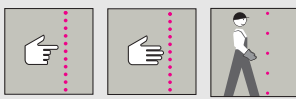


Safety application (IEC 61496)	Type	Resolution (mm)	Functions										Product	Page	
			Performance level (EN ISO 13849)	Restart interlock	External device monitoring	Muting	Beam coding	Safe device communication via EFI/SDL	Operating mode selection ¹⁾	Reduced resolution	PSDI mode	Blanking/goods detection			Ambient operating temperature (°C)
	Type 4	14/20/30/40	PL e	✓	✓	✓ ³⁾	✓	✓	✓	✓	✓ ¹⁾³⁾	✓	0 ... +55	C4000 Advanced	F-2
		14/20/30/40	PL e	✓	✓	✓ ³⁾	✓	✓	✓	-	✓ ¹⁾³⁾	-	0 ... +55	C4000 Standard	F-29
		14/30	PL e	✓	✓	✓ ³⁾	✓	✓	-	-	✓ ³⁾	-	-10 ... +55	C4000 ATEX II 3G/3D	F-65
		14/30	PL e	✓	✓	✓ ²⁾	✓	✓	-	-	✓ ³⁾	-	-10 ... +55	M4000 Advanced Curtain	F-68
		14/30	PL e	-	-	✓ ³⁾	✓	-	-	-	✓ ³⁾	✓	0 ... +55	C4000 Select	F-87
		14/24/34	PL e	✓	✓	✓ ³⁾	✓	-	-	-	✓ ³⁾	-	-20 ... +55	miniTwin4	F-105
		14/30	PL e	✓	✓	✓ ³⁾	-	-	-	-	✓ ³⁾	-	0 ... +55	C4000 Micro	F-117
			PL e	✓	✓	✓ ³⁾	-	-	-	-	✓ ³⁾	-	0 ... +55	C4000 Micro in IP69K Housing	F-129
			PL e	✓	✓	✓ ³⁾	-	-	-	-	✓ ³⁾	-	-30 ... +55 ⁴⁾	C4000 Micro Cold Store	F-136
			PL e	✓	✓	✓ ³⁾	-	-	-	-	✓ ³⁾	-	0 ... +55	C4000 Basic Plus	F-142
PL e	-		✓	✓ ³⁾	-	-	-	-	✓ ³⁾	-	0 ... +55	C4000 Basic	F-155		
PL e	-	-	✓ ³⁾	-	-	-	-	✓ ³⁾	-	0 ... +55	C4000 Eco	F-168			
	Type 4	20	PL e	✓	✓	-	-	✓	✓	-	-	✓ ³⁾	0 ... +55	C4000 Entry/Exit	F-181
		30/40	PL e	✓	✓	-	✓	✓	✓	-	-	✓ ³⁾	0 ... +55	C4000 Palletizer	F-192
	Type 4	20	PL e	✓	✓	-	✓	✓	✓	-	-	✓ ³⁾	0 ... +55	C4000 Fusion	F-205
		14/24/34	PL d ⁵⁾	✓	✓	✓ ³⁾	✓	-	-	-	-	-	-20 ... +55	miniTwin2	F-224
	Type 2	30	20/30/40	PL d ⁵⁾	-	✓	✓ ³⁾	✓	-	-	-	-	0 ... +55	C2000 Standard	F-236
			PL d ⁵⁾	-	✓	✓ ³⁾	✓	-	-	-	-	0 ... +55	C2000 Standard in IP69K Housing	F-253	
		20/30/40	PL d ⁵⁾	-	-	✓ ³⁾	-	-	-	-	-	0 ... +55	C2000 Eco	F-261	
			PL d ⁵⁾	✓	✓	✓ ³⁾	✓	-	-	-	-	0 ... +55	C2000 RES/EDM	F-272	
			PL d ⁵⁾	-	✓	✓ ³⁾	✓	-	-	-	-	0 ... +55	C2000 Cascadable	F-285	
			PL d ⁵⁾	-	✓	✓ ³⁾	✓	-	-	-	-	0 ... +55			

¹⁾ With UE402 ³⁾ With Flexi Classic / Flexi Soft ⁵⁾ The performance level does not contain any specific requirements on aspects such the
²⁾ With UE403 ⁴⁾ Depending on use of the integrated heating as optical characteristics. For more detailed information on this topic, see page A-10.

→ Suitable mirror and device columns can be found beginning on page I-0





F

- External device monitoring (EDM)
- Restart interlock (RES)
- Beam coding
- Teach-in blanking
- Floating blanking
- Fixed blanking
- Reduced resolution
- Up to 3 systems can be cascaded
- Alignment and diagnostics via 7-segment display
- Configuration and diagnostics via PC



Further information	Page
→ Technical specifications	F-10
→ Dimensional drawings	F-14
→ Connection diagrams	F-19
→ Accessories	F-20
→ Systematic safety	A-0
→ Services	B-0

Technical data overview

Protective field height (depending on type)	150 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 8 m / 0 m ... 19 m
Resolution (depending on type)	14 mm ... 40 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Advanced safety light curtain is used wherever hazardous points and hazardous areas require reliable and cost-effective protection:

- Blanking functions allow defined objects to be present in the protective field, e.g., cables, benches.
- Quick teach-in on-site reduces setup times
- Adjustable tolerances increase availability

- Emergency stop, bypass or reset directly at the extension connection
- Application diagnostic output for status information
- Configure quickly and easily using Clone Plug
- The integrated EFI interface allows the use of additional sensor functions (see A-8).

In-system added value

Combined with SICK safe control solutions

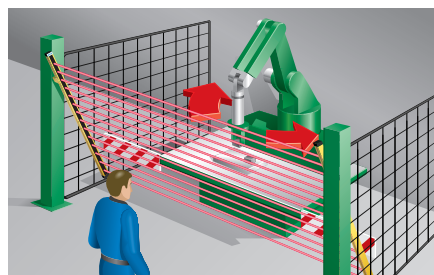
Combination with	Restart interlock	External device monitoring	Bypass	PSDI/PSDI window	Teach-in	Operating mode selection	Further information
UE402	-	-	✓	✓	✓	✓	F-13
Flexi Classic	✓	✓	✓	-	-	-	O-2
Flexi Soft	✓	✓	✓	✓	✓	✓	O-25
UE48-20S	✓	✓	-	-	-	-	N-46
UE48-30S	✓	✓	-	-	-	-	N-52
UE10-30S	Contact expansion module						N-63

→ For more combinations, see annex

Applications

→ You can find more applications using the application finder at www.mysick.com

- Material handling
- Plastic
- Transforming machine tools
- Electronics industry
- Automotive industry
- Robotics
- Print and paper industry
- Wood industry
- Palletizers



Hazardous point protection on an industrial robot

Ordering information

C4000 Advanced without extension connection

Usage	As a standalone system and as last system in a cascade
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Configuration connection: M8 x 4

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301CA010	1018591	C40E-0301CB010	1018781
450 mm	C40S-0401CA010	1018347	C40E-0401CB010	1018782
600 mm	C40S-0601CA010	1018593	C40E-0601CB010	1018783
750 mm	C40S-0701CA010	1018595	C40E-0701CB010	1018784
900 mm	C40S-0901CA010	1018597	C40E-0901CB010	1018785
1050 mm	C40S-1001CA010	1018599	C40E-1001CB010	1018786
1200 mm	C40S-1201CA010	1018601	C40E-1201CB010	1018787
1350 mm	C40S-1301CA010	1018603	C40E-1301CB010	1018788
1500 mm	C40S-1501CA010	1018605	C40E-1501CB010	1018789
1650 mm	C40S-1601CA010	1018607	C40E-1601CB010	1018790
1800 mm	C40S-1801CA010	1018609	C40E-1801CB010	1018791

- Resolution: 20 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302CA010	1018613	C40E-0302CB010	1018792
450 mm	C40S-0402CA010	1018615	C40E-0402CB010	1018793
600 mm	C40S-0602CA010	1018617	C40E-0602CB010	1018794
750 mm	C40S-0702CA010	1018619	C40E-0702CB010	1018795
900 mm	C40S-0902CA010	1018621	C40E-0902CB010	1018796
1050 mm	C40S-1002CA010	1018623	C40E-1002CB010	1018797
1200 mm	C40S-1202CA010	1018625	C40E-1202CB010	1018798
1350 mm	C40S-1302CA010	1018627	C40E-1302CB010	1018799
1500 mm	C40S-1502CA010	1018629	C40E-1502CB010	1018800
1650 mm	C40S-1602CA010	1018631	C40E-1602CB010	1018801
1800 mm	C40S-1802CA010	1018633	C40E-1802CB010	1018802

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303CA010	1018635	C40E-0303CB010	1018803
450 mm	C40S-0403CA010	1018637	C40E-0403CB010	1018804
600 mm	C40S-0603CA010	1018639	C40E-0603CB010	1018805
750 mm	C40S-0703CA010	1018641	C40E-0703CB010	1018806
900 mm	C40S-0903CA010	1018643	C40E-0903CB010	1018807
1050 mm	C40S-1003CA010	1018645	C40E-1003CB010	1018809
1200 mm	C40S-1203CA010	1018647	C40E-1203CB010	1018810
1350 mm	C40S-1303CA010	1018649	C40E-1303CB010	1018811
1500 mm	C40S-1503CA010	1018651	C40E-1503CB010	1018812
1650 mm	C40S-1603CA010	1018653	C40E-1603CB010	1018813
1800 mm	C40S-1803CA010	1018655	C40E-1803CB010	1018814

F

- Resolution: 40 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304CA010	1018657	C40E-0304CB010	1018815
450 mm	C40S-0404CA010	1018659	C40E-0404CB010	1018816
600 mm	C40S-0604CA010	1018661	C40E-0604CB010	1018817
750 mm	C40S-0704CA010	1018663	C40E-0704CB010	1018818
900 mm	C40S-0904CA010	1018665	C40E-0904CB010	1018819
1050 mm	C40S-1004CA010	1018667	C40E-1004CB010	1018820
1200 mm	C40S-1204CA010	1018669	C40E-1204CB010	1018821
1350 mm	C40S-1304CA010	1018671	C40E-1304CB010	1018822
1500 mm	C40S-1504CA010	1018673	C40E-1504CB010	1018823
1650 mm	C40S-1604CA010	1018675	C40E-1604CB010	1018824
1800 mm	C40S-1804CA010	1018677	C40E-1804CB010	1018825

C4000 Advanced with extension connection M26 x 11 + FE

Usage	As first or middle system in a cascade
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Extension connection: Hirschmann socket M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301DA010	1018690	C40E-0301DB010	1018827
450 mm	C40S-0401DA010	1018349	C40E-0401DB010	1018828
600 mm	C40S-0601DA010	1018692	C40E-0601DB010	1018829
750 mm	C40S-0701DA010	1018694	C40E-0701DB010	1018830
900 mm	C40S-0901DA010	1018696	C40E-0901DB010	1018831
1050 mm	C40S-1001DA010	1018698	C40E-1001DB010	1018832
1200 mm	C40S-1201DA010	1018700	C40E-1201DB010	1018833
1350 mm	C40S-1301DA010	1018702	C40E-1301DB010	1018834
1500 mm	C40S-1501DA010	1018704	C40E-1501DB010	1018835
1650 mm	C40S-1601DA010	1018706	C40E-1601DB010	1018836
1800 mm	C40S-1801DA010	1018708	C40E-1801DB010	1018837

- Resolution: 20 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302DA010	1018710	C40E-0302DB010	1018838
450 mm	C40S-0402DA010	1018712	C40E-0402DB010	1018839
600 mm	C40S-0602DA010	1018714	C40E-0602DB010	1018840
750 mm	C40S-0702DA010	1018716	C40E-0702DB010	1018841
900 mm	C40S-0902DA010	1018718	C40E-0902DB010	1018842
1050 mm	C40S-1002DA010	1018720	C40E-1002DB010	1018843
1200 mm	C40S-1202DA010	1018722	C40E-1202DB010	1018844
1350 mm	C40S-1302DA010	1018724	C40E-1302DB010	1018845
1500 mm	C40S-1502DA010	1018726	C40E-1502DB010	1018846
1650 mm	C40S-1602DA010	1018728	C40E-1602DB010	1018847
1800 mm	C40S-1802DA010	1018730	C40E-1802DB010	1018848

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303DA010	1018733	C40E-0303DB010	1018849
450 mm	C40S-0403DA010	1018735	C40E-0403DB010	1018850
600 mm	C40S-0603DA010	1018737	C40E-0603DB010	1018851
750 mm	C40S-0703DA010	1018739	C40E-0703DB010	1018852
900 mm	C40S-0903DA010	1018741	C40E-0903DB010	1018853
1050 mm	C40S-1003DA010	1018743	C40E-1003DB010	1018854
1200 mm	C40S-1203DA010	1018745	C40E-1203DB010	1018855
1350 mm	C40S-1303DA010	1018747	C40E-1303DB010	1018856
1500 mm	C40S-1503DA010	1018749	C40E-1503DB010	1018857
1650 mm	C40S-1603DA010	1018751	C40E-1603DB010	1018858
1800 mm	C40S-1803DA010	1018753	C40E-1803DB010	1018859

F

- Resolution: 40 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304DA010	1018755	C40E-0304DB010	1018860
450 mm	C40S-0404DA010	1018757	C40E-0404DB010	1018861
600 mm	C40S-0604DA010	1018759	C40E-0604DB010	1018862
750 mm	C40S-0704DA010	1018762	C40E-0704DB010	1018863
900 mm	C40S-0904DA010	1018765	C40E-0904DB010	1018864
1050 mm	C40S-1004DA010	1018767	C40E-1004DB010	1018865
1200 mm	C40S-1204DA010	1018769	C40E-1204DB010	1018866
1350 mm	C40S-1304DA010	1018771	C40E-1304DB010	1018867
1500 mm	C40S-1504DA010	1018773	C40E-1504DB010	1018868
1650 mm	C40S-1604DA010	1018775	C40E-1604DB010	1018869
1800 mm	C40S-1804DA010	1018777	C40E-1804DB010	1018870

C4000 Advanced Host with extension connection M12 x 7 + FE

Usage	As first or middle system in a cascade
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Extension connection: M12 x 7 + FE Configuration connection: M8 x 4

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301DA040	1028969	C40E-0301DB040	1028989
450 mm	C40S-0401DA040	1028967	C40E-0401DB040	1028990
600 mm	C40S-0601DA040	1028971	C40E-0601DB040	1028991
750 mm	C40S-0701DA040	1028973	C40E-0701DB040	1028992
900 mm	C40S-0901DA040	1028975	C40E-0901DB040	1028993
1050 mm	C40S-1001DA040	1028977	C40E-1001DB040	1028994
1200 mm	C40S-1201DA040	1028979	C40E-1201DB040	1028995
1350 mm	C40S-1301DA040	1028981	C40E-1301DB040	1028996
1500 mm	C40S-1501DA040	1028983	C40E-1501DB040	1028997
1650 mm	C40S-1601DA040	1028985	C40E-1601DB040	1028998
1800 mm	C40S-1801DA040	1028987	C40E-1801DB040	1028999

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303DA040	1029001	C40E-0303DB040	1029023
450 mm	C40S-0403DA040	1029003	C40E-0403DB040	1029024
600 mm	C40S-0603DA040	1029005	C40E-0603DB040	1029025
750 mm	C40S-0703DA040	1029007	C40E-0703DB040	1029026
900 mm	C40S-0903DA040	1029009	C40E-0903DB040	1029027
1050 mm	C40S-1003DA040	1029011	C40E-1003DB040	1029028
1200 mm	C40S-1203DA040	1029013	C40E-1203DB040	1029029
1350 mm	C40S-1303DA040	1029015	C40E-1303DB040	1029030
1500 mm	C40S-1503DA040	1029017	C40E-1503DB040	1029031
1650 mm	C40S-1603DA040	1029019	C40E-1603DB040	1029032
1800 mm	C40S-1803DA040	1029021	C40E-1803DB040	1029033

C4000 Advanced Guest with straight system connection

Usage	As last system in a cascade, configurable via host
Connection types	System connection: fixed connection cable 320 mm with plug M12 x 7 + FE, straight

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0101CT400	1028796	C46E-0101CU400	1028820
300 mm	C46S-0301CT400	1028802	C46E-0301CU400	1028821
450 mm	C46S-0401CT400	1028804	C46E-0401CU400	1028822
600 mm	C46S-0601CT400	1028806	C46E-0601CU400	1028823
750 mm	C46S-0701CT400	1028808	C46E-0701CU400	1028824
900 mm	C46S-0901CT400	1040173	C46E-0901CU400	1040186
1050 mm	C46S-1001CT400	1040175	C46E-1001CU400	1040187
1200 mm	C46S-1201CT400	1040177	C46E-1201CU400	1040188
1350 mm	C46S-1301CT400	1040179	C46E-1301CU400	1040189
1500 mm	C46S-1501CT400	1040181	C46E-1501CU400	1040190
1650 mm	C46S-1601CT400	1040182	C46E-1601CU400	1040191
1800 mm	C46S-1801CT400	1040184	C46E-1801CU400	1040192

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0103CT400	1028879	C46E-0103CU400	1028889
300 mm	C46S-0303CT400	1028881	C46E-0303CU400	1028890
450 mm	C46S-0403CT400	1028883	C46E-0403CU400	1028891
600 mm	C46S-0603CT400	1028885	C46E-0603CU400	1028892
750 mm	C46S-0703CT400	1028887	C46E-0703CU400	1028893
900 mm	C46S-0903CT400	1040193	C46E-0903CU400	1040207
1050 mm	C46S-1003CT400	1040195	C46E-1003CU400	1040208
1200 mm	C46S-1203CT400	1040197	C46E-1203CU400	1040209
1350 mm	C46S-1303CT400	1040199	C46E-1303CU400	1040210
1500 mm	C46S-1503CT400	1040201	C46E-1503CU400	1040211
1650 mm	C46S-1603CT400	1040203	C46E-1603CU400	1040212
1800 mm	C46S-1803CT400	1040205	C46E-1803CU400	1040213

C4000 Advanced Guest with angled system connection

Usage	As last system in a cascade, configurable via host
Connection types	System connection: fixed connection cable 320 mm with plug M12 x 7 + FE, angled

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0101CT500	1028810	C46E-0101CU500	1028825
300 mm	C46S-0301CT500	1028812	C46E-0301CU500	1028826
450 mm	C46S-0401CT500	1028814	C46E-0401CU500	1028827
600 mm	C46S-0601CT500	1028816	C46E-0601CU500	1028828
750 mm	C46S-0701CT500	1028818	C46E-0701CU500	1028829

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0103CT500	1028901	C46E-0103CU500	1028894
300 mm	C46S-0303CT500	1028903	C46E-0303CU500	1028895
450 mm	C46S-0403CT500	1028905	C46E-0403CU500	1028896
600 mm	C46S-0603CT500	1028907	C46E-0603CU500	1028897
750 mm	C46S-0703CT500	1028909	C46E-0703CU500	1028898

UE402 switching amplifier

Description	Type	Part no.
Expands C4000 Standard, Advanced, Palletizer, Entry/Exit and Fusion with the functions described in the technical data, e.g., bypass, operating mode switching or in addition PSDI mode on C4000 Standard, Advanced.	UE402	1023577

F

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

C4000 Advanced

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm ... 40 mm	
Scanning range (depending on type)	-	0 m ... 8 m / 0 m ... 19 m
Protective field height (depending on type)	300 mm ... 1800 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5 x 10 ⁻⁸ (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 26 ms ¹⁾
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

¹⁾ Without beam coding, without blanking, no cascaded systems. Other response times, see operating instructions.

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
Restart interlock (delivery status)	-	External
External device monitoring	-	✓
External device monitoring (delivery status)	-	Deactivated
Beam coding	✓	
Beam coding (delivery status)	Non-coded	
Reduced resolution (depending on type)	- / ✓	✓
Extension connection (depending on type)	- / ✓	
Emergency stop / bypass at extension connection (depending on type)	-	- / ✓
Bypass (with UE402)	-	✓
Operating mode switching (with UE402)	-	✓
PSDI mode (with UE402)	✓	
Safe device communication via EFI/SDL	✓	
Configuration method	PC with CDS (configuration and diagnostic software)	

Electrical data

System part	Sender	Receiver
System connection	Hirschmann plug M26 x 11 + FE	
Connecting cable length	Max. 50 m ¹⁾	
Connecting cable wire cross-section	0.75 mm ²	
Extension connection (depending on type)	Hirschmann socket M26 x 11 + FE / socket M12 x 7 + FE	
Connection cable wire cross-section	M26 x 11 + FE	0.75 mm ²
	M12 x 7 + FE	0.25 mm ²
Configuration connection	M8 x 4	
Supply voltage V _s	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 10 % ³⁾	
Power consumption	Max. 2 A	Max. 3 A
Safety outputs (OSSD)	Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
	Switching voltage HIGH	24 V DC (V _S - 2.25 V DC ... V _S)
	Switching voltage LOW	2 V DC
	Switching current	Max. 500 mA
Display elements	7-segment	

¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S.

C4000 Advanced Guest

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	-	0 m ... 8 m / 0 m ... 19 m
Protective field height (depending on type)	150 mm ... 1800 mm	
Safety related parameters	Type	Type 4 (IEC 61496)
	Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
	Category	Category 4 (EN ISO 13849)
	Performance level	PL e (EN ISO 13849)
	PFHd (mean probability of a dangerous failure per hour)	1.5 x 10 ⁻⁸ (EN ISO 13849)
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 26 ms ¹⁾
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

¹⁾ Without beam coding, without blanking. Other response times, see operating instructions.

Functional data

System part	Sender	Receiver
Beam coding		✓
Beam coding (delivery status)	Non-coded	
Reduced resolution	-	✓
PSDI mode (with UE402)	✓	
Configuration method	PC with CDS (configuration and diagnostic software)	

Electrical data

System part	Sender	Receiver															
System connection (depending on type)	Fixed connection cable 320 mm with plug M12 x 7 + FE, straight Fixed connection cable 320 mm with plug M12 x 7 + FE, angled																
Connecting cable length	Max. 3 m ¹⁾																
Connecting cable wire cross-section	0.25 mm ²																
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾																
Residual ripple	≤ 10 % ³⁾																
Power consumption	Max. 2 A	Max. 3 A															
Safety outputs (OSSD)	<table border="1"> <thead> <tr> <th>Type of output</th> <th>Sender</th> <th>Receiver</th> </tr> </thead> <tbody> <tr> <td>Type of output</td> <td>-</td> <td>2 PNP semiconductors, short-circuit protected, cross-circuit monitored</td> </tr> <tr> <td>Switching voltage HIGH</td> <td>-</td> <td>24 V DC ($V_S - 2.25$ V DC ... V_S)</td> </tr> <tr> <td>Switching voltage LOW</td> <td>-</td> <td>2 V DC</td> </tr> <tr> <td>Switching current</td> <td>-</td> <td>Max. 500 mA</td> </tr> </tbody> </table>		Type of output	Sender	Receiver	Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored	Switching voltage HIGH	-	24 V DC ($V_S - 2.25$ V DC ... V_S)	Switching voltage LOW	-	2 V DC	Switching current	-	Max. 500 mA
Type of output	Sender	Receiver															
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored															
Switching voltage HIGH	-	24 V DC ($V_S - 2.25$ V DC ... V_S)															
Switching voltage LOW	-	2 V DC															
Switching current	-	Max. 500 mA															
Display elements	7-segment																

¹⁾ Between host and guest

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S .

UE402 switching amplifier

General data

Protection class	III (IEC 536:1976)
Enclosure rating	IP 20 (IEC 60529)
Safety related parameters	
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
PFHd (mean probability of a dangerous failure per hour)	15×10^{-9} (EN ISO 13849)
T _M (Mission Time)	20 years (EN ISO 13849)
Ambient operating temperature from ... to	0 °C ... +55 °C
Air humidity from ... to	15 % ... 95 %, non-condensing
Storage temperature from ... to	-25 °C ... +70 °C
Weight	120 g
Housing material	Plastic

Functional data

PSDI mode	✓
Bypass	✓
Operating mode switching	✓

Electrical data

Supply voltage V _s	24 V DC (19.2 V DC ... 28.8 V DC)
Residual ripple	≤ 10 %
Power consumption	Max. 110 mA
Switch-on time	Max. 4 s
IN A1 ... A6, MCC-BDC, MCC-TDC	
Switching voltage HIGH	24 V DC (11 V DC ... 30 V DC)
Switching voltage LOW	-30 V DC ... 5 V DC
Switching current HIGH	6 mA ... 20 mA
Switching current LOW	-3 mA ... 0.5 mA
Change over time operating mode selection	Max. 2 s
IN B1, IN B2, OUT B1, OUT B2	
Change over time bypass	Max. 2 s
Synchronous time monitoring	200 ms

Safety outputs

Connection type	Screw-terminal connector
Conductor cross-section	0.25 mm ² ... 2.5 mm ²

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Dimensional drawings

C4000 Advanced without extension connection

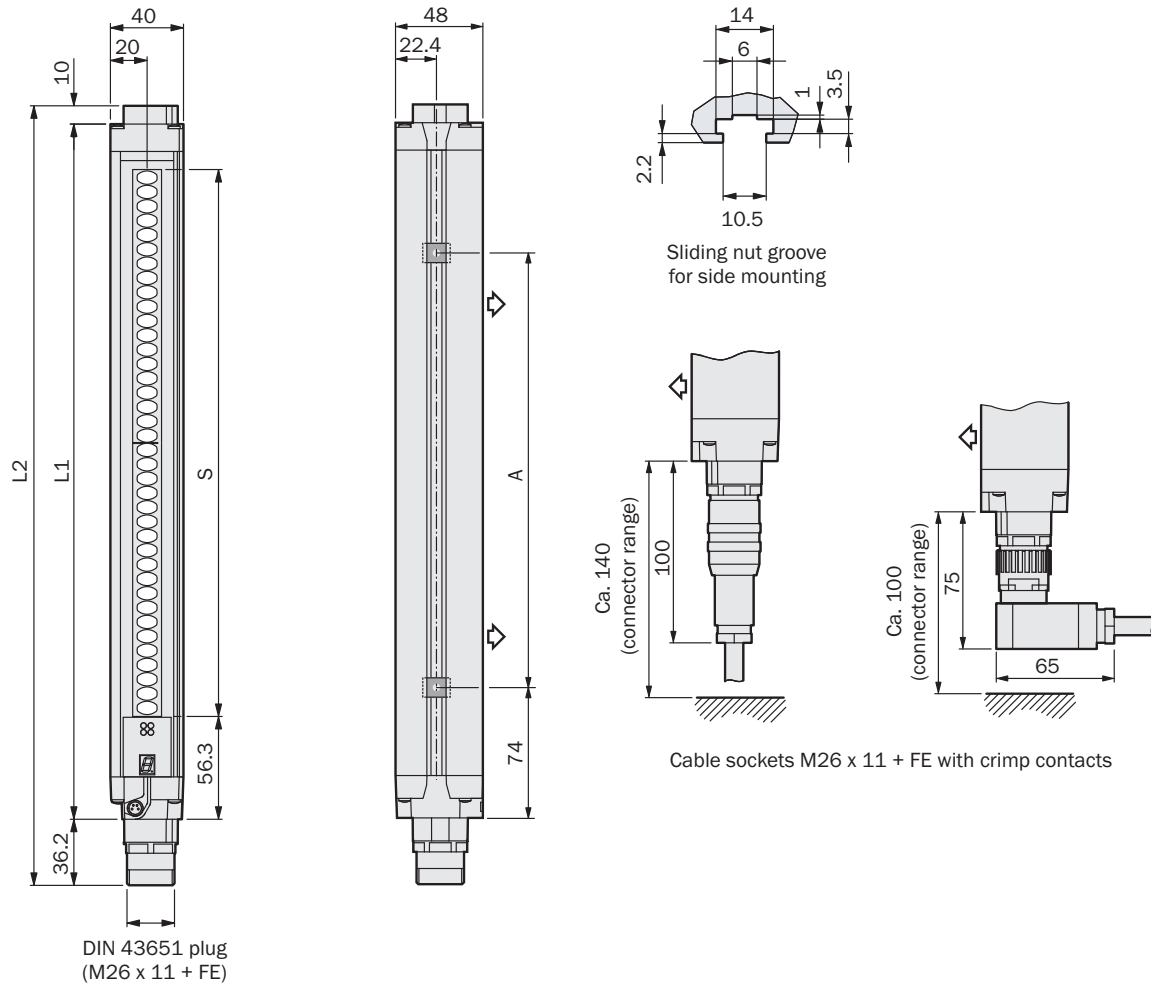


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	427	224
450	532	578	374
600	682	728	524
750	833	879	674
900	984	1030	824
1050	1134	1180	974
1200	1283	1329	1124
1350	1435	1481	1274
1500	1586	1632	1424
1650	1736	1782	1574
1800	1887	1933	1724

Dimensions in mm

C4000 Advanced with extension connection M26 x 11 + FE

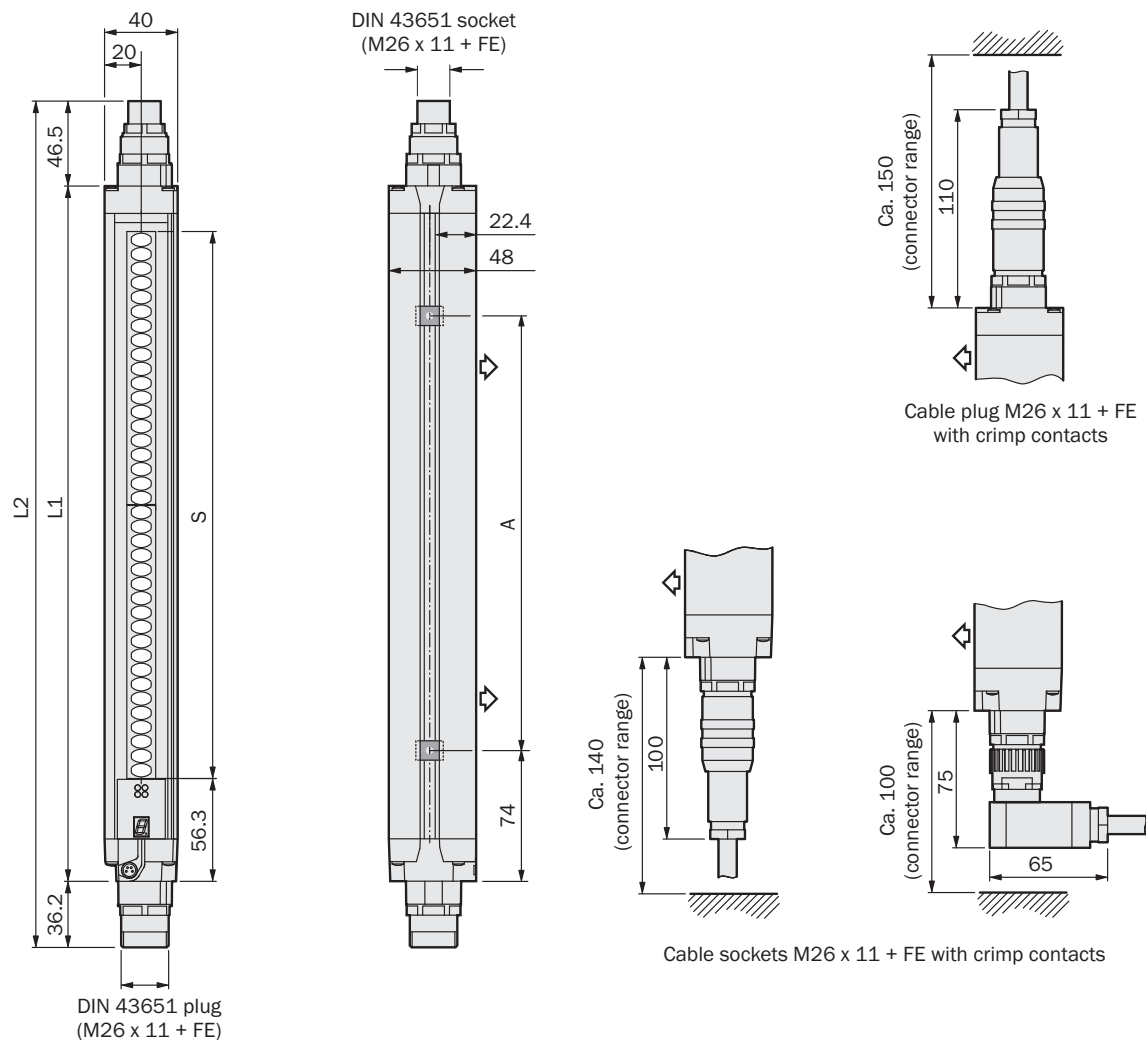


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	464	224
450	532	614	374
600	682	765	524
750	833	915	674
900	984	1066	824
1050	1134	1216	974
1200	1283	1366	1124
1350	1435	1517	1274
1500	1586	1669	1424
1650	1736	1818	1574
1800	1887	1969	1724

Dimensions in mm

C4000 Advanced Host with extension connection M12 x 7 + FE

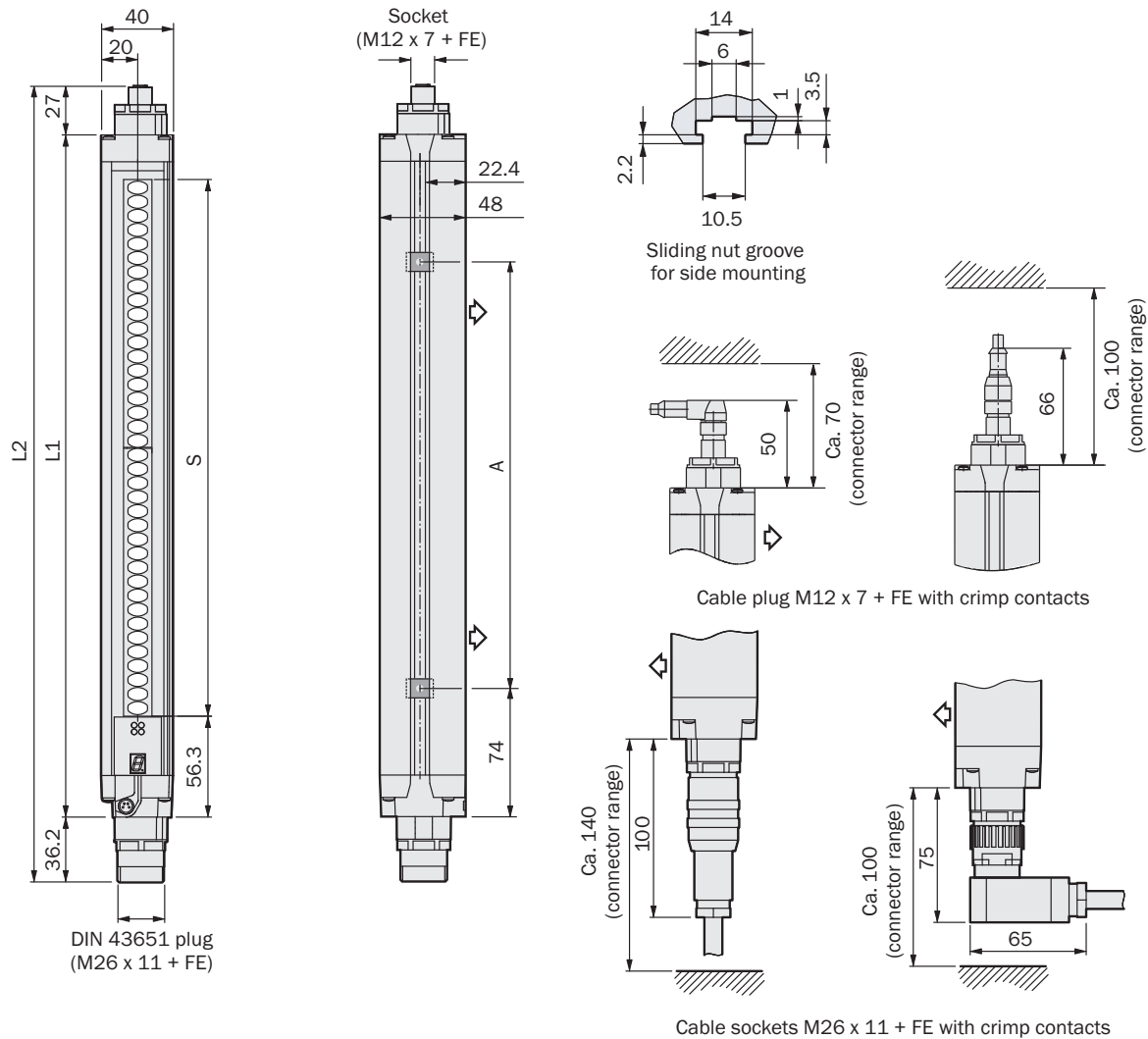


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	444	224
450	532	594	374
600	682	744	524
750	833	895	674
900	984	1046	824
1050	1134	1196	974
1200	1283	1346	1124
1350	1435	1497	1274
1500	1586	1649	1424
1650	1736	1798	1574
1800	1887	1949	1724

Dimensions in mm



C4000 Advanced Guest

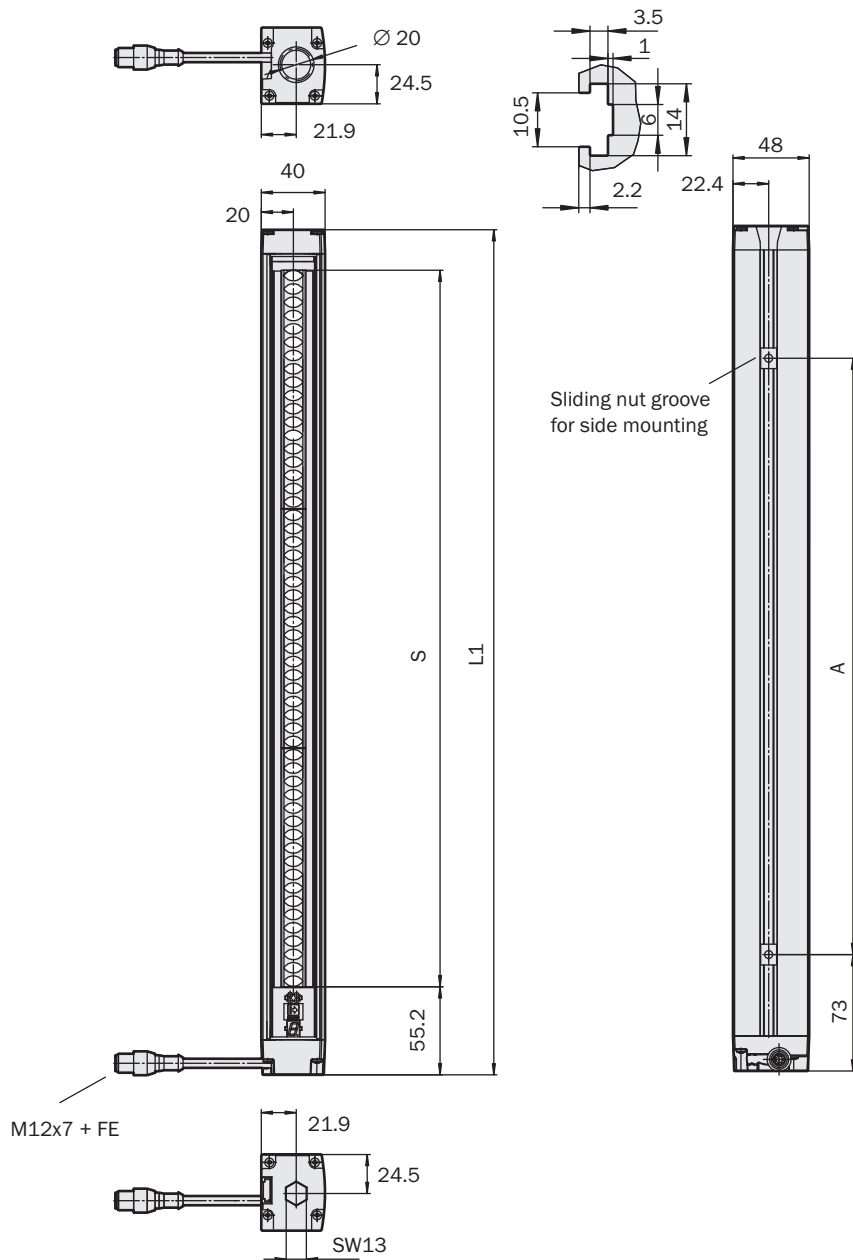


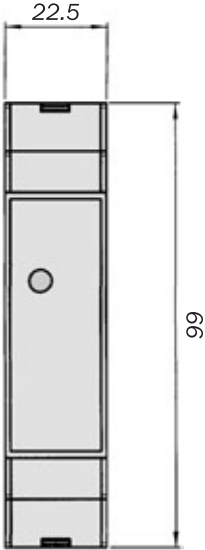
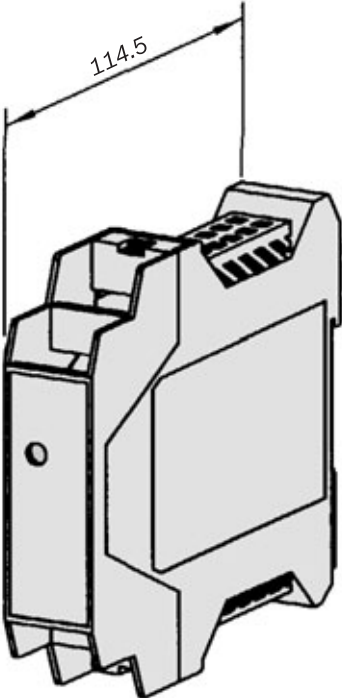
Illustration sender (receiver mirror image)

Protective field height S	L1	A
150	220	76
300	380	224
450	530	374
600	680	524
750	830	674
900	981	825
1050	1131	975
1200	1281	1125
1350	1432	1275
1500	1583	1427
1650	1733	1504
1800	1884	1728

Dimensions in mm

UE402 switching amplifier

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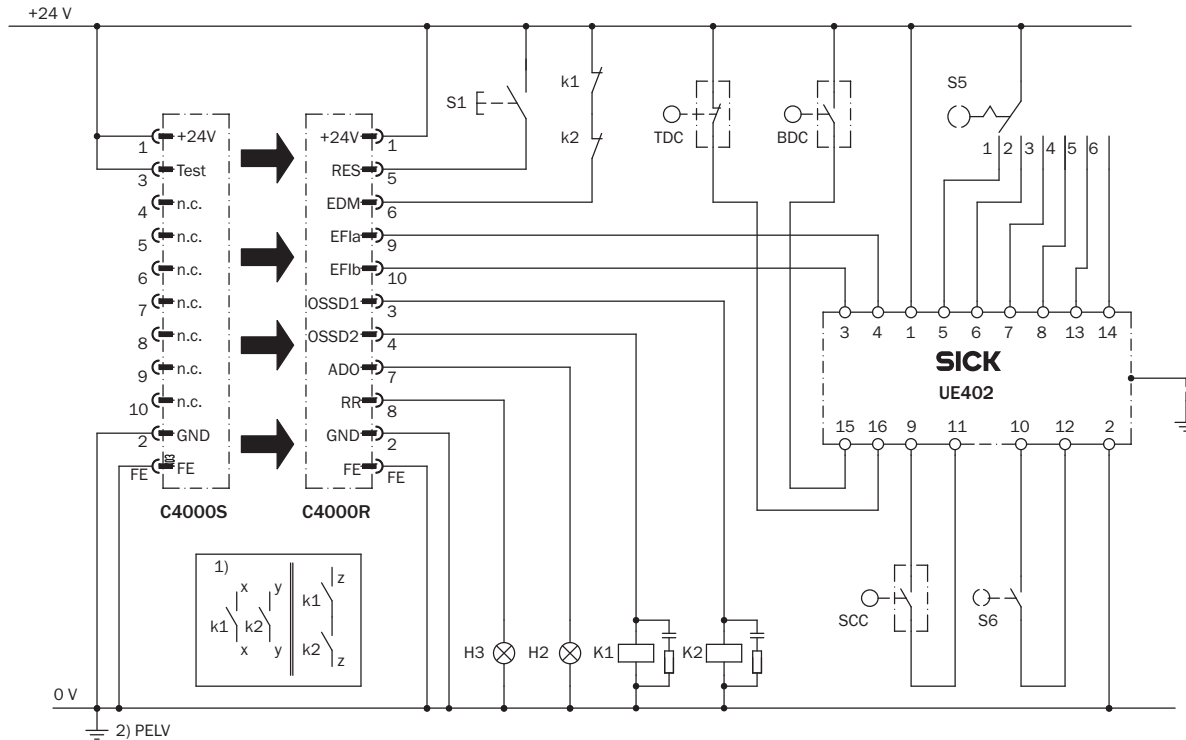


Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C4000 Advanced on UE402 switching amplifier



Task

Integration of a C4000 Advanced safety light curtain with UE402 in a controller. Six configurable operating modes with restart interlock and external device monitoring. PSDI mode with TDC, BDC, SCC. Teachable blanking areas.

Operating characteristics

If no object is detected in the active protective field and the K1 and K2 contactors are in the de-energized position, the H3 lamp flashes as a prompt to operate S1 control switch. The OSSDs are switched on when S1 is operated (button is pressed and released). These outputs activate K1 and K2 contactors. Upon the detection of an object in an active protective field, the OSSDs deactivate K1 and K2 contactors.

Fault analysis

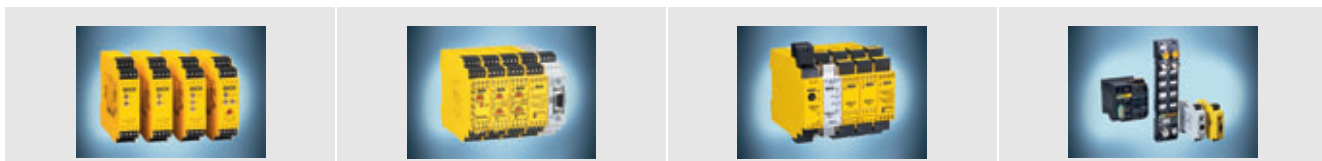
The incorrect functioning of one of the K1 or K2 contactors does not result in the loss of the shutdown function. OSSD cross-

circuits and short-circuits are detected and lead to the inhibited state (lock-out). On manipulation (e.g., jamming) of the S1 button, the system does not enable the output current circuits.

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
 - 2) PELV in accordance with the requirements in EN 60204-1 / 6.4
- Please see the operating instructions for the related devices to obtain information on the effects of the functions with configurable parameters. This information is to be observed.

sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Mounting kit C4000 Guest, swivel mount	4	BEF-2WNAEEST4	2034959
	Mounting kit 11, replacement bracket, suitable for replacement of FGS	4	BEF-3WNGBCST4	2021646


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600



Connecting cables

Figure	Cable length	Remark	Type	Part no.
	By the meter	Fitting for EFI connections	Connection cable	6021437



Connecting cables (cont'd)

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	2.5 m	DOL-0612G2M5075KM0	2022544
			5 m	DOL-0612G05M075KM0	2022545
			7.5 m	DOL-0612G7M5075KM0	2022546
			10 m	DOL-0612G10M075KM0	2022547
			15 m	DOL-0612G15M075KM0	2022548
			20 m	DOL-0612G20M075KM0	2022549
			30 m	DOL-0612G30M075KM0	2022550
			50 m	DOL-0612G50MD75KM0	2033548



Connectors

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable plug M26 x 11 + FE	Straight	STE-0612G000GA3KM0	6021191
		Angled	STE-0612W000GA3KM0	6021192


Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	DOS-0612G000GA3KM0	6020757
		Angled	DOS-0612W000GA3KM0	6020758


Cascade connection cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann M26 x 11 + FE	Plug straight/ socket straight	0.25 m	DSL-0612GM25075KM0	2022278
			0.5 m	DSL-0612G0M5075KM0	2021838
			1 m	DSL-0612G01M075KM0	2022279
			1.5 m	DSL-0612G1M5075KM0	2022280
			2 m	DSL-0612G02M075KM0	2022281
			2.5 m	DSL-0612G2M5075KM0	2022282
			3 m	DSL-0612G03M075KM0	2022283
	Hirschmann M26 x 11 + FE	Plug straight/ socket angled	0.25 m	DSL-0612BM25075KM0	2022284
			0.5 m	DSL-0612B0M5075KM0	2022285
			1 m	DSL-0612B01M075KM0	2022286
			1.5 m	DSL-0612B1M5075KM0	2022287
			2 m	DSL-0612B02M075KM0	2022288
			2.5 m	DSL-0612B2M5075KM0	2022289
			3 m	DSL-0612B03M075KM0	2022290
	M12 x 8	Plug straight/ socket straight	1 m	DSL-127SG01ME25KM0	6021002
		Plug angled/ socket straight	1 m	DSL-127SA01ME25KM0	6030974

Control switch connection cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann M26 x 7 + FE	Plug straight	2.5 m	STL-0608G2M5075KM1	2026869
			10 m	STL-0608G10M075KM1	2026870


Configuration connection cables

Figure	Description	Connection type	Cable length	Type	Part no.
	For connecting the configuration connection to the PC	M8 x 4, SUB-D 9-pin	2 m	DSL-8D04G02M025KM1	6021195
			10 m	DSL-8D04G10M025KM1	2027649


Terminators

Description	Remark	Type	Part no.
Terminal with 182 Ω resistance for pin 9 and 10 on the system connection	For improving the EMC behavior if EFI device communication is not used	Terminal with 182 Ω resistance	2027227

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves

Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device columns with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

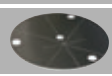



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Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMMEAL2	2045883
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

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Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2022412
	450 mm	2022413
	600 mm	2022414
	750 mm	2022415
	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420
	1650 mm	2022421
	1800 mm	2022422

Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 <p>Example of use</p>	300 mm	2026853
	450 mm	2026854
	600 mm	2026855
	750 mm	2026856
	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863

PNS75 deflector mirrors



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Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424

PNS125 deflector mirrors

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column	-	-	-	4056731


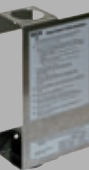
Configuration software

Figure	Description	Type	Part no.
	CDS (Configuration & Diagnostic Software)	CDS	2032314

Configuration tools

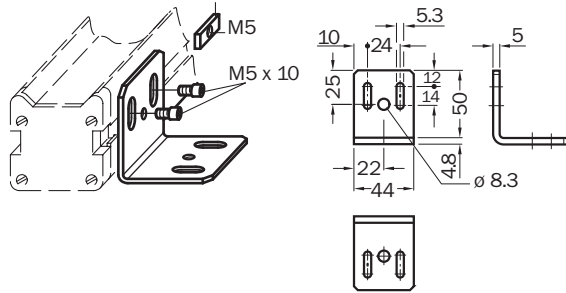
Figure	Description	Type	Part no.
	For saving and transferring configurations. For C4000 Standard, Advanced, Palletizer, Entry/Exit, Fusion and M4000 Advanced, Advanced Curtain, Area	Clone Plug for C4000 and M4000	1029665
	For resetting a system position saved in a C4000 (host, guest 1, guest 2). For C4000 Standard, Advanced, Palletizer, Entry/Exit	Host-Guest Plug for C4000	1029717
	-	Wall mount	5318443

Device protection

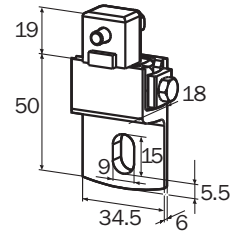
Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	20 mm diameter	Test rod	2022600
	30 mm diameter	Test rod	2022602
	40 mm diameter	Test rod	2022604
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

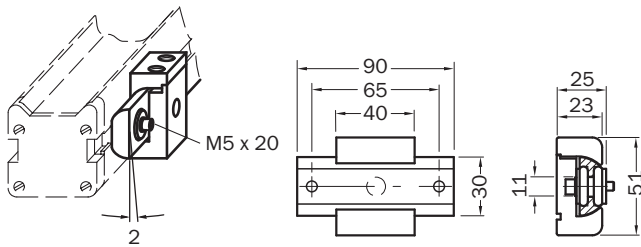
BEF-3WNGBAST4
Mounting kit 1, rigid



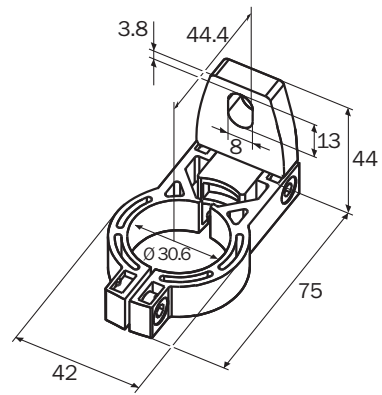
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



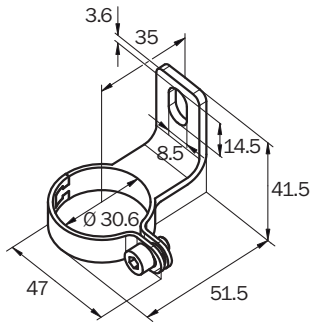
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



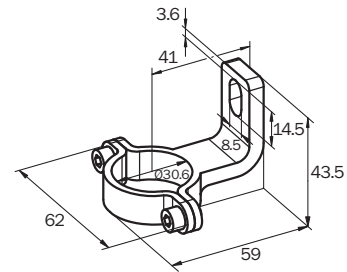
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



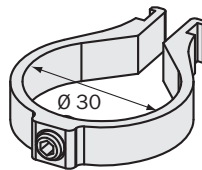
BEF-2SMMEAES4
Stainless steel bracket, adjustable



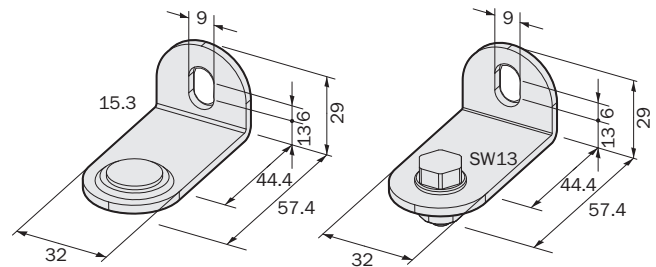
BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



BEF-2SMMEAL4, BEF-2SMMEAL2
Omega bracket, flexible and quick installation with only one screw



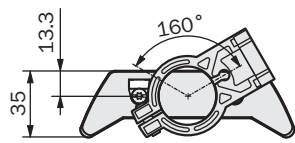
BEF-2WNAEST4
Mounting kit C4000 Guest, swivel mount



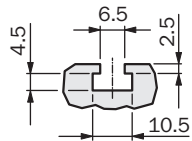
Dimensions in mm

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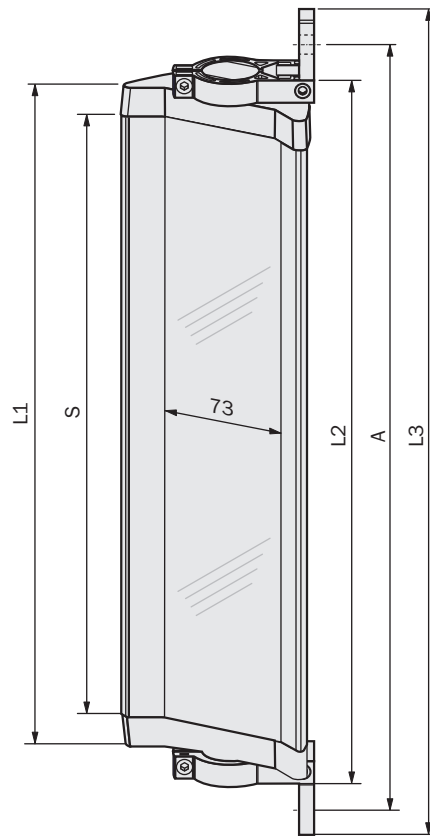
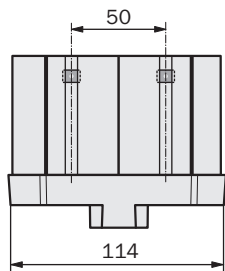
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

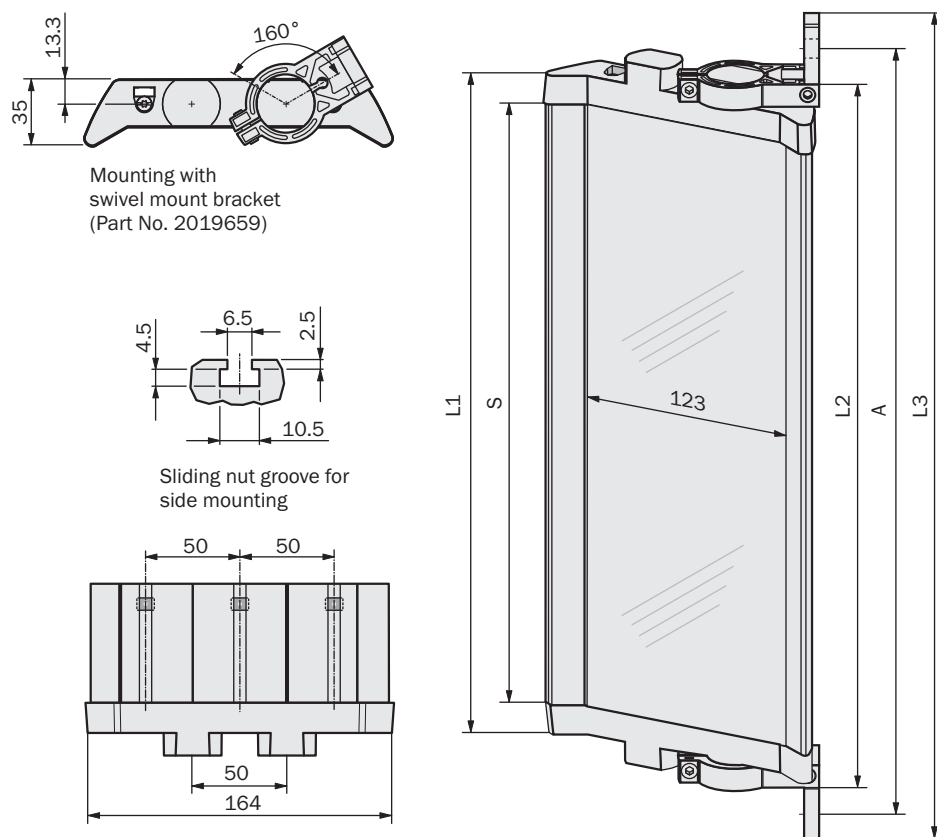


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Protective field height (depending on type)	150 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 8 m / 0 m ... 19 m
Resolution (depending on type)	14 mm ... 40 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Standard safety light curtain is used wherever hazardous points and hazardous areas require reliable and cost-effective protection:

- Alignment and diagnostics via 7-segment display
- Application diagnostic output for status information
- Configuration and diagnostics via RS-232 interface

- Emergency stop button or reset button directly at the extension connection
- Rapid commissioning due to preconfigured devices
- Configure quickly and easily using Clone Plug
- The integrated EFI interface allows the use of additional sensor functions (see A-8).

In-system added value

Combined with SICK safe control solutions

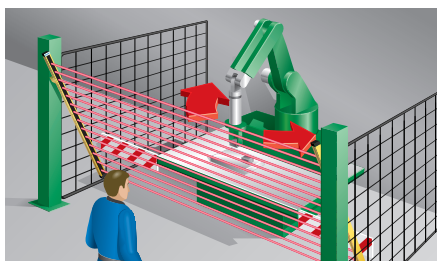
Combination with	Restart interlock	External device monitoring	Bypass	PSD/PSDI window	Teach-in	Operating mode selection	Further information
UE402	-	-	✓	✓	✓	✓	F-47
Flexi Classic	✓	✓	✓	-	-	-	O-2
Flexi Soft	✓	✓	✓	✓	✓	✓	O-25
UE48-20S	✓	✓	-	-	-	-	N-46
UE48-30S	✓	✓	-	-	-	-	N-52
UE10-30S	Contact expansion module						N-63

→ For more combinations, see annex

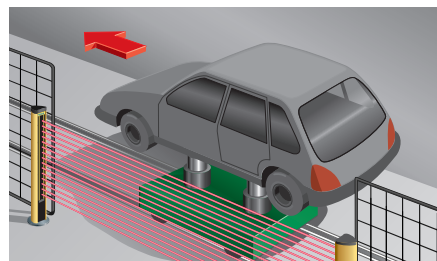
Applications

→ You can find more applications using the application finder at www.mysick.com

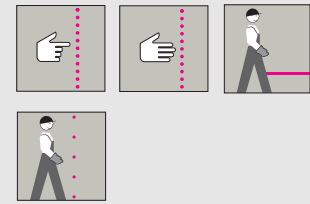
- Automotive industry
- Transforming machine tools
- Plastic
- Electronic
- Robotics
- Print and paper industry
- Wood industry
- Palletizer



Hazardous point protection on an industrial robot



Hazardous point protection on an assembly line



- External device monitoring (EDM)
- Restart interlock (RES)
- Beam coding
- Up to 3 systems can be cascaded
- Alignment and diagnostics via 7-segment display
- Configuration and diagnostics via PC



Further information	Page
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→ Dimensional drawings	F-49
→ Connection diagrams	F-55
→ Accessories	F-56
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C4000 Standard without extension connection

Usage	As a standalone system and as last system in a cascade
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Configuration connection: M8 x 4

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301CA010	1018591	C40E-0301CA010	1018592
450 mm	C40S-0401CA010	1018347	C40E-0401CA010	1018348
600 mm	C40S-0601CA010	1018593	C40E-0601CA010	1018594
750 mm	C40S-0701CA010	1018595	C40E-0701CA010	1018596
900 mm	C40S-0901CA010	1018597	C40E-0901CA010	1018598
1050 mm	C40S-1001CA010	1018599	C40E-1001CA010	1018600
1200 mm	C40S-1201CA010	1018601	C40E-1201CA010	1018602
1350 mm	C40S-1301CA010	1018603	C40E-1301CA010	1018604
1500 mm	C40S-1501CA010	1018605	C40E-1501CA010	1018606
1650 mm	C40S-1601CA010	1018607	C40E-1601CA010	1018608
1800 mm	C40S-1801CA010	1018609	C40E-1801CA010	1018610

- Resolution: 20 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302CA010	1018613	C40E-0302CA010	1018614
450 mm	C40S-0402CA010	1018615	C40E-0402CA010	1018616
600 mm	C40S-0602CA010	1018617	C40E-0602CA010	1018618
750 mm	C40S-0702CA010	1018619	C40E-0702CA010	1018620
900 mm	C40S-0902CA010	1018621	C40E-0902CA010	1018622
1050 mm	C40S-1002CA010	1018623	C40E-1002CA010	1018624
1200 mm	C40S-1202CA010	1018625	C40E-1202CA010	1018626
1350 mm	C40S-1302CA010	1018627	C40E-1302CA010	1018628
1500 mm	C40S-1502CA010	1018629	C40E-1502CA010	1018630
1650 mm	C40S-1602CA010	1018631	C40E-1602CA010	1018632
1800 mm	C40S-1802CA010	1018633	C40E-1802CA010	1018634

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303CA010	1018635	C40E-0303CA010	1018636
450 mm	C40S-0403CA010	1018637	C40E-0403CA010	1018638
600 mm	C40S-0603CA010	1018639	C40E-0603CA010	1018640
750 mm	C40S-0703CA010	1018641	C40E-0703CA010	1018642
900 mm	C40S-0903CA010	1018643	C40E-0903CA010	1018644
1050 mm	C40S-1003CA010	1018645	C40E-1003CA010	1018646
1200 mm	C40S-1203CA010	1018647	C40E-1203CA010	1018648
1350 mm	C40S-1303CA010	1018649	C40E-1303CA010	1018650
1500 mm	C40S-1503CA010	1018651	C40E-1503CA010	1018652
1650 mm	C40S-1603CA010	1018653	C40E-1603CA010	1018654
1800 mm	C40S-1803CA010	1018655	C40E-1803CA010	1018656

- Resolution: 40 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304CA010	1018657	C40E-0304CA010	1018658
450 mm	C40S-0404CA010	1018659	C40E-0404CA010	1018660
600 mm	C40S-0604CA010	1018661	C40E-0604CA010	1018662
750 mm	C40S-0704CA010	1018663	C40E-0704CA010	1018664
900 mm	C40S-0904CA010	1018665	C40E-0904CA010	1018666
1050 mm	C40S-1004CA010	1018667	C40E-1004CA010	1018668
1200 mm	C40S-1204CA010	1018669	C40E-1204CA010	1018670
1350 mm	C40S-1304CA010	1018671	C40E-1304CA010	1018672
1500 mm	C40S-1504CA010	1018673	C40E-1504CA010	1018674
1650 mm	C40S-1604CA010	1018675	C40E-1604CA010	1018676
1800 mm	C40S-1804CA010	1018677	C40E-1804CA010	1018678

C4000 Standard with angled system connection, without extension connection

Usage	As a standalone system and as last system in a cascade
Connection types	System connection: Hirschmann plug M26 x 11 + FE, angled Configuration connection: M8 x 4

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301CA020	1022267	C40E-0301CA020	1022268
450 mm	C40S-0401CA020	1026737	C40E-0401CA020	1026738

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303CA020	1026733	C40E-0303CA020	1026734
450 mm	C40S-0403CA020	1026735	C40E-0403CA020	1026736

C4000 Standard with extension connection M26 x 11 + FE

Usage	As first or middle system in a cascade
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Extension connection: Hirschmann socket M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301DA010	1018690	C40E-0301DA010	1018691
450 mm	C40S-0401DA010	1018349	C40E-0401DA010	1018350
600 mm	C40S-0601DA010	1018692	C40E-0601DA010	1018693
750 mm	C40S-0701DA010	1018694	C40E-0701DA010	1018695
900 mm	C40S-0901DA010	1018696	C40E-0901DA010	1018697
1050 mm	C40S-1001DA010	1018698	C40E-1001DA010	1018699
1200 mm	C40S-1201DA010	1018700	C40E-1201DA010	1018701
1350 mm	C40S-1301DA010	1018702	C40E-1301DA010	1018703
1500 mm	C40S-1501DA010	1018704	C40E-1501DA010	1018705
1650 mm	C40S-1601DA010	1018706	C40E-1601DA010	1018707
1800 mm	C40S-1801DA010	1018708	C40E-1801DA010	1018709

- Resolution: 20 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302DA010	1018710	C40E-0302DA010	1018711
450 mm	C40S-0402DA010	1018712	C40E-0402DA010	1018713
600 mm	C40S-0602DA010	1018714	C40E-0602DA010	1018715
750 mm	C40S-0702DA010	1018716	C40E-0702DA010	1018717
900 mm	C40S-0902DA010	1018718	C40E-0902DA010	1018719
1050 mm	C40S-1002DA010	1018720	C40E-1002DA010	1018721
1200 mm	C40S-1202DA010	1018722	C40E-1202DA010	1018723
1350 mm	C40S-1302DA010	1018724	C40E-1302DA010	1018725
1500 mm	C40S-1502DA010	1018726	C40E-1502DA010	1018727
1650 mm	C40S-1602DA010	1018728	C40E-1602DA010	1018729
1800 mm	C40S-1802DA010	1018730	C40E-1802DA010	1018731

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303DA010	1018733	C40E-0303DA010	1018734
450 mm	C40S-0403DA010	1018735	C40E-0403DA010	1018736
600 mm	C40S-0603DA010	1018737	C40E-0603DA010	1018738
750 mm	C40S-0703DA010	1018739	C40E-0703DA010	1018740
900 mm	C40S-0903DA010	1018741	C40E-0903DA010	1018742
1050 mm	C40S-1003DA010	1018743	C40E-1003DA010	1018744
1200 mm	C40S-1203DA010	1018745	C40E-1203DA010	1018746
1350 mm	C40S-1303DA010	1018747	C40E-1303DA010	1018748
1500 mm	C40S-1503DA010	1018749	C40E-1503DA010	1018750
1650 mm	C40S-1603DA010	1018751	C40E-1603DA010	1018752
1800 mm	C40S-1803DA010	1018753	C40E-1803DA010	1018754

- Resolution: 40 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304DA010	1018755	C40E-0304DA010	1018756
450 mm	C40S-0404DA010	1018757	C40E-0404DA010	1018758
600 mm	C40S-0604DA010	1018759	C40E-0604DA010	1018760
750 mm	C40S-0704DA010	1018762	C40E-0704DA010	1018763
900 mm	C40S-0904DA010	1018765	C40E-0904DA010	1018766
1050 mm	C40S-1004DA010	1018767	C40E-1004DA010	1018768
1200 mm	C40S-1204DA010	1018769	C40E-1204DA010	1018770
1350 mm	C40S-1304DA010	1018771	C40E-1304DA010	1018772
1500 mm	C40S-1504DA010	1018773	C40E-1504DA010	1018774
1650 mm	C40S-1604DA010	1018775	C40E-1604DA010	1018776
1800 mm	C40S-1804DA010	1018777	C40E-1804DA010	1018778

C4000 Standard Host with extension connection M12 x 7 + FE

Usage	As first or middle system in a cascade
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Extension connection: M12 x 7 + FE Configuration connection: M8 x 4

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301DA040	1028969	C40E-0301DA040	1028970
450 mm	C40S-0401DA040	1028967	C40E-0401DA040	1028968
600 mm	C40S-0601DA040	1028971	C40E-0601DA040	1028972
750 mm	C40S-0701DA040	1028973	C40E-0701DA040	1028974
900 mm	C40S-0901DA040	1028975	C40E-0901DA040	1028976
1050 mm	C40S-1001DA040	1028977	C40E-1001DA040	1028978
1200 mm	C40S-1201DA040	1028979	C40E-1201DA040	1028980
1350 mm	C40S-1301DA040	1028981	C40E-1301DA040	1028982
1500 mm	C40S-1501DA040	1028983	C40E-1501DA040	1028984
1650 mm	C40S-1601DA040	1028985	C40E-1601DA040	1028986
1800 mm	C40S-1801DA040	1028987	C40E-1801DA040	1028988

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303DA040	1029001	C40E-0303DA040	1029002
450 mm	C40S-0403DA040	1029003	C40E-0403DA040	1029004
600 mm	C40S-0603DA040	1029005	C40E-0603DA040	1029006
750 mm	C40S-0703DA040	1029007	C40E-0703DA040	1029008
900 mm	C40S-0903DA040	1029009	C40E-0903DA040	1029010
1050 mm	C40S-1003DA040	1029011	C40E-1003DA040	1029012
1200 mm	C40S-1203DA040	1029013	C40E-1203DA040	1029014
1350 mm	C40S-1303DA040	1029015	C40E-1303DA040	1029016
1500 mm	C40S-1503DA040	1029017	C40E-1503DA040	1029018
1650 mm	C40S-1603DA040	1029019	C40E-1603DA040	1029020
1800 mm	C40S-1803DA040	1029021	C40E-1803DA040	1029022

C4000 Standard Guest with straight system connection

Usage	As last system in a cascade, configurable via host
Connection types	System connection: fixed connection cable 320 mm with plug M12 x 7 + FE, straight

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0101CT400	1028796	C46E-0101CT400	1028797
300 mm	C46S-0301CT400	1028802	C46E-0301CT400	1028803
450 mm	C46S-0401CT400	1028804	C46E-0401CT400	1028805
600 mm	C46S-0601CT400	1028806	C46E-0601CT400	1028807
750 mm	C46S-0701CT400	1028808	C46E-0701CT400	1028809
900 mm	C46S-0901CT400	1040173	C46E-0901CT400	1040174
1050 mm	C46S-1001CT400	1040175	C46E-1001CT400	1040176
1200 mm	C46S-1201CT400	1040177	C46E-1201CT400	1040178
1350 mm	C46S-1301CT400	1040179	C46E-1301CT400	1040180
1500 mm	C46S-1501CT400	1040181	C46E-1501CT400	1040214
1650 mm	C46S-1601CT400	1040182	C46E-1601CT400	1040183
1800 mm	C46S-1801CT400	1040184	C46E-1801CT400	1040185

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0103CT400	1028879	C46E-0103CT400	1028880
300 mm	C46S-0303CT400	1028881	C46E-0303CT400	1028882
450 mm	C46S-0403CT400	1028883	C46E-0403CT400	1028884
600 mm	C46S-0603CT400	1028885	C46E-0603CT400	1028886
750 mm	C46S-0703CT400	1028887	C46E-0703CT400	1028888
900 mm	C46S-0903CT400	1040193	C46E-0903CT400	1040194
1050 mm	C46S-1003CT400	1040195	C46E-1003CT400	1040196
1200 mm	C46S-1203CT400	1040197	C46E-1203CT400	1040198
1350 mm	C46S-1303CT400	1040199	C46E-1303CT400	1040200
1500 mm	C46S-1503CT400	1040201	C46E-1503CT400	1040202
1650 mm	C46S-1603CT400	1040203	C46E-1603CT400	1040204
1800 mm	C46S-1803CT400	1040205	C46E-1803CT400	1040206

C4000 Standard Guest with angled system connection

Usage	As last system in a cascade, configurable via host
Connection types	System connection: fixed connection cable 320 mm with plug M12 x 7 + FE, angled

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0101CT500	1028810	C46E-0101CT500	1028811
300 mm	C46S-0301CT500	1028812	C46E-0301CT500	1028813
450 mm	C46S-0401CT500	1028814	C46E-0401CT500	1028815
600 mm	C46S-0601CT500	1028816	C46E-0601CT500	1028817
750 mm	C46S-0701CT500	1028818	C46E-0701CT500	1028819

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C46S-0103CT500	1028901	C46E-0103CT500	1028902
300 mm	C46S-0303CT500	1028903	C46E-0303CT500	1028904
450 mm	C46S-0403CT500	1028905	C46E-0403CT500	1028906
600 mm	C46S-0603CT500	1028907	C46E-0603CT500	1028908
750 mm	C46S-0703CT500	1028909	C46E-0703CT500	1028910

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C4000 Standard without extension connection, with pre-configuration C

Based on C4000 Standard	With the following pre-configuration			
	C	D	E	F
Restart interlock	External	External	Internal	Internal
External device monitoring	Selected	Selected	Selected	Selected
Beam coding	Non-coded	Non-coded	Non-coded	Non-coded
Scanning range	Short	Long	Short	Long

- Resolution: 14 mm
- Scanning range: 0 m ... 2.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301CA010	1018591	C40E-0301CC010	1022358
450 mm	C40S-0401CA010	1018347	C40E-0401CC010	1022359
600 mm	C40S-0601CA010	1018593	C40E-0601CC010	1022360
750 mm	C40S-0701CA010	1018595	C40E-0701CC010	1022361
900 mm	C40S-0901CA010	1018597	C40E-0901CC010	1022362
1050 mm	C40S-1001CA010	1018599	C40E-1001CC010	1022363
1200 mm	C40S-1201CA010	1018601	C40E-1201CC010	1022364
1350 mm	C40S-1301CA010	1018603	C40E-1301CC010	1022365
1500 mm	C40S-1501CA010	1018605	C40E-1501CC010	1022366
1650 mm	C40S-1601CA010	1018607	C40E-1601CC010	1022367
1800 mm	C40S-1801CA010	1018609	C40E-1801CC010	1022368

- Resolution: 20 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302CA010	1018613	C40E-0302CC010	1022369
450 mm	C40S-0402CA010	1018615	C40E-0402CC010	1022370
600 mm	C40S-0602CA010	1018617	C40E-0602CC010	1022371
750 mm	C40S-0702CA010	1018619	C40E-0702CC010	1022372
900 mm	C40S-0902CA010	1018621	C40E-0902CC010	1022373
1050 mm	C40S-1002CA010	1018623	C40E-1002CC010	1022374
1200 mm	C40S-1202CA010	1018625	C40E-1202CC010	1022375
1350 mm	C40S-1302CA010	1018627	C40E-1302CC010	1022376
1500 mm	C40S-1502CA010	1018629	C40E-1502CC010	1022377
1650 mm	C40S-1602CA010	1018631	C40E-1602CC010	1022378
1800 mm	C40S-1802CA010	1018633	C40E-1802CC010	1022379

- Resolution: 30 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303CA010	1018635	C40E-0303CC010	1022380
450 mm	C40S-0403CA010	1018637	C40E-0403CC010	1022381
600 mm	C40S-0603CA010	1018639	C40E-0603CC010	1022382
750 mm	C40S-0703CA010	1018641	C40E-0703CC010	1022383
900 mm	C40S-0903CA010	1018643	C40E-0903CC010	1022384
1050 mm	C40S-1003CA010	1018645	C40E-1003CC010	1022385
1200 mm	C40S-1203CA010	1018647	C40E-1203CC010	1022386
1350 mm	C40S-1303CA010	1018649	C40E-1303CC010	1022387
1500 mm	C40S-1503CA010	1018651	C40E-1503CC010	1022388
1650 mm	C40S-1603CA010	1018653	C40E-1603CC010	1022389
1800 mm	C40S-1803CA010	1018655	C40E-1803CC010	1022390

F

- Resolution: 40 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304CA010	1018657	C40E-0304CC010	1022391
450 mm	C40S-0404CA010	1018659	C40E-0404CC010	1022392
600 mm	C40S-0604CA010	1018661	C40E-0604CC010	1022393
750 mm	C40S-0704CA010	1018663	C40E-0704CC010	1022394
900 mm	C40S-0904CA010	1018665	C40E-0904CC010	1022395
1050 mm	C40S-1004CA010	1018667	C40E-1004CC010	1022396
1200 mm	C40S-1204CA010	1018669	C40E-1204CC010	1022397
1350 mm	C40S-1304CA010	1018671	C40E-1304CC010	1022398
1500 mm	C40S-1504CA010	1018673	C40E-1504CC010	1022399
1650 mm	C40S-1604CA010	1018675	C40E-1604CC010	1022400
1800 mm	C40S-1804CA010	1018677	C40E-1804CC010	1022401

C4000 Standard without extension connection, with pre-configuration D

Based on C4000 Standard	With the following pre-configuration			
	C	D	E	F
Restart interlock	External	External	Internal	Internal
External device monitoring	Selected	Selected	Selected	Selected
Beam coding	Non-coded	Non-coded	Non-coded	Non-coded
Scanning range	Short	Long	Short	Long

- Resolution: 14 mm
- Scanning range: 2 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301CA010	1018591	C40E-0301CD010	1022402
450 mm	C40S-0401CA010	1018347	C40E-0401CD010	1022403
600 mm	C40S-0601CA010	1018593	C40E-0601CD010	1022404
750 mm	C40S-0701CA010	1018595	C40E-0701CD010	1022405
900 mm	C40S-0901CA010	1018597	C40E-0901CD010	1022406
1050 mm	C40S-1001CA010	1018599	C40E-1001CD010	1022407
1200 mm	C40S-1201CA010	1018601	C40E-1201CD010	1022408
1350 mm	C40S-1301CA010	1018603	C40E-1301CD010	1022409
1500 mm	C40S-1501CA010	1018605	C40E-1501CD010	1022410
1650 mm	C40S-1601CA010	1018607	C40E-1601CD010	1022411
1800 mm	C40S-1801CA010	1018609	C40E-1801CD010	1022412

- Resolution: 20 mm
- Scanning range: 5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302CA010	1018613	C40E-0302CD010	1022413
450 mm	C40S-0402CA010	1018615	C40E-0402CD010	1022414
600 mm	C40S-0602CA010	1018617	C40E-0602CD010	1022415
750 mm	C40S-0702CA010	1018619	C40E-0702CD010	1022416
900 mm	C40S-0902CA010	1018621	C40E-0902CD010	1022417
1050 mm	C40S-1002CA010	1018623	C40E-1002CD010	1022418
1200 mm	C40S-1202CA010	1018625	C40E-1202CD010	1022419
1350 mm	C40S-1302CA010	1018627	C40E-1302CD010	1022420
1500 mm	C40S-1502CA010	1018629	C40E-1502CD010	1022421
1650 mm	C40S-1602CA010	1018631	C40E-1602CD010	1022422
1800 mm	C40S-1802CA010	1018633	C40E-1802CD010	1022423

- Resolution: 30 mm
- Scanning range: 5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303CA010	1018635	C40E-0303CD010	1022424
450 mm	C40S-0403CA010	1018637	C40E-0403CD010	1022425
600 mm	C40S-0603CA010	1018639	C40E-0603CD010	1022426
750 mm	C40S-0703CA010	1018641	C40E-0703CD010	1022427
900 mm	C40S-0903CA010	1018643	C40E-0903CD010	1022428
1050 mm	C40S-1003CA010	1018645	C40E-1003CD010	1022429
1200 mm	C40S-1203CA010	1018647	C40E-1203CD010	1022430
1350 mm	C40S-1303CA010	1018649	C40E-1303CD010	1022431
1500 mm	C40S-1503CA010	1018651	C40E-1503CD010	1022432
1650 mm	C40S-1603CA010	1018653	C40E-1603CD010	1022433
1800 mm	C40S-1803CA010	1018655	C40E-1803CD010	1022434

F

- Resolution: 40 mm
- Scanning range: 5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304CA010	1018657	C40E-0304CD010	1022435
450 mm	C40S-0404CA010	1018659	C40E-0404CD010	1022436
600 mm	C40S-0604CA010	1018661	C40E-0604CD010	1022437
750 mm	C40S-0704CA010	1018663	C40E-0704CD010	1022438
900 mm	C40S-0904CA010	1018665	C40E-0904CD010	1022439
1050 mm	C40S-1004CA010	1018667	C40E-1004CD010	1022440
1200 mm	C40S-1204CA010	1018669	C40E-1204CD010	1022441
1350 mm	C40S-1304CA010	1018671	C40E-1304CD010	1022442
1500 mm	C40S-1504CA010	1018673	C40E-1504CD010	1022443
1650 mm	C40S-1604CA010	1018675	C40E-1604CD010	1022444
1800 mm	C40S-1804CA010	1018677	C40E-1804CD010	1022445

C4000 Standard without extension connection, with pre-configuration E

Based on C4000 Standard	With the following pre-configuration			
	C	D	E	F
Restart interlock	External	External	Internal	Internal
External device monitoring	Selected	Selected	Selected	Selected
Beam coding	Non-coded	Non-coded	Non-coded	Non-coded
Scanning range	Short	Long	Short	Long

- Resolution: 14 mm
- Scanning range: 0 m ... 2.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301CA010	1018591	C40E-0301CE010	1022446
450 mm	C40S-0401CA010	1018347	C40E-0401CE010	1022447
600 mm	C40S-0601CA010	1018593	C40E-0601CE010	1022448
750 mm	C40S-0701CA010	1018595	C40E-0701CE010	1022449
900 mm	C40S-0901CA010	1018597	C40E-0901CE010	1022450
1050 mm	C40S-1001CA010	1018599	C40E-1001CE010	1022451
1200 mm	C40S-1201CA010	1018601	C40E-1201CE010	1022452
1350 mm	C40S-1301CA010	1018603	C40E-1301CE010	1022453
1500 mm	C40S-1501CA010	1018605	C40E-1501CE010	1022454
1650 mm	C40S-1601CA010	1018607	C40E-1601CE010	1022455
1800 mm	C40S-1801CA010	1018609	C40E-1801CE010	1022456

- Resolution: 20 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302CA010	1018613	C40E-0302CE010	1022457
450 mm	C40S-0402CA010	1018615	C40E-0402CE010	1022458
600 mm	C40S-0602CA010	1018617	C40E-0602CE010	1022459
750 mm	C40S-0702CA010	1018619	C40E-0702CE010	1022460
900 mm	C40S-0902CA010	1018621	C40E-0902CE010	1022461
1050 mm	C40S-1002CA010	1018623	C40E-1002CE010	1022462
1200 mm	C40S-1202CA010	1018625	C40E-1202CE010	1022463
1350 mm	C40S-1302CA010	1018627	C40E-1302CE010	1022464
1500 mm	C40S-1502CA010	1018629	C40E-1502CE010	1022465
1650 mm	C40S-1602CA010	1018631	C40E-1602CE010	1022466
1800 mm	C40S-1802CA010	1018633	C40E-1802CE010	1022467

- Resolution: 30 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303CA010	1018635	C40E-0303CE010	1022468
450 mm	C40S-0403CA010	1018637	C40E-0403CE010	1022469
600 mm	C40S-0603CA010	1018639	C40E-0603CE010	1022470
750 mm	C40S-0703CA010	1018641	C40E-0703CE010	1022471
900 mm	C40S-0903CA010	1018643	C40E-0903CE010	1022472
1050 mm	C40S-1003CA010	1018645	C40E-1003CE010	1022473
1200 mm	C40S-1203CA010	1018647	C40E-1203CE010	1022474
1350 mm	C40S-1303CA010	1018649	C40E-1303CE010	1022475
1500 mm	C40S-1503CA010	1018651	C40E-1503CE010	1022476
1650 mm	C40S-1603CA010	1018653	C40E-1603CE010	1022477
1800 mm	C40S-1803CA010	1018655	C40E-1803CE010	1022478

F

- Resolution: 40 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304CA010	1018657	C40E-0304CE010	1022479
450 mm	C40S-0404CA010	1018659	C40E-0404CE010	1022480
600 mm	C40S-0604CA010	1018661	C40E-0604CE010	1022481
750 mm	C40S-0704CA010	1018663	C40E-0704CE010	1022482
900 mm	C40S-0904CA010	1018665	C40E-0904CE010	1022483
1050 mm	C40S-1004CA010	1018667	C40E-1004CE010	1022484
1200 mm	C40S-1204CA010	1018669	C40E-1204CE010	1022485
1350 mm	C40S-1304CA010	1018671	C40E-1304CE010	1022486
1500 mm	C40S-1504CA010	1018673	C40E-1504CE010	1022487
1650 mm	C40S-1604CA010	1018675	C40E-1604CE010	1022488
1800 mm	C40S-1804CA010	1018677	C40E-1804CE010	1022489

C4000 Standard without extension connection, with pre-configuration F

Based on C4000 Standard	With the following pre-configuration			
	C	D	E	F
Restart interlock	External	External	Internal	Internal
External device monitoring	Selected	Selected	Selected	Selected
Beam coding	Non-coded	Non-coded	Non-coded	Non-coded
Scanning range	Short	Long	Short	Long

- Resolution: 14 mm
- Scanning range: 2 m ... 8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301CA010	1018591	C40E-0301CF010	1022490
450 mm	C40S-0401CA010	1018347	C40E-0401CF010	1022491
600 mm	C40S-0601CA010	1018593	C40E-0601CF010	1022492
750 mm	C40S-0701CA010	1018595	C40E-0701CF010	1022493
900 mm	C40S-0901CA010	1018597	C40E-0901CF010	1022494
1050 mm	C40S-1001CA010	1018599	C40E-1001CF010	1022495
1200 mm	C40S-1201CA010	1018601	C40E-1201CF010	1022496
1350 mm	C40S-1301CA010	1018603	C40E-1301CF010	1022497
1500 mm	C40S-1501CA010	1018605	C40E-1501CF010	1022498
1650 mm	C40S-1601CA010	1018607	C40E-1601CF010	1022499
1800 mm	C40S-1801CA010	1018609	C40E-1801CF010	1022500

- Resolution: 20 mm
- Scanning range: 5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302CA010	1018613	C40E-0302CF010	1022501
450 mm	C40S-0402CA010	1018615	C40E-0402CF010	1022502
600 mm	C40S-0602CA010	1018617	C40E-0602CF010	1022503
750 mm	C40S-0702CA010	1018619	C40E-0702CF010	1022504
900 mm	C40S-0902CA010	1018621	C40E-0902CF010	1022505
1050 mm	C40S-1002CA010	1018623	C40E-1002CF010	1022506
1200 mm	C40S-1202CA010	1018625	C40E-1202CF010	1022507
1350 mm	C40S-1302CA010	1018627	C40E-1302CF010	1022508
1500 mm	C40S-1502CA010	1018629	C40E-1502CF010	1022509
1650 mm	C40S-1602CA010	1018631	C40E-1602CF010	1022510
1800 mm	C40S-1802CA010	1018633	C40E-1802CF010	1022511

- Resolution: 30 mm
- Scanning range: 5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303CA010	1018635	C40E-0303CF010	1022512
450 mm	C40S-0403CA010	1018637	C40E-0403CF010	1022513
600 mm	C40S-0603CA010	1018639	C40E-0603CF010	1022514
750 mm	C40S-0703CA010	1018641	C40E-0703CF010	1022515
900 mm	C40S-0903CA010	1018643	C40E-0903CF010	1022516
1050 mm	C40S-1003CA010	1018645	C40E-1003CF010	1022517
1200 mm	C40S-1203CA010	1018647	C40E-1203CF010	1022518
1350 mm	C40S-1303CA010	1018649	C40E-1303CF010	1022519
1500 mm	C40S-1503CA010	1018651	C40E-1503CF010	1022520
1650 mm	C40S-1603CA010	1018653	C40E-1603CF010	1022521
1800 mm	C40S-1803CA010	1018655	C40E-1803CF010	1022522

F

- Resolution: 40 mm
- Scanning range: 5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0304CA010	1018657	C40E-0304CF010	1022523
450 mm	C40S-0404CA010	1018659	C40E-0404CF010	1022524
600 mm	C40S-0604CA010	1018661	C40E-0604CF010	1022525
750 mm	C40S-0704CA010	1018663	C40E-0704CF010	1022526
900 mm	C40S-0904CA010	1018665	C40E-0904CF010	1022527
1050 mm	C40S-1004CA010	1018667	C40E-1004CF010	1022528
1200 mm	C40S-1204CA010	1018669	C40E-1204CF010	1022529
1350 mm	C40S-1304CA010	1018671	C40E-1304CF010	1022530
1500 mm	C40S-1504CA010	1018673	C40E-1504CF010	1022531
1650 mm	C40S-1604CA010	1018675	C40E-1604CF010	1022532
1800 mm	C40S-1804CA010	1018677	C40E-1804CF010	1022533

UE402 switching amplifier

Description	Type	Part no.
Expands C4000 Standard, Advanced, Palletizer, Entry/Exit and Fusion with the functions described in the technical data, e.g., bypass, operating mode switching or in addition PSDI mode on C4000 Standard, Advanced.	UE402	1023577

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

C4000 Standard

General data

	Sender	Receiver
Resolution (depending on type)	14 mm ... 40 mm	
Scanning range (depending on type)	-	0 m ... 8 m / 0 m ... 19 m
Protective field height (depending on type)	300 mm ... 1800 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 26 ms ¹⁾
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

¹⁾ Without beam coding, without blanking, no cascaded systems. Other response times, see operating instructions.

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
Restart interlock (delivery status)	-	External
External device monitoring	-	✓
External device monitoring (delivery status)	-	Deactivated
Beam coding	✓	
Beam coding (delivery status)	Non-coded	
Reduced resolution (depending on type)	- / ✓	-
Extension connection (depending on type)	- / ✓	
Emergency stop / bypass at extension connection (depending on type)	-	- / ✓
Bypass (with UE402)	-	✓
Operating mode switching (with UE402)	-	✓
PSDI mode (with UE402)	✓	
Safe device communication via EFI/SDL	✓	
Configuration method	PC with CDS (configuration and diagnostic software)	

Electrical data

System part	Sender	Receiver
System connection	Hirschmann plug M26 x 11 + FE	
Connecting cable length	Max. 50 m ¹⁾	
Connecting cable wire cross-section	0.75 mm ²	
Extension connection (depending on type)	Hirschmann socket M26 x 11 + FE / socket M12 x 7 + FE	
Connection cable wire cross-section	M26 x 11 + FE	0.75 mm ²
	M12 x 7 + FE	0.25 mm ²
Configuration connection	M8 x 4	
Supply voltage V _S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 10 % ³⁾	
Power consumption	Max. 2 A	Max. 3 A
Safety outputs (OSSD)	Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
	Switching voltage HIGH	24 V DC (V _S - 2.25 V DC ... V _S)
	Switching voltage LOW	2 V DC
	Switching current	Max. 500 mA
Display elements	7-segment	

¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S.

C4000 Standard Guest

General data

	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	-	0 m ... 8 m / 0 m ... 19 m
Protective field height (depending on type)	150 mm ... 1800 mm	
Safety related parameters	Type	Type 4 (IEC 61496)
	Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
	Category	Category 4 (EN ISO 13849)
	Performance level	PL e (EN ISO 13849)
	PFHd (mean probability of a dangerous failure per hour)	1.5 x 10 ⁻⁸ (EN ISO 13849)
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 26 ms ¹⁾
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

¹⁾ Without beam coding, without blanking. Other response times, see operating instructions.

Functional data

System part	Sender	Receiver
Beam coding		✓
Beam coding (delivery status)	Non-coded	
PSDI mode (with UE402)		✓
Configuration method	PC with CDS (configuration and diagnostic software)	

Electrical data

System part	Sender	Receiver
System connection (depending on type)	Fixed connection cable 320 mm with plug M12 x 7 + FE, straight Fixed connection cable 320 mm with plug M12 x 7 + FE, angled	
Connecting cable length	Max. 3 m ¹⁾	
Connecting cable wire cross-section	0.25 mm ²	
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	$\leq 10\%$ ³⁾	
Power consumption	Max. 2 A	Max. 3 A
Safety outputs (OSSD)		2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Type of output	-	24 V DC ($V_S - 2.25$ V DC ... V_S)
Switching voltage HIGH	-	2 V DC
Switching voltage LOW	-	Max. 500 mA
Switching current	-	
Display elements	7-segment	

¹⁾ Between host and guest

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S .

UE402 switching amplifier

General data

Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	15×10^{-9} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Protection class	III (IEC 536:1976)	
Enclosure rating	IP 20 (IEC 60529)	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Storage temperature from ... to	-25 °C ... +70 °C	
Weight	120 g	
Housing material	Plastic	

Functional data

PSDI mode	✓
Bypass	✓
Operating mode switching	✓

Electrical data

Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC)
Residual ripple	$\leq 10 \%$
Power consumption	Max. 110 mA
Switch-on time	Max. 4 s
IN A1 ... A6, MCC-BDC, MCC-TDC	
Switching voltage HIGH	24 V DC (11 V DC ... 30 V DC)
Switching voltage LOW	-30 V DC ... 5 V DC
Switching current HIGH	6 mA ... 20 mA
Switching current LOW	-3 mA ... 0.5 mA
Change over time operating mode selection	Max. 2 s
IN B1, IN B2, OUT B1, OUT B2	
Change over time bypass	Max. 2 s
Synchronous time monitoring	200 ms

Safety outputs

Connection type	Screw-terminal connector
Conductor cross-section	0.25 mm ² ... 2.5 mm ²

F

Dimensional drawings

C4000 Standard without extension connection

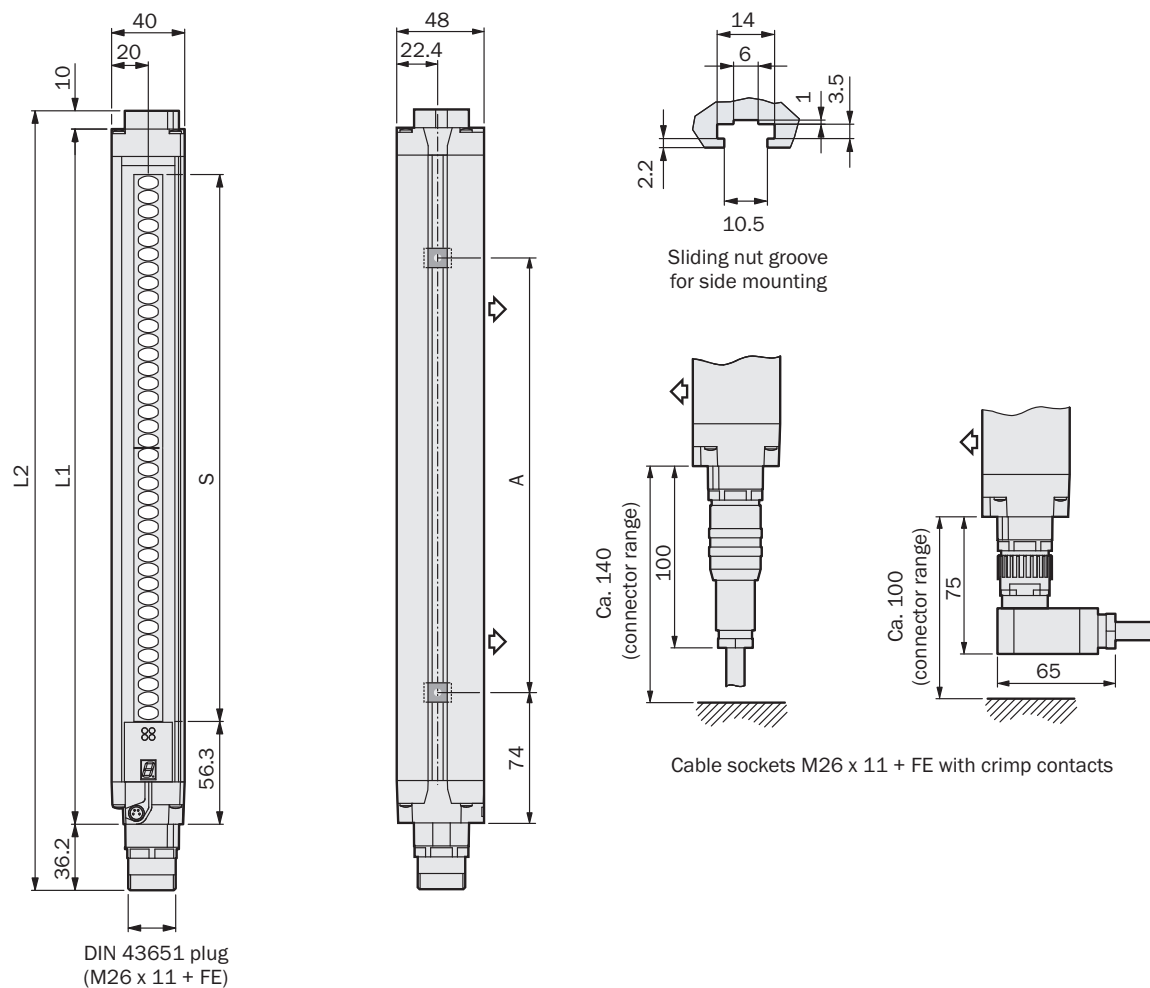


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	427	224
450	532	578	374
600	682	728	524
750	833	879	674
900	984	1030	824
1050	1134	1180	974
1200	1283	1329	1124
1350	1435	1481	1274
1500	1586	1632	1424
1650	1736	1782	1574
1800	1887	1933	1724

Dimensions in mm



C4000 Standard with angled system connection, without extension connection

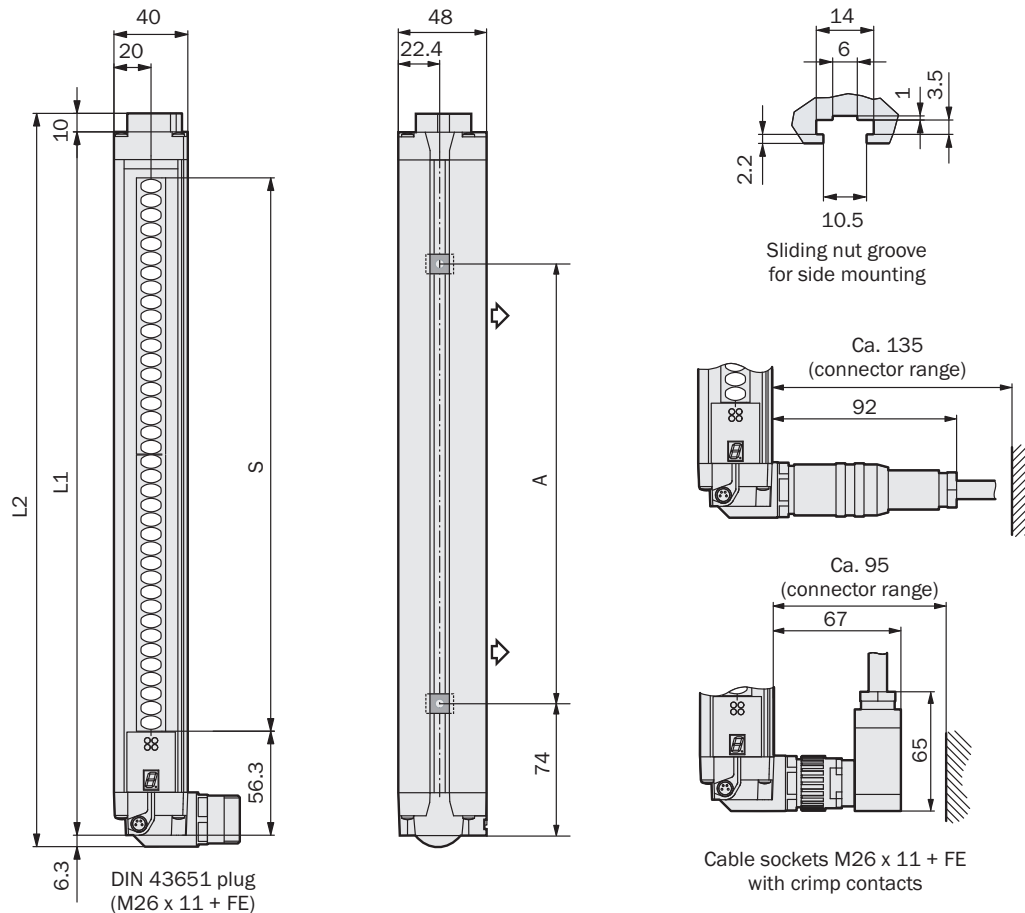


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	427	224
450	532	578	374
600	682	728	524
750	833	879	674
900	984	1030	824
1050	1134	1180	974
1200	1283	1329	1124
1350	1435	1481	1274
1500	1586	1632	1424
1650	1736	1782	1574
1800	1887	1933	1724

Dimensions in mm



C4000 Standard with extension connection M26 x 11 + FE

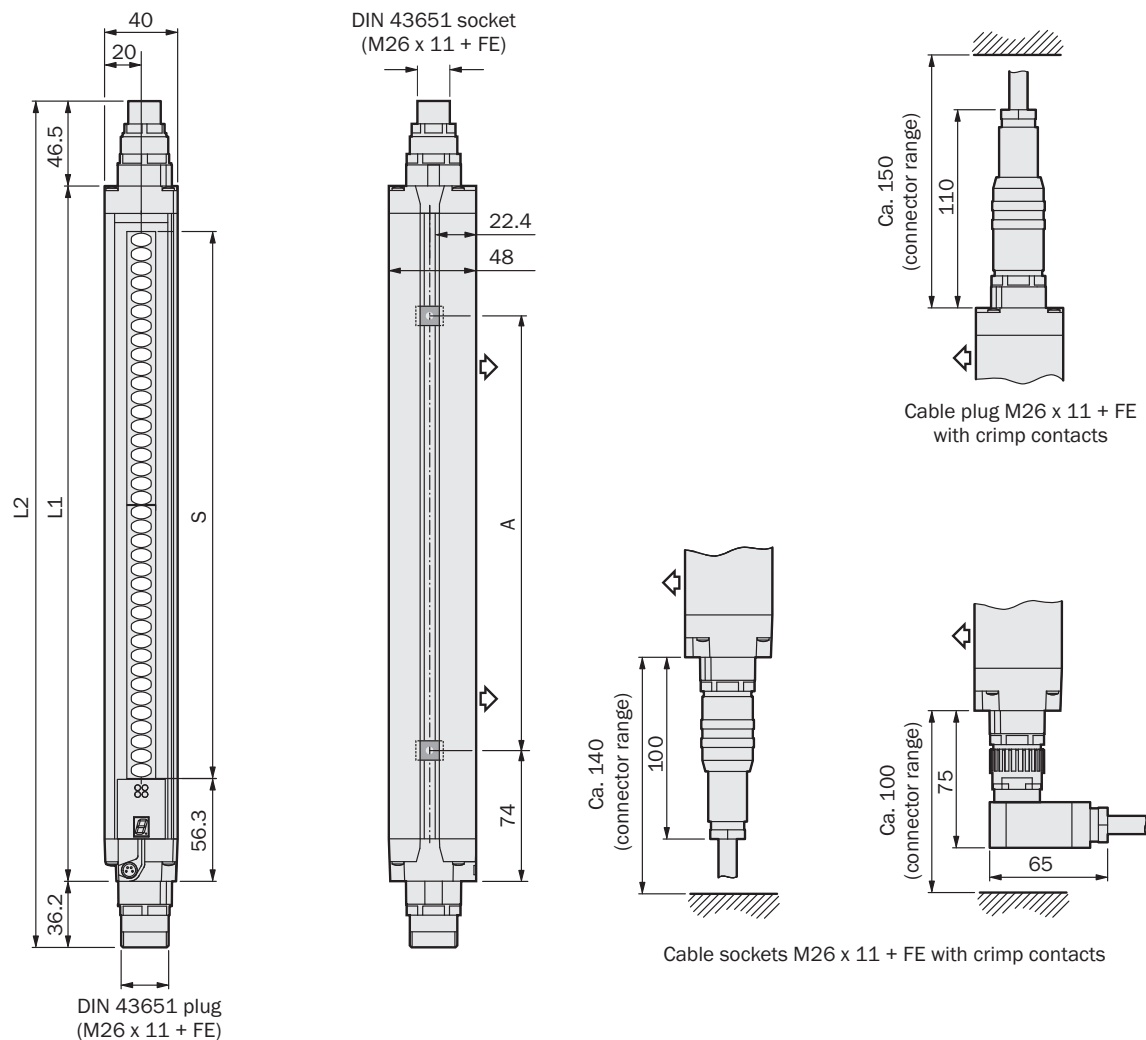


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	464	224
450	532	614	374
600	682	765	524
750	833	915	674
900	984	1066	824
1050	1134	1216	974
1200	1283	1366	1124
1350	1435	1517	1274
1500	1586	1669	1424
1650	1736	1818	1574
1800	1887	1969	1724

Dimensions in mm

C4000 Standard with extension connection M12 x 7 + FE

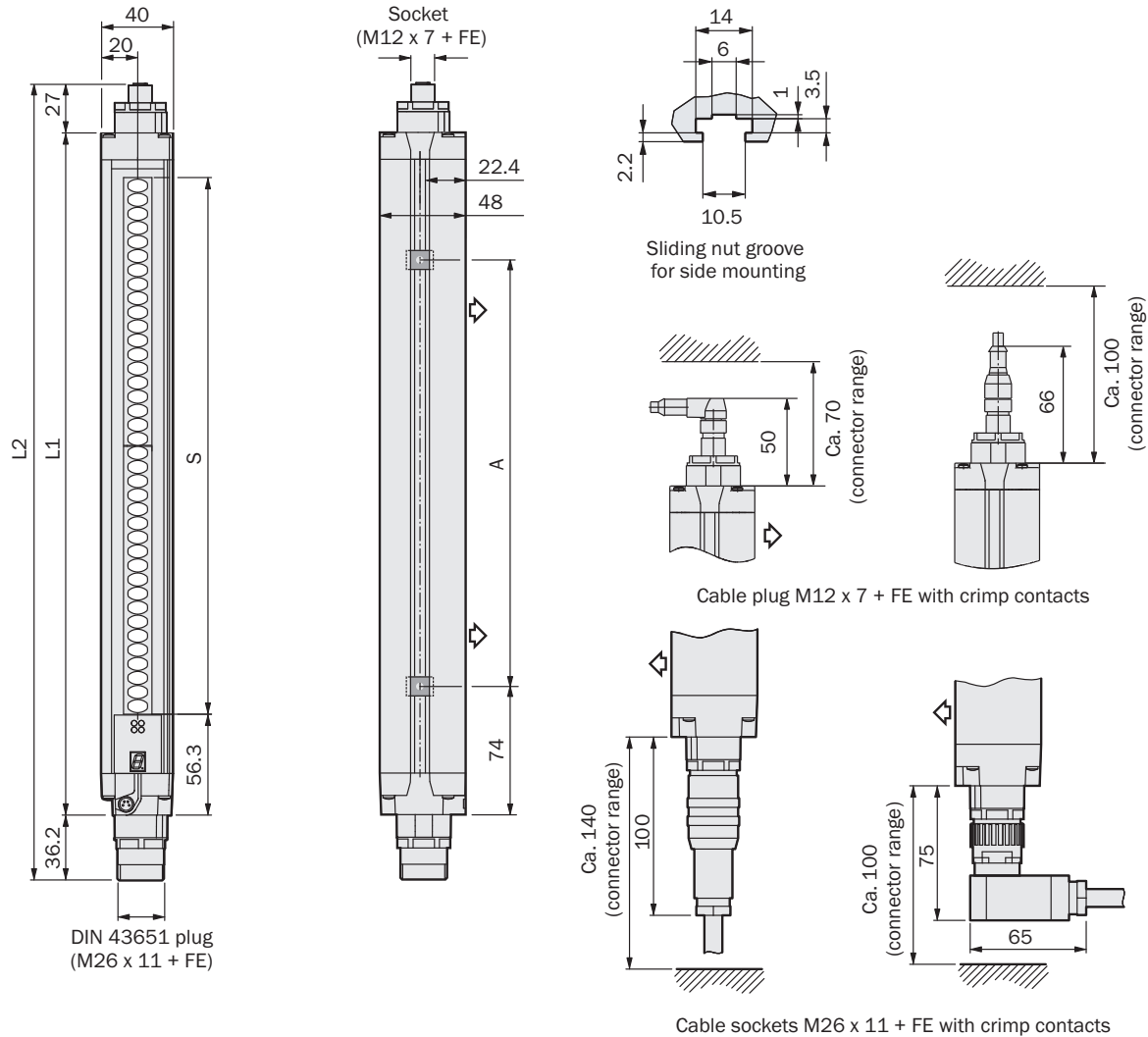


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	381	444	224
450	532	594	374
600	682	744	524
750	833	895	674
900	984	1046	824
1050	1134	1196	974
1200	1283	1346	1124
1350	1435	1497	1274
1500	1586	1649	1424
1650	1736	1798	1574
1800	1887	1949	1724

Dimensions in mm



C4000 Standard Guest with straight system connection

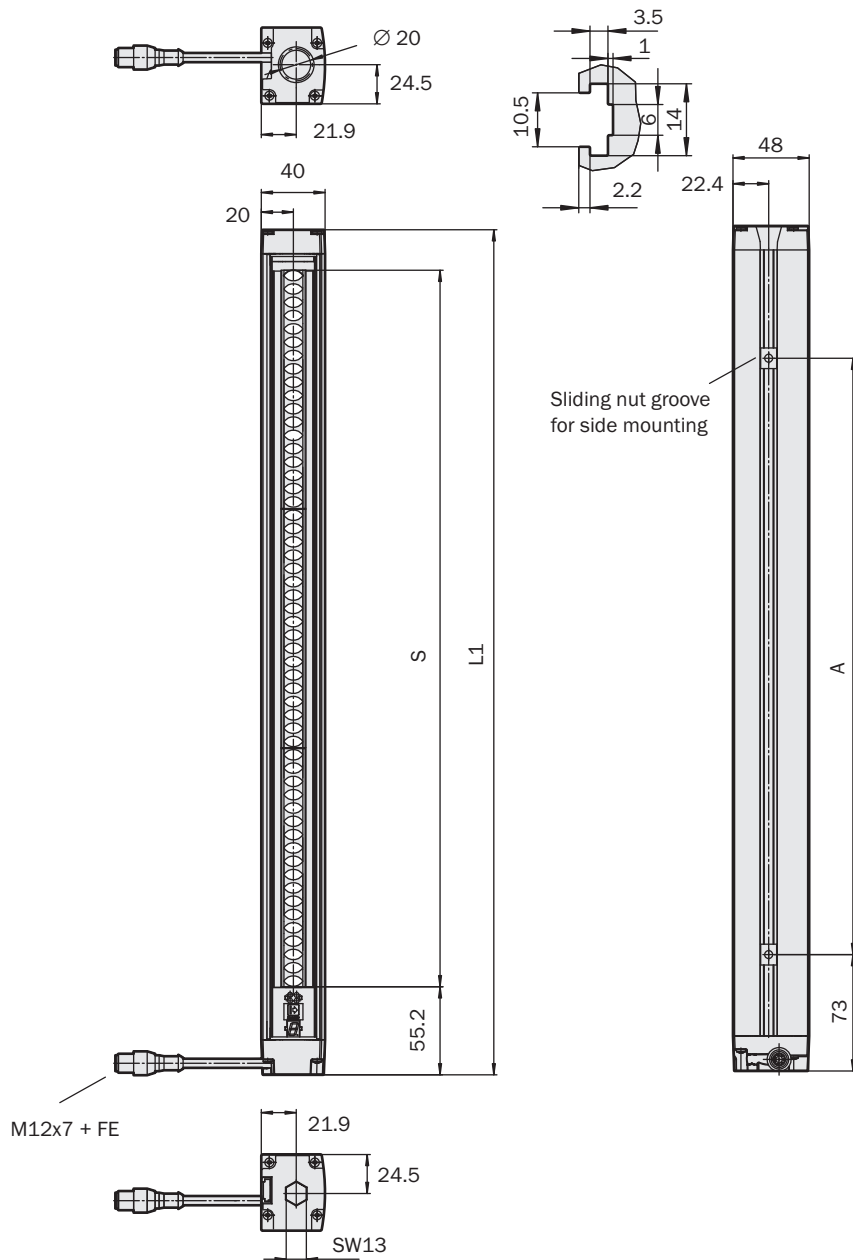


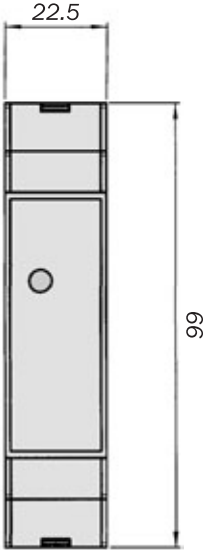
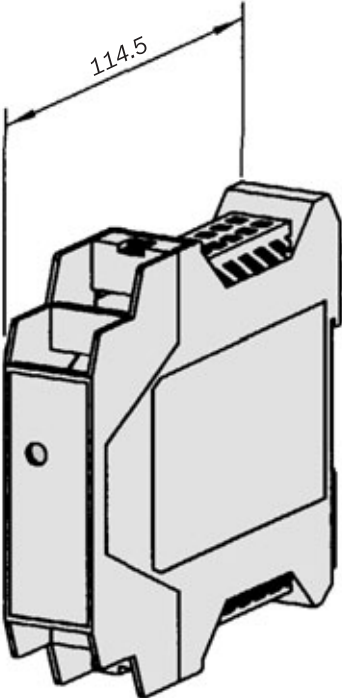
Illustration sender (receiver mirror image)

Protective field height S	L1	A
150	220	76
300	380	224
450	530	374
600	680	524
750	830	674
900	981	825
1050	1131	975
1200	1281	1125
1350	1432	1275
1500	1583	1427
1650	1733	1504
1800	1884	1728

Dimensions in mm

UE402 switching amplifier

F

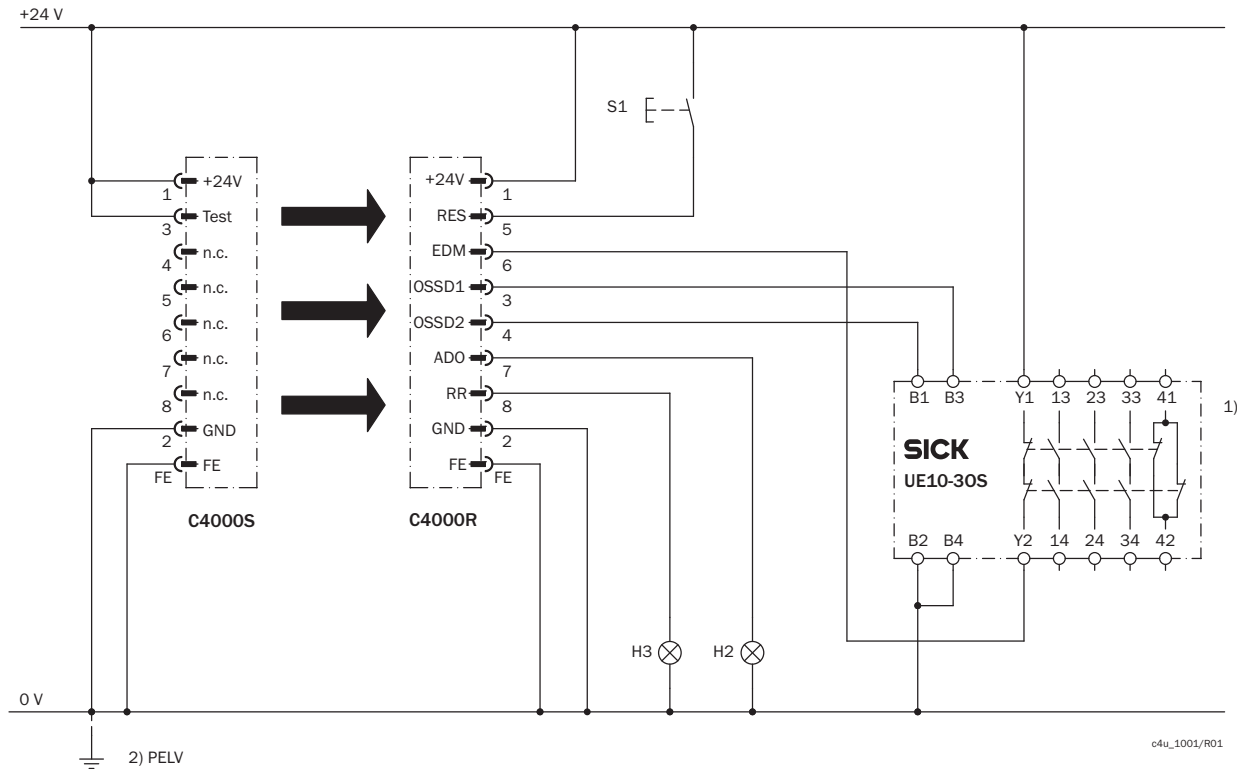


Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C4000 Standard on UE10-30S safety relay



Task

Connection of a C4000 Standard/Advanced/Palletizer/Fusion safety light curtain to UE10-30S. Operating mode: with restart interlock and external device monitoring.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the yellow LED on the receiver and the H3 lamp flash. The system is ready to be switched on. The system is enabled by pressing S1 (button is pressed and released). The OSSD1 and OSSD2 outputs are live and the UE10-30S is switched on. Upon the interruption of one of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

Fault analysis

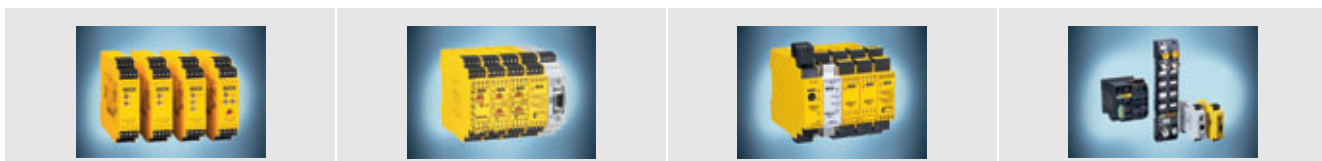
OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The incorrect functioning of the

UE10-30S will be detected but will not result in the loss of the shutdown function. Jamming of the S1 button prevents the output circuit from enabling H2 lamp is illuminated if there is contamination (adjustable parameter).

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
- 2) PELV in accordance with the requirements in EN 60204-1 / 6.4 Take note of the operating instructions of the integrated devices.

sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Mounting kit C4000 Guest, swivel mount	4	BEF-2WNAEEST4	2034959
	Mounting kit 11, replacement bracket, suitable for replacement of FGS	4	BEF-3WNGBCST4	2021646


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600



Connecting cables

Figure	Cable length	Remark	Type	Part no.
	By the meter	Fitting for EFI connections	Connection cable	6021437



Connecting cables (cont'd)

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	2.5 m	DOL-0612G2M5075KM0	2022544
			5 m	DOL-0612G05M075KM0	2022545
			7.5 m	DOL-0612G7M5075KM0	2022546
			10 m	DOL-0612G10M075KM0	2022547
			15 m	DOL-0612G15M075KM0	2022548
			20 m	DOL-0612G20M075KM0	2022549
			30 m	DOL-0612G30M075KM0	2022550
			50 m	DOL-0612G50MD75KM0	2033548




Connectors

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable plug M26 x 11 + FE	Straight	STE-0612G000GA3KM0	6021191
		Angled	STE-0612W000GA3KM0	6021192


Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	DOS-0612G000GA3KM0	6020757
		Angled	DOS-0612W000GA3KM0	6020758


Cascade connection cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann M26 x 11 + FE	Plug straight/ socket straight	0.25 m	DSL-0612GM25075KM0	2022278
			0.5 m	DSL-0612G0M5075KM0	2021838
			1 m	DSL-0612G01M075KM0	2022279
			1.5 m	DSL-0612G1M5075KM0	2022280
			2 m	DSL-0612G02M075KM0	2022281
			2.5 m	DSL-0612G2M5075KM0	2022282
			3 m	DSL-0612G03M075KM0	2022283
	Hirschmann M26 x 11 + FE	Plug straight/ socket angled	0.25 m	DSL-0612BM25075KM0	2022284
			0.5 m	DSL-0612B0M5075KM0	2022285
			1 m	DSL-0612B01M075KM0	2022286
			1.5 m	DSL-0612B1M5075KM0	2022287
			2 m	DSL-0612B02M075KM0	2022288
			2.5 m	DSL-0612B2M5075KM0	2022289
			3 m	DSL-0612B03M075KM0	2022290
	M12 x 8	Plug straight/ socket straight	1 m	DSL-127SG01ME25KM0	6021002
		Plug angled/ socket straight	1 m	DSL-127SA01ME25KM0	6030974

Control switch connection cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann M26 x 7 + FE	Plug straight	2.5 m	STL-0608G2M5075KM1	2026869
			10 m	STL-0608G10M075KM1	2026870


Configuration connection cables

Figure	Description	Connection type	Cable length	Type	Part no.
	For connecting the configuration connection to the PC	M8 x 4, SUB-D 9-pin	2 m	DSL-8D04G02M025KM1	6021195
			10 m	DSL-8D04G10M025KM1	2027649


Terminators

Description	Remark	Type	Part no.
Terminal with 182 Ω resistance for pin 9 and 10 on the system connection	For improving the EMC behavior if EFI device communication is not used	Terminal with 182 Ω resistance	2027227

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves

Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device columns with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

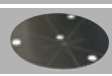



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Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMMEAL2	2045883
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2022412
	450 mm	2022413
	600 mm	2022414
	750 mm	2022415
	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420
	1650 mm	2022421
	1800 mm	2022422


Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2026853
	450 mm	2026854
	600 mm	2026855
	750 mm	2026856
	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863



Deflector mirrors PNS75

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424

Deflector mirrors PNS125

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column	-	-	-	4056731



Configuration software

Figure	Description	Type	Part no.
	CDS (Configuration & Diagnostic Software)	CDS	2032314

Configuration tools

Figure	Description	Type	Part no.
	For saving and transferring configurations. For C4000 Standard, Advanced, Palletizer, Entry/Exit, Fusion and M4000 Advanced, Advanced Curtain, Area	Clone Plug for C4000 and M4000	1029665
	For resetting a system position saved in a C4000 (host, guest 1, guest 2). For C4000 Standard, Advanced, Palletizer, Entry/Exit	Host-Guest Plug for C4000	1029717
	-	Wall mount	5318443

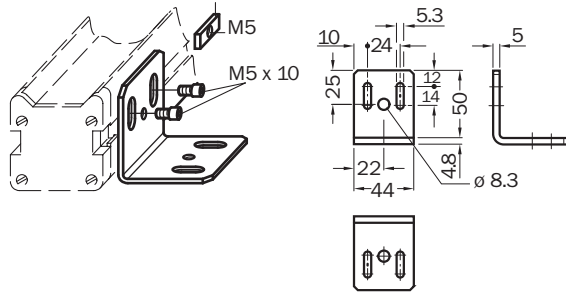
Device protection

Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	20 mm diameter	Test rod	2022600
	30 mm diameter	Test rod	2022602
	40 mm diameter	Test rod	2022604
	Test rod holder	BEF-3WNAAAAL1	2052249

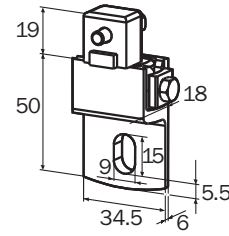
F

Dimensional drawings mounting systems

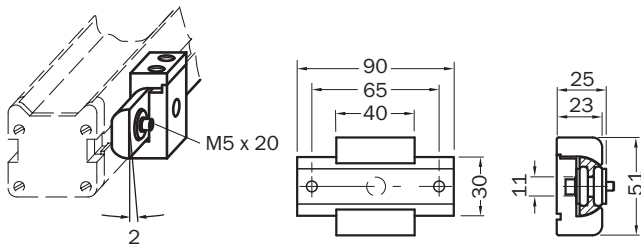
BEF-3WNGBAST4
Mounting kit 1, rigid



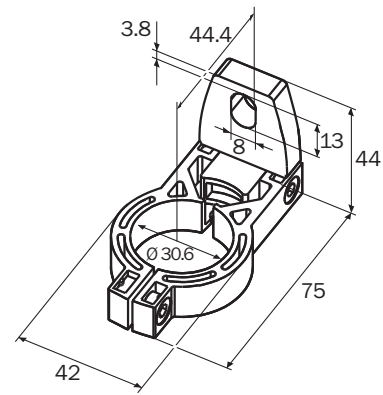
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



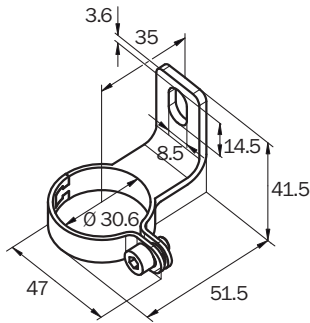
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



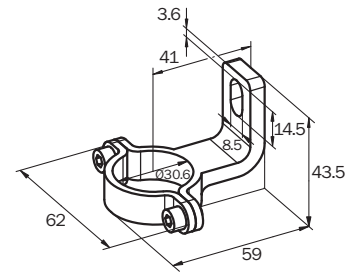
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



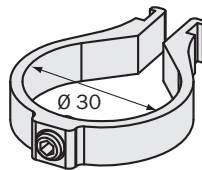
BEF-2SMMEAES4
Stainless steel bracket, adjustable



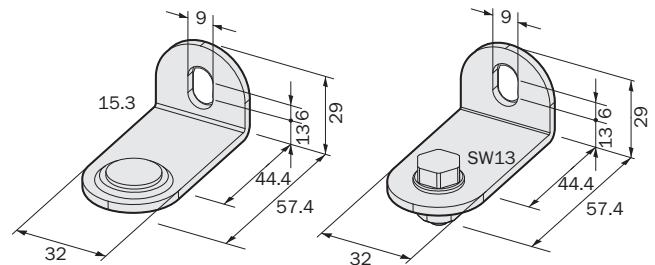
BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



BEF-2SMMEAAL4, BEF-2SMMEAAL2
Omega bracket, flexible and quick installation with only one screw



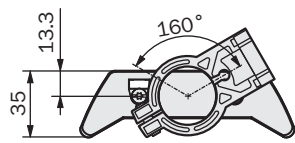
BEF-2WNAEEST4
Mounting kit C4000 Guest, swivel mount



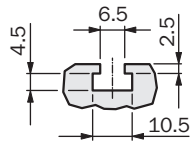
Dimensions in mm

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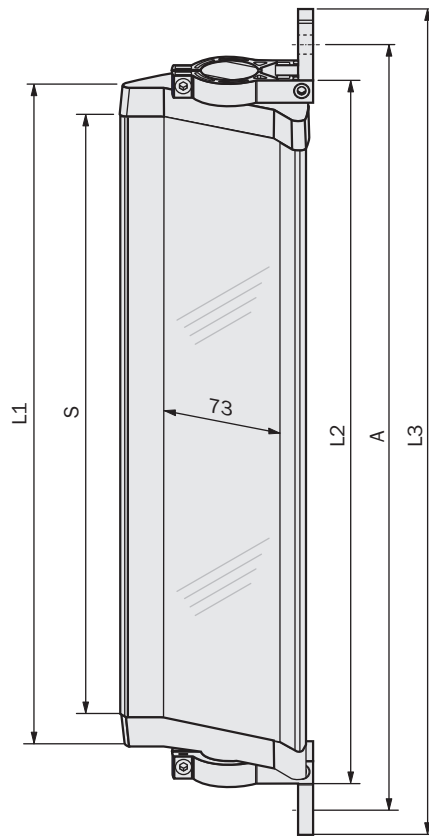
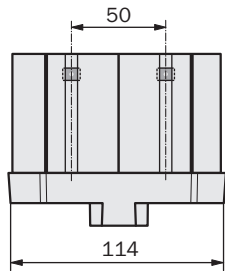
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

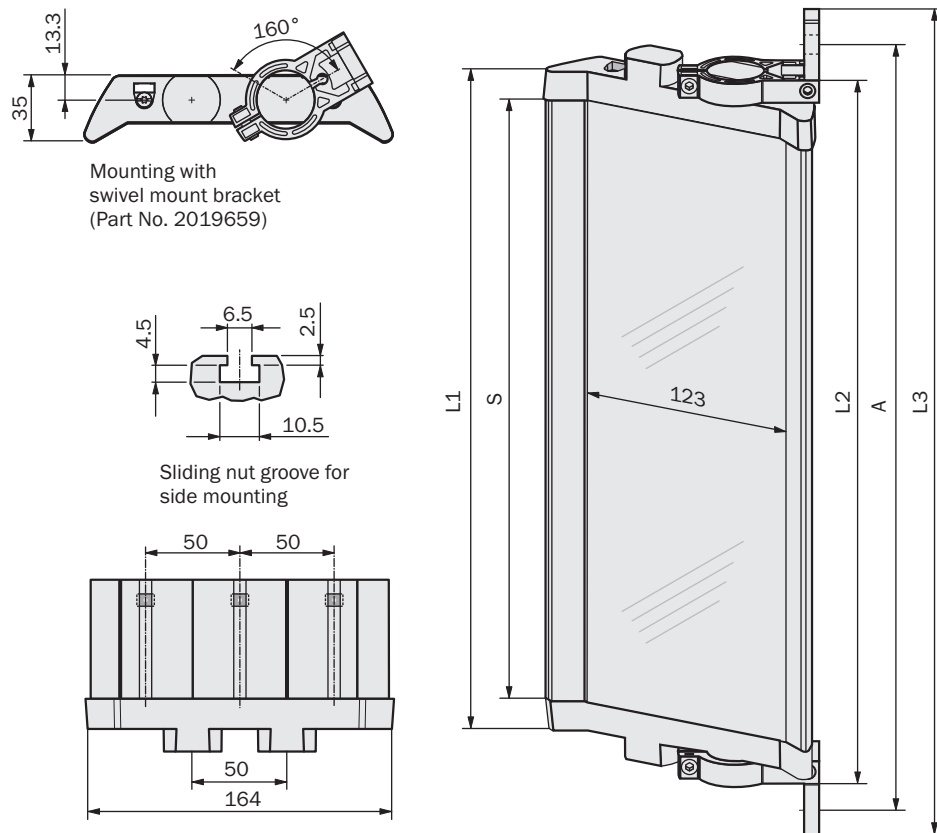


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Note: The products of the C4000 ATEX II 3G/3D family are based on products of the C4000 Standard, Advanced, Entry/Exit, Palletizer and Fusion family.
For explosion-proof applications outside the European Union, other local regulations may apply.

Protective field height (depending on type)	300 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 19 m
Resolution (depending on type)	20 mm / 30 mm / 40 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
ATEX category	3G (EN 60079-0, EN 60079-15, EN 60079-28) 3D (EN 61241-0, EN 61241-1)
Enclosure rating	IP 65

Product description

The C4000 ATEX II 3G/3D safety light curtain can be used in explosive areas, zone 2 and 22.

In addition to the features of the basic C4000 family, the C4000 ATEX II 3G/3D provides the following advantages:

- No mechanical adjustments required
- Customer-friendly pre-configuration:
 - Protective cap mounted on terminal compartment
 - ATEX label on the device
 - Modified type label

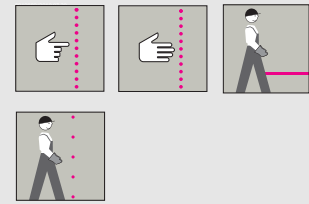
Applications

→ You can find more applications using the application finder at www.mysick.com

- Automotive industry
- Paint shops
- Wood industry
- Packaging industry / pallets



Paint line in the automotive industry



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- ATEX category 3G (gas) and 3D (dust)
- Beam coding
- External device monitoring (EDM)
- Restart interlock (RES)



Further information	Page
→ Ordering information	F-66
→ Systematic safety	A-0
→ Services	B-0

Ordering information

Note: Other resolutions and protective field heights available upon request.
C4000 ATEX II 3G/3D based on C4000 Entry/Exit, Palletizer or Fusion are also available upon request.
For explosion-proof applications outside the European Union, other local regulations may apply.

C4000 ATEX II 3G/3D based on C4000 Standard

→ For more data on C4000 Standard, see page F-29

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Configuration connection: M8 x 4

- Resolution: 20 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
900 mm	C40S-S126	1051570	C40E-S126	1051571
1200 mm	C40S-S117	1050714	C40E-S117	1050715

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
750 mm	C40S-S111	1025786	C40E-S111	1025787
900 mm	C40S-S114	1050298	C40E-S114	1050299
1050 mm	C40S-S118	1050716	C40E-S118	1050717
1350 mm	C40S-S115	1050300	C40E-S115	1050301
1500 mm	C40S-S005	1024072	C40E-S005	1024073
1650 mm	C40S-S123	1050747	C40E-S123	1050748
1800 mm	C40S-S124	1051138	C40E-S124	1051139

- Resolution: 40 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-S127	1052310	C40E-S127	1052311
600 mm	C40S-S119	1050718	C40E-S119	1050719
750 mm	C40S-S120	1050720	C40E-S120	1050721
900 mm	C40S-S121	1050722	C40E-S121	1050723
1050 mm	C40S-S122	1050724	C40E-S122	1050725
1350 mm	C40S-S125	1051372	C40E-S125	1051371
1500 mm	C40S-S113	1042292	C40E-S113	1042293
1800 mm	C40S-S110	1024052	C40E-S110	1024053

C4000 ATEX II 3G/3D based on C4000 Advanced

→ For more data on C4000 Advanced, see page F-2

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE, straight Configuration connection: M8 x 4

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
900 mm	C40S-S114	1050298	C40E-S116	1050537

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- 14/30 mm resolution
- 300 to 1800 mm protective field height
- Restart interlock (RES)
- External device monitoring (EDM)
- Beam coding
- LED/7-segment display
- Application diagnostic output (ADO)
- Configuration and diagnostics via PC
- SDL interface
- Muting configurable in conjunction with UE403
- End cap with integrated LED (optional)



Technical data overview

Scanning range (depending on type)	0 m ... 8 m / 0 m ... 19 m
Protective field height (depending on type)	300 mm ... 1800 mm
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The M4000 Advanced Curtain and the UE403 switching amplifier form the efficient solution for decentralized conventional muting applications involving automatic material transport that require high resolution (14/30 mm) due to a short safety distance. Access protection with muting can be achieved with maximum availability, thanks to their integrated functions, easily configured by PC via the RS-232 interface, and the simple in-situ connection of muting signals and control switches to the UE403.

The integrated functions and status and diagnostic information permit rapid commissioning and prevent unnecessary machine downtime.

The modular concept provides a high level of machine safety that takes economic efficiency into account since device properties can be adapted to meet specific requirements.

The integrated EFI interface allows the use of additional sensor functions (see A-8).

In-system added value

- Combined with safe control solutions by SICK
- Safe integration in network solutions
- M4000 Advanced Curtain with UE403 for the connection of:
 - 2 to 4 muting sensors
 - External muting lamp
 - Reset and override control switch
 - Conveyor belt stop signal
- Additional functions:
 - Concurrence monitoring
 - Total muting time monitoring
 - Sensor gap monitoring
 - Sensor test
 - Partial blanking
 - End of muting by ESPE
 - Integrated override
- Alternative to UE403: use of e.g., UE4155

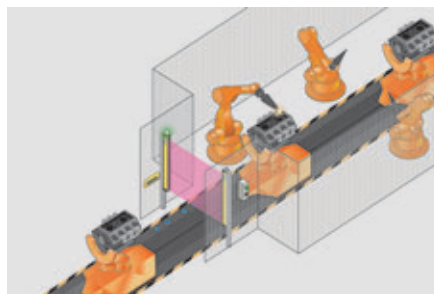
→ For more combinations, see annex

Applications

→ You can find more applications using the application finder at www.mysick.com

Provides access protection with or without muting on robot systems, machining centers in mechanical engineering applica-

tions, automated conveying storage and transport systems.



Access protection with muting on a motor machining station

Further information	Page
→ Technical specifications	F-71
→ Dimensional drawings	F-75
→ Connection diagrams	F-77
→ Accessories	F-78
→ Systematic safety	A-0
→ Services	B-0

Ordering information

Resolution 14 mm

Protective field height	End cap with integrated LED	Sender		Receiver	
		Type	Part no.	Type	Part no.
300 mm	-	M40S-60A503AA0	1203262	M40E-60A503RB0	1203263
	✓	M40S-60A503AA0	1203262	M40E-60A523RB0	1205622
450 mm	-	M40S-61A503AA0	1203264	M40E-61A503RB0	1203265
	✓	M40S-61A503AA0	1203264	M40E-61A523RB0	1205623
600 mm	-	M40S-62A503AA0	1203266	M40E-62A503RB0	1203267
	✓	M40S-62A503AA0	1203266	M40E-62A523RB0	1205625
750 mm	-	M40S-63A503AA0	1203240	M40E-63A503RB0	1203241
	✓	M40S-63A503AA0	1203240	M40E-63A523RB0	1205303
900 mm	-	M40S-64A503AA0	1203268	M40E-64A503RB0	1203269
	✓	M40S-64A503AA0	1203268	M40E-64A523RB0	1205626
1050 mm	-	M40S-65A503AA0	1203270	M40E-65A503RB0	1203271
	✓	M40S-65A503AA0	1203270	M40E-65A523RB0	1205627
1200 mm	-	M40S-66A503AA0	1203272	M40E-66A503RB0	1203273
	✓	M40S-66A503AA0	1203272	M40E-66A523RB0	1204827
1350 mm	-	M40S-67A503AA0	1203274	M40E-67A503RB0	1203275
	✓	M40S-67A503AA0	1203274	M40E-67A523RB0	1205628
1500 mm	-	M40S-68A503AA0	1203276	M40E-68A503RB0	1203277
	✓	M40S-68A503AA0	1203276	M40E-68A523RB0	1203511
1650 mm	-	M40S-69A503AA0	1203278	M40E-69A503RB0	1203279
	✓	M40S-69A503AA0	1203278	M40E-69A523RB0	1205629
1800 mm	-	M40S-70A503AA0	1203250	M40E-70A503RB0	1203280
	✓	M40S-70A503AA0	1203250	M40E-70A523RB0	1204828

F

Resolution 30 mm

Protective field height	End cap with integrated LED	Sender		Receiver	
		Type	Part no.	Type	Part no.
300 mm	-	M40S-60A303AA0	1201570	M40E-60A303RBO	1201572
	✓	M40S-60A303AA0	1201570	M40E-60A323RBO	1205630
450 mm	-	M40S-61A303AA0	1201127	M40E-61A303RBO	1201214
	✓	M40S-61A303AA0	1201127	M40E-61A323RBO	1205631
600 mm	-	M40S-62A303AA0	1201463	M40E-62A303RBO	1201464
	✓	M40S-62A303AA0	1201463	M40E-62A323RBO	1204362
750 mm	-	M40S-63A303AA0	1201571	M40E-63A303RBO	1201573
	✓	M40S-63A303AA0	1201571	M40E-63A323RBO	1205392
900 mm	-	M40S-64A303AA0	1201441	M40E-64A303RBO	1201442
	✓	M40S-64A303AA0	1201441	M40E-64A323RBO	1204680
1050 mm	-	M40S-65A303AA0	1201482	M40E-65A303RBO	1201483
	✓	M40S-65A303AA0	1201482	M40E-65A323RBO	1205632
1200 mm	-	M40S-66A303AA0	1201036	M40E-66A303RBO	1201035
	✓	M40S-66A303AA0	1201036	M40E-66A323RBO	1204764
1350 mm	-	M40S-67A303AA0	1203236	M40E-67A303RBO	1203242
	✓	M40S-67A303AA0	1203236	M40E-67A323RBO	1205633
1500 mm	-	M40S-68A303AA0	1203237	M40E-68A303RBO	1203243
	✓	M40S-68A303AA0	1203237	M40E-68A323RBO	1204598
1650 mm	-	M40S-69A303AA0	1203238	M40E-69A303RBO	1203244
	✓	M40S-69A303AA0	1203238	M40E-69A323RBO	1205634
1800 mm	-	M40S-70A303AA0	1203239	M40E-70A303RBO	1203245
	✓	M40S-70A303AA0	1203239	M40E-70A323RBO	1204829

UE403 switching amplifier

Type	Part no.
UE403-A0930	1026287

F

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

M4000 Advanced Curtain

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Protective field height (depending on type)	300 mm ... 1800 mm	
Scanning range		
Configurable	-	✓
Resolution 14 mm	-	0 m ... 2.5 m / 2 m ... 8 m
Resolution 30 mm	-	0 m ... 6 m / 5 m ... 19 m
Response time with beam coding (depending on type)	-	Max. 56 ms ¹⁾
Response time without beam coding (depending on type)	-	Max. 26 ms ¹⁾
Protection class	III (EN 50178:1998)	
Enclosure rating	IP 65 (EN 60529)	
Synchronization	Optical, without separate synchronization	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	2.8 x 10 ⁻⁸ (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Ambient operating temperature from ... to	-10 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	52 mm x 55.5 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	
Housing material	Aluminum alloy ALMGSI 0.5, powder coated	
Front screen material	Polycarbonate, scratch-resistant coating	

¹⁾ Other response times, see operating instructions.

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
Restart interlock (delivery status)	-	Activated
External device monitoring	-	✓
External device monitoring (delivery status)	-	Activated
Beam coding		✓
Beam coding (delivery status)		Non-coded
Configurable application diagnostic output	-	✓
Application diagnostic output (delivery status)	-	Contamination (OWS)
Sender test	✓	-
Sender test (delivery status)	Deactivated	-
Configurable scanning range	-	✓
Scanning range (delivery status) (depending on type)	-	8 m / 2.5 m
End cap with integrated LED (optional) (depending on type)	-	✓
SDL interface		✓
Safe device communication via EFI/SDL		✓
Configuration method	PC with CDS (configuration and diagnostic software)	
Concurrence monitoring (with UE403)	-	✓
Monitoring total muting time (with UE403)	-	✓
Sensor gap monitoring (with UE403)	-	✓
Sensor test (with UE403)	-	✓
Partial blanking (with UE403)	-	✓
End of muting by ESPE (with UE403)	-	✓
Belt stop (with UE403)	-	✓
Muting with override (with UE403)	-	✓

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Electrical data

System part	Sender	Receiver
System connection	M26 x 11 + FE Hirschmann plug	
Connecting cable wire cross-section	0.75 mm ²	
Connecting cable length	Max. 50 m ¹⁾	
Extension connection	-	Plug M12 x 5
Supply voltage V _s	24 V (19.2 V ... 28.8 V) ²⁾	
Residual ripple	± 10 %	
Power consumption	Max. 0.2 A	Max. 0.6 A
Display elements	LED/7-segment	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored ³⁾
Switching voltage HIGH	-	24 V DC (V _S - 2.25 V ... V _S)
Switching voltage LOW	-	2 V DC
Switching current	-	0 mA ... 500 mA
Application diagnostic output		
Switching voltage HIGH	-	24 V DC (V _S - 4.2 V ... V _S)
Switching voltage LOW	-	High resistance
Switching current	-	0 mA ... 100 mA

¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ The external voltage supply of the devices must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Applies to a voltage range between -30 V and +30 V.

UE403 switching amplifier

General data

Type of muting sensors	Optical sensors, inductive sensors, mechanical switches, controller signals
Protection class	III (EN 50178:1998)
Enclosure rating	IP 65 (IEC 60529)
Safety related parameters	
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
PFHd (mean probability of a dangerous failure per hour)	1.0 x 10 ⁻⁸ (EN ISO 13849) ¹⁾
T _M (Mission Time)	18 years (EN ISO 13849) ¹⁾
Ambient operating temperature from ... to	-10 °C ... +55 °C
Air humidity from ... to	15 % ... 95 %, non-condensing
Storage temperature from ... to	-25 °C ... +70 °C
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 60068-2-6)
Shock resistance	10 g, 16 ms (IEC 60068-2-29)
Housing material	Die-cast aluminum powder coated
Material, connector strip	Polyamide
Assembly	Flexible mounting to the M4000 Advanced or directly in the system

¹⁾ Only in conjunction with M4000 Advanced Curtain, M4000 Advanced or M4000 Advanced A/P

Electrical data

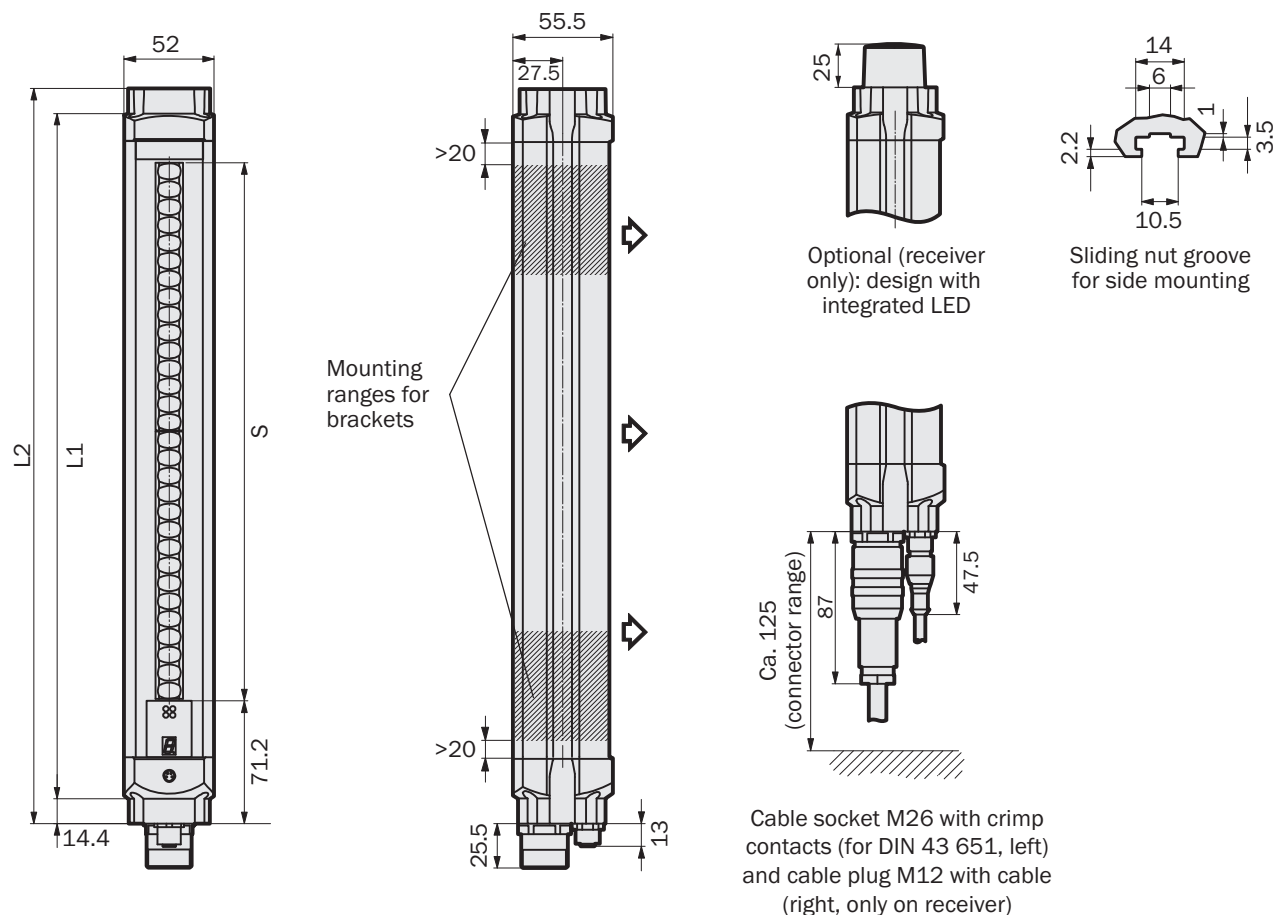
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC), via connected ESPE
Power consumption	Max. 2 A
Inputs override, reset, C1, belt stop, muting sensors	
Switching voltage HIGH	24 V DC (11 V DC ... 30 V DC)
Input current HIGH	10 mA (6 mA ... 15 mA)
Switching voltage LOW	0 V DC (-30 V DC ... 5 V DC)
Input current LOW	0 mA (-0.5 mA ... 1.5 mA)
Outputs voltage supply for reset, override, C1, muting sensors	
Supply voltage	24 V DC (15 V DC ... 28.8 V DC)
Output current for muting sensors	Max. 500 mA ¹⁾
Output current for reset, override, C1	400 mA ¹⁾
Muting lamp	
Output current	Monitored 20 mA ... 400 mA, at max. 5 W power consumption Not monitored 0 mA ... 400 mA, at max. 5 W power consumption
Connection type	Socket M12 x 5
Cable length	Max. 10 m ²⁾
Wire cross-section	0.34 mm ²
Cable resistance	< 0.5 Ohm (per cable)

¹⁾ Total of all supply currents from the connections RES/OVR, A1, A2, B1 and B2 (pin 1 in each case): max. 1000 mA

²⁾ Between UE403 and M4000 Advanced / Advanced Curtain as well as between the muting sensors/control switches/muting lamp and UE403

Dimensional drawings

M4000 Advanced Curtain



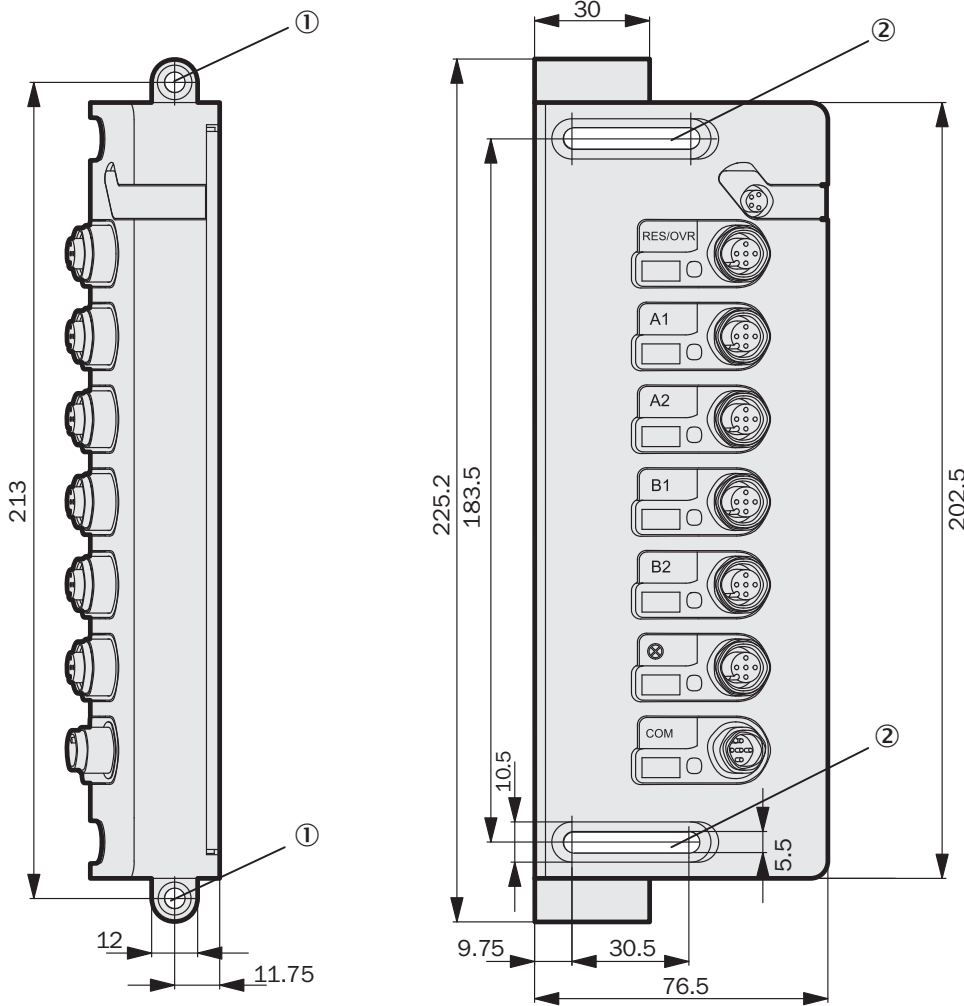
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Protective field height S	L1	L2
300	387	416
450	537	566
600	687	716
750	837	866
900	987	1016
1050	1137	1166
1200	1287	1316
1350	1437	1466
1500	1587	1616
1650	1737	1766
1800	1887	1916

Dimensions in mm

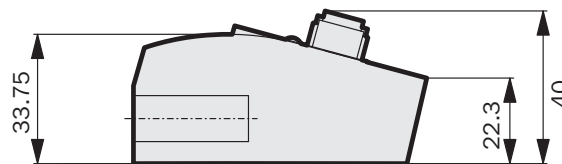
UE403 switching amplifier

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Note:

The fixing holes ① and slots ② are suitable for cheese head screws M5 x 30 as per DIN EN ISO 4762.

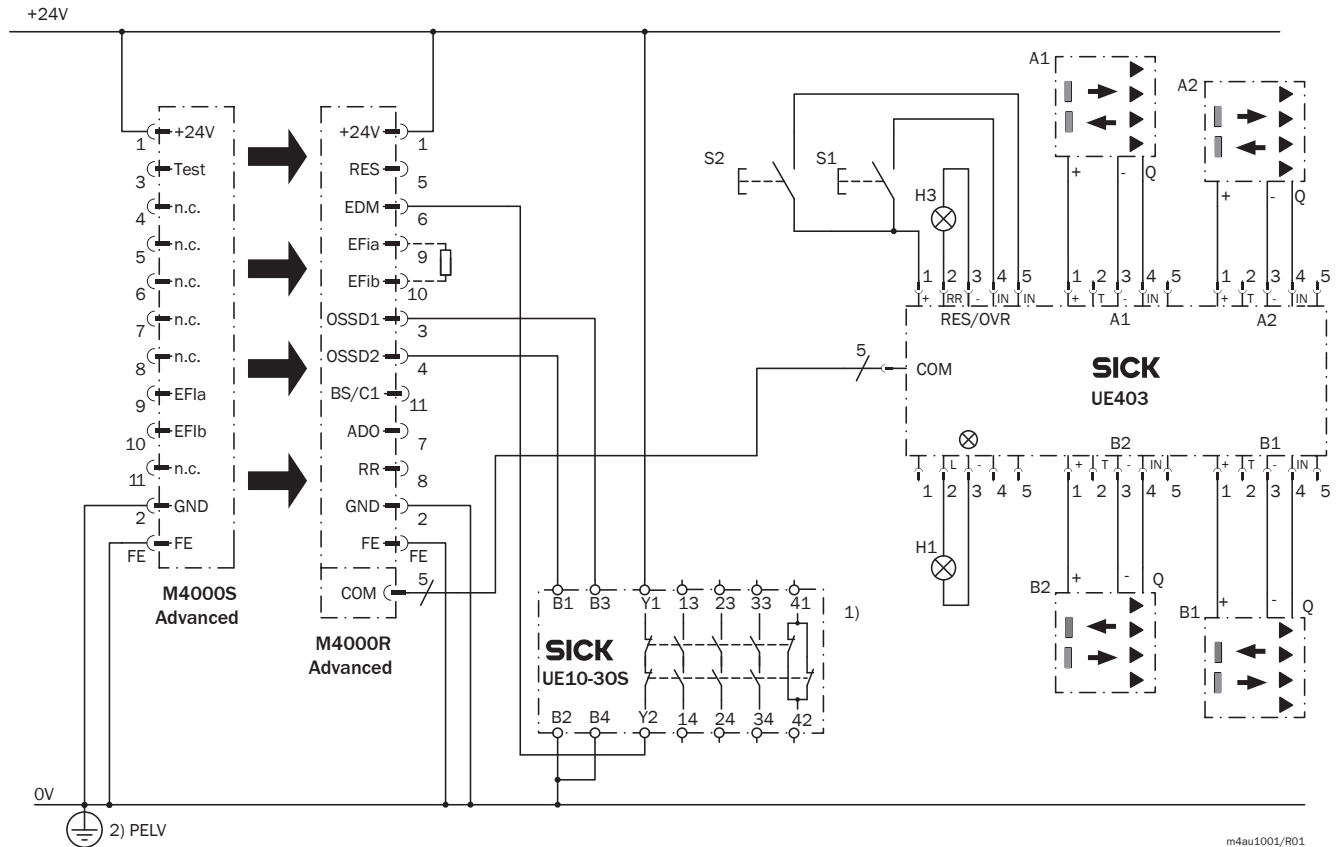


Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

M4000 Advanced Curtain with UE403 switching amplifier connected to UE10-30S safety relay



Task

Connection of an M4000 Advanced Curtain safety light curtain with UE403 switching amplifier to a UE10-30S safety relay. Muting with 4 photoelectric reflex switches (dark-switching, PNP). Operating mode: with restart interlock and external device monitoring.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the yellow LED on the receiver and the H3 lamp flash. The system is ready for switch-on and waits for an input signal/switch-on signal. The system is enabled by pressing and releasing the S1 button. The OSSD1 and OSSD2 outputs are live and the UE10-30S is switched on. Upon interruption of one or several of the light beams, the UE10-30S is de-energized by the OSSD1 and OSSD2 outputs.

Muting and override

When the light path is clear and the muting input conditions are valid, muting starts. The H1 muting lamp illuminates. Different time and monitoring functions can be configured.

When the light path is interrupted and muting sensors are active, e.g., because of muting errors or a new power on, override is enabled by pressing and releasing the S2 button.

Fault analysis

OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The erroneous behavior of the UE10-30S will be detected. The shutdown function is retained. On manipulation (e.g., jamming) of the S1 button, the system does not enable the output current circuits.

The failure of one muting sensor will be detected by the muting sequence, and prohibit a new muting cycle. On manipulation (e.g., jamming) of the S2 button, the system does not enable override. A permanent use of the override function will be inhibited through the device.

Comments

1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.

2) PELV in accordance with the requirements in EN 60204-1 / 6.4

Take note of the operating instructions of the integrated devices. This applies particularly to the use of configurable functions.

sens:Control – safe control solutions








Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).


Accessories

M4000 Advanced Curtain


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, adjustable	4	BEF-1SHABAAL4	2017751
	Mounting kit 12, swivel mount	4	BEF-2SMGEAKU4	2030510
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMGEAAL4	2044846



Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	2.5 m	DOL-0612G2M5075KM0	2022544
			5 m	DOL-0612G05M075KM0	2022545
			7.5 m	DOL-0612G7M5075KM0	2022546
			10 m	DOL-0612G10M075KM0	2022547
			15 m	DOL-0612G15M075KM0	2022548
			20 m	DOL-0612G20M075KM0	2022549
			30 m	DOL-0612G30M075KM0	2022550


Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	DOS-0612G000GA3KM0	6020757
		Angled	DOS-0612W000GA3KM0	6020758

Extension connection cables

Figure	Connection type	Direction of cable outlet	Cable length	Remark	Type	Part no.
	Plug M12 x 5, socket M12 x 5	Plug straight/ socket straight	0.6 m	Connection cable for M4000 Advanced with M12, 5-pin connector and UE403	DSL-1205-G0M6C	6025930
			1 m		DSL-1205-G01MC	6029280
			1.5 m		DSL-1205-G1M5C	6029281
			2 m		DSL-1205-G02MC	6025931
			5 m		DSL-1205-G05MC	6029282


Configuration connection cables

Figure	Description	Connection type	Cable length	Type	Part no.
	For connecting the configuration connection to the PC	M8 x 4, SUB-D 9-pin	2 m	DSL-8D04G02M025KM1	6021195
			10 m	DSL-8D04G10M025KM1	2027649


Terminators

Description	Remark	Type	Part no.
Terminal with 182 Ω resistance for pin 9 and 10 on the system connection	For improving the EMC behavior if EFI device communication is not used	Terminal with 182 Ω resistance	2027227

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves

Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

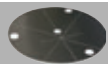



Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456


→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories


F

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMGEAAL2	2045736
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

Additional front screens

Figure	Suitable for	Remark	Packing unit	Part no.
 Example of use	M40x-60xxxxxx	Including sliding nuts and fixing screws	2	2033235
	M40x-61xxxxxx			2033236
	M40x-62xxxxxx			2033237
	M40x-63xxxxxx			2033238
	M40x-64xxxxxx			2033239
	M40x-65xxxxxx			2033240
	M40x-66xxxxxx			2033241
	M40x-67xxxxxx			2033242
	M40x-68xxxxxx			2033243
	M40x-69xxxxxx			2033244
	M40x-70xxxxxx			2033245



PNS75 deflector mirrors

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
			1800 mm	PNS75-184

PNS125 deflector mirrors

Figure	Mirror material	Suitable for protective field height	Type	Part no.		
	Glass	300 mm	PNS125-034	1019425		
		450 mm	PNS125-049	1019426		
		600 mm	PNS125-064	1019427		
		750 mm	PNS125-079	1019428		
		900 mm	PNS125-094	1019429		
		1050 mm	PNS125-109	1019430		
		1200 mm	PNS125-124	1019431		
		1350 mm	PNS125-139	1019432		
		1500 mm	PNS125-154	1019433		
		1650 mm	PNS125-169	1019434		
				1800 mm	PNS125-184	1019435


Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter AR60 for M4000	-	-	-	4040006



Configuration software

Figure	Description	Type	Part no.
	CDS (Configuration & Diagnostic Software)	CDS	2032314

Configuration tools

Figure	Description	Type	Part no.
	For saving and transferring configurations. For C4000 Standard, Advanced, Palletizer, Entry/Exit, Fusion and M4000 Advanced, Advanced Curtain, Area	Clone Plug for C4000 and M4000	1029665
	-	Wall mount	5318443

Device protection


Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

UE403 switching amplifier



Mounting systems

Property	Remark	Packing unit	Type	Part no.
Fixing screws with sliding nuts	Included in the delivery	2	Fixing screws	2033250


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Part no.
	Plug M12 x 5	Straight	2 m	6026133
			5 m	6026134
			10 m	6026135


Connectors

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Plug M12 x 4	Straight	STE-1204-G	6009932
	Socket M12 x 4	Angled	DOS-1204-W	6007303

Extension connection cables

Figure	Connection type	Direction of cable outlet	Cable length	Remark	Type	Part no.
	Plug M12 x 5, socket M12 x 5	Plug straight/ socket straight	0.6 m	Connection cable for M4000 Advanced with M12, 5-pin connector and UE403	DSL-1205-G0M6C	6025930
			1 m		DSL-1205-G01MC	6029280
			1.5 m		DSL-1205-G1M5C	6029281
			2 m		DSL-1205-G02MC	6025931
			5 m		DSL-1205-G05MC	6029282

Configuration connection cables

Figure	Description	Connection type	Cable length	Type	Part no.
	For connecting the configuration connection to the PC	M8 x 4, SUB-D 9-pin	2 m	DSL-8D04G02M025KM1	6021195
			10 m	DSL-8D04G10M025KM1	2027649

Muting sensor connection cables



Connection type	Direction of cable outlet	Cable length	Description	Type	Part no.
Plug M12 x 3	Plug straight/ socket angled	1 m	Suitable for WT27, WL260, WT260 muting sensors, pin 2 (plug) not connected	DSL-1203B01MC34KM1	6026106
		2 m		DSL-1203B02MC34KM1	6026107
		5 m		DSL-1203B05MC34KM2	6025118
Plug M12 x 4	Plug straight/ socket angled	1 m	Suitable for WL24 and WT24 muting sensors	DSL-1204B01MC34KM0	6025974
				Suitable for WL12, WL14, WL18, WL23, WL27 muting sensors, pin 4 (plug) rotated to pin 2 (socket), pin 2 (plug) not connected	DSL-1204B01MC34KM2
		2 m	Suitable for WL24 and WT24 muting sensors	DSL-1204B02MC34KM0	6025975
				Suitable for WL12, WL14, WL18, WL23, WL27 muting sensors, pin 4 (plug) rotated to pin 2 (socket), pin 2 (plug) not connected	DSL-1204B02MC34KM2
		5 m	Suitable for WL24 and WT24 muting sensors	DSL-1204B05MC34KM1	6025087
				Suitable for WL12, WL14, WL18, WL23, WL27 muting sensors, pin 4 (plug) rotated to pin 2 (socket), pin 2 (plug) not connected	DSL-1204B05MC34KM2

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Configuration software

Figure	Description	Type	Part no.
	CDS (Configuration & Diagnostic Software)	CDS	2032314

Muting indicator lamps

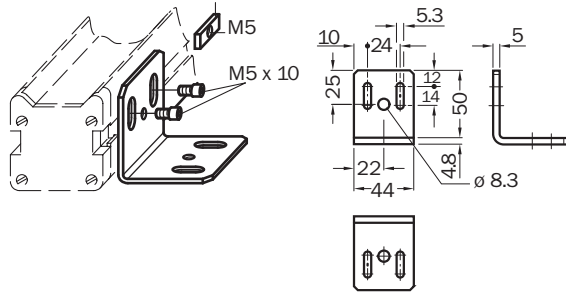
Figure	Type of muting indicator	Connection type	Cable length	Remark	Part no.
 Product may differ from illustration	LED	Connector	2 m	Incl. mounting bracket and mounting kit	2033118
			10 m	Incl. mounting bracket	2033119
 Product may differ from illustration	Incandescent lamp	Connector	2 m	Incl. mounting bracket and mounting kit	2033116
			10 m	Incl. mounting bracket	2033117

Muting accessories, other

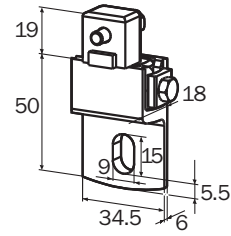
Figure	Type	Part no.
	Protective cap for device socket	6011170

Dimensional drawings mounting systems

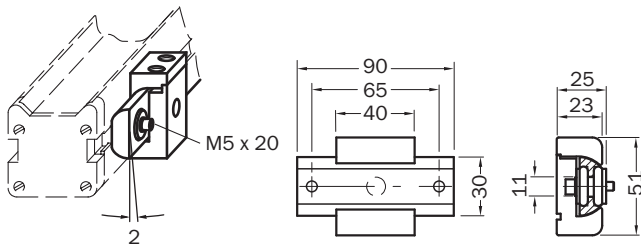
BEF-3WNGBAST4
Mounting kit 1, rigid



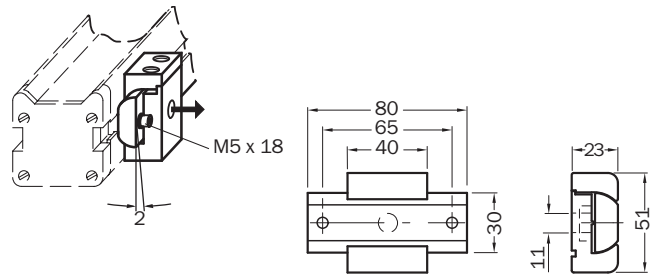
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



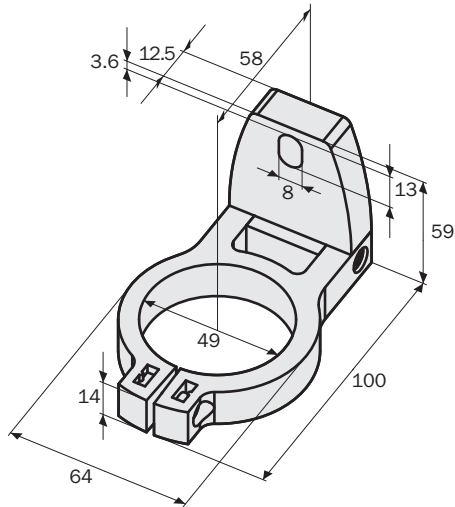
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



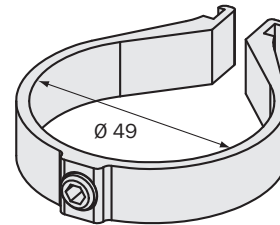
BEF-1SHABAAL4
Mounting kit 2, adjustable



BEF-2SMGEAKU4
Mounting kit 12, swivel mount



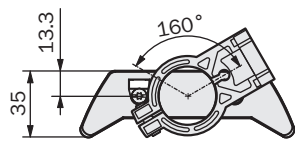
BEF-2SMGEAAL4
Omega bracket, flexible and quick installation with only one screw



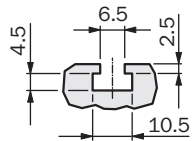
Dimensions in mm

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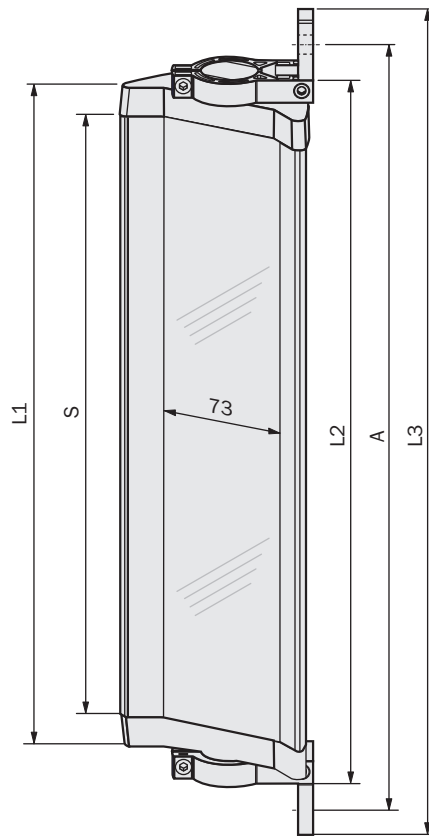
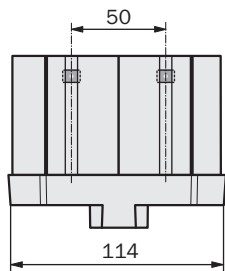
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

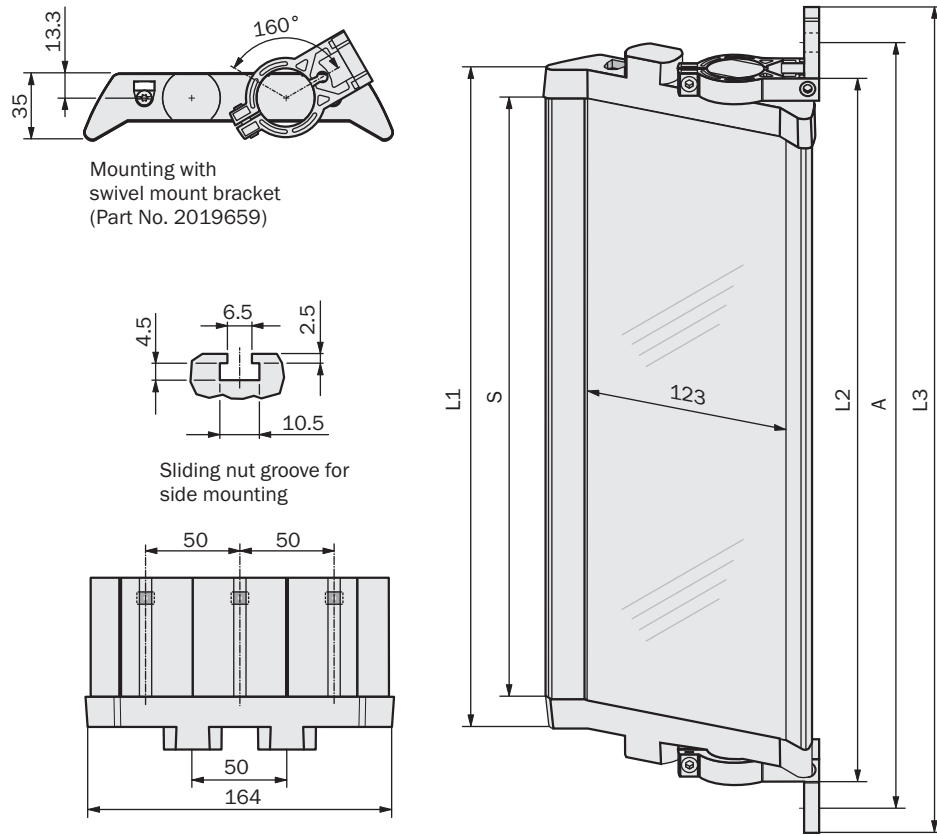


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Note: C4000 Select is only available in North America!

Scanning range (depending on type)	0 m ... 8 m / 0 m ... 19 m
Protective field height (depending on type)	300 mm ... 1800 mm
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (EN 62061)
Enclosure rating	IP 65

Product description

The C4000 Select safety light curtain is used for hazardous point-of-operation safeguarding applications. It is designed to provide the highest level of safety while simplifying installation and operation.

- Devices are easily configured using DIP switch technology
- Installation times are reduced using the integrated laser alignment aid
- One- and two-beam floating blanking feature allows an object to be present in the protective field, e.g., cables, work piece supports, etc.

- Cascade of additional C4000 Select safety light curtains or an S300/S3000 safety scanner simplifies integration of safety components
- Standard M12 x 5-pin connectors for both system and extendable I/O connections minimize installation costs
- Multiple systems may coexist without interference while in close proximity to one another using SICK's beam coding technology
- Simple, easy-to-understand diagnostics make troubleshooting quick and easy

In-system added value

Combined with SICK safe control solutions

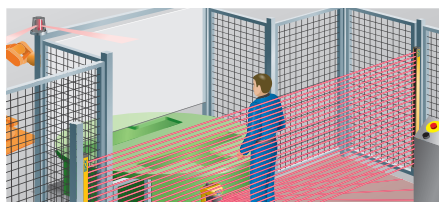
Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	O-2
Flexi Soft	✓	✓	✓	O-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

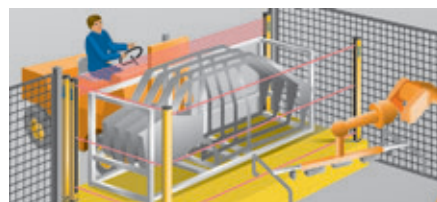
Applications

→ You can find more applications using the application finder at www.mysick.com

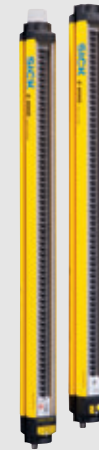
- Car and vehicle industry
- Robotics
- Print and paper industry
- Plastic and rubber industry
- Machine tools
- Wood industry
- Storage and conveyor
- Operator load stations



Combined protection of hazardous point/area in front of a turntable with C4000 Select and S3000



Mutually active access-protection in front of and behind a rack station of a robot cell with C4000 Select and M4000



- DIP switch configuration
- Integrated laser alignment
- Floating blanking
- Beam coding
- Up to 3 systems can be cascaded
- Easy-to-understand diagnostics
- Optional LED on top for 360° viewing



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Further information	Page
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→ Dimensional drawings	F-97
→ Connection diagrams	F-98
→ Accessories	F-99
→ Systematic safety	A-0
→ Services	B-0

Ordering information

Note: C4000 Select is only available in North America!

C4000 Select without extension connection

Usage	As a standalone system and as last system in a cascade
Connection types	System connection: Plug M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0301A0A00AA0	1208918	XC40E-0301A0A0AAA0	1208951	XC40P-0301A0A0AAA0	1052742
450 mm	XC40S-0401A0A00AA0	1208825	XC40E-0401A0A0AAA0	1208824	XC40P-0401A0A0AAA0	1052743
600 mm	XC40S-0601A0A00AA0	1208919	XC40E-0601A0A0AAA0	1208952	XC40P-0601A0A0AAA0	1052744
750 mm	XC40S-0701A0A00AA0	1208920	XC40E-0701A0A0AAA0	1208953	XC40P-0701A0A0AAA0	1052745
900 mm	XC40S-0901A0A00AA0	1208921	XC40E-0901A0A0AAA0	1208954	XC40P-0901A0A0AAA0	1052746
1050 mm	XC40S-1001A0A00AA0	1208922	XC40E-1001A0A0AAA0	1208955	XC40P-1001A0A0AAA0	1052747
1200 mm	XC40S-1201A0A00AA0	1208923	XC40E-1201A0A0AAA0	1208956	XC40P-1201A0A0AAA0	1052748
1350 mm	XC40S-1301A0A00AA0	1208924	XC40E-1301A0A0AAA0	1208957	XC40P-1301A0A0AAA0	1052749
1500 mm	XC40S-1501A0A00AA0	1208925	XC40E-1501A0A0AAA0	1208958	XC40P-1501A0A0AAA0	1052750
1650 mm	XC40S-1601A0A00AA0	1208926	XC40E-1601A0A0AAA0	1208959	XC40P-1601A0A0AAA0	1052751
1800 mm	XC40S-1801A0A00AA0	1208927	XC40E-1801A0A0AAA0	1208960	XC40P-1801A0A0AAA0	1052752

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0303A0A00AA0	1204061	XC40E-0303A0A0AAA0	1204063	XC40P-0303A0A0AAA0	1043111
450 mm	XC40S-0403A0A00AA0	1208853	XC40E-0403A0A0AAA0	1208852	XC40P-0403A0A0AAA0	1052707
600 mm	XC40S-0603A0A00AA0	1204068	XC40E-0603A0A0AAA0	1204116	XC40P-0603A0A0AAA0	1043112
750 mm	XC40S-0703A0A00AA0	1208855	XC40E-0703A0A0AAA0	1208854	XC40P-0703A0A0AAA0	1052708
900 mm	XC40S-0903A0A00AA0	1204071	XC40E-0903A0A0AAA0	1204191	XC40P-0903A0A0AAA0	1043113
1050 mm	XC40S-1003A0A00AA0	1208856	XC40E-1003A0A0AAA0	1208857	XC40P-1003A0A0AAA0	1052709
1200 mm	XC40S-1203A0A00AA0	1204118	XC40E-1203A0A0AAA0	1204102	XC40P-1203A0A0AAA0	1043114
1350 mm	XC40S-1303A0A00AA0	1208858	XC40E-1303A0A0AAA0	1208859	XC40P-1303A0A0AAA0	1052710
1500 mm	XC40S-1503A0A00AA0	1204119	XC40E-1503A0A0AAA0	1204137	XC40P-1503A0A0AAA0	1043115
1650 mm	XC40S-1603A0A00AA0	1208860	XC40E-1603A0A0AAA0	1208861	XC40P-1603A0A0AAA0	1052711
1800 mm	XC40S-1803A0A00AA0	1204112	XC40E-1803A0A0AAA0	1204138	XC40P-1803A0A0AAA0	1043116

C4000 Select with integrated LED status indicator (receiver)

Usage	As a standalone system and as last system in a cascade
Connection types	System connection: Plug M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0301A0A00AA0	1208918	XC40E-0301A0A0AAC0	1208961	XC40P-0301A0A0AAC0	1052753
450 mm	XC40S-0401A0A00AA0	1208825	XC40E-0401A0A0AAC0	1208962	XC40P-0401A0A0AAC0	1052754
600 mm	XC40S-0601A0A00AA0	1208919	XC40E-0601A0A0AAC0	1208963	XC40P-0601A0A0AAC0	1052755
750 mm	XC40S-0701A0A00AA0	1208920	XC40E-0701A0A0AAC0	1208964	XC40P-0701A0A0AAC0	1052756
900 mm	XC40S-0901A0A00AA0	1208921	XC40E-0901A0A0AAC0	1208965	XC40P-0901A0A0AAC0	1052757
1050 mm	XC40S-1001A0A00AA0	1208922	XC40E-1001A0A0AAC0	1208966	XC40P-1001A0A0AAC0	1052758
1200 mm	XC40S-1201A0A00AA0	1208923	XC40E-1201A0A0AAC0	1208967	XC40P-1201A0A0AAC0	1052759
1350 mm	XC40S-1301A0A00AA0	1208924	XC40E-1301A0A0AAC0	1208968	XC40P-1301A0A0AAC0	1052760
1500 mm	XC40S-1501A0A00AA0	1208925	XC40E-1501A0A0AAC0	1208969	XC40P-1501A0A0AAC0	1052761
1650 mm	XC40S-1601A0A00AA0	1208926	XC40E-1601A0A0AAC0	1208970	XC40P-1601A0A0AAC0	1052762
1800 mm	XC40S-1801A0A00AA0	1208927	XC40E-1801A0A0AAC0	1208971	XC40P-1801A0A0AAC0	1052763

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0303A0A00AA0	1204061	XC40E-0303A0A0AAC0	1204139	XC40P-0303A0A0AAC0	1043117
450 mm	XC40S-0403A0A00AA0	1208853	XC40E-0403A0A0AAC0	1208862	XC40P-0403A0A0AAC0	1052712
600 mm	XC40S-0603A0A00AA0	1204068	XC40E-0603A0A0AAC0	1204140	XC40P-0603A0A0AAC0	1043118
750 mm	XC40S-0703A0A00AA0	1208855	XC40E-0703A0A0AAC0	1208863	XC40P-0703A0A0AAC0	1052713
900 mm	XC40S-0903A0A00AA0	1204071	XC40E-0903A0A0AAC0	1204141	XC40P-0903A0A0AAC0	1043119
1050 mm	XC40S-1003A0A00AA0	1208856	XC40E-1003A0A0AAC0	1208864	XC40P-1003A0A0AAC0	1052714
1200 mm	XC40S-1203A0A00AA0	1204118	XC40E-1203A0A0AAC0	1204142	XC40P-1203A0A0AAC0	1043120
1350 mm	XC40S-1303A0A00AA0	1208858	XC40E-1303A0A0AAC0	1208865	XC40P-1303A0A0AAC0	1052715
1500 mm	XC40S-1503A0A00AA0	1204119	XC40E-1503A0A0AAC0	1204143	XC40P-1503A0A0AAC0	1043121
1650 mm	XC40S-1603A0A00AA0	1208860	XC40E-1603A0A0AAC0	1208866	XC40P-1603A0A0AAC0	1052716
1800 mm	XC40S-1803A0A00AA0	1204112	XC40E-1803A0A0AAC0	1204144	XC40P-1803A0A0AAC0	1043122

C4000 Select with top end cap extension connection

Usage	As a standalone system and as first, middle or last system in a cascade
Connection types	System connection: Plug M12 x 5 Extension connection: Socket M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0301A0A00AB0	1208928	XC40E-0301A0A0CAB0	1208972	XC40P-0301A0A0CAB0	1052764
450 mm	XC40S-0401A0A00AB0	1208929	XC40E-0401A0A0CAB0	1208973	XC40P-0401A0A0CAB0	1052765
600 mm	XC40S-0601A0A00AB0	1208930	XC40E-0601A0A0CAB0	1208974	XC40P-0601A0A0CAB0	1052766
750 mm	XC40S-0701A0A00AB0	1208931	XC40E-0701A0A0CAB0	1208975	XC40P-0701A0A0CAB0	1052767
900 mm	XC40S-0901A0A00AB0	1208932	XC40E-0901A0A0CAB0	1208976	XC40P-0901A0A0CAB0	1052768
1050 mm	XC40S-1001A0A00AB0	1208933	XC40E-1001A0A0CAB0	1208977	XC40P-1001A0A0CAB0	1052769
1200 mm	XC40S-1201A0A00AB0	1208934	XC40E-1201A0A0CAB0	1208978	XC40P-1201A0A0CAB0	1052770
1350 mm	XC40S-1301A0A00AB0	1208935	XC40E-1301A0A0CAB0	1208979	XC40P-1301A0A0CAB0	1052771
1500 mm	XC40S-1501A0A00AB0	1208936	XC40E-1501A0A0CAB0	1208980	XC40P-1501A0A0CAB0	1052772
1650 mm	XC40S-1601A0A00AB0	1208937	XC40E-1601A0A0CAB0	1208981	XC40P-1601A0A0CAB0	1052773
1800 mm	XC40S-1801A0A00AB0	1208938	XC40E-1801A0A0CAB0	1208982	XC40P-1801A0A0CAB0	1052774

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0303A0A00AB0	1204069	XC40E-0303A0A0CAB0	1204134	XC40P-0303A0A0CAB0	1043123
450 mm	XC40S-0403A0A00AB0	1208867	XC40E-0403A0A0CAB0	1208868	XC40P-0403A0A0CAB0	1052717
600 mm	XC40S-0603A0A00AB0	1204132	XC40E-0603A0A0CAB0	1204146	XC40P-0603A0A0CAB0	1043124
750 mm	XC40S-0703A0A00AB0	1208869	XC40E-0703A0A0CAB0	1208870	XC40P-0703A0A0CAB0	1052718
900 mm	XC40S-0903A0A00AB0	1204145	XC40E-0903A0A0CAB0	1204147	XC40P-0903A0A0CAB0	1043125
1050 mm	XC40S-1003A0A00AB0	1208871	XC40E-1003A0A0CAB0	1208872	XC40P-1003A0A0CAB0	1052719
1200 mm	XC40S-1203A0A00AB0	1204148	XC40E-1203A0A0CAB0	1204149	XC40P-1203A0A0CAB0	1043126
1350 mm	XC40S-1303A0A00AB0	1208873	XC40E-1303A0A0CAB0	1208874	XC40P-1303A0A0CAB0	1052720
1500 mm	XC40S-1503A0A00AB0	1204150	XC40E-1503A0A0CAB0	1204151	XC40P-1503A0A0CAB0	1043127
1650 mm	XC40S-1603A0A00AB0	1208875	XC40E-1603A0A0CAB0	1208876	XC40P-1603A0A0CAB0	1052721
1800 mm	XC40S-1803A0A00AB0	1204152	XC40E-1803A0A0CAB0	1204153	XC40P-1803A0A0CAB0	1043128

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C4000 Select with bottom end cap extension connection (sender and receiver)

Usage	As a standalone system and as first, middle or last system in a cascade
Connection types	System connection: Plug M12 x 5 Extension connection: Socket M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0301A0A00BA0	1208939	XC40E-0301A0A0CBA0	1208983	XC40P-0301A0A0CBA0	1052775
450 mm	XC40S-0401A0A00BA0	1208940	XC40E-0401A0A0CBA0	1208984	XC40P-0401A0A0CBA0	1052776
600 mm	XC40S-0601A0A00BA0	1208941	XC40E-0601A0A0CBA0	1208985	XC40P-0601A0A0CBA0	1052777
750 mm	XC40S-0701A0A00BA0	1208942	XC40E-0701A0A0CBA0	1208986	XC40P-0701A0A0CBA0	1052778
900 mm	XC40S-0901A0A00BA0	1208944	XC40E-0901A0A0CBA0	1208987	XC40P-0901A0A0CBA0	1052779
1050 mm	XC40S-1001A0A00BA0	1208943	XC40E-1001A0A0CBA0	1208988	XC40P-1001A0A0CBA0	1052780
1200 mm	XC40S-1201A0A00BA0	1208945	XC40E-1201A0A0CBA0	1208989	XC40P-1201A0A0CBA0	1052781
1350 mm	XC40S-1301A0A00BA0	1208946	XC40E-1301A0A0CBA0	1208990	XC40P-1301A0A0CBA0	1052782
1500 mm	XC40S-1501A0A00BA0	1208947	XC40E-1501A0A0CBA0	1208991	XC40P-1501A0A0CBA0	1052783
1650 mm	XC40S-1601A0A00BA0	1208948	XC40E-1601A0A0CBA0	1208992	XC40P-1601A0A0CBA0	1052784
1800 mm	XC40S-1801A0A00BA0	1208949	XC40E-1801A0A0CBA0	1208993	XC40P-1801A0A0CBA0	1052785

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0303A0A00BA0	1204154	XC40E-0303A0A0CBA0	1204155	XC40P-0303A0A0CBA0	1043129
450 mm	XC40S-0403A0A00BA0	1208877	XC40E-0403A0A0CBA0	1208878	XC40P-0403A0A0CBA0	1052722
600 mm	XC40S-0603A0A00BA0	1204156	XC40E-0603A0A0CBA0	1204157	XC40P-0603A0A0CBA0	1043130
750 mm	XC40S-0703A0A00BA0	1208879	XC40E-0703A0A0CBA0	1208894	XC40P-0703A0A0CBA0	1052723
900 mm	XC40S-0903A0A00BA0	1204158	XC40E-0903A0A0CBA0	1204159	XC40P-0903A0A0CBA0	1043131
1050 mm	XC40S-1003A0A00BA0	1208880	XC40E-1003A0A0CBA0	1208881	XC40P-1003A0A0CBA0	1052724
1200 mm	XC40S-1203A0A00BA0	1204160	XC40E-1203A0A0CBA0	1204161	XC40P-1203A0A0CBA0	1043132
1350 mm	XC40S-1303A0A00BA0	1208882	XC40E-1303A0A0CBA0	1208883	XC40P-1303A0A0CBA0	1052725
1500 mm	XC40S-1503A0A00BA0	1204162	XC40E-1503A0A0CBA0	1204163	XC40P-1503A0A0CBA0	1043133
1650 mm	XC40S-1603A0A00BA0	1208884	XC40E-1603A0A0CBA0	1208885	XC40P-1603A0A0CBA0	1052726
1800 mm	XC40S-1803A0A00BA0	1204164	XC40E-1803A0A0CBA0	1204165	XC40P-1803A0A0CBA0	1043134

C4000 Select with bottom end cap extension connection (sender and receiver) and integrated LED status indicator (receiver)

Usage	As a standalone system and as first, middle or last system in a cascade
Connection types	System connection: Plug M12 x 5 Extension connection: Socket M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0301A0A00BA0	1208939	XC40E-0301A0A0CBC0	1208994	XC40P-0301A0A0CBC0	1052786
450 mm	XC40S-0401A0A00BA0	1208940	XC40E-0401A0A0CBC0	1208995	XC40P-0401A0A0CBC0	1052787
600 mm	XC40S-0601A0A00BA0	1208941	XC40E-0601A0A0CBC0	1208996	XC40P-0601A0A0CBC0	1052788
750 mm	XC40S-0701A0A00BA0	1208942	XC40E-0701A0A0CBC0	1208997	XC40P-0701A0A0CBC0	1052789
900 mm	XC40S-0901A0A00BA0	1208944	XC40E-0901A0A0CBC0	1208998	XC40P-0901A0A0CBC0	1052790
1050 mm	XC40S-1001A0A00BA0	1208943	XC40E-1001A0A0CBC0	1208999	XC40P-1001A0A0CBC0	1052791
1200 mm	XC40S-1201A0A00BA0	1208945	XC40E-1201A0A0CBC0	1209000	XC40P-1201A0A0CBC0	1052792
1350 mm	XC40S-1301A0A00BA0	1208946	XC40E-1301A0A0CBC0	1209001	XC40P-1301A0A0CBC0	1052793
1500 mm	XC40S-1501A0A00BA0	1208947	XC40E-1501A0A0CBC0	1209002	XC40P-1501A0A0CBC0	1052794
1650 mm	XC40S-1601A0A00BA0	1208948	XC40E-1601A0A0CBC0	1209003	XC40P-1601A0A0CBC0	1052795
1800 mm	XC40S-1801A0A00BA0	1208949	XC40E-1801A0A0CBC0	1209004	XC40P-1801A0A0CBC0	1052796

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0303A0A00BA0	1204154	XC40E-0303A0A0CBC0	1204166	XC40P-0303A0A0CBC0	1043135
450 mm	XC40S-0403A0A00BA0	1208877	XC40E-0403A0A0CBC0	1208950	XC40P-0403A0A0CBC0	1052727
600 mm	XC40S-0603A0A00BA0	1204156	XC40E-0603A0A0CBC0	1204167	XC40P-0603A0A0CBC0	1043136
750 mm	XC40S-0703A0A00BA0	1208879	XC40E-0703A0A0CBC0	1208886	XC40P-0703A0A0CBC0	1052728
900 mm	XC40S-0903A0A00BA0	1204158	XC40E-0903A0A0CBC0	1204168	XC40P-0903A0A0CBC0	1043137
1050 mm	XC40S-1003A0A00BA0	1208880	XC40E-1003A0A0CBC0	1208887	XC40P-1003A0A0CBC0	1052729
1200 mm	XC40S-1203A0A00BA0	1204160	XC40E-1203A0A0CBC0	1204169	XC40P-1203A0A0CBC0	1043138
1350 mm	XC40S-1303A0A00BA0	1208882	XC40E-1303A0A0CBC0	1208888	XC40P-1303A0A0CBC0	1052730
1500 mm	XC40S-1503A0A00BA0	1204162	XC40E-1503A0A0CBC0	1204170	XC40P-1503A0A0CBC0	1043139
1650 mm	XC40S-1603A0A00BA0	1208884	XC40E-1603A0A0CBC0	1208889	XC40P-1603A0A0CBC0	1052731
1800 mm	XC40S-1803A0A00BA0	1204164	XC40E-1803A0A0CBC0	1204171	XC40P-1803A0A0CBC0	1043140

C4000 Select with bottom end cap extension connection (receiver)

Usage	As a standalone system and as first system in a cascade with S300 or S3000 safety laser scanner
Connection types	System connection: Plug M12 x 5 Extension connection: Socket M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0301A0A00AA0	1208918	XC40E-0301A0A0CBA0	1208983	XC40P-0301A0A0CCA0	1052797
450 mm	XC40S-0401A0A00AA0	1208825	XC40E-0401A0A0CBA0	1208984	XC40P-0401A0A0CCA0	1052798
600 mm	XC40S-0601A0A00AA0	1208919	XC40E-0601A0A0CBA0	1208985	XC40P-0601A0A0CCA0	1052799
750 mm	XC40S-0701A0A00AA0	1208920	XC40E-0701A0A0CBA0	1208986	XC40P-0701A0A0CCA0	1052800
900 mm	XC40S-0901A0A00AA0	1208921	XC40E-0901A0A0CBA0	1208987	XC40P-0901A0A0CCA0	1052801
1050 mm	XC40S-1001A0A00AA0	1208922	XC40E-1001A0A0CBA0	1208988	XC40P-1001A0A0CCA0	1052802
1200 mm	XC40S-1201A0A00AA0	1208923	XC40E-1201A0A0CBA0	1208989	XC40P-1201A0A0CCA0	1052803
1350 mm	XC40S-1301A0A00AA0	1208924	XC40E-1301A0A0CBA0	1208990	XC40P-1301A0A0CCA0	1052804
1500 mm	XC40S-1501A0A00AA0	1208925	XC40E-1501A0A0CBA0	1208991	XC40P-1501A0A0CCA0	1052805
1650 mm	XC40S-1601A0A00AA0	1208926	XC40E-1601A0A0CBA0	1208992	XC40P-1601A0A0CCA0	1052806
1800 mm	XC40S-1801A0A00AA0	1208927	XC40E-1801A0A0CBA0	1208993	XC40P-1801A0A0CCA0	1052807

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0303A0A00AA0	1204061	XC40E-0303A0A0CBA0	1204155	XC40P-0303A0A0CCA0	1043141
450 mm	XC40S-0403A0A00AA0	1208853	XC40E-0403A0A0CBA0	1208878	XC40P-0403A0A0CCA0	1052732
600 mm	XC40S-0603A0A00AA0	1204068	XC40E-0603A0A0CBA0	1204157	XC40P-0603A0A0CCA0	1043142
750 mm	XC40S-0703A0A00AA0	1208855	XC40E-0703A0A0CBA0	1208894	XC40P-0703A0A0CCA0	1052733
900 mm	XC40S-0903A0A00AA0	1204071	XC40E-0903A0A0CBA0	1204159	XC40P-0903A0A0CCA0	1043143
1050 mm	XC40S-1003A0A00AA0	1208856	XC40E-1003A0A0CBA0	1208881	XC40P-1003A0A0CCA0	1052734
1200 mm	XC40S-1203A0A00AA0	1204118	XC40E-1203A0A0CBA0	1204161	XC40P-1203A0A0CCA0	1043144
1350 mm	XC40S-1303A0A00AA0	1208858	XC40E-1303A0A0CBA0	1208883	XC40P-1303A0A0CCA0	1052735
1500 mm	XC40S-1503A0A00AA0	1204119	XC40E-1503A0A0CBA0	1204163	XC40P-1503A0A0CCA0	1043145
1650 mm	XC40S-1603A0A00AA0	1208860	XC40E-1603A0A0CBA0	1208885	XC40P-1603A0A0CCA0	1052736
1800 mm	XC40S-1803A0A00AA0	1204112	XC40E-1803A0A0CBA0	1204165	XC40P-1803A0A0CCA0	1043146

C4000 Select with bottom end cap extension connection and integrated LED status indicator (receiver)

Usage	As a standalone system and as first system in a cascade with S300 or S3000 safety laser scanner
Connection types	System connection: Plug M12 x 5 Extension connection: Socket M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 8 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0301A0A00AA0	1208918	XC40E-0301A0A0CBC0	1208994	XC40P-0301A0A0CCCO	1052808
450 mm	XC40S-0401A0A00AA0	1208825	XC40E-0401A0A0CBC0	1208995	XC40P-0401A0A0CCCO	1052809
600 mm	XC40S-0601A0A00AA0	1208919	XC40E-0601A0A0CBC0	1208996	XC40P-0601A0A0CCCO	1052810
750 mm	XC40S-0701A0A00AA0	1208920	XC40E-0701A0A0CBC0	1208997	XC40P-0701A0A0CCCO	1052811
900 mm	XC40S-0901A0A00AA0	1208921	XC40E-0901A0A0CBC0	1208998	XC40P-0901A0A0CCCO	1052812
1050 mm	XC40S-1001A0A00AA0	1208922	XC40E-1001A0A0CBC0	1208999	XC40P-1001A0A0CCCO	1052813
1200 mm	XC40S-1201A0A00AA0	1208923	XC40E-1201A0A0CBC0	1209000	XC40P-1201A0A0CCCO	1052814
1350 mm	XC40S-1301A0A00AA0	1208924	XC40E-1301A0A0CBC0	1209001	XC40P-1301A0A0CCCO	1052815
1500 mm	XC40S-1501A0A00AA0	1208925	XC40E-1501A0A0CBC0	1209002	XC40P-1501A0A0CCCO	1052816
1650 mm	XC40S-1601A0A00AA0	1208926	XC40E-1601A0A0CBC0	1209003	XC40P-1601A0A0CCCO	1052817
1800 mm	XC40S-1801A0A00AA0	1208927	XC40E-1801A0A0CBC0	1209004	XC40P-1801A0A0CCCO	1052818

- Resolution: 30 mm
- Scanning range: 0 m ... 19 m

Protective field height	Sender		Receiver		Sender/receiver	
	Type	Part no.	Type	Part no.	Type	Part no.
300 mm	XC40S-0303A0A00AA0	1204061	XC40E-0303A0A0CBC0	1204166	XC40P-0303A0A0CCCO	1043147
450 mm	XC40S-0403A0A00AA0	1208853	XC40E-0403A0A0CBC0	1208950	XC40P-0403A0A0CCCO	1052737
600 mm	XC40S-0603A0A00AA0	1204068	XC40E-0603A0A0CBC0	1204167	XC40P-0603A0A0CCCO	1043148
750 mm	XC40S-0703A0A00AA0	1208855	XC40E-0703A0A0CBC0	1208886	XC40P-0703A0A0CCCO	1052738
900 mm	XC40S-0903A0A00AA0	1204071	XC40E-0903A0A0CBC0	1204168	XC40P-0903A0A0CCCO	1043149
1050 mm	XC40S-1003A0A00AA0	1208856	XC40E-1003A0A0CBC0	1208887	XC40P-1003A0A0CCCO	1052739
1200 mm	XC40S-1203A0A00AA0	1204118	XC40E-1203A0A0CBC0	1204169	XC40P-1203A0A0CCCO	1043150
1350 mm	XC40S-1303A0A00AA0	1208858	XC40E-1303A0A0CBC0	1208888	XC40P-1303A0A0CCCO	1052740
1500 mm	XC40S-1503A0A00AA0	1204119	XC40E-1503A0A0CBC0	1204170	XC40P-1503A0A0CCCO	1043151
1650 mm	XC40S-1603A0A00AA0	1208860	XC40E-1603A0A0CBC0	1208889	XC40P-1603A0A0CCCO	1052741
1800 mm	XC40S-1803A0A00AA0	1204112	XC40E-1803A0A0CBC0	1204171	XC40P-1803A0A0CCCO	1043152

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Protective field height (depending on type)	300 mm ... 1800 mm	
Scanning range (depending on type)		
Configurable	-	✓
Resolution 14 mm	-	0 m ... 2.5 m / 0 m ... 8 m
Resolution 30 mm	-	0 m ... 8 m / 5 m ... 19 m
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (EN 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	3.2 x 10 ⁻⁸ (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 26 ms ¹⁾
Synchronization	Optical, without separate synchronization	
Protection class	III (EN 50178:1998)	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	52 mm x 55.5 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	
Housing material	Aluminum alloy ALMGSI 0.5	

¹⁾ Without beam coding, without blanking, no cascaded systems. Other response times, see operating instructions.

Functional data

System part	Sender	Receiver
Beam coding	✓	
Beam coding (delivery status)	Non-coded	
Blanking	1 beam floating blanking, 2 beam floating blanking	
Delivery status	Deactivated	
Configuration method	DIP switch	
Integrated laser alignment aid	✓	
End cap with integrated LED (depending on type)	-	- / ✓

Electrical data

System part	Sender	Receiver
System connection	Plug M12 x 5	
Connecting cable length	Max. 50 m ¹⁾	
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	$\pm 10\%$ ³⁾	
Power consumption (depending on type)	4.9 W ... 9.3 W	7.6 W ... 11.2 W
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	24 V DC ($V_S - 2.25$ V DC ... V_S)
Switching voltage LOW	-	2 V DC
Switching current	-	Max. 500 mA
Switch off time	-	Min. 100 ms

¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

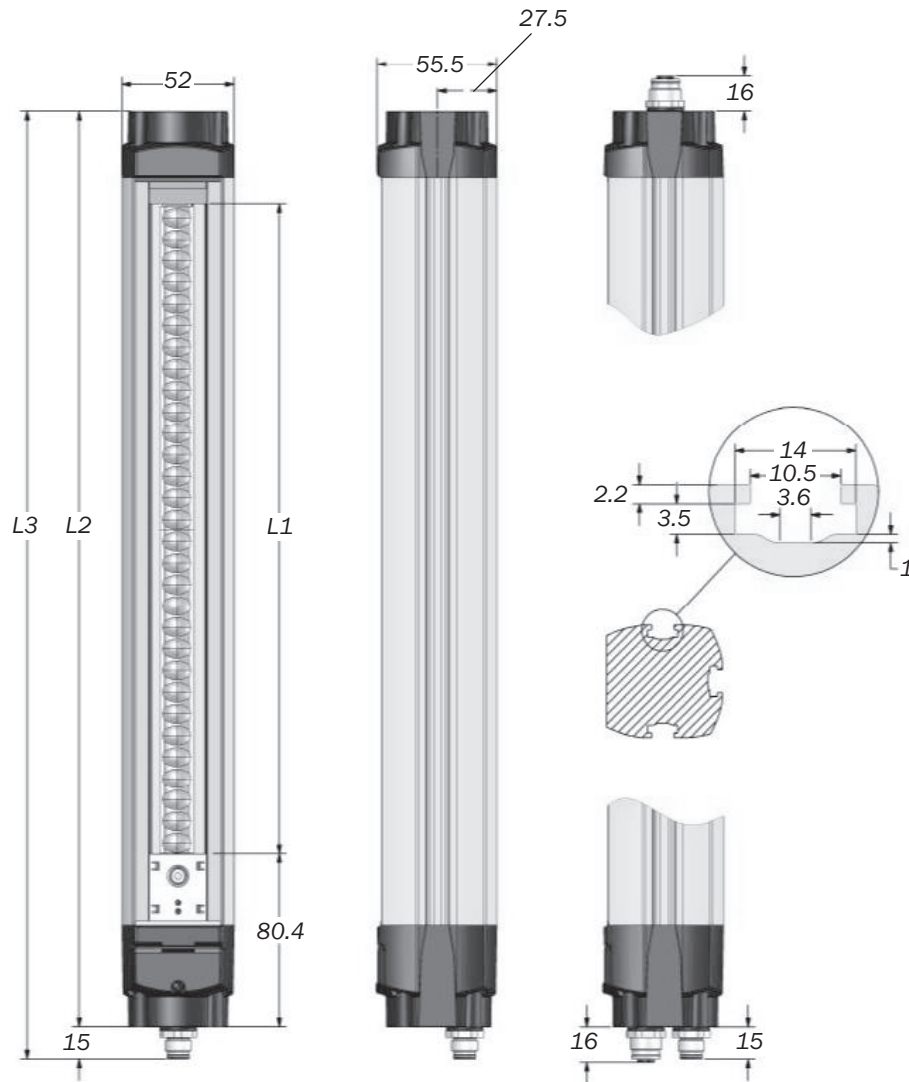
²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S .

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Dimensional drawings

Sender

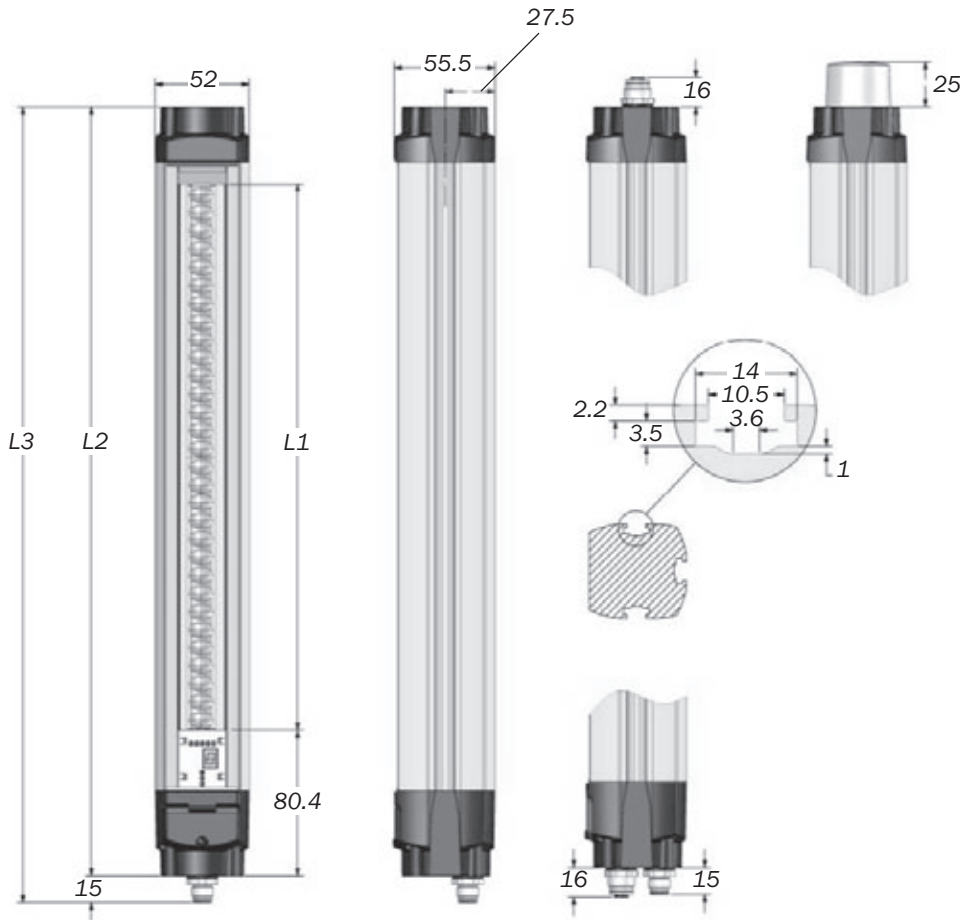


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Protective field height S	L1	L2	L3
300	302	425	440
450	452	575	590
600	602	725	740
750	752	875	890
900	902	1025	1040
1050	1052	1175	1190
1200	1202	1325	1340
1350	1352	1475	1490
1500	1502	1625	1640
1650	1652	1775	1790
1800	1802	1925	1940

Dimensions in mm

Receiver



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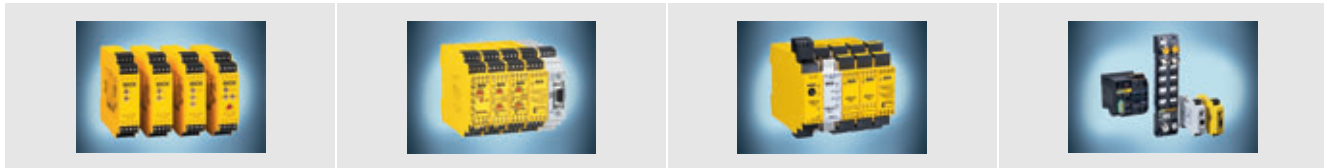
Protective field height S	L1	L2	L3
300	302	425	440
450	452	575	590
600	602	725	740
750	752	875	890
900	902	1025	1040
1050	1052	1175	1190
1200	1202	1325	1340
1350	1352	1475	1490
1500	1502	1625	1640
1650	1652	1775	1790
1800	1802	1925	1940

Dimensions in mm

Connection diagrams

→ You can find connection diagrams at www.mysick.com

sens:Control – safe control solutions



Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories

Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, adjustable	4	BEF-1SHABAAL4	2017751
	Mounting kit 12, swivel mount	4	BEF-2SMGEAKU4	2030510
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMGEAAL4	2044846

Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Plug M12 x 5	Straight	10 m	Plug	6026135
	Socket M12 x 5	Straight	2 m	DOL-1205-G02M	6008899
			5 m	DOL-1205-G05M	6009868
			10 m	DOL-1205-G10M	6010544
			15 m	DOL-1205-G15M	6029215
			30 m	Connection cable	6032956


Connection cables

Connection type	Direction of cable outlet	Remark	Cable length	Part no.
Plug M12 x 5, socket M12 x 5	Plug straight/ socket straight	For use with DeviceNet Safety remote I/Os and controller	2 m	2044610
			5 m	2044611
			10 m	2044612
			15 m	2044613
			30 m	2044614


T-junction

Connection type	Remark	Type	Part no.
Plug M12 x 5	T-connector plugs directly into receiver, splits the single home run from control cabinet between sender and receiver	DSC-1205T000025KM0	6030664

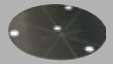

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789


Device columns with external grooves

Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device columns with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Column parts and accessories


Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMGEAAL2	2045736

Additional front screens

Figure	Suitable for	Remark	Packing unit	Part no.
 Example of use	M40x-60xxxxxx, XC40x-03xxxxxxxxxx	Including sliding nuts and fixing screws	2	2033235
	M40x-61xxxxxx, XC40x-04xxxxxxxxxx			2033236
	M40x-62xxxxxx, XC40x-06xxxxxxxxxx			2033237
	M40x-63xxxxxx, XC40x-07xxxxxxxxxx			2033238
	M40x-64xxxxxx, XC40x-09xxxxxxxxxx			2033239
	M40x-65xxxxxx, XC40x-10xxxxxxxxxx			2033240
	M40x-66xxxxxx, XC40x-12xxxxxxxxxx			2033241
	M40x-67xxxxxx, XC40x-13xxxxxxxxxx			2033242
	M40x-68xxxxxx, XC40x-15xxxxxxxxxx			2033243
	M40x-69xxxxxx, XC40x-16xxxxxxxxxx			2033244
	M40x-70xxxxxx, XC40x-18xxxxxxxxxx			2033245

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PNS75 deflector mirrors

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
			1800 mm	PNS75-184

PNS125 deflector mirrors

Figure	Mirror material	Suitable for protective field height	Type	Part no.		
	Glass	300 mm	PNS125-034	1019425		
		450 mm	PNS125-049	1019426		
		600 mm	PNS125-064	1019427		
		750 mm	PNS125-079	1019428		
		900 mm	PNS125-094	1019429		
		1050 mm	PNS125-109	1019430		
		1200 mm	PNS125-124	1019431		
		1350 mm	PNS125-139	1019432		
		1500 mm	PNS125-154	1019433		
		1650 mm	PNS125-169	1019434		
				1800 mm	PNS125-184	1019435

Device protection

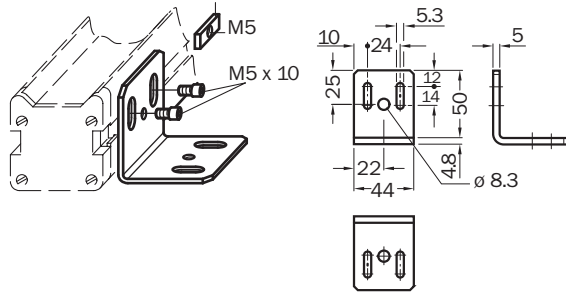
Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

Protective cap

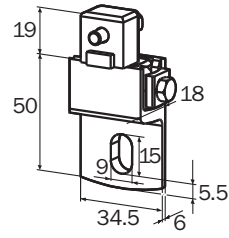
Packing unit	Part no.
10	2019706
1	5311099

Dimensional drawings mounting systems

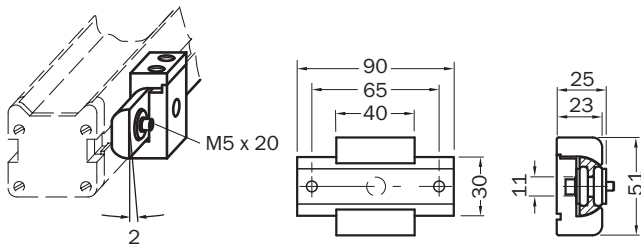
BEF-3WNGBAST4
Mounting kit 1, rigid



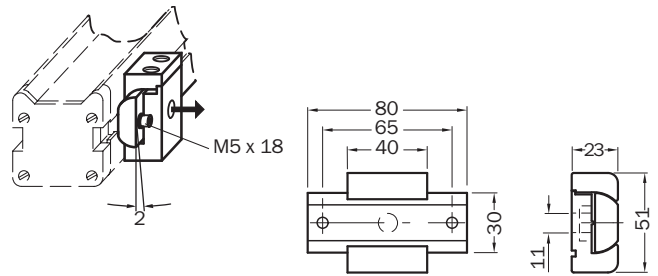
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



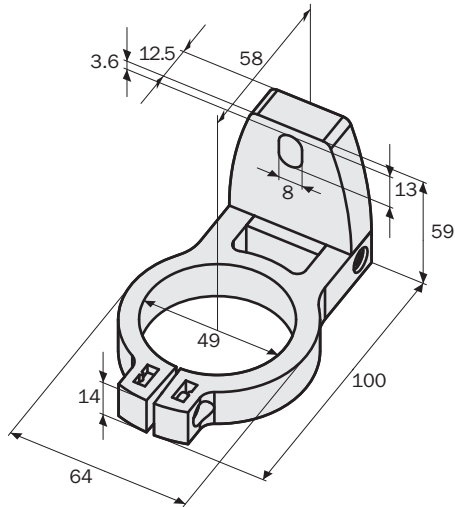
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



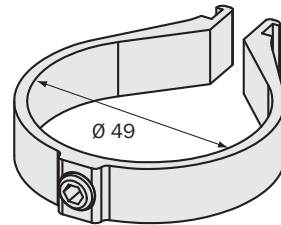
BEF-1SHABAAL4
Mounting kit 2, adjustable



BEF-2SMGEAKU4
Mounting kit 12, swivel mount



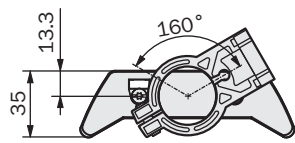
BEF-2SMGEAAL4
Omega bracket, flexible and quick installation with only one screw



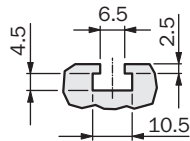
Dimensions in mm

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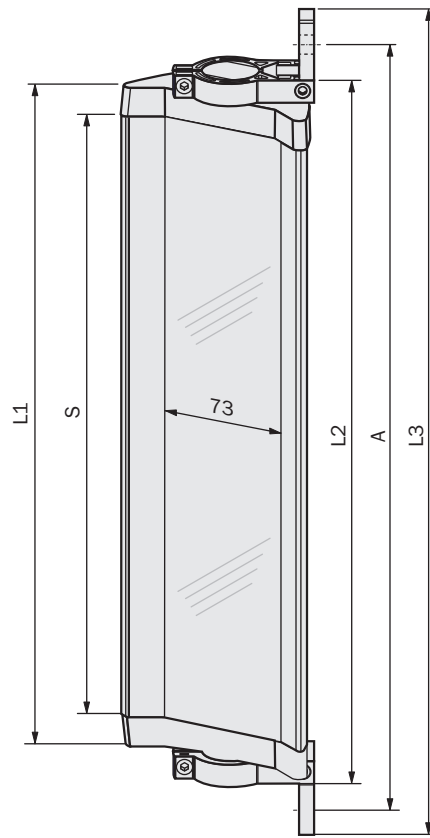
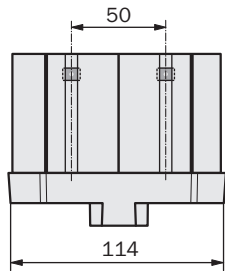
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

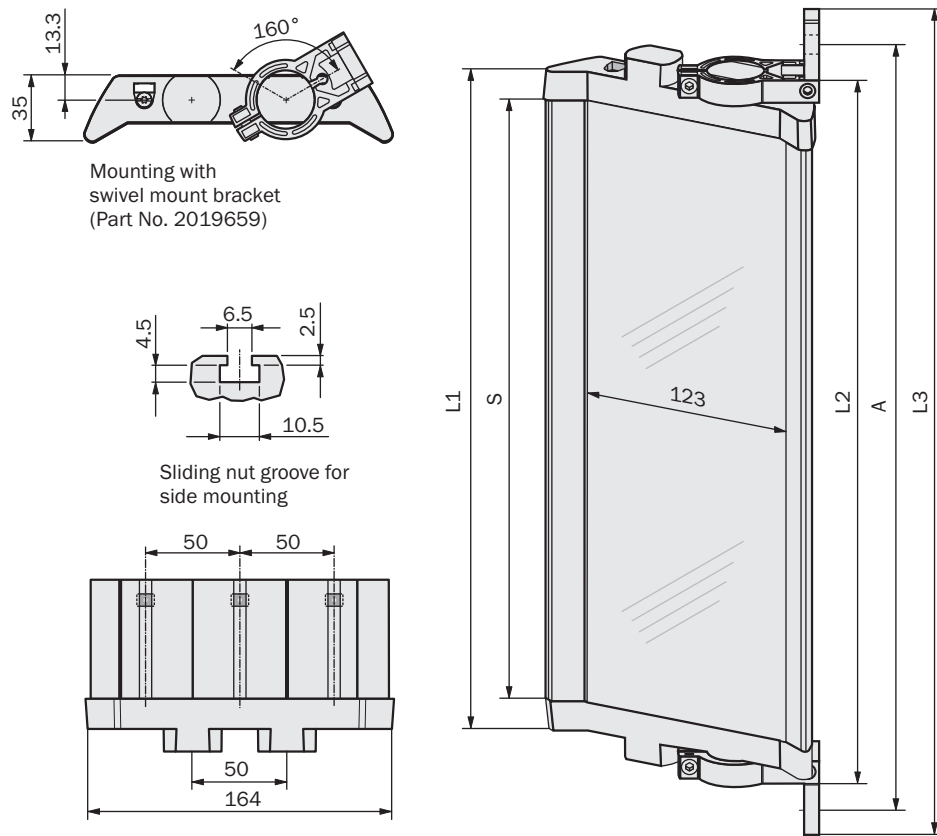


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Protective field height (depending on type)	120 mm ... 1200 mm
Scanning range	Min. 0 m ... 4 m / typ. 0 m ... 5 m
Resolution (depending on type)	14 mm / 24 mm / 34 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The miniTwin4 safety light curtain is primarily used for hazardous point protection (finger and hand protection). Thanks to innovative technology, the device offers the customer significant advantages:

- Standardization of the sticks: the innovative Twin Sticks (S/R Stick) reduce the number of system components by up to 50 %. The clear advantages can be seen over the entire life cycle.
- Simplification of the service concept: the simple system construction reduces the effort for training courses and planning the service concept.
- Cost-effective machine integration: very small shape, cascading and fine graduation of the protective field lengths make flexible adaptation to the machine design possible.

- Handling: the simple, software-free commissioning is almost fully automatic. Modern industrial design combines the requirements for intuitive operation with durable appearance.
- The trend toward machines with high-quality ergonomic design places special requirements on safety light curtains. For the first time, innovative designs make it possible to use the optimal safety distance, even in positions that were critical in the past.
- Standardization of the accessories: for the first time, it is possible to use additional safety functions on a 5-core cable. Easy-to-mount brackets save space, provides simple commissioning and is a cost-effective alternative to the special solutions used in the past.

In-system added value

Combined with SICK safe control solutions

Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

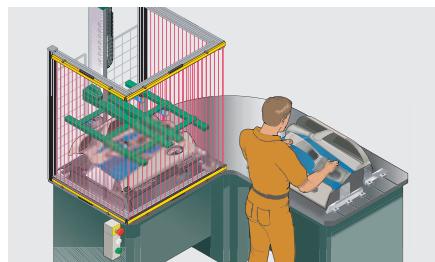
→ For more combinations, see annex

Applications

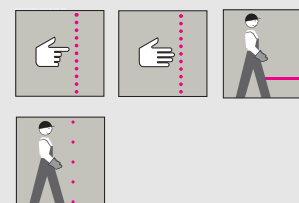
→ You can find more applications using the application finder at www.mysick.com



Parts supplier industry: Hazardous point protection at assembly machine



Parts-supplier industry: U-Shape like hazardous point protection at assembly machine



F

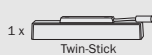


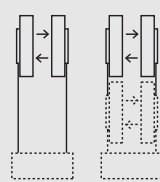
- Optimal integration due to miniaturization
- Up to 3 systems can be cascaded
- Automatic beam coding
- Alignment and diagnostics via LED display
- External device monitoring (EDM) and reset
- Configuration without PC



Further information	Page
→ Ordering information	F-106
→ Technical specifications	F-112
→ Dimensional drawings	F-113
→ Connection diagrams	F-113
→ Accessories	F-114
→ Systematic safety	A-0
→ Services	B-0

Ordering information

miniTwin4 as a standalone device or cascade end unit

Consisting of		Usage
  	<ul style="list-style-type: none"> ▪ Twin-Stick with standalone system plug and connecting cable with plug M12 x 4 + FE ▪ 2 C-Fix brackets with L-Fix bracket ▪ Operating instructions on CD-ROM 	 <ul style="list-style-type: none"> ▪ As a standalone device ▪ As a cascade end unit
Connection types		System connection: Plug M12 x 4 + FE
Scanning range		
Minimum		0 m ... 4 m
Typically		0 m ... 5 m



■ Resolution 14 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01214ABB03BE0	1207094
180 mm		C4MT-01814ABB03BE0	1207097
240 mm	350 mm	C4MT-02414ABB03DE0	1207098
300 mm		C4MT-03014ABB03DE0	1207099
360 mm		C4MT-03614ABB03DE0	1207100
420 mm		C4MT-04214ABB03DE0	1207101
480 mm		C4MT-04814ABB03DE0	1207102
540 mm		C4MT-05414ABB03DE0	1207103
600 mm	700 mm	C4MT-06014ABB03FE0	1207104
660 mm		C4MT-06614ABB03FE0	1207105
720 mm		C4MT-07214ABB03FE0	1207106
780 mm		C4MT-07814ABB03FE0	1207107
840 mm		C4MT-08414ABB03FE0	1207108
900 mm		C4MT-09014ABB03FE0	1207109
960 mm		C4MT-09614ABB03FE0	1207110
1020 mm		C4MT-10214ABB03FE0	1207111
1080 mm		C4MT-10814ABB03FE0	1207112
1140 mm		C4MT-11414ABB03FE0	1207113
1200 mm	C4MT-12014ABB03FE0	1207114	

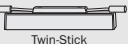


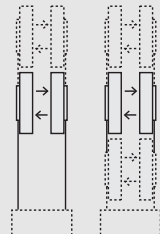
■ Resolution 24 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01224ABB03BEO	1207222
180 mm		C4MT-01824ABB03BEO	1207223
240 mm	350 mm	C4MT-02424ABB03DEO	1207224
300 mm		C4MT-03024ABB03DEO	1207225
360 mm		C4MT-03624ABB03DEO	1207227
420 mm		C4MT-04224ABB03DEO	1207228
480 mm		C4MT-04824ABB03DEO	1207229
540 mm		C4MT-05424ABB03DEO	1207230
600 mm		C4MT-06024ABB03FEO	1207231
660 mm	700 mm	C4MT-06624ABB03FEO	1207232
720 mm		C4MT-07224ABB03FEO	1207233
780 mm		C4MT-07824ABB03FEO	1207234
840 mm		C4MT-08424ABB03FEO	1207235
900 mm		C4MT-09024ABB03FEO	1207236
960 mm		C4MT-09624ABB03FEO	1207237
1020 mm		C4MT-10224ABB03FEO	1207238
1080 mm		C4MT-10824ABB03FEO	1207239
1140 mm		C4MT-11424ABB03FEO	1207240
1200 mm		C4MT-12024ABB03FEO	1207241

■ Resolution 34 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01234ABB03BEO	1207242
180 mm		C4MT-01834ABB03BEO	1207243
240 mm	350 mm	C4MT-02434ABB03DEO	1207244
300 mm		C4MT-03034ABB03DEO	1207245
360 mm		C4MT-03634ABB03DEO	1207246
420 mm		C4MT-04234ABB03DEO	1207247
480 mm		C4MT-04834ABB03DEO	1207248
540 mm		C4MT-05434ABB03DEO	1207249
600 mm		C4MT-06034ABB03FEO	1207250
660 mm	700 mm	C4MT-06634ABB03FEO	1207251
720 mm		C4MT-07234ABB03FEO	1207252
780 mm		C4MT-07834ABB03FEO	1207253
840 mm		C4MT-08434ABB03FEO	1207254
900 mm		C4MT-09034ABB03FEO	1207255
960 mm		C4MT-09634ABB03FEO	1207256
1020 mm		C4MT-10234ABB03FEO	1207257
1080 mm		C4MT-10834ABB03FEO	1207258
1140 mm		C4MT-11434ABB03FEO	1207259
1200 mm		C4MT-12034ABB03FEO	1207260

miniTwin4 as a cascaded host or guest device – not as a cascade end unit

Consisting of		Usage
<p>1 x  Twin-Stick</p> <p>2 x  C-Fix bracket</p> <p>2 x  L-Fix bracket</p>	<ul style="list-style-type: none"> ■ Twin-Stick with cascade system plug and 2 connecting cables with plug and socket M12 x 4 + FE ■ 2 C-Fix brackets with L-Fix bracket ■ Operating instructions on CD-ROM 	 <ul style="list-style-type: none"> ■ As a cascaded host or guest device – not as a cascade end unit
Connection types		System connection: Plug M12 x 4 + FE Extension connection: Socket M12 x 4 + FE
Scanning range		
Minimum		0 m ... 4 m
Typically		0 m ... 5 m

F

■ Resolution 14 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01214ABB04BE0	1207115
180 mm		C4MT-01814ABB04BE0	1207116
240 mm	350 mm	C4MT-02414ABB04DE0	1207117
300 mm		C4MT-03014ABB04DE0	1207118
360 mm		C4MT-03614ABB04DE0	1207119
420 mm		C4MT-04214ABB04DE0	1207120
480 mm		C4MT-04814ABB04DE0	1207121
540 mm		C4MT-05414ABB04DE0	1207122
600 mm		700 mm	C4MT-06014ABB04FE0
660 mm	C4MT-06614ABB04FE0		1207124
720 mm	C4MT-07214ABB04FE0		1207125
780 mm	C4MT-07814ABB04FE0		1207126
840 mm	C4MT-08414ABB04FE0		1207127
900 mm	C4MT-09014ABB04FE0		1207128
960 mm	C4MT-09614ABB04FE0		1207129
1020 mm	C4MT-10214ABB04FE0		1207130
1080 mm	C4MT-10814ABB04FE0		1207131
1140 mm	C4MT-11414ABB04FE0		1207132
1200 mm	C4MT-12014ABB04FE0		1207133

■ Resolution 24 mm

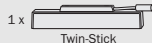
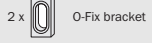
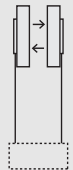
Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01224ABB04BE0	1207168
180 mm		C4MT-01824ABB04BE0	1207283
240 mm	350 mm	C4MT-02424ABB04DE0	1207284
300 mm		C4MT-03024ABB04DE0	1207285
360 mm		C4MT-03624ABB04DE0	1207286
420 mm		C4MT-04224ABB04DE0	1207287
480 mm		C4MT-04824ABB04DE0	1207181
540 mm		C4MT-05424ABB04DE0	1207288
600 mm		C4MT-06024ABB04FE0	1207289
660 mm	700 mm	C4MT-06624ABB04FE0	1207290
720 mm		C4MT-07224ABB04FE0	1207291
780 mm		C4MT-07824ABB04FE0	1207292
840 mm		C4MT-08424ABB04FE0	1207293
900 mm		C4MT-09024ABB04FE0	1207294
960 mm		C4MT-09624ABB04FE0	1207295
1020 mm		C4MT-10224ABB04FE0	1207296
1080 mm		C4MT-10824ABB04FE0	1207297
1140 mm		C4MT-11424ABB04FE0	1207298
1200 mm		C4MT-12024ABB04FE0	1207299

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■ Resolution 34 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01234ABB04BE0	1207300
180 mm		C4MT-01834ABB04BE0	1207301
240 mm	350 mm	C4MT-02434ABB04DE0	1207302
300 mm		C4MT-03034ABB04DE0	1207303
360 mm		C4MT-03634ABB04DE0	1207304
420 mm		C4MT-04234ABB04DE0	1207305
480 mm		C4MT-04834ABB04DE0	1207306
540 mm		C4MT-05434ABB04DE0	1207307
600 mm		C4MT-06034ABB04FE0	1207308
660 mm	700 mm	C4MT-06634ABB04FE0	1207309
720 mm		C4MT-07234ABB04FE0	1207310
780 mm		C4MT-07834ABB04FE0	1207311
840 mm		C4MT-08434ABB04FE0	1207312
900 mm		C4MT-09034ABB04FE0	1207313
960 mm		C4MT-09634ABB04FE0	1207314
1020 mm		C4MT-10234ABB04FE0	1207315
1080 mm		C4MT-10834ABB04FE0	1207316
1140 mm		C4MT-11434ABB04FE0	1207317
1200 mm		C4MT-12034ABB04FE0	1206993

miniTwin4 as a standalone device

Consisting of		Usage	
 	<ul style="list-style-type: none"> ▪ Twin-Stick with standalone system plug and 1 connecting cable with plug M12 x 4 + FE ▪ 2 O-Fix brackets ▪ Operating instructions on CD-ROM 		<ul style="list-style-type: none"> ▪ As a standalone device
Connection types		System connection: Plug M12 x 4 + FE	
Scanning range			
		Minimum	0 m ... 4 m
		Typically	0 m ... 5 m

■ Resolution 14 mm

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Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01214ABB03BB0	1206951
180 mm		C4MT-01814ABB03BB0	1206945
240 mm	350 mm	C4MT-02414ABB03DB0	1206954
300 mm		C4MT-03014ABB03DB0	1206953
360 mm		C4MT-03614ABB03DB0	1206955
420 mm		C4MT-04214ABB03DB0	1206956
480 mm		C4MT-04814ABB03DB0	1206957
540 mm		C4MT-05414ABB03DB0	1206958
600 mm	700 mm	C4MT-06014ABB03FB0	1206959
660 mm		C4MT-06614ABB03FB0	1206960
720 mm		C4MT-07214ABB03FB0	1206961
780 mm		C4MT-07814ABB03FB0	1206962
840 mm		C4MT-08414ABB03FB0	1206963
900 mm		C4MT-09014ABB03FB0	1206964
960 mm		C4MT-09614ABB03FB0	1206965
1020 mm		C4MT-10214ABB03FB0	1206966
1080 mm		C4MT-10814ABB03FB0	1206967
1140 mm		C4MT-11414ABB03FB0	1206968
1200 mm	C4MT-12014ABB03FB0	1206969	

■ Resolution 24 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01224ABB03BB0	1207318
180 mm		C4MT-01824ABB03BB0	1207177
240 mm	350 mm	C4MT-02424ABB03DB0	1207319
300 mm		C4MT-03024ABB03DB0	1207320
360 mm		C4MT-03624ABB03DB0	1207321
420 mm		C4MT-04224ABB03DB0	1207322
480 mm		C4MT-04824ABB03DB0	1207178
540 mm		C4MT-05424ABB03DB0	1207323
600 mm		C4MT-06024ABB03FBO	1207324
660 mm	700 mm	C4MT-06624ABB03FBO	1207325
720 mm		C4MT-07224ABB03FBO	1207326
780 mm		C4MT-07824ABB03FBO	1207327
840 mm		C4MT-08424ABB03FBO	1207328
900 mm		C4MT-09024ABB03FBO	1207329
960 mm		C4MT-09624ABB03FBO	1207330
1020 mm		C4MT-10224ABB03FBO	1207331
1080 mm		C4MT-10824ABB03FBO	1207332
1140 mm		C4MT-11424ABB03FBO	1207180
1200 mm		C4MT-12024ABB03FBO	1207333

■ Resolution 34 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C4MT-01234ABB03BB0	1207334
180 mm		C4MT-01834ABB03BB0	1207335
240 mm	350 mm	C4MT-02434ABB03DB0	1207336
300 mm		C4MT-03034ABB03DB0	1207337
360 mm		C4MT-03634ABB03DB0	1207338
420 mm		C4MT-04234ABB03DB0	1207339
480 mm		C4MT-04834ABB03DB0	1207340
540 mm		C4MT-05434ABB03DB0	1207341
600 mm		C4MT-06034ABB03FBO	1207342
660 mm	700 mm	C4MT-06634ABB03FBO	1207343
720 mm		C4MT-07234ABB03FBO	1207344
780 mm		C4MT-07834ABB03FBO	1207345
840 mm		C4MT-08434ABB03FBO	1207346
900 mm		C4MT-09034ABB03FBO	1207347
960 mm		C4MT-09634ABB03FBO	1207348
1020 mm		C4MT-10234ABB03FBO	1207349
1080 mm		C4MT-10834ABB03FBO	1207350
1140 mm		C4MT-11434ABB03FBO	1207351
1200 mm		C4MT-12034ABB03FBO	1207169

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Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

Scanning range	Minimum	0 m ... 4 m
	Typically	0 m ... 5 m
Protective field height (depending on type)		120 mm ... 1200 mm
Safety related parameters	Type	Type 4 (IEC 61496)
	Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
	Category	Category 4 (EN ISO 13849)
	Performance level	PL e (EN ISO 13849)
	PFHd (mean probability of a dangerous failure per hour)	Standalone system: 4.3×10^{-9} (EN ISO 13849) Cascaded systems: 1.3×10^{-8} (EN ISO 13849)
	T_M (Mission Time)	20 years (EN ISO 13849)
Response time (depending on type)		Max. 17 ms ¹⁾
Synchronization		Optical, without separate synchronization
Protection class		III (EN 61140)
Enclosure rating		IP 65
Ambient operating temperature from ... to		-20 °C ... +55 °C
Storage temperature from ... to		-25 °C ... +70 °C
Air humidity from ... to		15 % ... 95 %, non-condensing
Housing cross-section (incl. system connection)		15 mm x 32 mm
Vibration resistance		5 g (10 Hz ... 55 Hz), IEC 60068-2-6
Shock resistance		10 g, 16 s (IEC 60068-2-29)

¹⁾ Standalone devices, no cascaded systems. Other response times, see operating instructions.

Functional data

Restart interlock	✓
External device monitoring	✓
Beam coding	Automatic
Extension connection (depending on type)	✓
Configuration method	Hard wired

Electrical data

System connection	Plug M12 x 4 + FE
Connecting cable length	Max. 20 m ¹⁾
Connecting cable wire cross-section	0.34 mm ²
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC)
Residual ripple	± 10 %
Switch-on time	Max. 3 s ²⁾
Display elements	LED

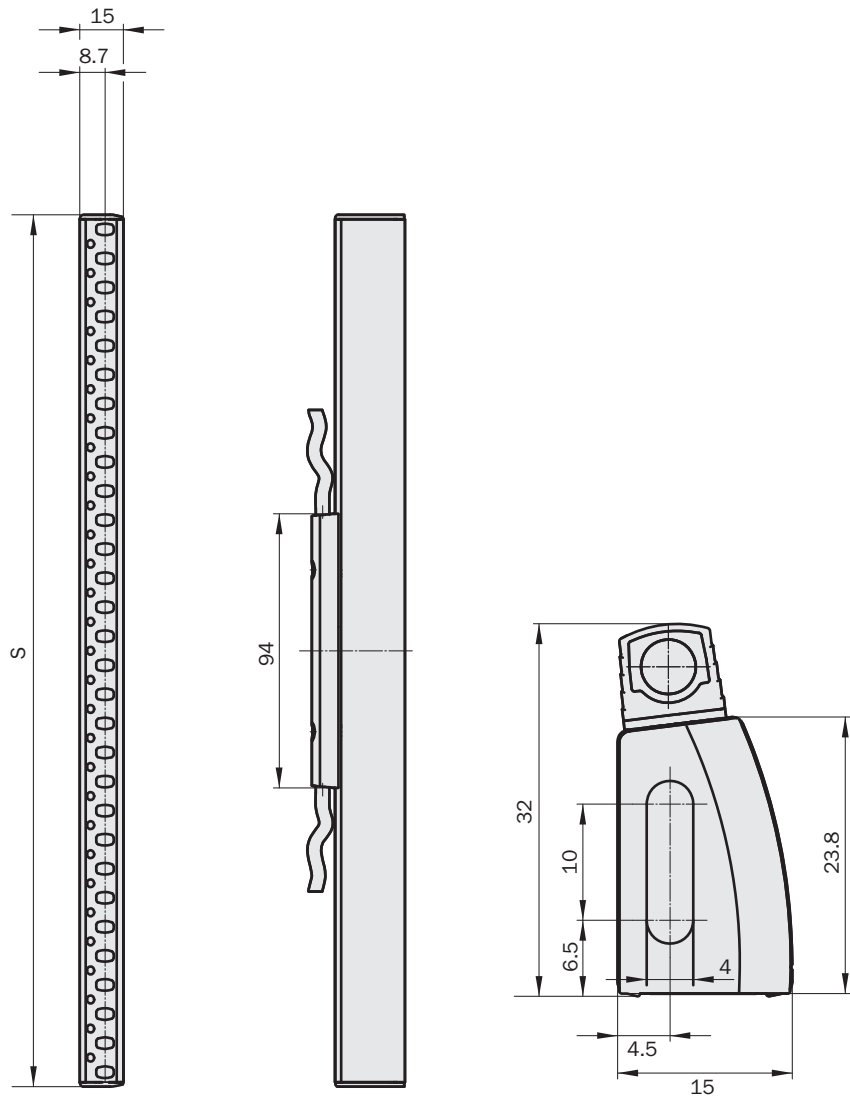
¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ After applying the supply voltage

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Dimensional drawings

miniTwin4



S = protective field height = housing length

Dimensions in mm

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Connection diagrams

→ You can find connection diagrams at www.mysick.com

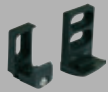


sens:Control – safe control solutions



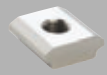
Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories




Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Combination C-Fix bracket with L-Fix bracket	2	BEF-3AAA0MKU2S04	2045843
	O-Fix bracket	2	BEF-3SHAEMKU2	2045835
	C-Fix-Flex bracket, adjustable +4°/-4°, metal version, for flat and connector side assembly	2	BEF-1SHABMAL2	2056598


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts for deflector mirror	Suitable for PNS75 and PNS125	6	2030600


System plugs

Figure	Description	Cable length	Type	Part no.
	With 1 connecting cable, stripped	10 m	Standalone system plug	2051290
	With 1 connecting cable and plug M12 x 4 + FE	160 mm	Standalone system plug	2046447
		350 mm	Standalone system plug	2046449
		700 mm	Standalone system plug	2046451
	With 2 connecting cables and 1 plug and 1 socket M12 x 4 + FE	160 mm	Cascade system plug	2046452
		350 mm	Cascade system plug	2046454
		700 mm	Cascade system plug	2046456

Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 5	Straight	2 m	DOL-1205-G02M	6008899
			5 m	DOL-1205-G05M	6009868
			10 m	DOL-1205-G10M	6010544
			15 m	DOL-1205-G15M	6029215
			20 m	DOL-1205-G20MAC	6036386


Connector

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Plug M12 x 5	Straight	STE-1205-G	6022083

Cable receptacles

Connection type	Direction of cable outlet	Type	Part no.
Socket M12 x 5	Straight	DOS-1205-G	6009719

Extension connection cables


Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Plug M12 x 5, socket M12 x 5	Plug straight/ socket straight	1 m	DSL-1205-G01MC	6029280
			2 m	DSL-1205-G02MC	6025931

Deflector mirrors PNS75


Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424

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Deflector mirrors PNS125

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435

Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter AR60 for miniTwin	-	-	-	4064710

Device protection

Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	24 mm diameter	Test rod	2045592
	34 mm diameter	Test rod	2045593
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

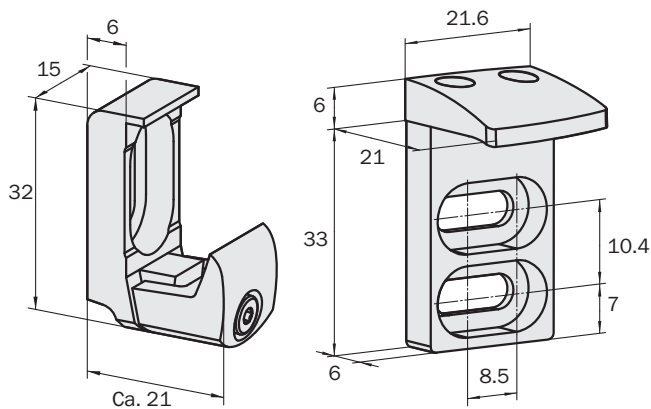
BEF-3AAA0MKU2S04

Combination C-Fix bracket with L-Fix bracket, 2 pieces each

BEF-3SHAEMKU2

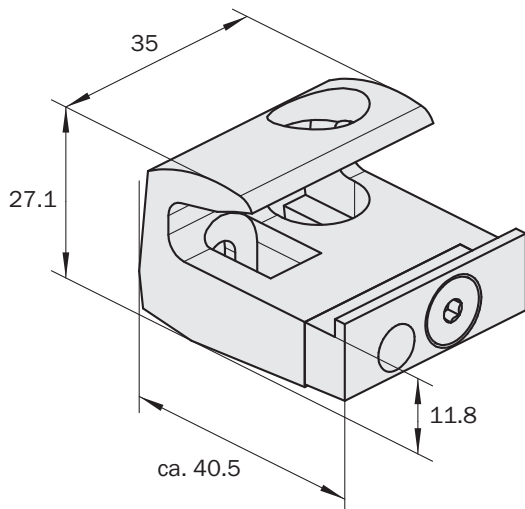
O-Fix bracket, 2 pieces

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BEF-1SHABMAL2

C-Fix-Flex bracket, adjustable +4°/-4°, metal version, for flat and connector side assembly



Dimensions in mm

Technical data overview

Protective field height (depending on type)	150 mm ... 1200 mm
Scanning range (depending on type)	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Micro safety light curtain is used wherever hazardous points and hazardous areas require reliable and cost-effective protection.

- Simplified machine integration in small spaces due to small, compact design
- Space-saving cable entry due to M12 connections

In-system added value

Combined with SICK safe control solutions

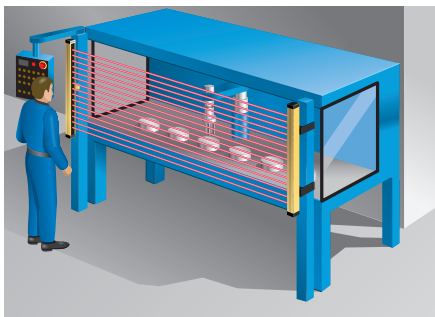
Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

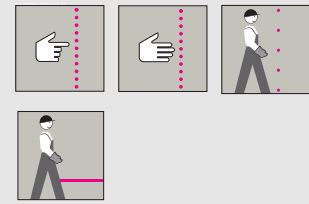
Applications

→ You can find more applications using the application finder at www.mysick.com

- Electronics industry
- Packaging machinery
- Food and beverage industry
- Handling machinery
- Special machinery



Hazardous point protection on a handling machine



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- Small, compact housing
- External device monitoring (EDM)
- Restart interlock (RES)



Further information	Page
→ Ordering information	F-118
→ Technical specifications	F-119
→ Dimensional drawings	F-120
→ Connection diagrams	F-121
→ Accessories	F-122
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C4000 Micro

Usage	As a standalone system
Connection types	System connection: plug M12 x 7 + FE

- Resolution: 14 mm
- Scanning range: 0 m ... 2.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C41S-0101AA300	1024054	C41E-0101AG300	1024055
300 mm	C41S-0301AA300	1023458	C41E-0301AG300	1023459
450 mm	C41S-0401AA300	1023460	C41E-0401AG300	1023461
600 mm	C41S-0601AA300	1023462	C41E-0601AG300	1023463
750 mm	C41S-0701AA300	1023464	C41E-0701AG300	1023465
900 mm	C41S-0901AA300	1023466	C41E-0901AG300	1023467
1050 mm	C41S-1001AA300	1023468	C41E-1001AG300	1023469
1200 mm	C41S-1201AA300	1023470	C41E-1201AG300	1023471

- Resolution: 14 mm
- Scanning range: 1 m ... 5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C41S-0101AA300	1024054	C41E-0101BG300	1024037
300 mm	C41S-0301AA300	1023458	C41E-0301BG300	1023486
450 mm	C41S-0401AA300	1023460	C41E-0401BG300	1023487
600 mm	C41S-0601AA300	1023462	C41E-0601BG300	1023488
750 mm	C41S-0701AA300	1023464	C41E-0701BG300	1023489
900 mm	C41S-0901AA300	1023466	C41E-0901BG300	1023490
1050 mm	C41S-1001AA300	1023468	C41E-1001BG300	1023491
1200 mm	C41S-1201AA300	1023470	C41E-1201BG300	1023492

- Resolution: 30 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C41S-0103AA300	1023563	C41E-0103AG300	1023860
300 mm	C41S-0303AA300	1023472	C41E-0303AG300	1023473
450 mm	C41S-0403AA300	1023474	C41E-0403AG300	1023475
600 mm	C41S-0603AA300	1023476	C41E-0603AG300	1023477
750 mm	C41S-0703AA300	1023478	C41E-0703AG300	1023479
900 mm	C41S-0903AA300	1023480	C41E-0903AG300	1023481
1050 mm	C41S-1003AA300	1023482	C41E-1003AG300	1023483
1200 mm	C41S-1203AA300	1023484	C41E-1203AG300	1023485

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	-	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Protective field height (depending on type)	150 mm ... 1200 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 20 ms
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	33.5 mm x 28.5 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

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Functional data

System part	Sender	Receiver
Restart interlock	-	✓
Restart interlock (delivery status)	-	Internal
External device monitoring	-	✓
External device monitoring (delivery status)	-	Deactivated
Configuration method	Hard wired	

Electrical data

System part	Sender	Receiver
System connection	Plug M12 x 7 + FE	
Connecting cable length	Max. 15 m ¹⁾	
Connecting cable wire cross-section	0.25 mm ²	
Supply voltage V _s	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 10 % ³⁾	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	24 V DC (15 V DC ... 28.8 V DC)
Switching voltage LOW	-	2 V DC
Switching current	-	Max. 500 mA
Display elements	7-segment	

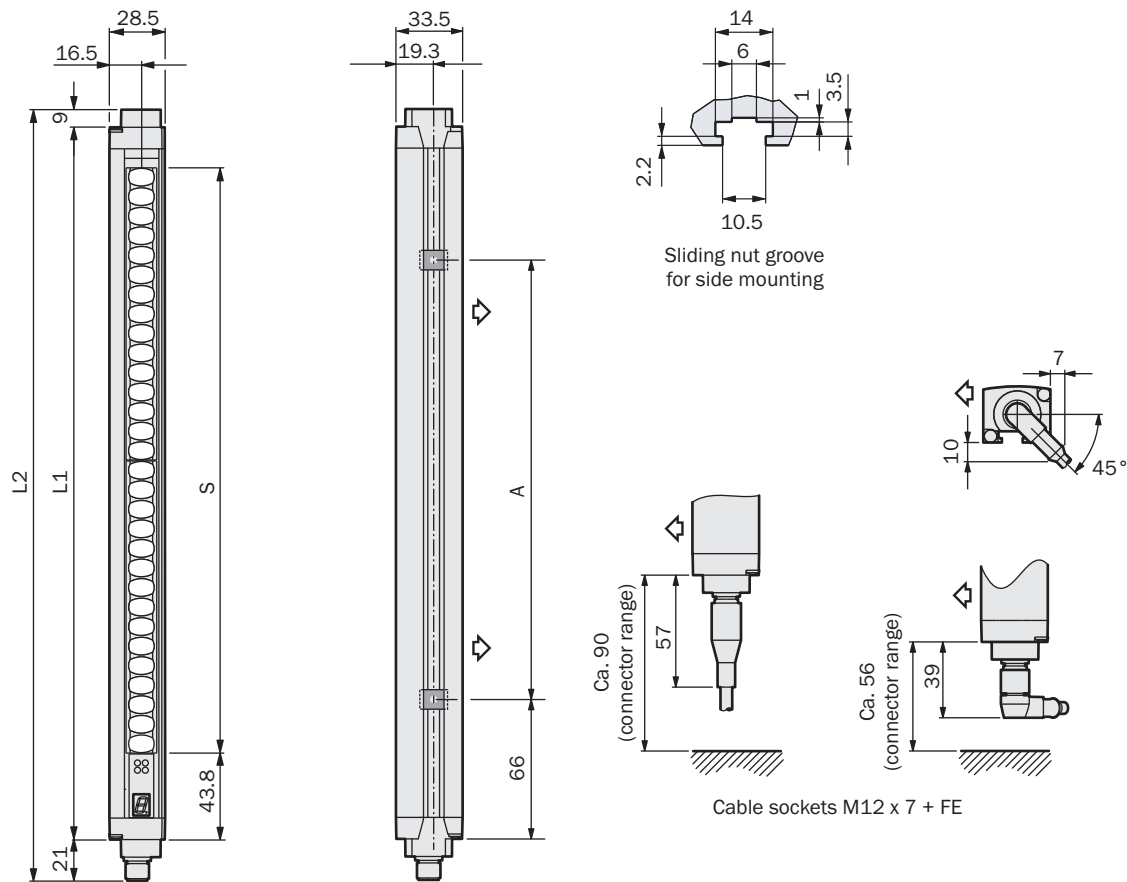
¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_s.

Dimensional drawings

C4000 Micro



Plug M12 x 7 + FE

Illustration sender (receiver mirror image)

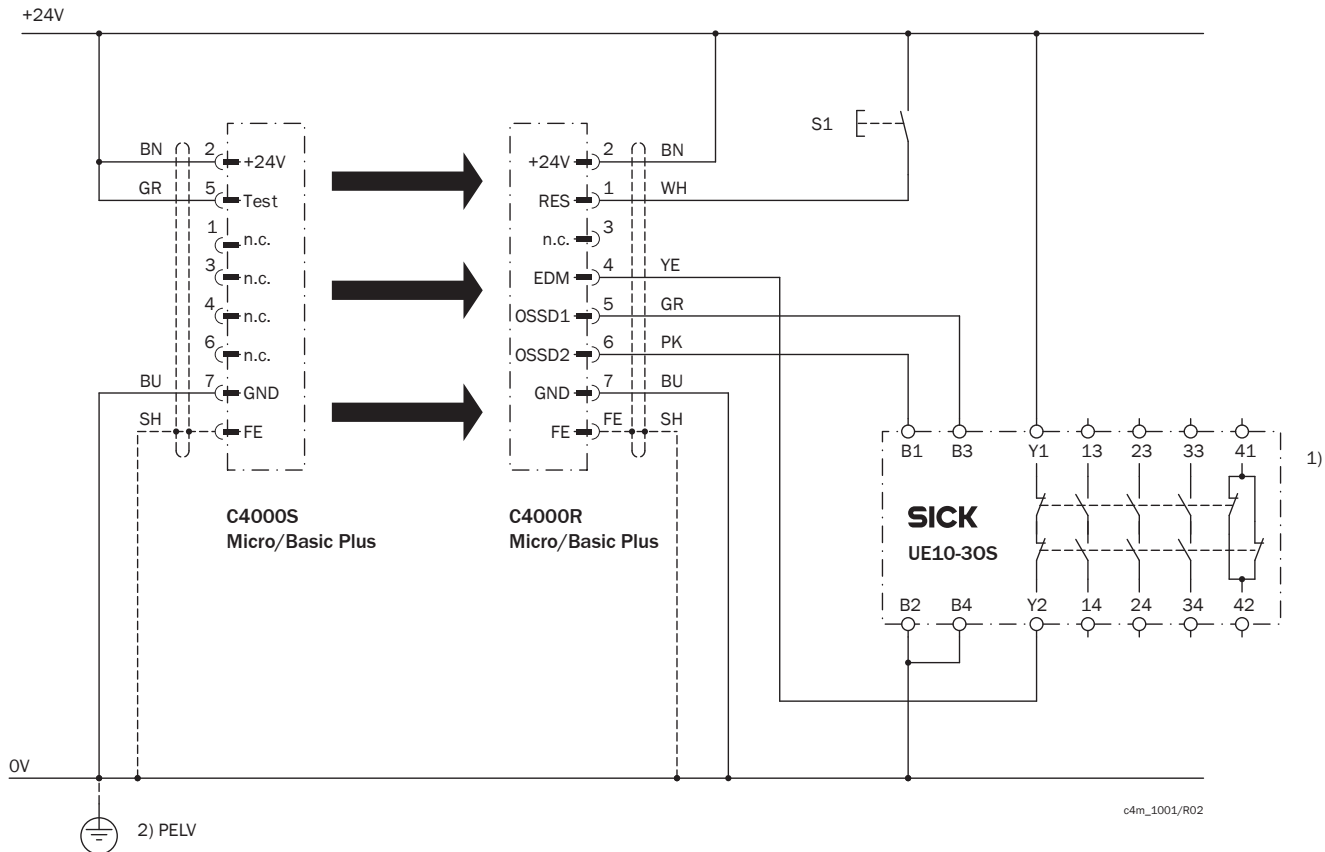
Protective field height S	L1	L2	A
150	246	276	106
300	364	394	224
450	515	545	374
600	666	696	524
750	816	846	674
900	967	997	824
1050	1117	1147	974
1200	1266	1296	1124

Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C4000 Micro on UE10-30S safety relay



Task

Integration of a C4000 Micro/Basic Plus safety light curtain on UE10-30S.

Operating mode: with restart interlock and external device monitoring.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the yellow LED on the receiver flashes. The system is ready to be switched on. The system is enabled by pressing S1 (button is pressed and released). The OSSD1 and OSSD2 outputs are live and the UE10-30S is switched on. Upon the interruption of one of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

Fault analysis

OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The incorrect functioning of the UE10-30S will be detected but will not result in the loss of the shutdown function. On manipulation (e.g., jamming) of the S1 button, the system does not enable the output current circuits.

Comments

1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.

2) PELV in accordance with the requirements in EN 60204-1 / 6.4 Take note of the operating instructions of the integrated devices.

sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories

Mounting systems



Figure	Property	Packing unit	Type	Part no.
	Mounting bracket, rigid	4	BEF-3WNKBAST4	2044068
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 1, swivel mount	4	BEF-2SMKEAKU4	2019649
	Stainless steel bracket, adjustable	4	BEF-2SMKEAES4	2030288
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMKEAAL4	2044848
	Mounting kit 10, replacement bracket, suitable for replacement of FGS	4	BEF-3WNKBCST4	2021645

Sliding nuts


Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600

F


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 7 + FE	Straight	2.5 m	DOL-127SG2M5E25KM0	6020537
			5 m	DOL-127SG05ME25KM0	6020354
			7.5 m	DOL-127SG7M5E25KM0	6020353
			10 m	DOL-127SG10ME25KM0	6020352
			15 m	DOL-127SG15ME25KM0	6020872
		Angled	5 m	DOL-127SW05ME25KM0	6021342
			15 m	DOL-127SW15ME25KM0	6021343


Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	M12 x 8	Straight	DOS-1208-G	6028422

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves

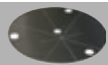



Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0


Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMKEAAL2	2045884
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938


Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	150 mm	2022404
	300 mm	2022405
	450 mm	2022406
	600 mm	2022407
	750 mm	2022408
	900 mm	2022409
	1050 mm	2022410
	1200 mm	2022411

PNS75 deflector mirrors



Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
			1800 mm	PNS75-184

PNS125 deflector mirrors


Figure	Mirror material	Suitable for protective field height	Type	Part no.		
	Glass	300 mm	PNS125-034	1019425		
		450 mm	PNS125-049	1019426		
		600 mm	PNS125-064	1019427		
		750 mm	PNS125-079	1019428		
		900 mm	PNS125-094	1019429		
		1050 mm	PNS125-109	1019430		
		1200 mm	PNS125-124	1019431		
		1350 mm	PNS125-139	1019432		
		1500 mm	PNS125-154	1019433		
		1650 mm	PNS125-169	1019434		
				1800 mm	PNS125-184	1019435

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Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for small housing profile	-	-	-	4032462
	Adapter for AR60, for small housing profile in PU3Hxx-xxxxxxx device column	-	-	-	4056730



Configuration software

Figure	Description	Remark	Part no.
	CD ROM operating instructions for C4000 Basic Plus, C4000 Basic, C4000 Eco, C4000 Micro	Included with delivery	2026783

Configuration tools

Figure	Description	Suitable for	Type	Part no.
	For deactivation of the external device monitoring and integrated restart interlock	C2000, M2000: deactivation of the external device monitoring; C4000 Micro, C4000 Basic Plus: deactivation of the external device monitoring and integrated restart interlock	Reset tool	6022103
	Adapter cable for reset tool	C4000 Basic Plus and C4000 Micro in combination with reset tool (6022103)	Adapter cable for reset tool	2026866

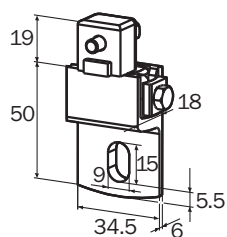
Device protection

Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

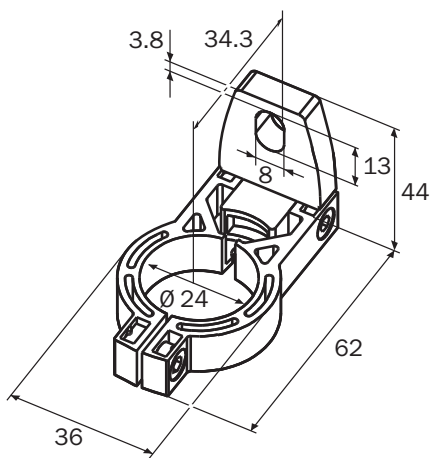
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Dimensional drawings mounting systems

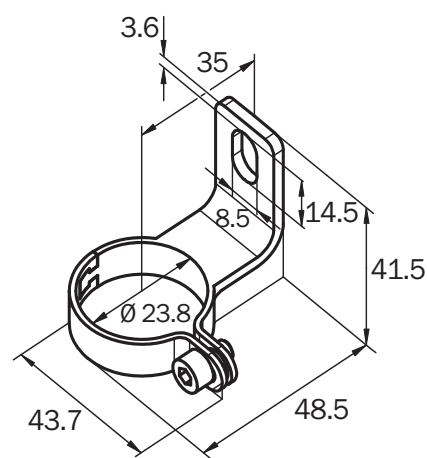
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



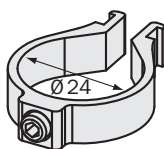
BEF-2SMKEAKU4
Mounting kit 1, swivel mount



BEF-2SMKEAES4
Stainless steel bracket, adjustable

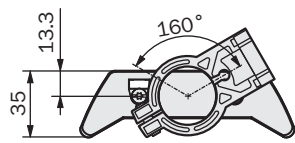


BEF-2SMKEAAL4
Omega bracket, flexible and quick installation with only one screw

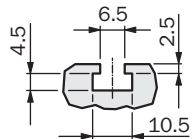


Dimensions in mm

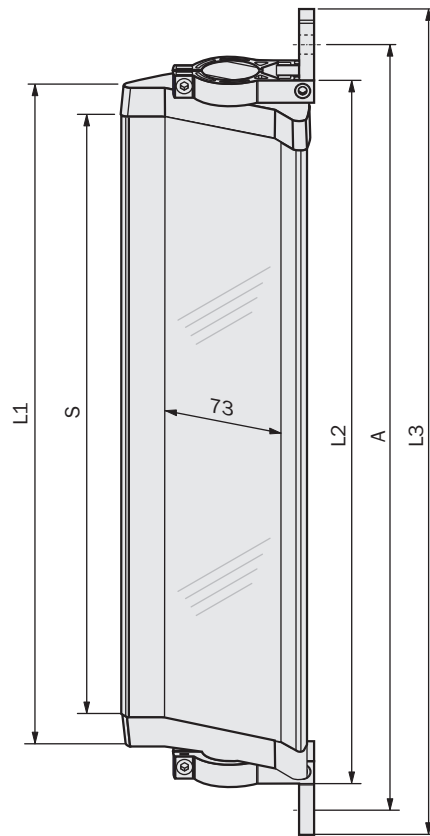
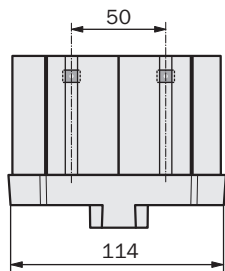
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

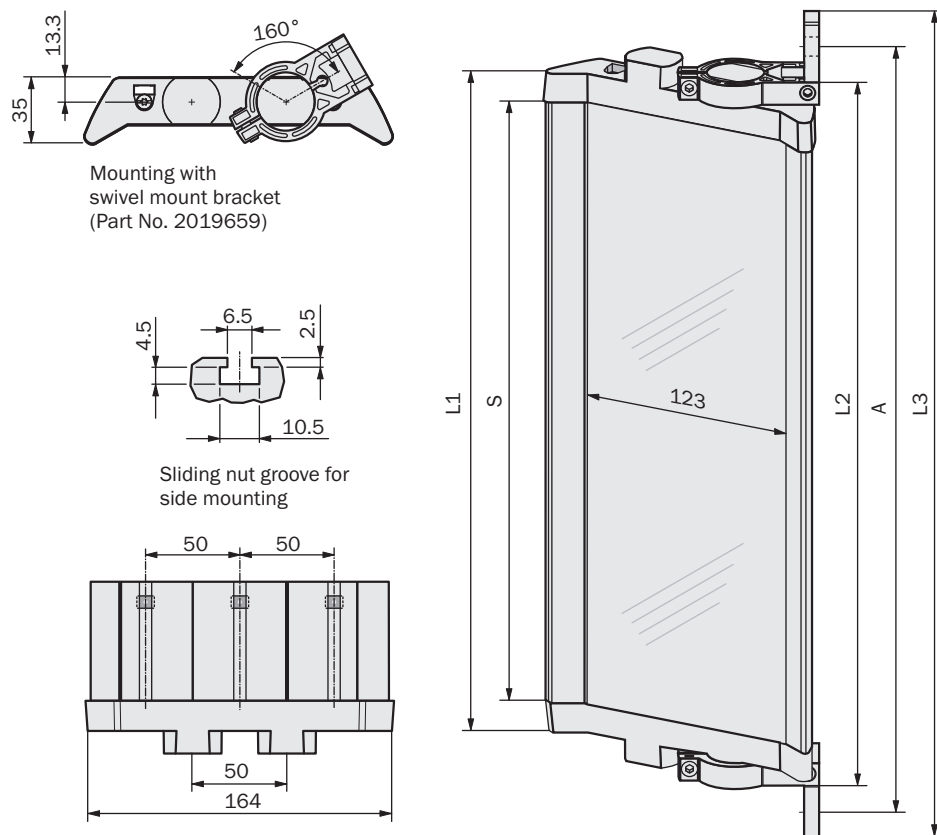


F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Resistant materials	Stainless steel V4A, PMMA, PA 6
Enclosure rating	IP 69K, IP 67, IP 66, IP 65
Protective field height (depending on type)	150 mm ... 1200 mm
Scanning range (depending on type)	0 m ... 1.8 m / 0 m ... 4.5 m / 1 m ... 4 m
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496-1) Type 2 (IEC 61496-2)

Product description

The IP69K Housing, in conjunction with the C4000 Micro safety light curtain, achieves an IP 69K enclosure rating. A high level of resistance against the usual cleaning agents is achieved by using suitable materials (V4A, PMMA, PA, PVC).

A compensating element (membrane) prevents the plastic tubes from misting up and liquids from entering the housing. The cable is fed into the device through the proven PG connector.

In-system added value

Combined with SICK safe control solutions

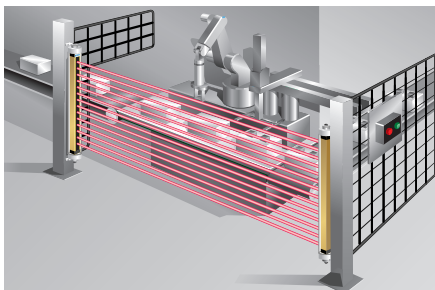
Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

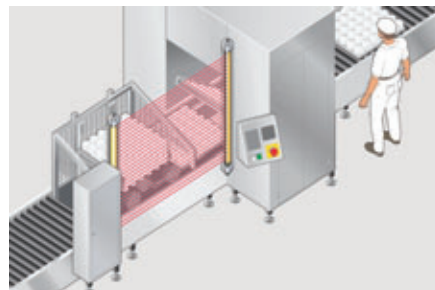
Applications

→ You can find more applications using the application finder at www.mysick.com

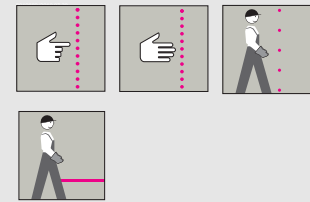
- Packaging industry
- Pharmaceutical industry
- Food industry
- Clean room systems
- Chemical industry



Hazardous point protection on a machining center in the hygiene area



Hazardous point protection on a cheese-making machine



- Enclosure ratings IP 69K, IP 67 and IP 66
- Resistant to wash down pressures up to 100 bar and wash down temperatures up to 80 °C
- ECOLAB and Diversey cleaning certificates
- Compact design in 50 mm acrylic tube with high hygiene and cleaning standards
- Chemical-resistant materials: stainless steel end caps, PMMA tube, PA membrane
- IP 69K-rated PVC cable and screw fitting
- Stainless steel brackets



Further information	Page
→ Ordering information	F-130
→ Technical specifications	F-131
→ Dimensional drawings	F-132
→ Accessories	F-133
→ Systematic safety	A-0
→ Services	B-0

Ordering information

IP69K Housing with integrated C4000 Micro sender or receiver unit,
including 15 m IP 69K-rated PVC cable

- Resolution: 14 mm
- Scanning range: 0 m ... 1.8 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C45S-0101AA220	1025720	C45E-0101AG220	1025721
300 mm	C45S-0301AA220	1025722	C45E-0301AG220	1025723
450 mm	C45S-0401AA220	1025727	C45E-0401AG220	1025728
600 mm	C45S-0601AA220	1025732	C45E-0601AG220	1025733
750 mm	C45S-0701AA220	1025737	C45E-0701AG220	1025738
900 mm	C45S-0901AA220	1025742	C45E-0901AG220	1025743
1050 mm	C45S-1001AA220	1025747	C45E-1001AG220	1025748
1200 mm	C45S-1201AA220	1025753	C45E-1201AG220	1025754

- Resolution: 14 mm
- Scanning range: 1 m ... 4 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C45S-0101AA220	1025720	C45E-0101BG220	1025719
300 mm	C45S-0301AA220	1025722	C45E-0301BG220	1025726
450 mm	C45S-0401AA220	1025727	C45E-0401BG220	1025731
600 mm	C45S-0601AA220	1025732	C45E-0601AG220	1025736
750 mm	C45S-0701AA220	1025737	C45E-0701BG220	1025741
900 mm	C45S-0901AA220	1025742	C45E-0901BG220	1025746
1050 mm	C45S-1001AA220	1025747	C45E-1001BG220	1025752
1200 mm	C45S-1201AA220	1025753	C45E-1201BG220	1025757

- Resolution: 30 mm
- Scanning range: 0 m ... 4.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C45S-0103AA220	1025717	C45E-0103AG220	1025718
300 mm	C45S-0303AA220	1025724	C45E-0303AG220	1025725
450 mm	C45S-0403AA220	1025729	C45E-0403AG220	1025730
600 mm	C45S-0603AA220	1025734	C45E-0603AG220	1025735
750 mm	C45S-0703AA220	1025739	C45E-0703AG220	1025740
900 mm	C45S-0903AA220	1025744	C45E-0903AG220	1025745
1050 mm	C45S-1003AA220	1025749	C45E-1003AG220	1025750
1200 mm	C45S-1203AA220	1025755	C45E-1203AG220	1025756

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	-	0 m ... 1.8 m / 0 m ... 4.5 m / 1 m ... 4 m
Protective field height (depending on type)	150 mm ... 1200 mm	
Safety related parameters		
Type	Type 4 (IEC 61496-1) Type 2 (IEC 61496-2)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (EN 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 20 ms
Synchronization	Optical, without separate synchronization	
Protection class	III (IEC 536:1976)	
Enclosure rating	IP 69K, IP 67, IP 66, IP 65	
Materials		
End caps	Stainless steel V4A	
Plastic tube	PMMA	
Compensating element (membrane)	PA 6	
PG connector	PA 6	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing diameter	52 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
External device monitoring	-	✓
Configuration method	Hard wired	

Electrical data

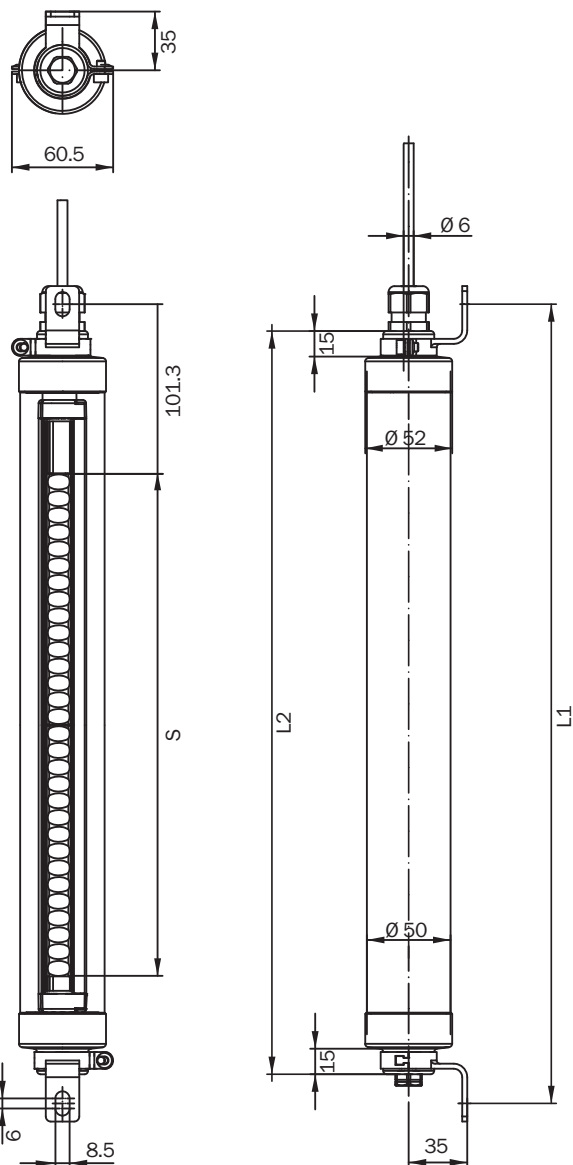
System part	Sender	Receiver
System connection	PVC cable, 15 m	
Supply voltage V_s	24 V DC (19 V DC ... 28 V DC)	
Residual ripple	$\leq 10\% \text{ } ^1$	
Power consumption	Max. 350 mA	Max. 450 mA
Safety outputs (OSSD)	2 PNP semiconductors, short-circuit protected, cross-circuit monitored	
Type of output	-	24 V DC (15 V DC ... 28.8 V DC)
Switching voltage HIGH	-	2 V DC
Switching voltage LOW	-	Max. 500 mA
Switching current	-	
Display elements	7-segment	

¹⁾ Within the limits of V_s .

Dimensional drawings



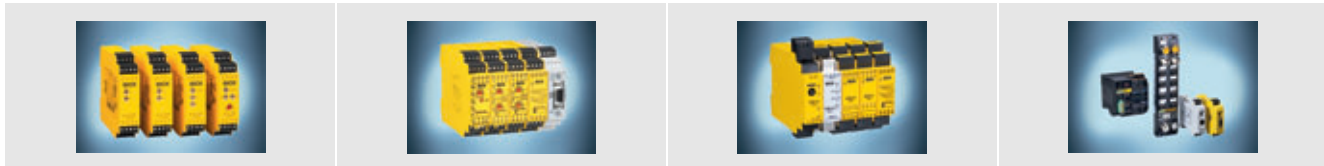
C4000 Micro in IP69K Housing



Protective field height S	L1	L2
150	357	324
300	476	443
450	626	593
600	777	744
750	927	894
900	1078	1045
1050	1228	1195
1200	1382	1349

Dimensions in mm





sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Stainless steel support bracket	2	BEF-2AAAADES2	2026849
	Venting membrane	–	Venting membrane	5309082
	For M12 cable socket	–	Assembly key	4034690


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600



Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Deflector mirrors

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Stainless steel	750 mm	PNS75-079S05	1046075

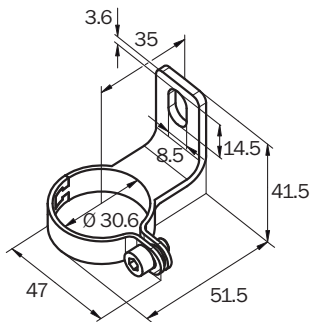
Device protection

Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

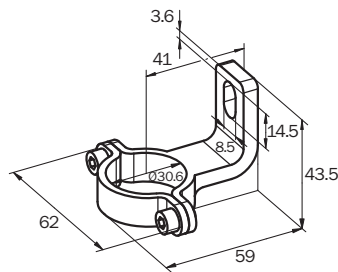
F

Dimensional drawings mounting systems

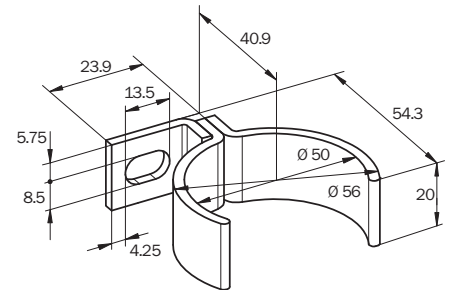
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable

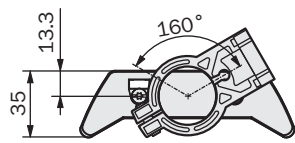


BEF-2AAADES2
Stainless steel support bracket

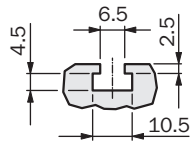


Dimensions in mm

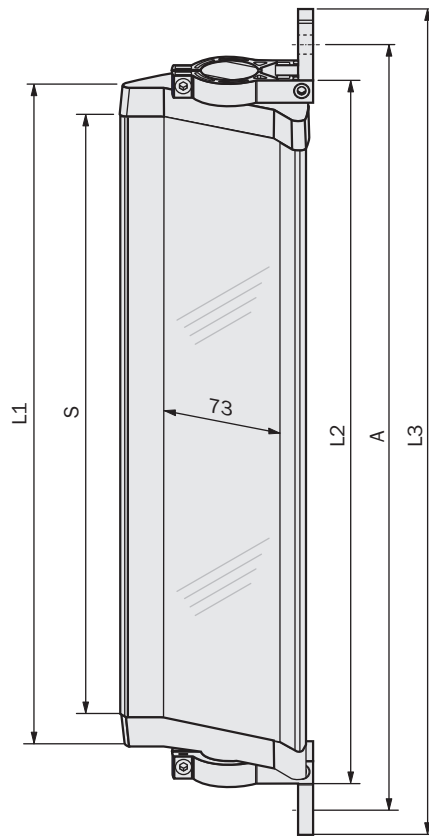
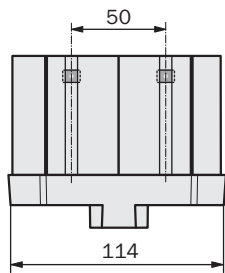
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting



Mirror height S	L1	L2	L3	A
790	822	846	910	890

Dimensions in mm

F



F

- Ambient operating temperature down to -30 °C
- High durability
- Compact design
- On-site diagnostics
- External device monitoring (EDM)
- Restart interlock (RES)



Technical data overview

Ambient operating temperature	-30 °C ... +15 °C
Resistant materials	Stainless steel, PMMA, PA 6
Enclosure rating	IP 67
Protective field height (depending on type)	600 mm / 1050 mm / 1200 mm
Scanning range (depending on type)	0 m ... 4.5 m / 1 m ... 4 m
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496-1) Type 2 (IEC 61496-2)

Product description

The robust IP 67 Housing and the integrated heating transform the C4000 Micro safety light curtain into the Cold Store Curtain, making it equipped for use at low temperatures. It is therefore now possible to provide more flexible, ergonomic and process-oriented protection of access and hazardous points-of-operation in deep-freeze areas than would be achieved with

separate protective equipment such as grids or fences.

In deep-freeze distribution centers, in particular, it is important that customer-specific batch sizes are rapidly and smoothly picked.

The protection of picking places with Cold Store Curtains ensures flexible and rapid access to automatic pallet stores.

In-system added value

Combined with SICK safe control solutions

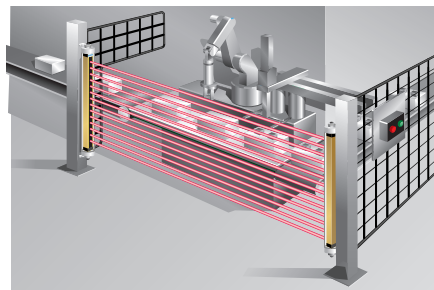
Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	O-2
Flexi Soft	✓	✓	✓	O-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

Applications

→ You can find more applications using the application finder at www.mysick.com

- Hazardous point protection and access protection in cold storage and in industries such as:
- Food industry
 - Logistics



Hazardous point protection on a machining center in the hygiene area

Further information	Page
→ Dimensional drawings	F-139
→ Accessories	F-140
→ Systematic safety	A-0
→ Services	B-0

Ordering information

Note: Other resolutions and protective field heights available upon request.

C4000 Micro Cold Store

- Resolution: 14 mm
- Scanning range: 1 m ... 4 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
600 mm	C45S-S007	1041165	C45E-S007	1041166

- Resolution: 30 mm
- Scanning range: 0 m ... 4.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
1050 mm	C45S-S012	1045693	C45E-S012	1045694
1200 mm	C45S-S016	1048528	C45E-S016	1048529

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	-	0 m ... 4.5 m / 1 m ... 4 m
Protective field height (depending on type)	600 mm / 1050 mm / 1200 mm	
Safety related parameters		
Type	Type 4 (IEC 61496-1) Type 2 (IEC 61496-2)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (EN 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	3.2×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 14 ms
Synchronization	Optical, without separate synchronization	
Protection class	III (IEC 536:1976)	
Enclosure rating	IP 67	
Materials		
End caps	Stainless steel	
Plastic tube	PMMA	
Compensating element (membrane)	PA 6	
PG connector	PA 6	
Ambient operating temperature from ... to	0 °C ... +55 °C -30 °C ... +15 °C with heating switched on	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing diameter	52 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
Restart interlock (delivery status)	-	Internal
External device monitoring	-	✓
External device monitoring (delivery status)	-	Deactivated
Configuration method	Hard wired	

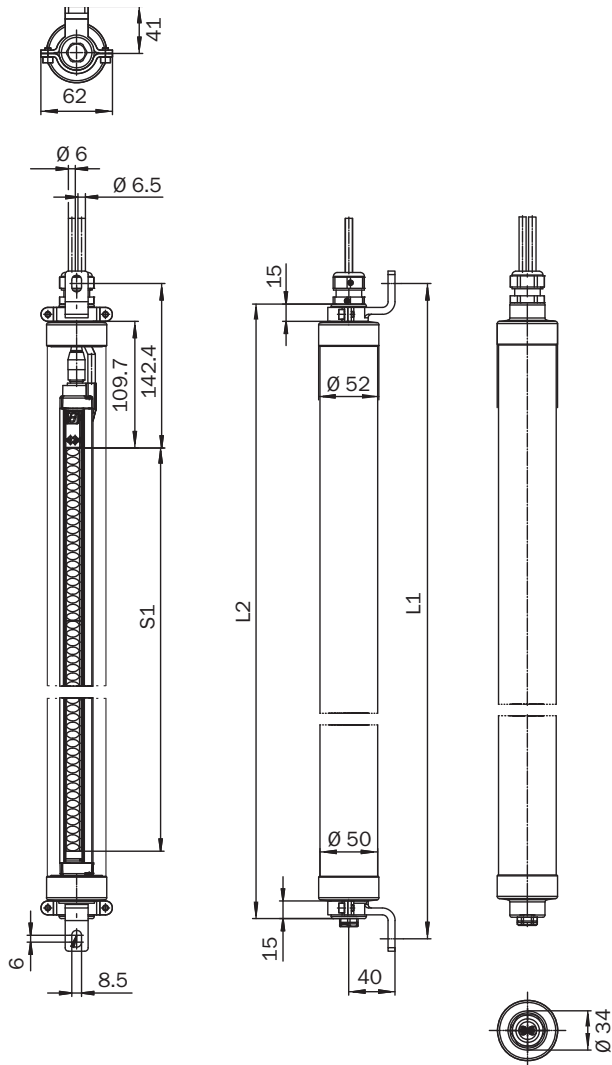
Electrical data

System part	Sender	Receiver
System connection	PVC cable, 15 m	
Connecting cable wire cross-section sensor	0.25 mm ²	
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC)	
Residual ripple	≤ 10 % ¹⁾	
Power consumption	Max. 350 mA	Max. 450 mA
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	24 V DC (15 V DC ... 28.8 V DC)
Switching voltage LOW	-	2 V DC
Switching current	-	Max. 500 mA
Heating		
Supply voltage	230 V AC	
Power consumption (temperature)	Max. 70 W (-30 °C)	
Short-circuit protection	6 A circuit breaker, type C	
Trip current earth leakage trip	30 mA	
Connecting cable wire cross-section heating	3 x 0.75 mm ²	
Display elements	7-segment	

¹⁾ Within the limits of V_s .

F

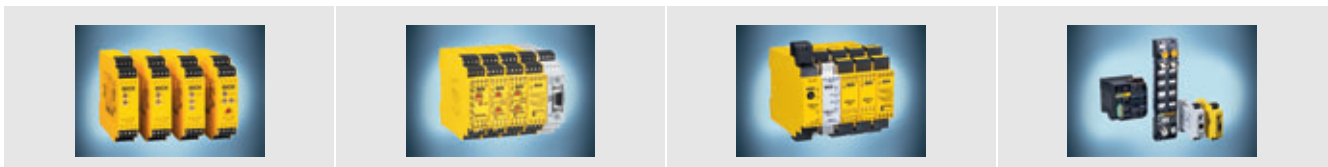
Dimensional drawings



Protective field height S	L1	L2
600	817	782
1050	1267	1232
1200	1422	1387

Dimensions in mm

sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Description	Packing unit	Type	Part no.
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Stainless steel support bracket	2	BEF-2AAAADES2	2026849
	Venting membrane	-	Venting membrane	5309082
	For M12 cable socket	-	Assembly key	4034690

Power supply units

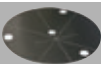


Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves



Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

→ For more detailed data on device columns, see page I-0

Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMMEAAL2	2045883

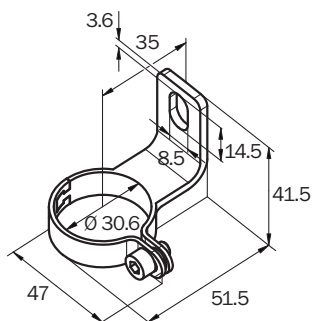
Device protection

Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

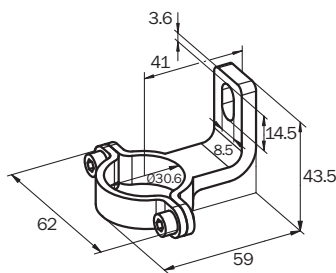
F

Dimensional drawings mounting systems

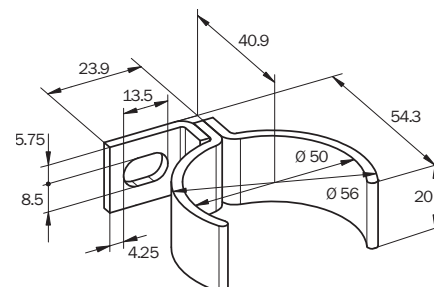
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



BEF-2AAADES2
Stainless steel support bracket



Dimensions in mm



F

- 7-segment display + LED
- Restart interlock (RES)
- External device monitoring (EDM)
- Pre-assembled M12 cables



Technical data overview

Protective field height (depending on type)	300 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Basic Plus safety light curtain provides cost-effective, reliable protection of hazardous points and hazardous areas. Pre-assembled "off-the-peg" M12 × 8 cables save money and integrated functions, such as restart interlock and external device monitoring, simplify machine integration. Alignment and diagnostics using the proven 7-segment display saves more time.

- Reduced replacement costs and time: Sender and receiver can be replaced separately.

- Security of investment due to high impact resistance and resistance of the front screen to scratches
- High system availability due to tested interaction between sensor and evaluation unit
- Space-saving and compact systems due to fast response times for low safety distances
- High availability even in harsh industrial conditions due to EMC immunity

In-system added value

Combined with SICK safe control solutions

Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	O-2
Flexi Soft	✓	✓	✓	O-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

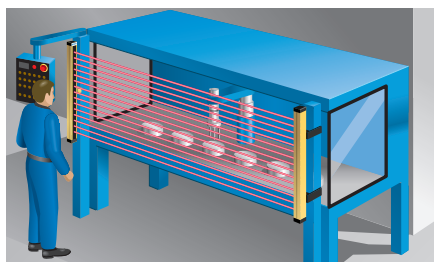
→ For more combinations, see annex

Applications

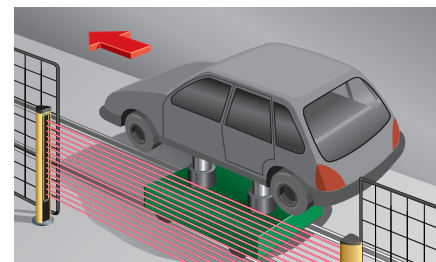
→ You can find more applications using the application finder at www.mysick.com

- Car and vehicle manufacture
- Machine tools
- Electronics industry
- Packaging machines
- Food and beverage industry
- Handling machines
- Special machine tool manufacturing
- Environmental engineering

Further information	Page
→ Technical specifications	F-144
→ Dimensional drawings	F-146
→ Connection diagrams	F-146
→ Accessories	F-147
→ Systematic safety	A-0
→ Services	B-0



Hazardous point protection on a handling machine



Hazardous point protection on an assembly line

Ordering information

C4000 Basic Plus

Usage	As a standalone system
Connection types	System connection: Plug M12 x 7 + FE

- Resolution: 14 mm
- Scanning range: 0 m ... 2.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301AA300	1027922	C40E-0301AG300	1027944
450 mm	C40S-0401AA300	1027923	C40E-0401AG300	1027945
600 mm	C40S-0601AA300	1027924	C40E-0601AG300	1027946
750 mm	C40S-0701AA300	1027925	C40E-0701AG300	1027947
900 mm	C40S-0901AA300	1027926	C40E-0901AG300	1027948
1050 mm	C40S-1001AA300	1027927	C40E-1001AG300	1027949
1200 mm	C40S-1201AA300	1027928	C40E-1201AG300	1027950
1350 mm	C40S-1301AA300	1027929	C40E-1301AG300	1027951
1500 mm	C40S-1501AA300	1027930	C40E-1501AG300	1027952
1650 mm	C40S-1601AA300	1027931	C40E-1601AG300	1027953
1800 mm	C40S-1801AA300	1027932	C40E-1801AG300	1027954

- Resolution: 14 mm
- Scanning range: 1 m ... 5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301AA300	1027922	C40E-0301BG300	1027966
450 mm	C40S-0401AA300	1027923	C40E-0401BG300	1027967
600 mm	C40S-0601AA300	1027924	C40E-0601BG300	1027968
750 mm	C40S-0701AA300	1027925	C40E-0701BG300	1027969
900 mm	C40S-0901AA300	1027926	C40E-0901BG300	1027970
1050 mm	C40S-1001AA300	1027927	C40E-1001BG300	1027971
1200 mm	C40S-1201AA300	1027928	C40E-1201BG300	1027972
1350 mm	C40S-1301AA300	1027929	C40E-1301BG300	1027973
1500 mm	C40S-1501AA300	1027930	C40E-1501BG300	1027974
1650 mm	C40S-1601AA300	1027931	C40E-1601BG300	1027975
1800 mm	C40S-1801AA300	1027932	C40E-1801BG300	1027976

- Resolution: 30 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303AA300	1027933	C40E-0303AG300	1027955
450 mm	C40S-0403AA300	1027934	C40E-0403AG300	1027956
600 mm	C40S-0603AA300	1027935	C40E-0603AG300	1027957
750 mm	C40S-0703AA300	1027936	C40E-0703AG300	1027958
900 mm	C40S-0903AA300	1027937	C40E-0903AG300	1027959
1050 mm	C40S-1003AA300	1027938	C40E-1003AG300	1027960
1200 mm	C40S-1203AA300	1027939	C40E-1203AG300	1027961
1350 mm	C40S-1303AA300	1027940	C40E-1303AG300	1027962
1500 mm	C40S-1503AA300	1027941	C40E-1503AG300	1027963
1650 mm	C40S-1603AA300	1027942	C40E-1603AG300	1027964
1800 mm	C40S-1803AA300	1027943	C40E-1803AG300	1027965

F

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	–	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Protective field height (depending on type)	300 mm ... 1800 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	Max. 26 ms	
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	–25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
Restart interlock (delivery status)	-	Deactivated
External device monitoring	-	✓
External device monitoring (delivery status)	-	Deactivated
Configuration method	Hard wired	

Electrical data

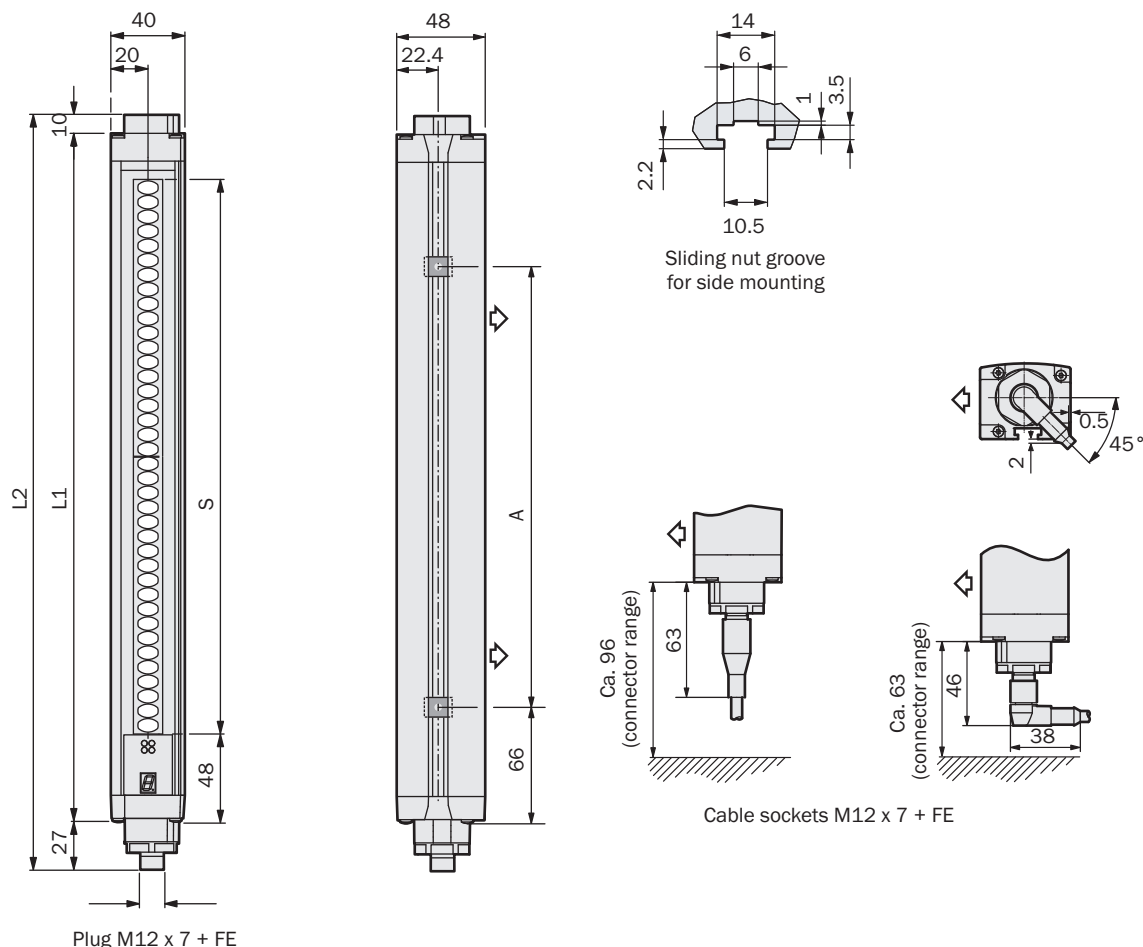
System part	Sender	Receiver
System connection	Plug M12 x 7 + FE	
Connecting cable length	Max. 15 m	
Connecting cable wire cross-section	0.25 mm ²	
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC) ¹⁾	
Residual ripple	$\leq 10\%$ ²⁾	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	24 V DC (15 V DC ... 28.8 V DC)
Switching voltage LOW	-	2 V DC
Switching current	-	Max. 500 mA
Display elements	7-segment	

¹⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

²⁾ Within the limits of V_s .

Dimensional drawings

C4000 Basic Plus



Plug M12 x 7 + FE

Illustration sender (receiver mirror image)

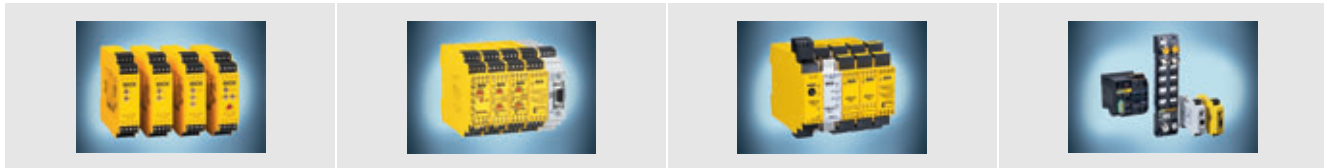
Protective field height S	L1	L2	A
300	372	409	224
450	523	560	374
600	674	711	524
750	824	861	674
900	975	1012	824
1050	1125	1162	974
1200	1274	1311	1124
1350	1426	1463	1274
1500	1577	1614	1424
1650	1727	1764	1574
1800	1878	1915	1724

Dimensions in mm

Connection diagrams

→ You can find connection diagrams at www.mysick.com










sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories



Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Mounting kit 11, replacement bracket, suitable for replacement of FGS	4	BEF-3WNGBCST4	2021646


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 7 + FE	Straight	2.5 m	DOL-127SG2M5E25KM0	6020537
			5 m	DOL-127SG05ME25KM0	6020354
			7.5 m	DOL-127SG7M5E25KM0	6020353
			10 m	DOL-127SG10ME25KM0	6020352
			15 m	DOL-127SG15ME25KM0	6020872
	Socket M12 x 7 + FE	Angled	5 m	DOL-127SW05ME25KM0	6021342
			15 m	DOL-127SW15ME25KM0	6021343


Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	M12 x 8	Straight	DOS-1208-G	6028422

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves





Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external assembling grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns see page I-0


Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMMEAAL2	2045883
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938


Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2022412
	450 mm	2022413
	600 mm	2022414
	750 mm	2022415
	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420
	1650 mm	2022421
	1800 mm	2022422

Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2026853
	450 mm	2026854
	600 mm	2026855
	750 mm	2026856
	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863



PNS75 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
			1800 mm	PNS75-184


PNS125 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825); Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column	-	-	-	4056731



Configuration software

Figure	Description	Remark	Part no.
	CD ROM operating instructions for C4000 Basic Plus, C4000 Basic, C4000 Eco, C4000 Micro	Included with delivery	2026783

Configuration tools

Figure	Description	Suitable for	Type	Part no.
	For deactivation of the external device monitoring and integrated restart interlock	C2000, M2000: deactivation of the external device monitoring; C4000 Micro, C4000 Basic Plus: deactivation of the external device monitoring and integrated restart interlock	Reset tool	6022103
	Adapter cable for reset tool	C4000 Basic Plus and C4000 Micro in combination with reset tool (6022103)	Adapter cable for reset tool	2026866

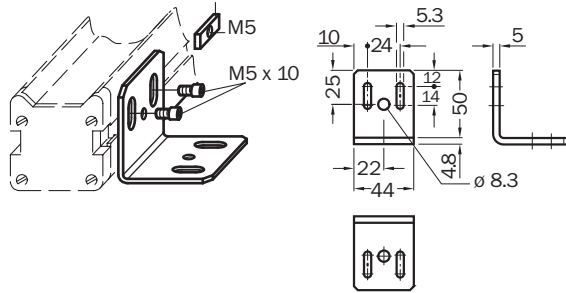
Device protection

Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

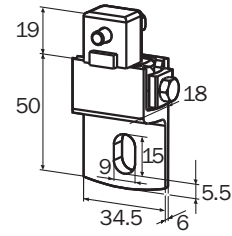
F

Dimensional drawings mounting systems

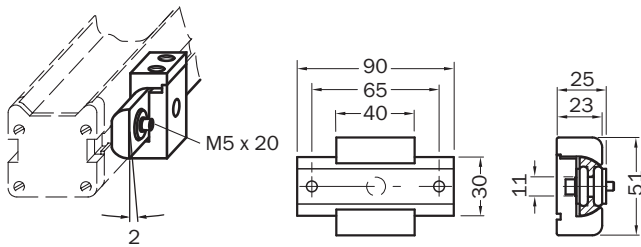
BEF-3WNGBAST4
Mounting kit 1, rigid



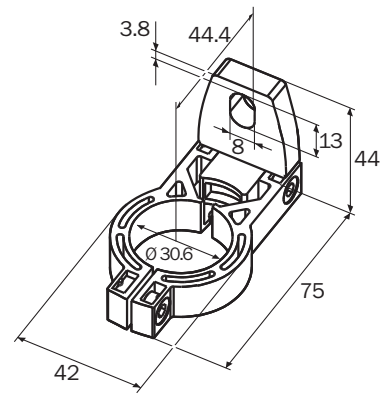
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



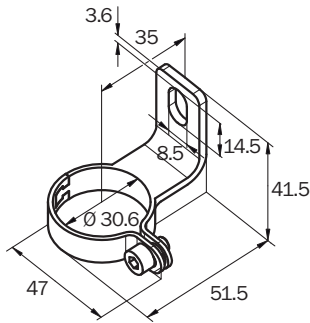
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



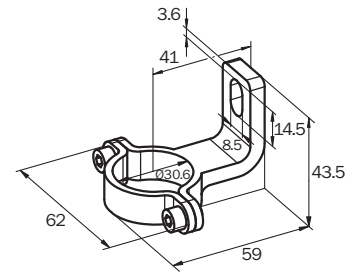
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



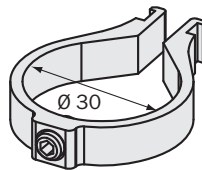
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



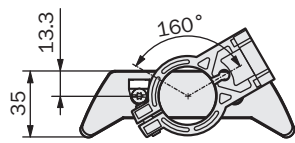
BEF-2SMMEAL4, BEF-2SMMEAL2
Omega bracket, flexible and quick installation with only one screw



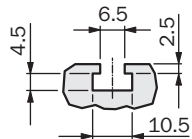
Dimensions in mm

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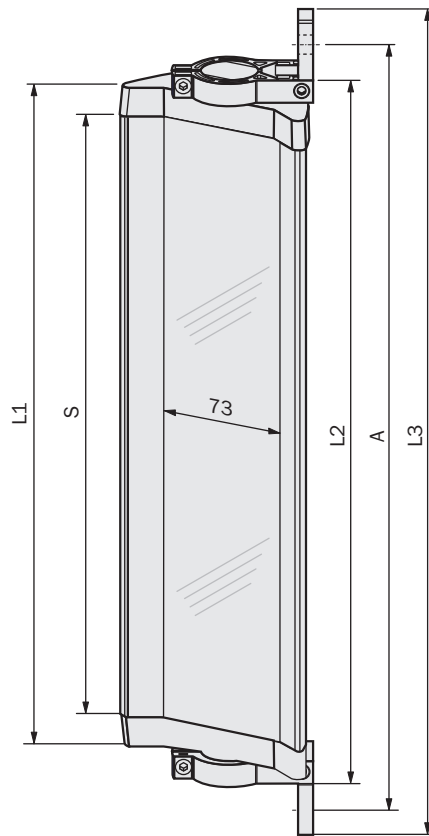
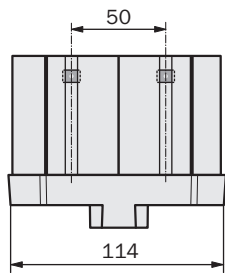
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

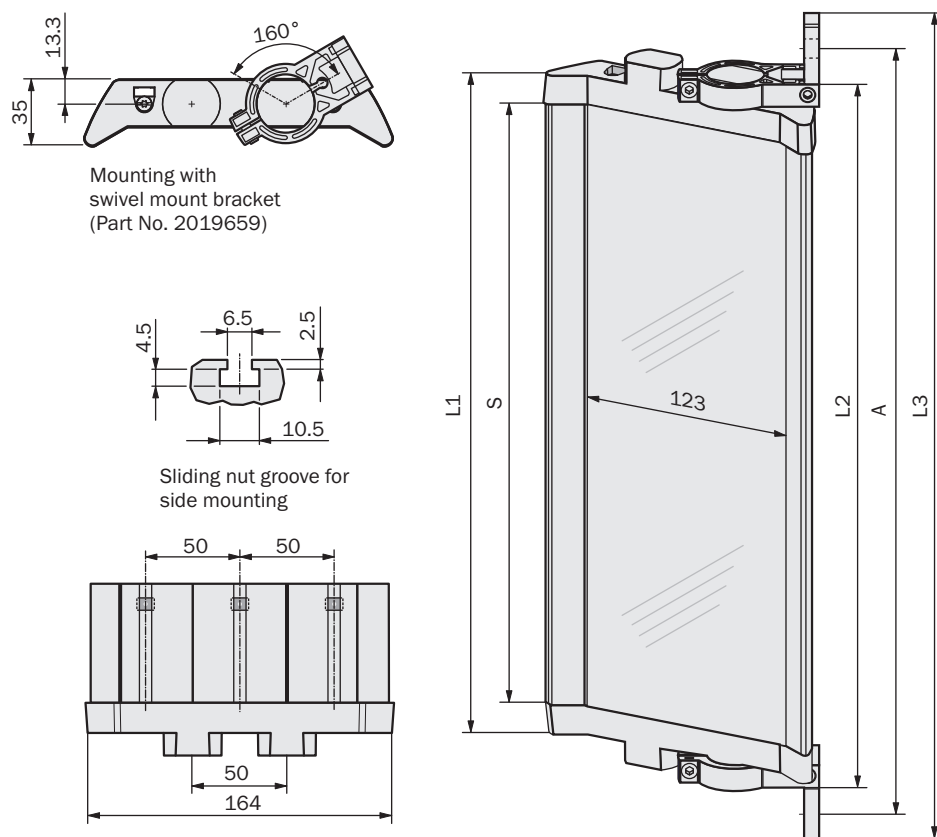


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Protective field height (depending on type)	300 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Basic safety light curtain is used wherever hazardous points and hazardous areas require reliable and cost-effective protection. It is a rugged device

designed for use in simple applications. Plus, the C4000 Basic provides alignment and diagnostics via a 7-segment display.

In-system added value

Combined with SICK safe control solutions

Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

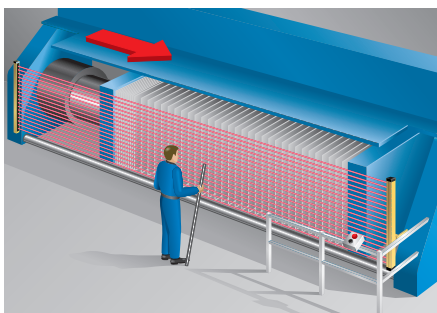
→ For more combinations, see annex

Applications

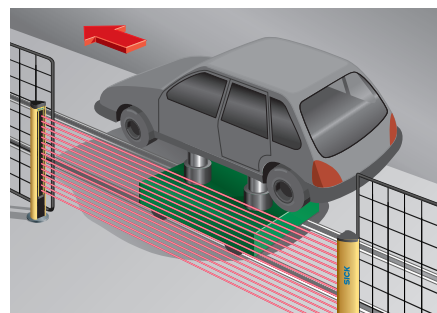
→ You can find more applications using the application finder at www.mysick.com

- Automotive industry
- Machine tool industry

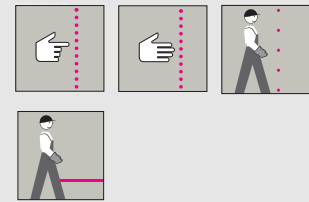
- Environmental engineering



Hazardous point protection on a diaphragm press



Access protection on an assembly line



- External device monitoring (EDM)



F

Further information	Page
→ Ordering information	F-156
→ Technical specifications	F-157
→ Dimensional drawings	F-159
→ Connection diagrams	F-159
→ Accessories	F-160
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C4000 Basic

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 6 + FE

- Resolution: 14 mm
- Scanning range: 0 m ... 2.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301AA030	1022195	C40E-0301AH030	1022196
450 mm	C40S-0401AA030	1022198	C40E-0401AH030	1022199
600 mm	C40S-0601AA030	1022200	C40E-0601AH030	1022201
750 mm	C40S-0701AA030	1022202	C40E-0701AH030	1022203
900 mm	C40S-0901AA030	1022204	C40E-0901AH030	1022205
1050 mm	C40S-1001AA030	1022206	C40E-1001AH030	1022207
1200 mm	C40S-1201AA030	1022208	C40E-1201AH030	1022209
1350 mm	C40S-1301AA030	1022210	C40E-1301AH030	1022211
1500 mm	C40S-1501AA030	1022212	C40E-1501AH030	1022213
1650 mm	C40S-1601AA030	1022214	C40E-1601AH030	1022215
1800 mm	C40S-1801AA030	1022216	C40E-1801AH030	1022217

- Resolution: 14 mm
- Scanning range: 1 m ... 5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301AA030	1022195	C40E-0301BH030	1022240
450 mm	C40S-0401AA030	1022198	C40E-0401BH030	1022241
600 mm	C40S-0601AA030	1022200	C40E-0601BH030	1022242
750 mm	C40S-0701AA030	1022202	C40E-0701BH030	1022243
900 mm	C40S-0901AA030	1022204	C40E-0901BH030	1022244
1050 mm	C40S-1001AA030	1022206	C40E-1001BH030	1022245
1200 mm	C40S-1201AA030	1022208	C40E-1201BH030	1022246
1350 mm	C40S-1301AA030	1022210	C40E-1301BH030	1022247
1500 mm	C40S-1501AA030	1022212	C40E-1501BH030	1022248
1650 mm	C40S-1601AA030	1022214	C40E-1601BH030	1022249
1800 mm	C40S-1801AA030	1022216	C40E-1801BH030	1022250

- Resolution: 30 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303AA030	1022218	C40E-0303AH030	1022219
450 mm	C40S-0403AA030	1022220	C40E-0403AH030	1022221
600 mm	C40S-0603AA030	1022222	C40E-0603AH030	1022223
750 mm	C40S-0703AA030	1022224	C40E-0703AH030	1022225
900 mm	C40S-0903AA030	1022226	C40E-0903AH030	1022227
1050 mm	C40S-1003AA030	1022228	C40E-1003AH030	1022229
1200 mm	C40S-1203AA030	1022230	C40E-1203AH030	1022231
1350 mm	C40S-1303AA030	1022232	C40E-1303AH030	1022233
1500 mm	C40S-1503AA030	1022234	C40E-1503AH030	1022235
1650 mm	C40S-1603AA030	1022236	C40E-1603AH030	1022237
1800 mm	C40S-1803AA030	1022238	C40E-1803AH030	1022239

Technical specifications



→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	-	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Protective field height (depending on type)	300 mm ... 1800 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 26 ms
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

Functional data

System part	Sender	Receiver
External device monitoring	-	✓
External device monitoring (delivery status)	-	Deactivated
Configuration method	Hard wired	

Electrical data

System part	Sender	Receiver
System connection	Hirschmann plug M26 x 6 + FE	
Connecting cable length	Max. 50 m ¹⁾	
Connecting cable wire cross-section	0.75 mm ²	
Supply voltage V _S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 10 % ³⁾	
Safety outputs (OSSD)		
	Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
	Switching voltage HIGH	24 V DC (15 V DC ... 28.8 V DC)
	Switching voltage LOW	2 V DC
	Switching current	Max. 500 mA
Display elements	7-segment	

¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S.

F

Dimensional drawings

C4000 Basic

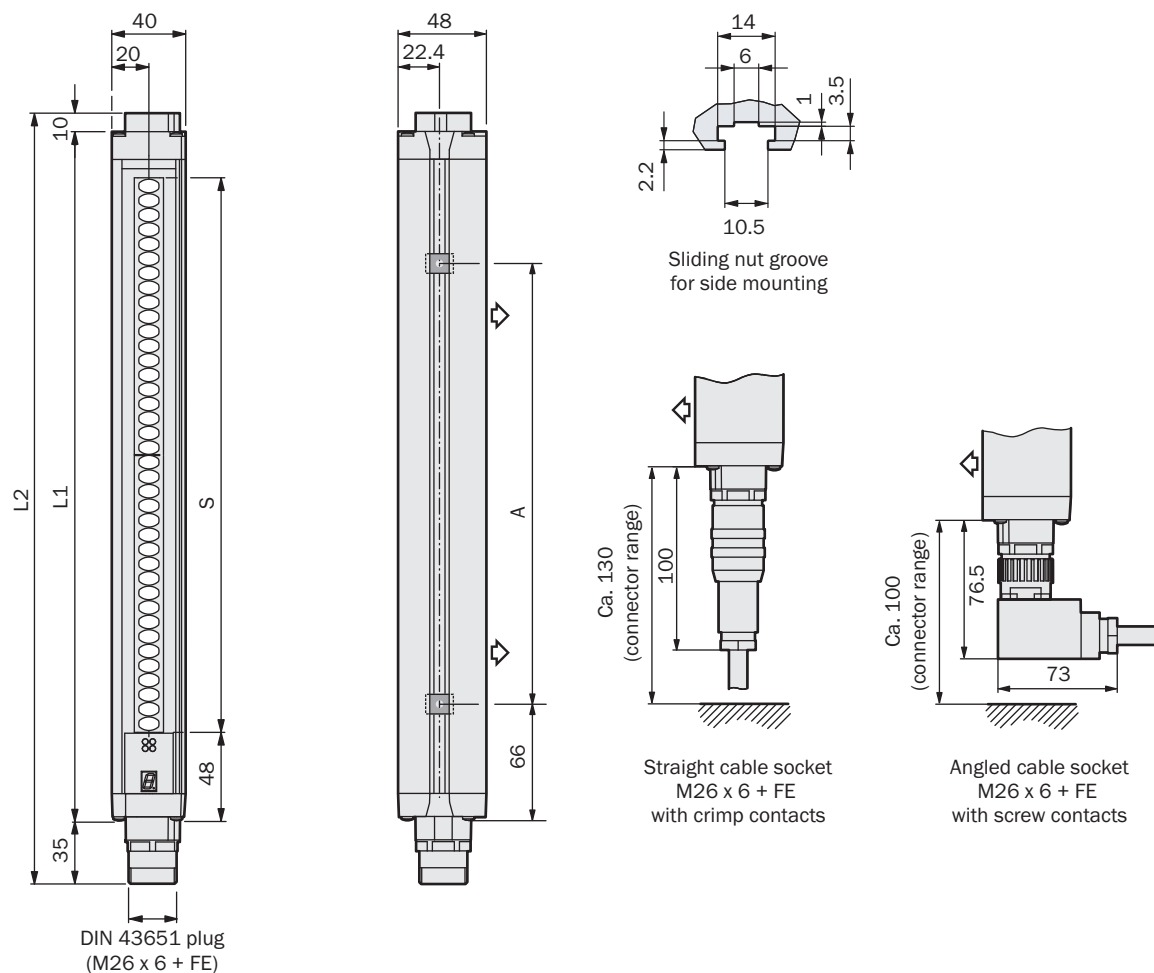


Illustration sender (receiver mirror image)

Protective field height S	L1	L2	A
300	372	417	224
450	523	568	374
600	674	718	524
750	824	869	674
900	975	1020	824
1050	1125	1170	974
1200	1274	1319	1124
1350	1426	1471	1274
1500	1577	1622	1424
1650	1727	1772	1574
1800	1878	1923	1724

Dimensions in mm

Connection diagrams

→ You can find connection diagrams at www.mysick.com










sens:Control – safe control solutions



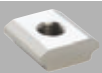
Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Mounting kit 11, replacement bracket, suitable for replacement of FGS	4	BEF-3WNGBCST4	2021646



Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann cable socket M26 x 6 + FE	Straight	2.5 m	DOL-0607G2M5075KM0	2023993
			5 m	DOL-0607G05M075KM0	2023994
			7.5 m	DOL-0607G7M5075KM0	2023995
			10 m	DOL-0607G10M075KM0	2023996
			15 m	DOL-0607G15M075KM0	2023997
			20 m	DOL-0607G20M075KM0	2023998
			30 m	DOL-0607G30M075KM0	2023999


Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable socket M26 x 6 + FE	Straight	DOS-0607G000GA3KM0	6006612
		Angled	DOS-0607W000IA3KU0	6007363

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves

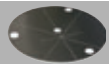



Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror


Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMMEAL2	2045883
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938


Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2022412
	450 mm	2022413
	600 mm	2022414
	750 mm	2022415
	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420
	1650 mm	2022421
	1800 mm	2022422

Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2026853
	450 mm	2026854
	600 mm	2026855
	750 mm	2026856
	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863



PNS75 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424


PNS125 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435

Laser alignment aid



Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column	-	-	-	4056731

Configuration software

Figure	Description	Remark	Part no.
	CD ROM operating instructions for C4000 Basic Plus, C4000 Basic, C4000 Eco, C4000 Micro	Included with delivery	2026783

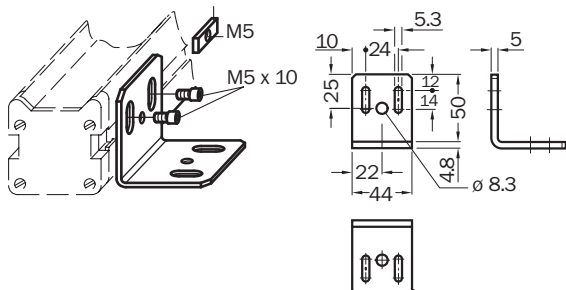
F

Device protection

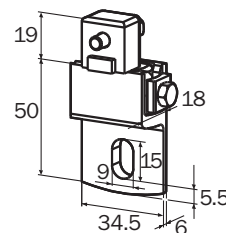
Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

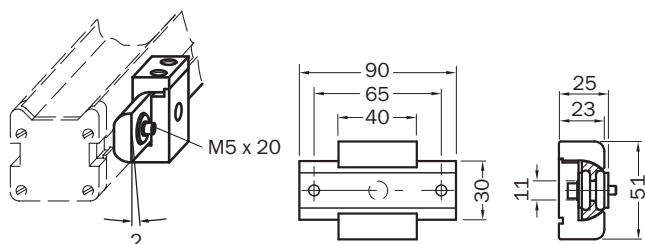
BEF-3WNGBAST4
Mounting kit 1, rigid



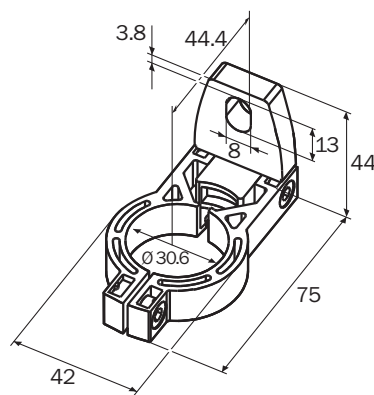
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



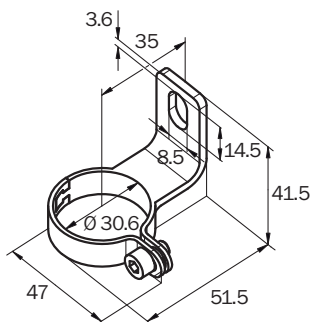
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



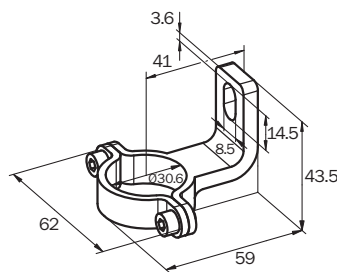
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



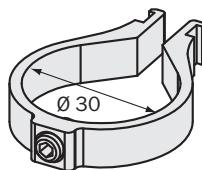
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable

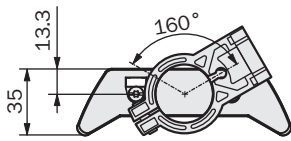


BEF-2SMMEAAL4, BEF-2SMMEAAL2
Omega bracket, flexible and quick installation with only one screw

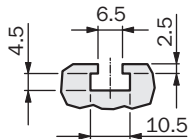


Dimensions in mm

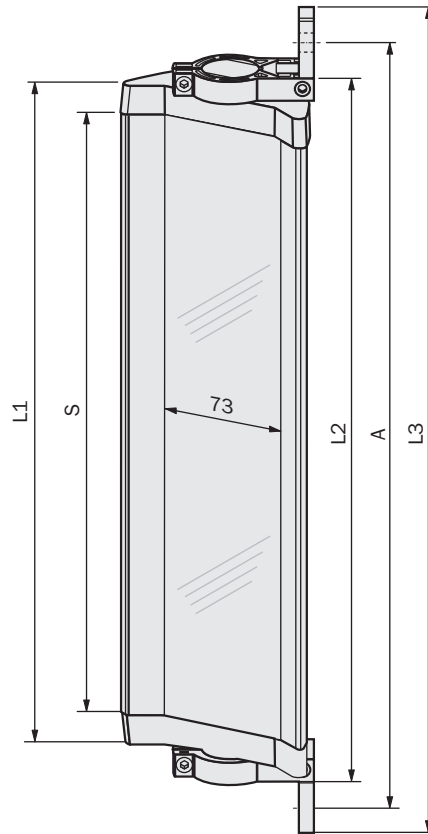
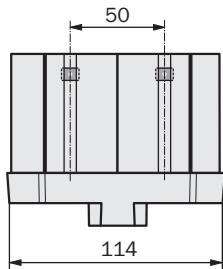
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

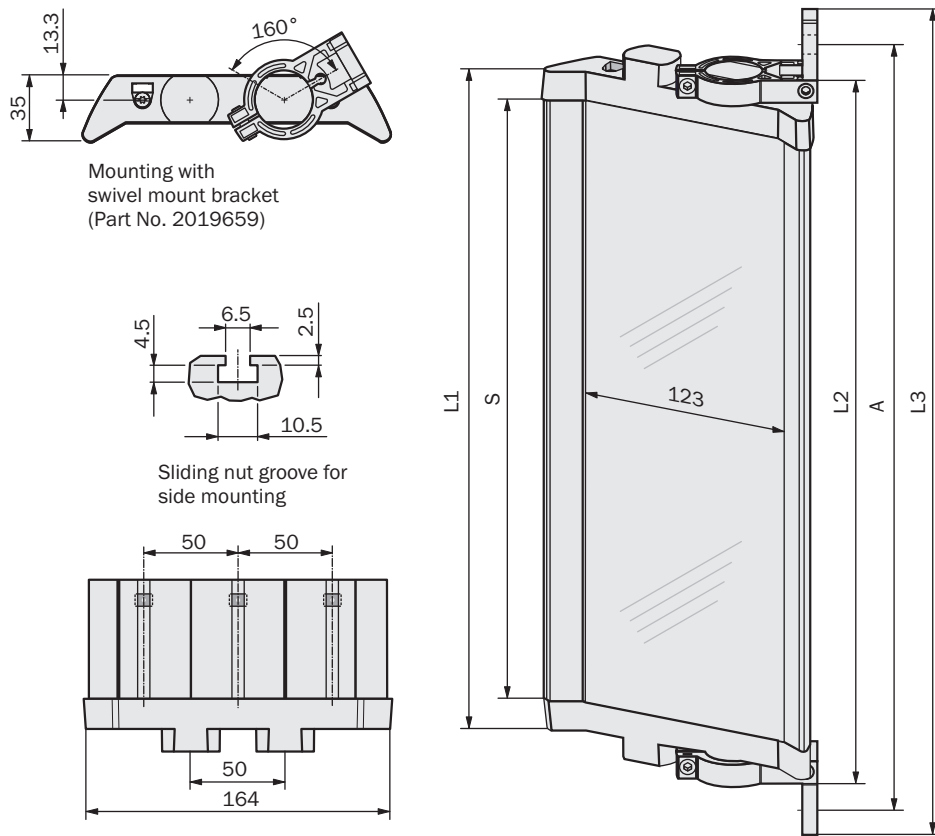


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm



F

- 7-segment display + LED
- Pre-assembled M12 cables



Technical data overview

Protective field height (depending on type)	300 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Resolution (depending on type)	14 mm / 30 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Eco safety light curtain reliably protects hazardous points and hazardous areas. Pre-assembled cable M12 x 5 and innovative accessories, such as the T-piece with only one cable wire to the control cabinet, save money.

The C4000 Eco also features time-saving alignment and diagnostics using the proven 7-segment display.

- Reduced replacement costs and time: Sender and receiver can be replaced separately.

- Security of investment due to high impact resistance and resistance of the front screen to scratches
- High system availability due to tested interaction between sensor and evaluation unit
- Space-saving and compact systems due to fast response times for low safety distances
- High availability even in harsh industrial conditions due to EMC immunity

In-system added value

Combined with SICK safe control solutions

Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52

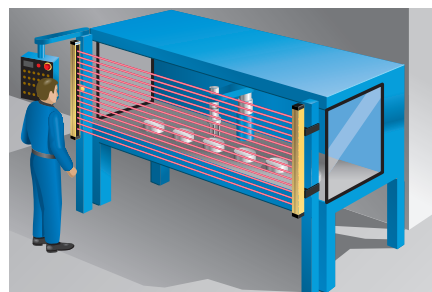
→ For more combinations, see annex

Applications

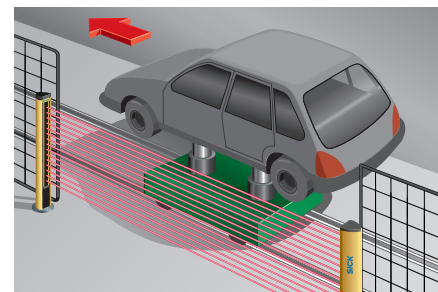
→ You can find more applications using the application finder at www.mysick.com

- Car and vehicle manufacturing
- Machine tools
- Electronics industry
- Packaging machinery
- Food and beverage industry
- Handling machines
- Special machine tool manufacturing
- Environmental engineering

Further information	Page
→ Technical specifications	F-171
→ Dimensional drawings	F-172
→ Connection diagrams	F-173
→ Accessories	F-174
→ Systematic safety	A-0
→ Services	B-0



Hazardous point protection on a handling machine



Hazardous point protection on an assembly line

Ordering information

C4000 Eco

Usage	As a standalone system
Connection types	System connection: Plug M12 x 5

- Resolution: 14 mm
- Scanning range: 0 m ... 2.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301AA310	1027440	C40E-0301AN310	1027441
450 mm	C40S-0401AA310	1027442	C40E-0401AN310	1027443
600 mm	C40S-0601AA310	1027444	C40E-0601AN310	1027445
750 mm	C40S-0701AA310	1027446	C40E-0701AN310	1027447
900 mm	C40S-0901AA310	1027448	C40E-0901AN310	1027449
1050 mm	C40S-1001AA310	1027450	C40E-1001AN310	1027451
1200 mm	C40S-1201AA310	1027452	C40E-1201AN310	1027453
1350 mm	C40S-1301AA310	1027454	C40E-1301AN310	1027455
1500 mm	C40S-1501AA310	1027456	C40E-1501AN310	1027457
1650 mm	C40S-1601AA310	1027458	C40E-1601AN310	1027459
1800 mm	C40S-1801AA310	1027460	C40E-1801AN310	1027463

- Resolution: 14 mm
- Scanning range: 1 m ... 5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0301AA310	1027440	C40E-0301BN310	1027486
450 mm	C40S-0401AA310	1027442	C40E-0401BN310	1027487
600 mm	C40S-0601AA310	1027444	C40E-0601BN310	1027488
750 mm	C40S-0701AA310	1027446	C40E-0701BN310	1027489
900 mm	C40S-0901AA310	1027448	C40E-0901BN310	1027490
1050 mm	C40S-1001AA310	1027450	C40E-1001BN310	1027491
1200 mm	C40S-1201AA310	1027452	C40E-1201BN310	1027492
1350 mm	C40S-1301AA310	1027454	C40E-1301BN310	1027493
1500 mm	C40S-1501AA310	1027456	C40E-1501BN31	1027494
1650 mm	C40S-1601AA310	1027458	C40E-1601BN310	1027495
1800 mm	C40S-1801AA310	1027460	C40E-1801BN310	1027496

- Resolution: 30 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0303AA310	1027464	C40E-0303AN31	1027465
450 mm	C40S-0403AA310	1027466	C40E-0403AN310	1027467
600 mm	C40S-0603AA310	1027468	C40E-0603AN310	1027469
750 mm	C40S-0703AA310	1027470	C40E-0703AN310	1027471
900 mm	C40S-0903AA310	1027472	C40E-0903AN310	1027473
1050 mm	C40S-1003AA310	1027474	C40E-1003AN310	1027475
1200 mm	C40S-1203AA310	1027476	C40E-1203AN310	1027477
1350 mm	C40S-1303AA310	1027478	C40E-1303AN310	1027479
1500 mm	C40S-1503AA310	1027480	C40E-1503AN310	1027481
1650 mm	C40S-1603AA310	1027482	C40E-1603AN310	1027483
1800 mm	C40S-1803AA310	1027484	C40E-1803AN310	1027485

F

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	14 mm / 30 mm	
Scanning range (depending on type)	-	0 m ... 2.5 m / 0 m ... 6 m / 1 m ... 5 m
Protective field height (depending on type)	300 mm ... 1800 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	Max. 26 ms	
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

Electrical data

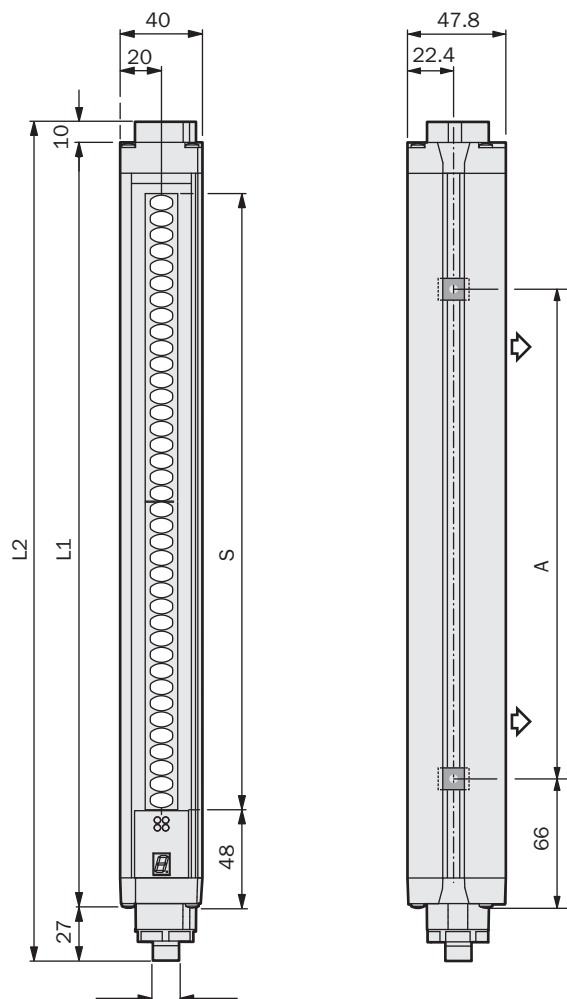
System part	Sender	Receiver
System connection	Plug M12 x 5	
Connecting cable length	Max. 15 m	
Connecting cable wire cross-section	0.25 mm ²	
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC) ¹⁾	
Residual ripple	$\leq 10\%$ ²⁾	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	24 V DC (15 V DC ... 28.8 V DC)
Switching voltage LOW	-	2 V DC
Switching current	-	Max. 500 mA
Display elements	7-segment	

¹⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

²⁾ Within the limits of V_s .

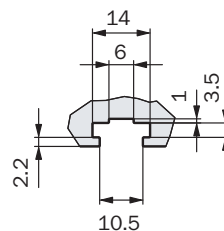
Dimensional drawings

C4000 Eco

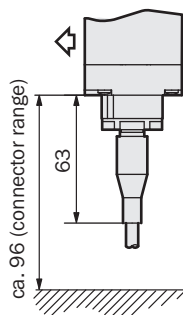
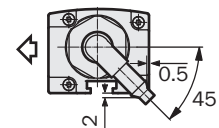


Plug M12 x 4 + FE

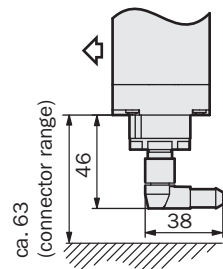
Illustration sender (receiver mirror image)



Sliding nut groove for side mounting



ca. 96 (connector range)



ca. 63 (connector range)

Cable sockets M12 x 4 + FE

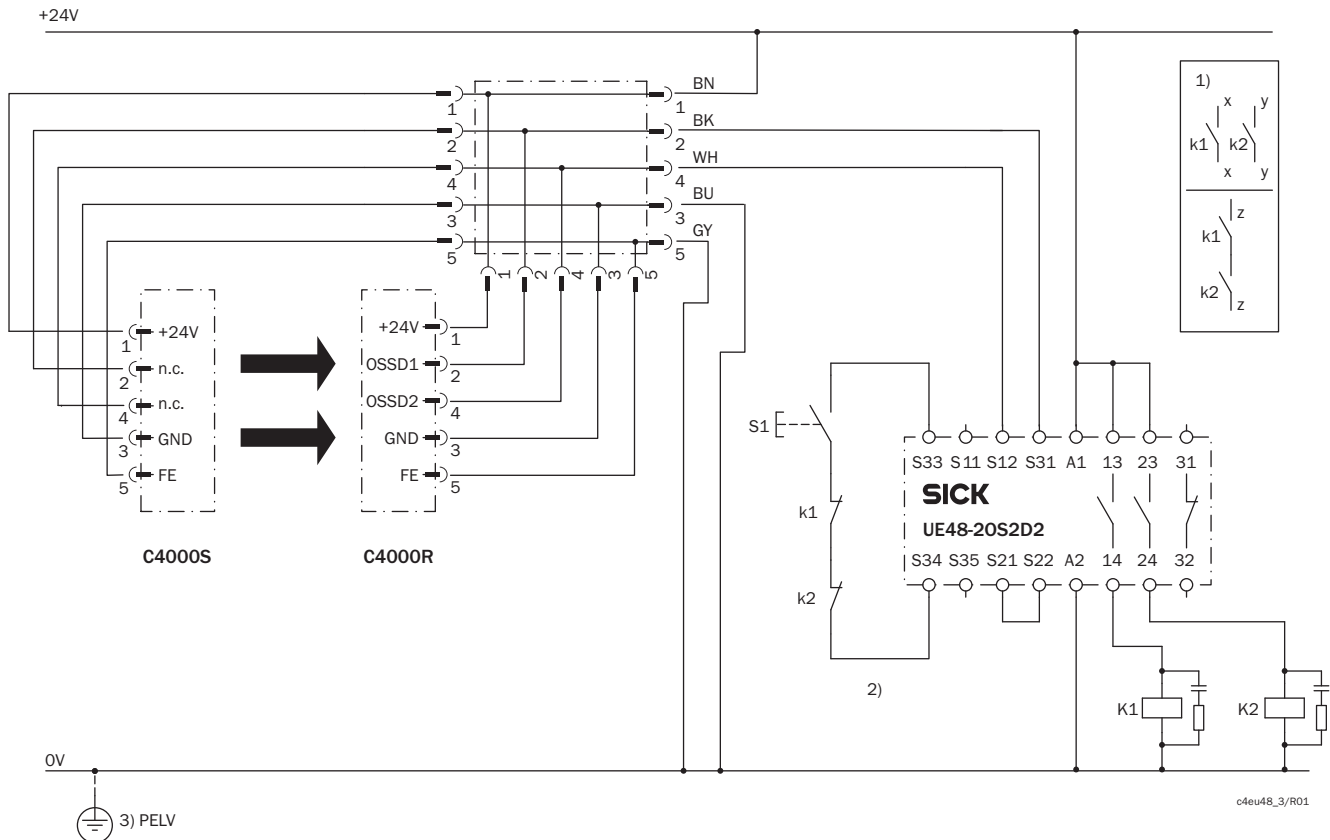
Protective field height S	L1	L2	A
300	372	409	224
450	523	560	374
600	674	711	524
750	824	861	674
900	975	1012	824
1050	1125	1162	974
1200	1274	1311	1124
1350	1426	1463	1274
1500	1577	1614	1424
1650	1727	1764	1574
1800	1878	1915	1724

Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C4000 Eco with T-piece on UE48-20S safety relay



Task

Connection of a C4000 Eco safety light curtain with a T-piece to a UE48-20S safety relay.

Operating mode: with restart interlock and external device monitoring.

Operating characteristics

When the light path is clear, the OSSD1 and OSSD2 outputs are live. When K1 and K2 are de-energized and functioning correctly, the system is ready for switch-on and waits for an input signal/switch-on signal. The UE48-20S is switched on by pressing and releasing the S1 button. The outputs (contacts 13 - 14 and 23 - 24) energize the K1 and K2 contactors. Upon interruption of one or several of the light beams in the active protective field, the OSSD1 and OSSD2 outputs shut down the UE48-20S. The contactors K1 and K2 are de-energized.

Fault analysis

OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The erroneous behavior of one of

the K1 or K2 contactors will be detected. The shutdown function is retained. On manipulation (e.g., jamming) of the S1 button, the UE48-20S will not re-enable the output current circuits.

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel insertion in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
- 2) The external device monitoring is only static.
- 3) PELV in accordance with the requirements in EN 60204-1 / 6.4. Take note of the operating instructions of the integrated devices. This circuit can also be used for the UE48-30S.










sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Mounting kit 11, replacement bracket, suitable for replacement of FGS	4	BEF-3WNGBCST4	2021646

Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 5	Straight	2 m	DOL-1205-G02M	6008899
			5 m	DOL-1205-G05M	6009868
			10 m	DOL-1205-G10M	6010544
			15 m	DOL-1205-G15M	6029215


T-junction

Connection type	Remark	Type	Part no.
Plug M12 x 5	T-connector plugs directly into receiver, splits the single home run from control cabinet between sender and receiver	DSC-1205T000025KM0	6030664

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves





Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0


Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMMEAL2	2045883
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2022412
	450 mm	2022413
	600 mm	2022414
	750 mm	2022415
	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420
	1650 mm	2022421
	1800 mm	2022422


Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2026853
	450 mm	2026854
	600 mm	2026855
	750 mm	2026856
	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863



PNS75 deflector mirror

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
			1800 mm	PNS75-184


PNS125 deflector mirror

Figure	Mirror material	For maximum protective field height	Type	Part no.		
	Glass	300 mm	PNS125-034	1019425		
		450 mm	PNS125-049	1019426		
		600 mm	PNS125-064	1019427		
		750 mm	PNS125-079	1019428		
		900 mm	PNS125-094	1019429		
		1050 mm	PNS125-109	1019430		
		1200 mm	PNS125-124	1019431		
		1350 mm	PNS125-139	1019432		
		1500 mm	PNS125-154	1019433		
		1650 mm	PNS125-169	1019434		
				1800 mm	PNS125-184	1019435



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column	-	-	-	4056731

Configuration software

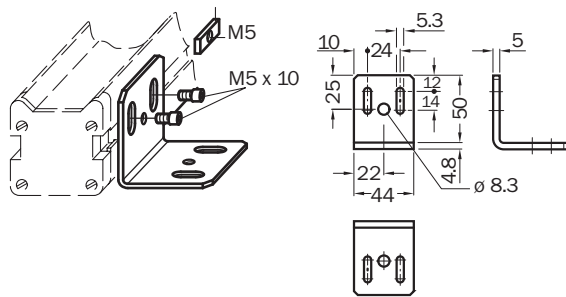
Figure	Description	Remark	Part no.
	CD ROM operating instructions for C4000 Basic Plus, C4000 Basic, C4000 Eco, C4000 Micro	Included with delivery	2026783

Device protection

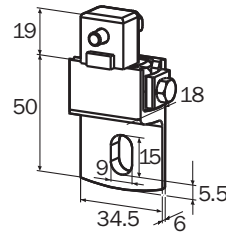
Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

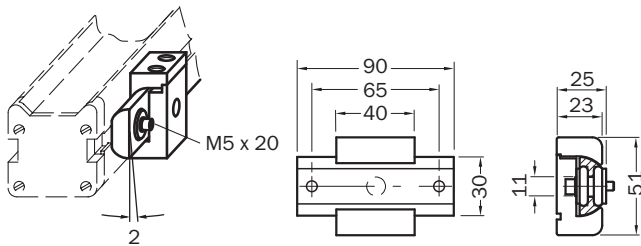
BEF-3WNGBAST4
Mounting kit 1, rigid



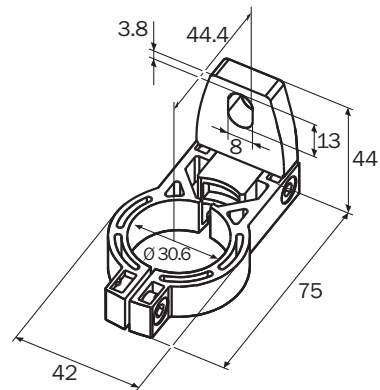
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



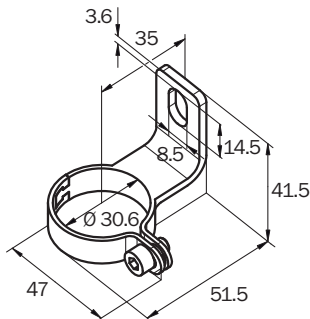
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



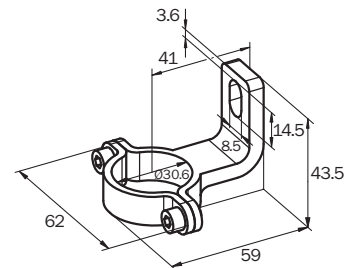
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



BEF-2SMMEAES4
Stainless steel bracket, adjustable

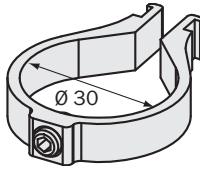


BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable

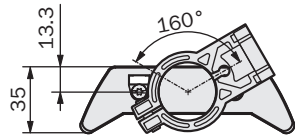


Dimensions in mm

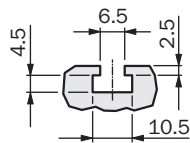
BEF-2SMMEAAL4, BEF-2SMMEAAL2
Omega bracket, flexible and quick installation
with only one screw



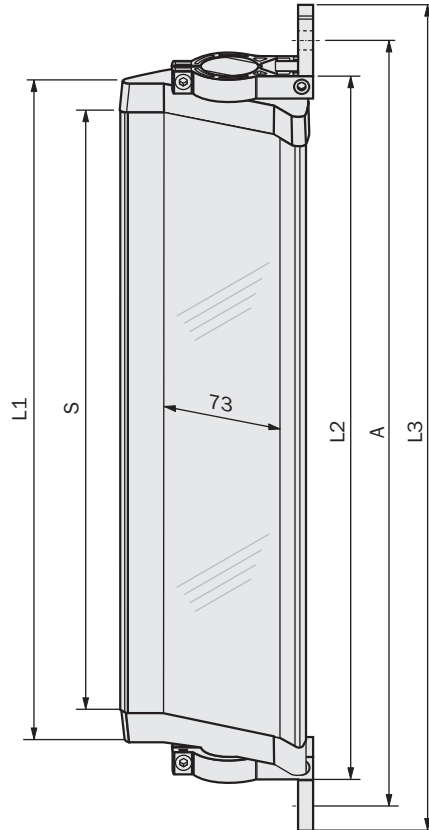
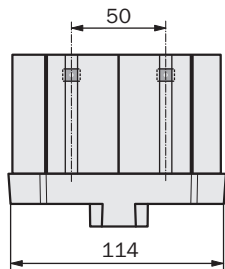
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

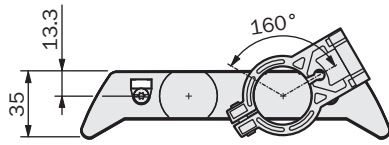


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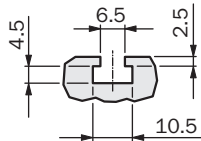
Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

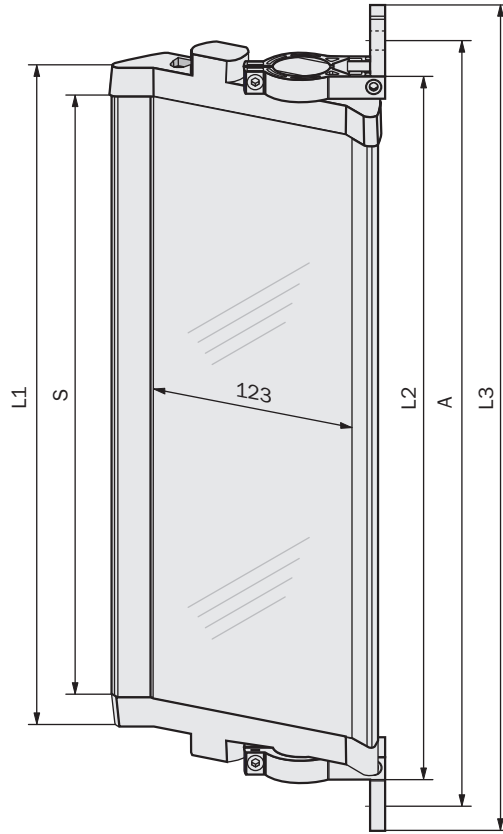
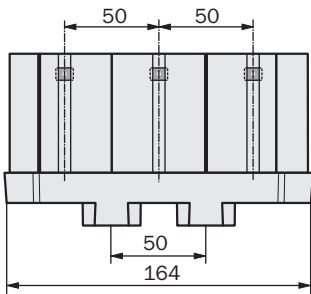
Dimensional drawings PNS125 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting



F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Protective field height (depending on type)	900 mm ... 1500 mm
Scanning range	0.5 m ... 19 m
Resolution	20 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Entry/Exit safety light curtain is used wherever material is automatically transported into the dangerous area in a machine and, at the same time, access by people must be reliably excluded:

- Maximum safety due to continuously active light curtain – tampering is very difficult
- Cost-effective due to savings on additional sensor systems or other protection

measures, e.g., muting sensors, muting lamp, hinged doors, etc.

- Very high availability due to self-teach distance monitoring
- Reduced mounting effort due to compact pair of sensors
- Functions can be activated without additional control device
- The integrated EFl interface allows the use of additional sensor functions (see A-8).

In-system added value

Combined with SICK safe control solutions

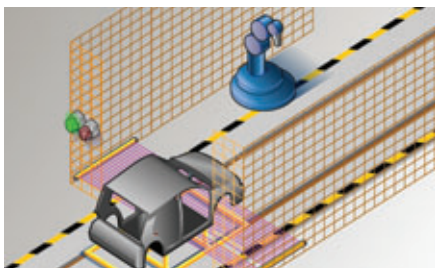
Combination with	Restart interlock	External device monitoring	Bypass	Operating mode selection	Further information
UE402	-	-	✓	✓	F-184
Flexi Classic	✓	✓	-	-	O-2
Flexi Soft	✓	✓	✓	✓	O-25
UE48-20S	✓	✓	-	-	N-46
UE48-30S	✓	✓	-	-	N-52
UE10-30S	Contact expansion module				N-63

→ For more combinations, see annex

Applications

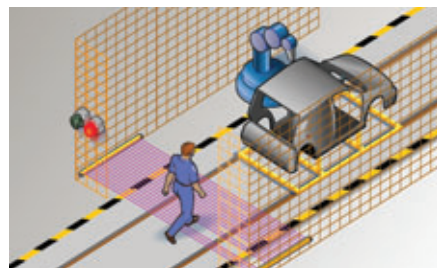
→ You can find more applications using the application finder at www.mysick.com

■ Automotive industry



Horizontal safety light curtain. No additional muting sensors required

■ Material handling



Invalid objects or asynchronous movements result in shut down



- Self-teach dynamic blanking
- External device monitoring (EDM)
- Restart interlock (RES)
- Configuration and diagnostics via PC
- Beam coding
- Multiple sampling to increase availability



F

Further information	Page
→ Ordering information	F-182
→ Technical specifications	F-182
→ Dimensional drawings	F-185
→ Connection diagrams	F-186
→ Accessories	F-186
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C4000 Entry/Exit

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 20 mm
- Scanning range: 0.5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
900 mm	C40S-0902CI010	1023968	C40E-0902CI010	1023969
1050 mm	C40S-1002CI010	1024044	C40E-1002CI010	1024045
1200 mm	C40S-1202CI010	1024046	C40E-1202CI010	1024047
1350 mm	C40S-1302CI010	1024048	C40E-1302CI010	1024049
1500 mm	C40S-1502CI010	1024050	C40E-1502CI010	1024051

F

UE402 switching amplifier

Description	Type	Part no.
Expands C4000 Standard, Advanced, Palletizer, Entry/Exit and Fusion with the functions described in the technical data, e.g., bypass, operating mode switching or in addition PSDI mode on C4000 Standard, Advanced.	UE402	1023577

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution	20 mm	
Scanning range	-	0.5 m ... 19 m
Protective field height (depending on type)	900 mm ... 1500 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	38 ms ¹⁾
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

¹⁾ Without beam coding, multiple sampling 3 times. Other response times, see operating instructions.

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
Restart interlock (delivery status)	-	External
External device monitoring	-	✓
External device monitoring (delivery status)	-	Deactivated
Beam coding		✓
Beam coding (delivery status)	-	Non-coded
Operating mode switching (with UE402)	-	✓
Muting		Self-teach dynamic blanking
Delivery status		None
Type of self-teach dynamic blanking	-	Object pattern recognition
Safe device communication via EFI/SDL		✓
Configuration method	PC with CDS (configuration and diagnostic software)	

Electrical data

System part	Sender	Receiver
System connection	Hirschmann plug M26 x 11 + FE	
Connecting cable length	Max. 50 m ¹⁾	
Connecting cable wire cross-section	0.75 mm ²	
Configuration connection	M8 x 4	
Supply voltage V _S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 10 % ³⁾	
Safety outputs (OSSD)		2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Type of output	-	
Switching voltage HIGH	-	24 V DC (V _S - 2.25 V DC ... V _S)
Switching voltage LOW	-	2 V DC
Switching current	-	Max. 500 mA
Display elements	7-segment	

¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S.

UE402 switching amplifier

General data

Safety related parameters		
	Type	Type 4 (IEC 61496)
	Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
	Category	Category 4 (EN ISO 13849)
	Performance level	PL e (EN ISO 13849)
	PFHd (mean probability of a dangerous failure per hour)	15×10^{-9} (EN ISO 13849)
	T_M (Mission Time)	20 years (EN ISO 13849)
Protection class		III (IEC 536:1976)
Enclosure rating		IP 20 (IEC 60529)
Ambient operating temperature from ... to		0 °C ... +55 °C
Air humidity from ... to		15 % ... 95 %, non-condensing
Storage temperature from ... to		-25 °C ... +70 °C
Weight		120 g
Housing material		Plastic

Functional data

Bypass	✓
Operating mode switching	✓

Electrical data

Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC)
Residual ripple	≤ 10 %
Power consumption	Max. 110 mA
Switch-on time	Max. 4 s
IN A1 ... A6, MCC-BDC, MCC-TDC	
Switching voltage HIGH	24 V DC (11 V DC ... 30 V DC)
Switching voltage LOW	-30 V DC ... 5 V DC
Switching current HIGH	6 mA ... 20 mA
Switching current LOW	-3 mA ... 0.5 mA
Change over time operating mode selection	Max. 2 s
IN B1, IN B2, OUT B1, OUT B2	
Change over time bypass	Max. 2 s
Synchronous time monitoring	200 ms

Safety outputs

Connection type	Screw-terminal connector
Conductor cross-section	0.25 mm ² ... 2.5 mm ²

F

Dimensional drawings

C4000 Entry/Exit

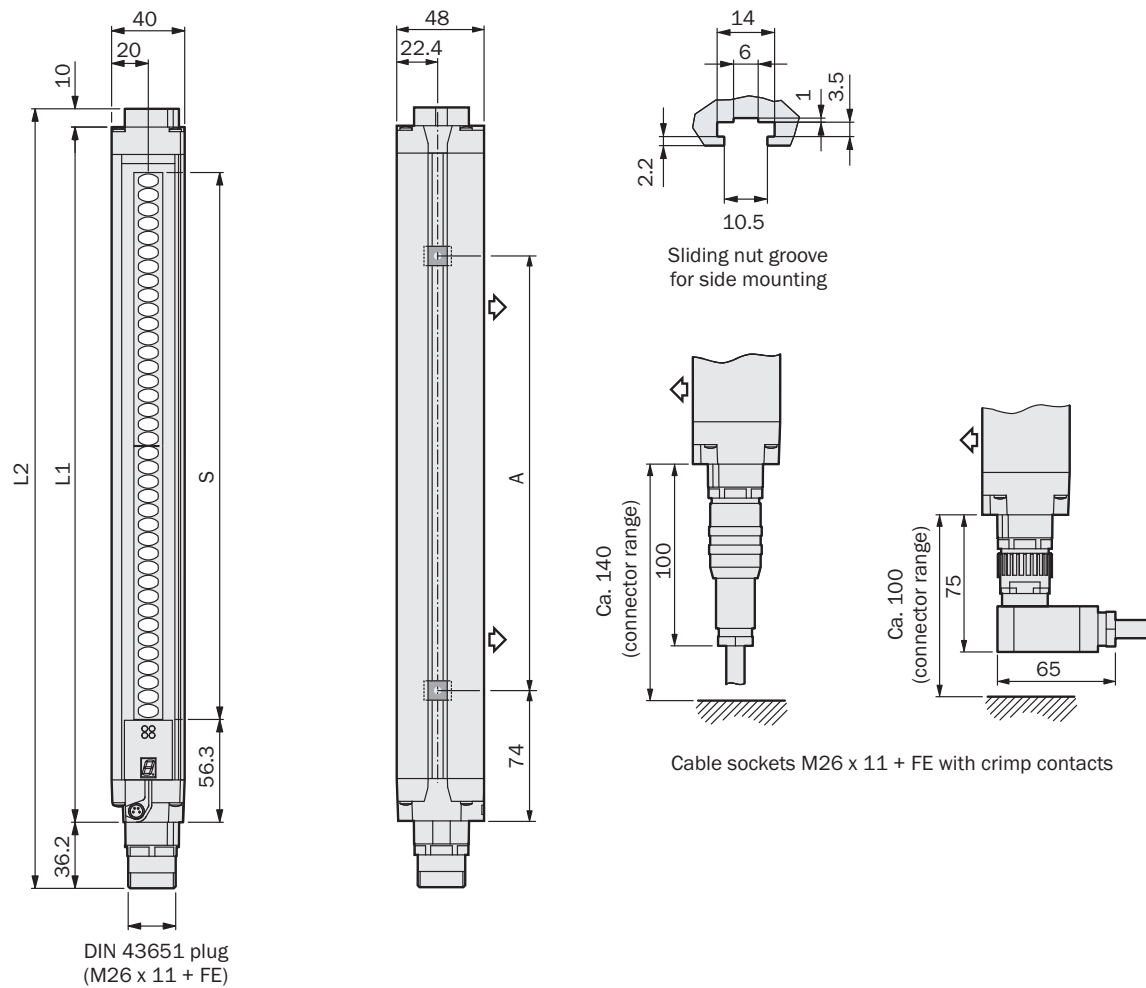


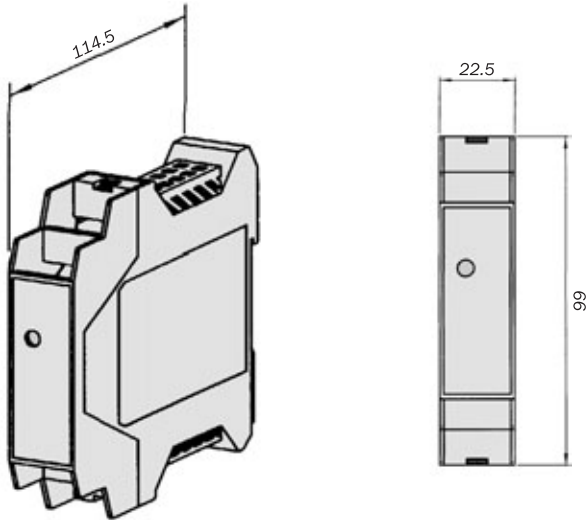
Illustration sender (receiver mirror image)

Protective field length S	L1	L2	A
900	984	1030	824
1050	1134	1180	974
1200	1283	1329	1124
1350	1435	1481	1274
1500	1586	1632	1424

Dimensions in mm



UE402 switching amplifier



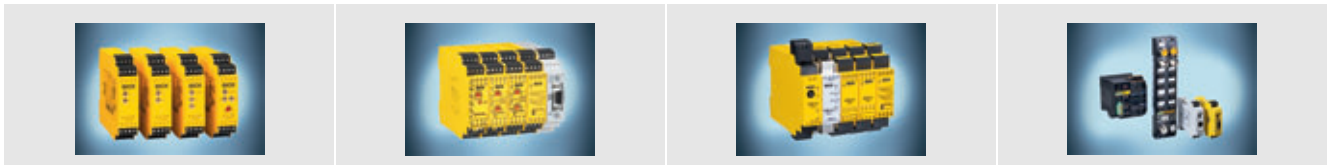
Dimensions in mm

F

Connection diagrams

→ You can find connection diagrams at www.mysick.com





sens:Control – safe control solutions








Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories

Mounting systems


Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659

Mounting systems (cont'd)


Figure	Property	Packing unit	Type	Part no.
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Stand, for horizontal mounting of C4000 Fusion, Entry/Exit, and Palletizer safety light curtains and M4000 Area multiple light beam safety devices, for mounting heights from 70 mm to 780 mm	2	BEF-3HHOCAST2	2041661

F



Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550



Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	2.5 m	DOL-0612G2M5075KM0	2022544
			5 m	DOL-0612G05M075KM0	2022545
			7.5 m	DOL-0612G7M5075KM0	2022546
			10 m	DOL-0612G10M075KM0	2022547
			15 m	DOL-0612G15M075KM0	2022548
			20 m	DOL-0612G20M075KM0	2022549
			30 m	DOL-0612G30M075KM0	2022550
			50 m	DOL-0612G50MD75KM0	2033548


Connectors

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable plug M26 x 11 + FE	Straight	STE-0612G000GA3KM0	6021191
		Angled	STE-0612W000GA3KM0	6021192

Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	DOS-0612G000GA3KM0	6020757
		Angled	DOS-0612W000GA3KM0	6020758


Configuration connection cables

Figure	Description	Connection type	Cable length	Type	Part no.
	For connecting the configuration connection to the PC	M8 x 4, SUB-D 9-pin	2 m	DSL-8D04G02M025KM1	6021195
			10 m	DSL-8D04G10M025KM1	2027649


Terminators

Description	Remark	Type	Part no.
Terminal with 182 Ω resistance for pin 9 and 10 on the system connection	For improving the EMC behavior if EFL device communication is not used	Terminal with 182 Ω resistance	2027227

Power supply units


Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Additional front screens



Figure	Suitable for protective field height	Part no.
 Example of use	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420

F

Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 Example of use	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461

Configuration software

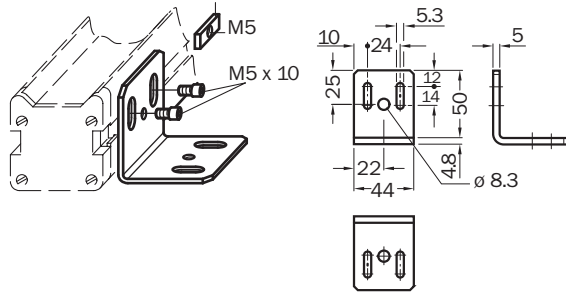
Figure	Description	Type	Part no.
	CDS (Configuration & Diagnostic Software)	CDS	2032314

Configuration tools

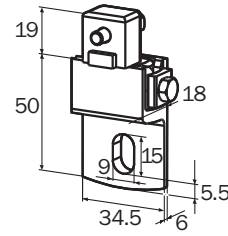
Figure	Description	Type	Part no.
	For saving and transferring configurations. For C4000 Standard, Advanced, Palletizer, Entry/Exit, Fusion and M4000 Advanced, Advanced Curtain, Area	Clone Plug for C4000 and M4000	1029665
	For resetting a system position saved in a C4000 (host, guest 1, guest 2). For C4000 Standard, Advanced, Palletizer, Entry/Exit	Host-Guest Plug for C4000	1029717
	-	Wall mount	5318443

Dimensional drawings mounting systems

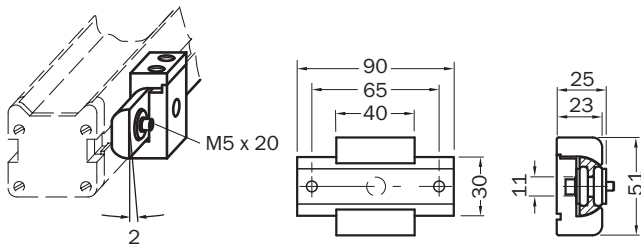
BEF-3WNGBAST4
Mounting kit 1, rigid



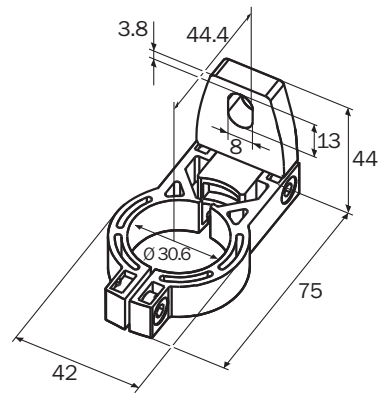
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



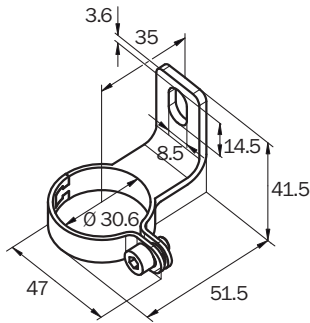
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



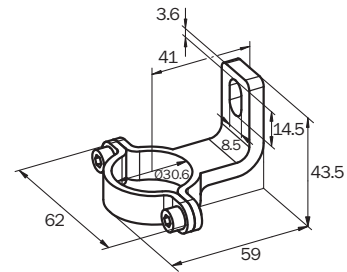
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



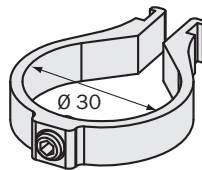
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



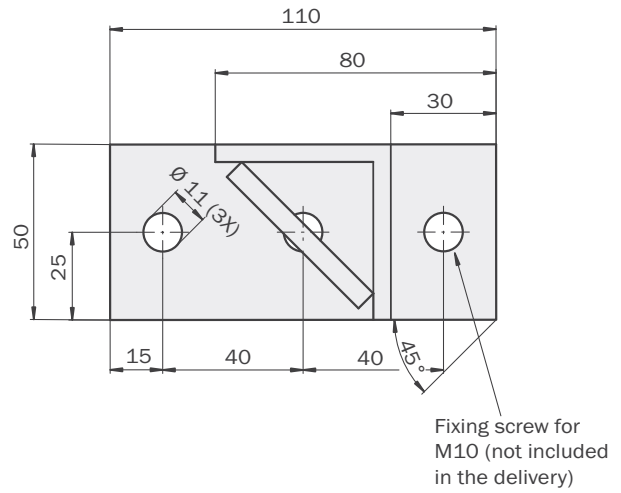
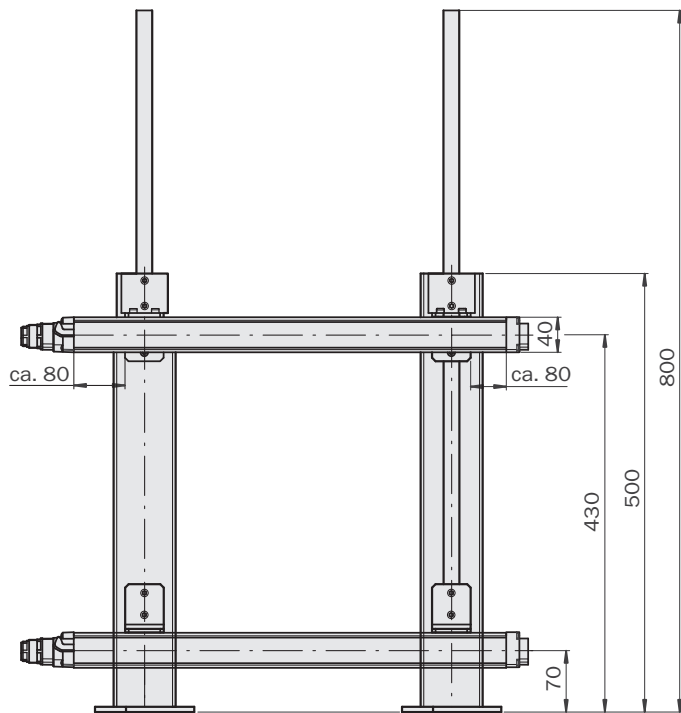
BEF-2SMMEAL4
Omega bracket, flexible and quick installation with only one screw



Dimensions in mm

F

BEF-3HHOCAST2
Stand, for horizontal mounting



Dimensions in mm





- Muting alternative
- Self-teach dynamic blanking
 - Goods detection
 - Pallet detection
- Direction monitoring
- Beam coding
- Reduced resolution
- Object gap suppression
- Velocity monitoring
- Multiple sampling



F

Technical data overview

Protective field height (depending on type)	750 mm ... 1800 mm
Scanning range	0.5 m ... 6 m
Resolution (depending on type)	30 mm / 40 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Palletizer safety light curtain is the innovative muting alternative for access protection during automatic material transport.

- Economical: only one sensor pair provides cost savings during planning, design, mounting, wiring and service
- Quickly placed in operation so that pallets, mesh crates, etc., are recognized without programming

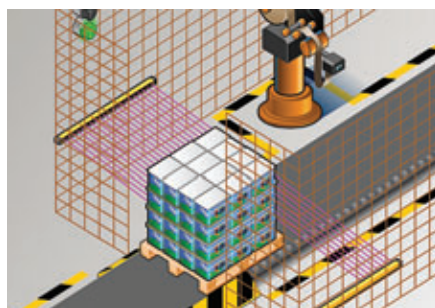
- Very high availability due to self-teach recognition of patterns on loading with different pallets
- Easily integrated: no secondary sensors necessary, only the OSSDs are implemented in the stop circuit
- Safer: provides protection in areas in which there is no object, unlike conventional muting solutions.
- The integrated EFI interface allows the use of additional sensor functions (see A-8).

	C4000 Palletizer Standard	C4000 Palletizer Advanced
Detected objects	Packages (min. size of 500 mm)	Pallets, mesh crates, mesh carriage or packages (max. size of 240 m)
Pattern recognition	By size and solid shape of package	Using size and number of objects (min. 2) and monitoring the distance between them
Automatic teach-in	✓	✓
Resolution	40 mm	30 mm

Applications

→ You can find more applications using the application finder at www.mysick.com

■ Material handling



Sensor differentiates between packages and worker

■ Packaging industry



Sensor differentiates between pallets and worker

Further information	Page
→ Technical specifications	F-194
→ Dimensional drawings	F-198
→ Connection diagrams	F-200
→ Accessories	F-200
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C4000 Palletizer Standard

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 40 mm
- Scanning range: 0.5 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
750 mm	C40S-0704CD010	1043445	C40E-0704FP010	1043171
900 mm	C40S-0904CD010	1043446	C40E-0904FP010	1043172
1050 mm	C40S-1004CD010	1043447	C40E-1004FP010	1043173
1200 mm	C40S-1204CD010	1043448	C40E-1204FP010	1043174
1350 mm	C40S-1304CD010	1043449	C40E-1304FP010	1043175
1500 mm	C40S-1504CD010	1043450	C40E-1504FP010	1043176
1650 mm	C40S-1604CD010	1043451	C40E-1604FP010	1043177
1800 mm	C40S-1804CD010	1043452	C40E-1804FP010	1043178

C4000 Palletizer Advanced

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 30 mm
- Scanning range: 0.5 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
750 mm	C40S-0703CD010	1041900	C40E-0703FK010	1043155
900 mm	C40S-0903CD010	1041901	C40E-0903FK010	1043156
1050 mm	C40S-1003CD010	1041902	C40E-1003FK010	1043157
1200 mm	C40S-1203CD010	1041903	C40E-1203FK010	1043158
1350 mm	C40S-1303CD010	1041904	C40E-1303FK010	1043159
1500 mm	C40S-1503CD010	1041905	C40E-1503FK010	1043160
1650 mm	C40S-1603CD010	1041907	C40E-1603FK010	1043161
1800 mm	C40S-1803CD010	1041908	C40E-1803FK010	1043162

C4000 Palletizer Advanced with extension connection on receiver (e.g., bypass)

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE Extension connection: Hirschmann socket M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 30 mm
- Scanning range: 0.5 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
750 mm	C40S-0703CD010	1041900	C40E-0703GK010	1043220
900 mm	C40S-0903CD010	1041901	C40E-0903GK010	1043179
1050 mm	C40S-1003CD010	1041902	C40E-1003GK010	1043180
1200 mm	C40S-1203CD010	1041903	C40E-1203GK010	1043221
1350 mm	C40S-1303CD010	1041904	C40E-1303GK010	1043181
1500 mm	C40S-1503CD010	1041905	C40E-1503GK010	1043222
1650 mm	C40S-1603CD010	1041907	C40E-1603GK010	1043223
1800 mm	C40S-1803CD010	1041908	C40E-1803GK010	1043182

UE402 switching amplifier

Description	Type	Part no.
Expands C4000 Standard, Advanced, Palletizer, Entry/Exit and Fusion with the functions described in the technical data, e.g., bypass, operating mode switching or in addition PSDI mode on C4000 Standard, Advanced.	UE402	1023577

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	30 mm / 40 mm	
Scanning range	0.5 m ... 6 m	
Protective field height (depending on type)	750 mm ... 1800 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	–	Max. 14 ms ¹⁾
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	–25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	

¹⁾ Without beam coding, with 1 x sampling. Other response times, see operating instructions.

Functional data

	C4000 Palletizer Standard	C4000 Palletizer Advanced	C4000 Palletizer Advanced with extension connection
Restart interlock		✓	
Restart interlock (delivery status)		External	
External device monitoring		✓	
External device monitoring (delivery status)		Deactivated	
Beam coding		✓	
Beam coding (delivery status)		Non-coded	
Multiple sampling		✓	
Multiple sampling (delivery status)		3 x sampling	
Direction monitoring		✓	
Reduced resolution		✓	
Reduced resolution (delivery status)		Deactivated	
Extension connection	-		✓
Emergency stop / bypass at extension connection	-		✓
Bypass (with UE402)		✓	
Operating mode switching (with UE402)		✓	
Blanking	Self-teach dynamic blanking		
Delivery status	Goods detection: 500 mm ... protective field height - 150 mm	Pallet detection: 0 .. 240 mm, 2 ... 5 objects	
Type of self-teach dynamic blanking	Goods detection	Pallet detection	
Speed monitoring		✓ ¹⁾	
Goods detection	✓	✓	✓
Object size monitoring	✓	✓ ²⁾	✓ ²⁾
Individual objects teach-in	✓	✓	✓
Object gap suppression	✓	✓ ²⁾	✓ ²⁾
Pallet detection	-	✓	✓
Object entry monitoring		✓	
Safe device communication via EFI/SDL		✓	
SDL interface		✓	
Configuration method	PC with CDS (configuration and diagnostic software)		

¹⁾ Software version V 06.2x or higher

²⁾ Only in case when blanking of a single object is configured.

F

Electrical data

System part	Sender	Receiver
System connection	Hirschmann plug M26 x 11 + FE	
Connecting cable length	Max. 50 m ¹⁾	
Connecting cable wire cross-section	0.75 mm ²	
Extension connection (depending on type)	-	Hirschmann socket M26 x 11 + FE
Configuration connection	M8 x 4	
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	$\leq 10\%$ ³⁾	
Power consumption	Max. 1 A	Max. 1.8 A
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	24 V DC ($V_S - 2.25$ V DC ... V_S)
Switching voltage LOW	-	2 V DC
Switching current	-	Max. 500 mA
Switch off time	-	Min. 1000 ms
Display elements	7-segment	

¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

³⁾ Within the limits of V_S .

UE402 switching amplifier

General data

Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	15×10^{-9} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Protection class	III (IEC 536:1976)	
Enclosure rating	IP 20 (IEC 60529)	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Storage temperature from ... to	-25 °C ... +70 °C	
Weight	120 g	
Housing material	Plastic	

Functional data

Bypass	✓
Operating mode switching	✓

Electrical data

Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC)
Residual ripple	$\leq 10 \%$
Power consumption	Max. 110 mA
Switch-on time	Max. 4 s
IN A1 ... A6, MCC-BDC, MCC-TDC	
Switching voltage HIGH	24 V DC (11 V DC ... 30 V DC)
Switching voltage LOW	-30 V DC ... 5 V DC
Switching current HIGH	6 mA ... 20 mA
Switching current LOW	-3 mA ... 0.5 mA
Change over time operating mode selection	Max. 2 s
IN B1, IN B2, OUT B1, OUT B2	
Change over time bypass	Max. 2 s
Synchronous time monitoring	200 ms

Safety outputs

Connection type	Screw-terminal connector
Conductor cross-section	0.25 mm ² ... 2.5 mm ²

F

Dimensional drawings

C4000 Palletizer Standard, C4000 Palletizer Advanced

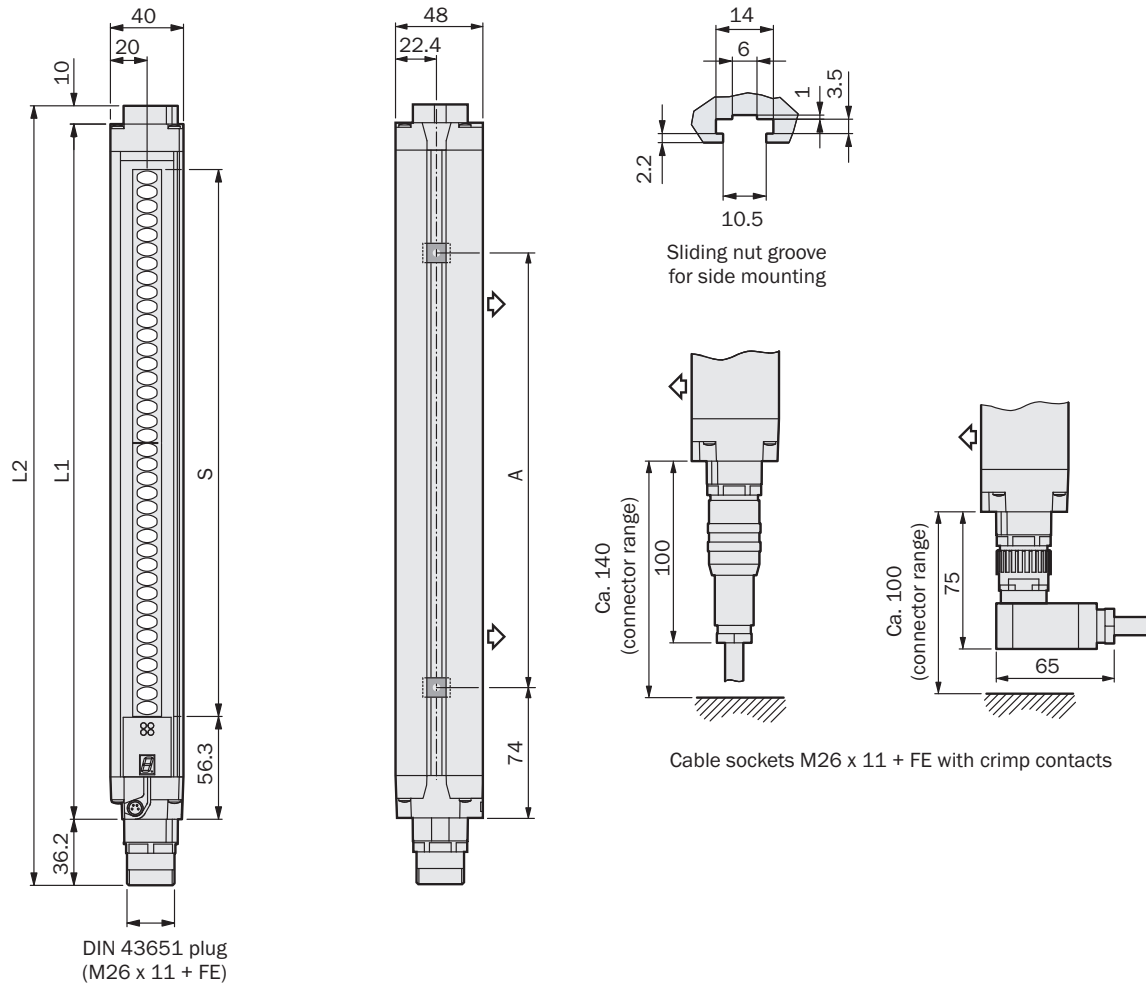


Illustration C4000 without extension connection, sender. Receiver mirror image

Protective field length S	L1	L2	A
750	833	879	674
900	984	1030	824
1050	1134	1180	974
1200	1283	1329	1124
1350	1435	1481	1274
1500	1586	1632	1424
1650	1736	1782	1574
1800	1887	1933	1724

Dimensions in mm

C4000 Palletizer Advanced, extension connection on receiver

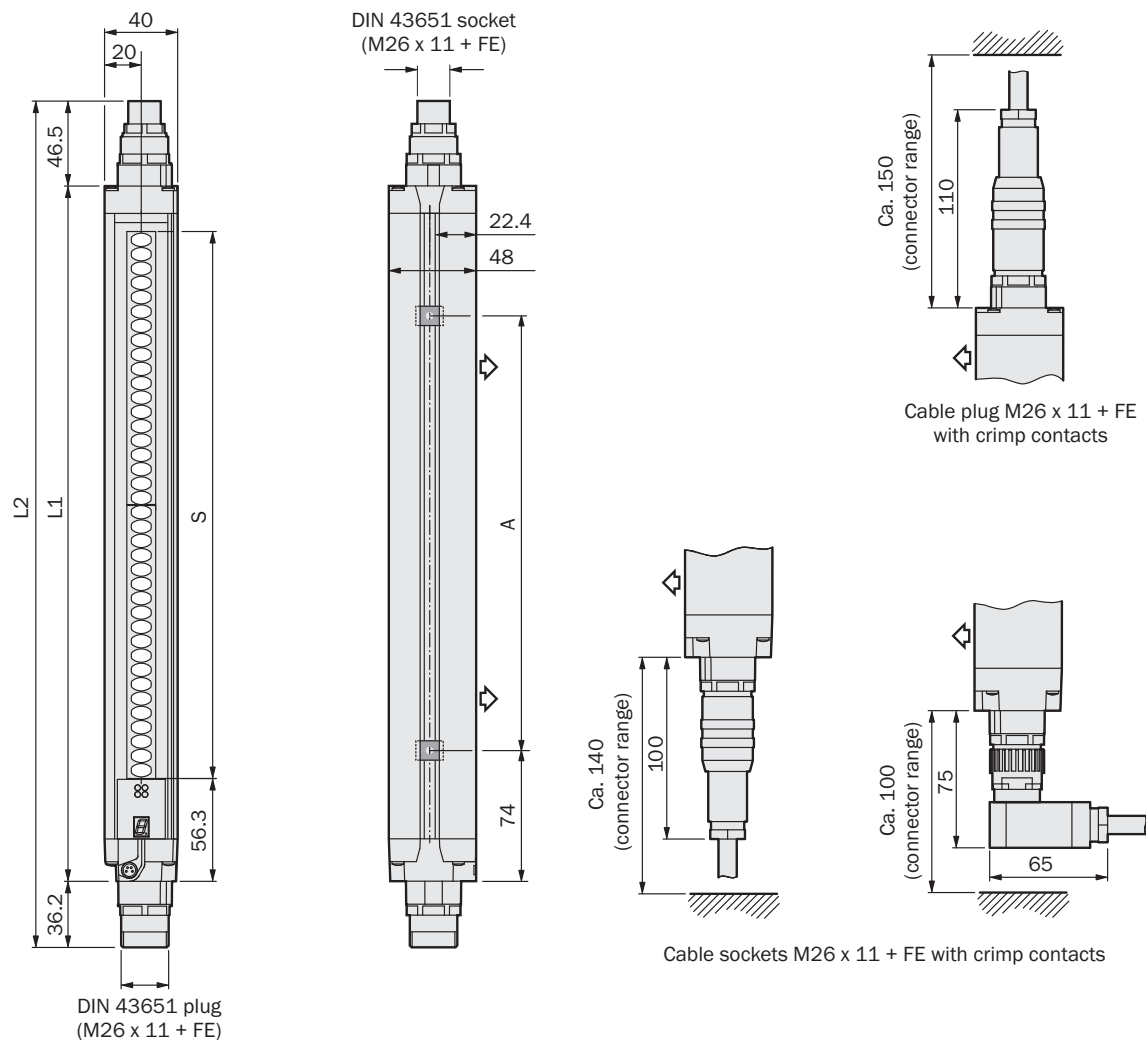
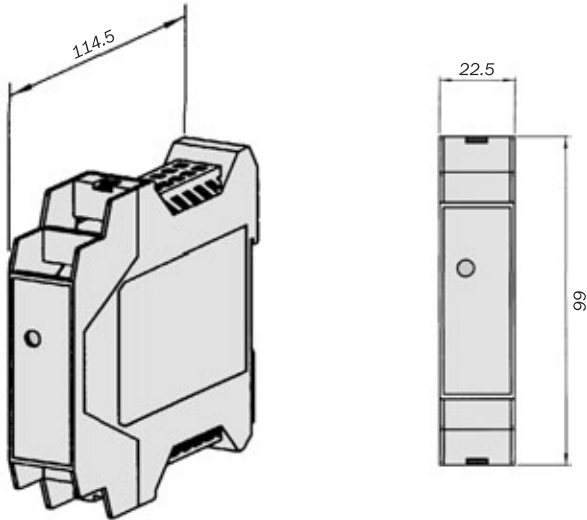


Illustration C4000 with extension connection, sender. Receiver mirror image

Protective field length S	L1	L2	A
750	833	895	674
900	984	1046	824
1050	1134	1196	974
1200	1283	1346	1124
1350	1435	1497	1274
1500	1586	1649	1424
1650	1736	1798	1574
1800	1887	1949	1724

Dimensions in mm

UE402 switching amplifier



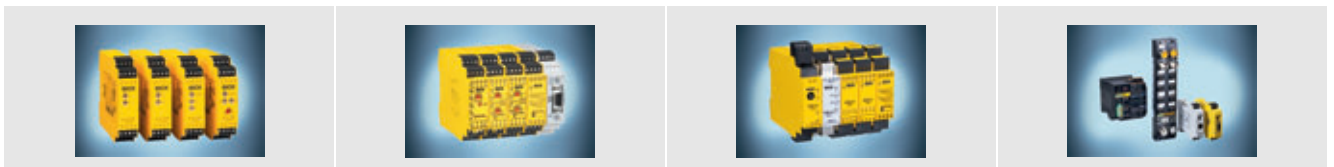
Dimensions in mm

F

Connection diagrams

→ You can find connection diagrams at www.mysick.com





sens:Control – safe control solutions








Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories

Mounting systems


Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659

Mounting systems (cont'd)


Figure	Property	Packing unit	Type	Part no.
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Stand, for horizontal mounting of C4000 Fusion, Entry/Exit, and Palletizer safety light curtains and M4000 Area multiple light beam safety devices, for mounting heights from 70 mm to 780 mm	2	BEF-3HHOCAST2	2041661

F



Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550



Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	2.5 m	DOL-0612G2M5075KM0	2022544
			5 m	DOL-0612G05M075KM0	2022545
			7.5 m	DOL-0612G7M5075KM0	2022546
			10 m	DOL-0612G10M075KM0	2022547
			15 m	DOL-0612G15M075KM0	2022548
			20 m	DOL-0612G20M075KM0	2022549
			30 m	DOL-0612G30M075KM0	2022550
			50 m	DOL-0612G50MD75KM0	2033548


Connectors

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable plug M26 x 11 + FE	Straight	STE-0612G000GA3KM0	6021191
		Angled	STE-0612W000GA3KM0	6021192

Cable receptacles


Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	DOS-0612G000GA3KM0	6020757
		Angled	DOS-0612W000GA3KM0	6020758

Configuration connection cables


Figure	Description	Connection type	Cable length	Type	Part no.
	For connecting the configuration connection to the PC	M8 x 4, SUB-D 9-pin	2 m	DSL-8D04G02M025KM1	6021195
			10 m	DSL-8D04G10M025KM1	2027649

Power supply units

F

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789



Additional front screens

Figure	Suitable for protective field height	Part no.
 <small>Example of use</small>	750 mm	2022415
	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420
	1650 mm	2022421
	1800 mm	2022422

Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 <small>Example of use</small>	750 mm	2026856
	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863


Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461

Configuration software

Figure	Description	Type	Part no.
	CDS (Configuration & Diagnostic Software)	CDS	2032314

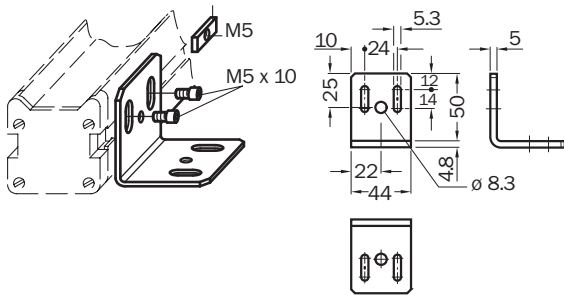
Configuration tools

Figure	Description	Type	Part no.
	For saving and transferring configurations. For C4000 Standard, Advanced, Palletizer, Entry/Exit, Fusion and M4000 Advanced, Advanced Curtain, Area	Clone Plug for C4000 and M4000	1029665
		Wall mount	5318443

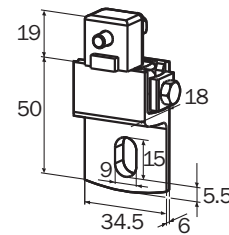


Dimensional drawings mounting systems

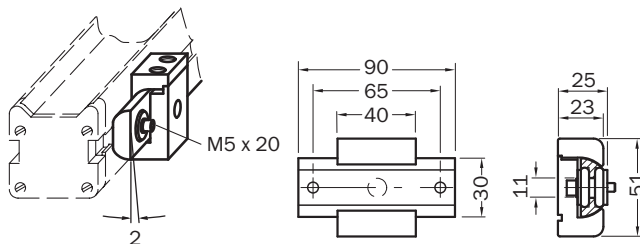
BEF-3WNGBAST4
Mounting kit 1, rigid



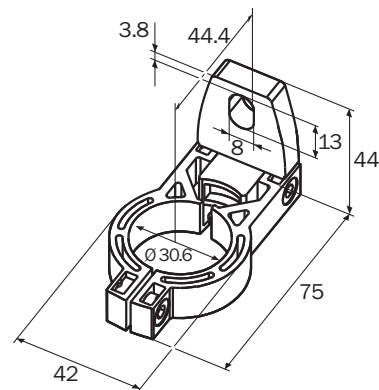
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing

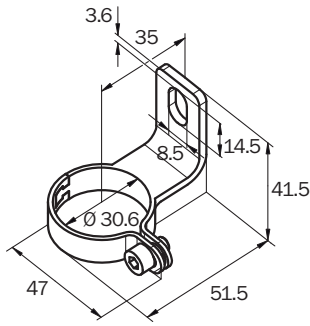


BEF-2SMMEAKU4
Mounting kit 2, swivel mount

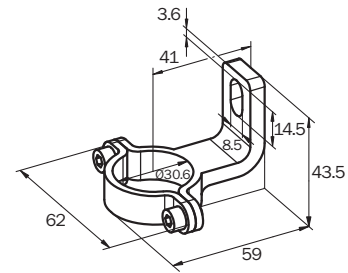


Dimensions in mm

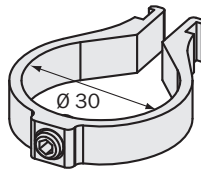
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable

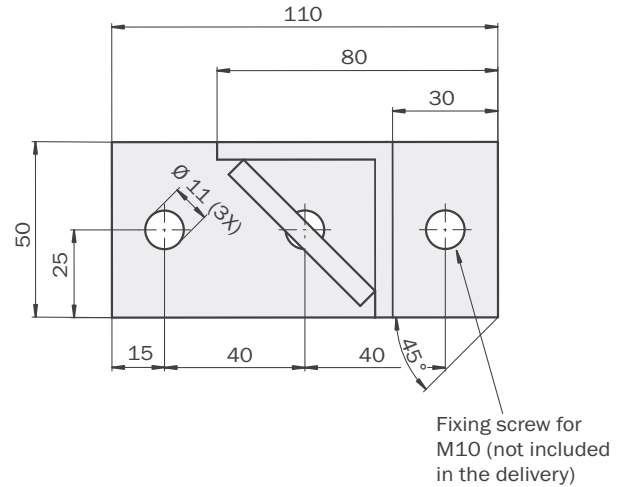
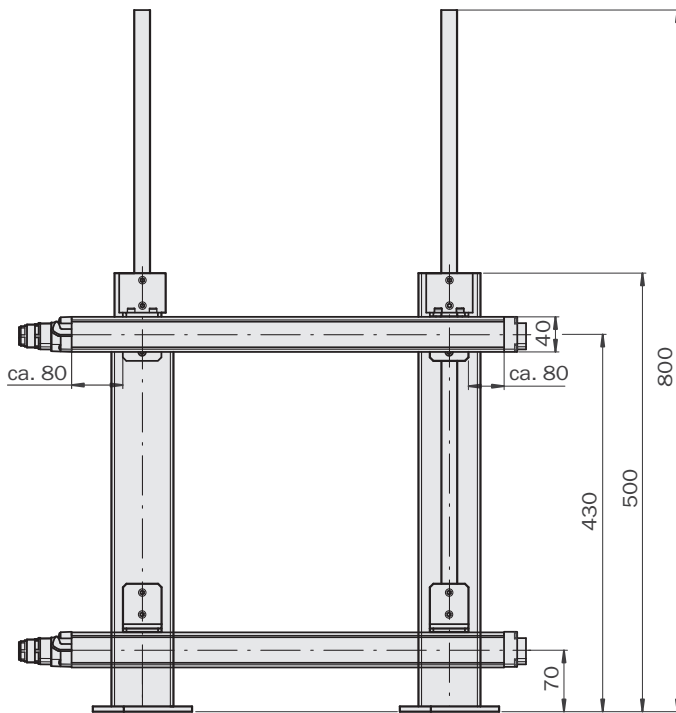


BEF-2SMMEAAL4
Omega bracket, flexible and quick installation with only one screw



F

BEF-3HHOCAST2
Stand, for horizontal mounting



Dimensions in mm

Technical data overview

Protective field height (depending on type)	300 mm ... 1800 mm
Scanning range	1.5 m ... 19 m
Resolution	20 mm
Type	Type 4 (IEC 61496)
Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
Enclosure rating	IP 65

Product description

The C4000 Fusion safety light curtain provides a variety of functions and expands the field of applications for safety light curtains. It is qualified for compact muting without additional sensors, as well as for highly available hazardous point and area protection. In harsh ambient conditions, the Fusion provides maximum uptime while virtually eliminating false trips.

- **Reliable:** flying wood chips or small debris are filtered, preventing annoying false trips
- **Simple:** for access protection with automated material transport, the C4000 Fusion differentiates between man and material
- **Available:** while skids are being detected, sporadic objects like cables are suppressed

- **Cost-effective:** only one sender / receiver pair, ensuring cost savings during mounting, wiring and service
- **Easily integrated:** no secondary muting sensors necessary, only the OSSDs are implemented
- **Safe:** provides protection in areas in which there is no object, unlike conventional muting solutions
- **Flexible:** individually adjustable to local conditions: sequence monitoring of defined objects of almost any size
- **Position monitoring:** using two single beams out of the curtain
- **The integrated EFl interface** allows the use of additional sensor functions (see A-8).

Applications

→ You can find more applications using the application finder at www.mysick.com

- Machine tools
- Automotive and other vehicles



Hazardous point protection available regardless of dirt or chips

- Storage and conveyor technology
- Wood industry



Horizontal safety light curtain. No additional muting sensors required



- Reliable hand protection
- Area protection in dirty environments
- Customized access protection with differentiation between man and material
- Reduced resolution
- Fixed blanking
- 2 virtual photoelectric switches
- Multiple sampling
- Integrated laser alignment



Further information	Page
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→ Accessories	F-215
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C4000 Fusion without extension connection

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 20 mm
- Scanning range: 1.5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302FY010	1043224	C40E-0302FY010	1043225
450 mm	C40S-0402FY010	1043226	C40E-0402FY010	1043227
600 mm	C40S-0602FY010	1043228	C40E-0602FY010	1043229
750 mm	C40S-0702FY010	1043183	C40E-0702FY010	1043184
900 mm	C40S-0902FY010	1043185	C40E-0902FY010	1043186
1050 mm	C40S-1002FY010	1043187	C40E-1002FY010	1043189
1200 mm	C40S-1202FY010	1043190	C40E-1202FY010	1043191
1350 mm	C40S-1302FY010	1043192	C40E-1302FY010	1043193
1500 mm	C40S-1502FY010	1043194	C40E-1502FY010	1043195
1650 mm	C40S-1602FY010	1043196	C40E-1602FY010	1043197
1800 mm	C40S-1802FY010	1043198	C40E-1802FY010	1043199

C4000 Fusion with extension connection¹⁾ on the receiver

Usage	As a standalone system
Connection types	System connection: Hirschmann plug M26 x 11 + FE Extension connection: Hirschmann socket M26 x 11 + FE Configuration connection: M8 x 4

- Resolution: 20 mm
- Scanning range: 1.5 m ... 19 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
300 mm	C40S-0302FY010	1043224	C40E-0302GY010	1043239
450 mm	C40S-0402FY010	1043226	C40E-0402GY010	1043240
600 mm	C40S-0602FY010	1043228	C40E-0602GY010	1043241
750 mm	C40S-0702FY010	1043183	C40E-0702GY010	1043242
900 mm	C40S-0902FY010	1043185	C40E-0902GY010	1043243
1050 mm	C40S-1002FY010	1043187	C40E-1002GY010	1043244
1200 mm	C40S-1202FY010	1043190	C40E-1202GY010	1043245
1350 mm	C40S-1302FY010	1043192	C40E-1302GY010	1043246
1500 mm	C40S-1502FY010	1043194	C40E-1502GY010	1043247
1650 mm	C40S-1602FY010	1043196	C40E-1602GY010	1043248
1800 mm	C40S-1802FY010	1043198	C40E-1802GY010	1043249

¹⁾ For reset, "reset required", bypass, emergency stop, teach-in

UE402 switching amplifier

Description	Type	Part no.
Expands C4000 Standard, Advanced, Palletizer, Entry/Exit and Fusion with the functions described in the technical data, e.g., bypass, operating mode switching or in addition PSDI mode on C4000 Standard, Advanced.	UE402	1023577

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution	20 mm	
Scanning range	1.5 m ... 19 m	
Protective field height (depending on type)	300 mm ... 1800 mm	
Safety related parameters		
Type	Type 4 (IEC 61496)	
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)	
Category	Category 4 (EN ISO 13849)	
Performance level	PL e (EN ISO 13849)	
PFHd (mean probability of a dangerous failure per hour)	1.5×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 21 ms ¹⁾
Protection class	III	
Enclosure rating	IP 65	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6	
Shock resistance	10 g, 16 ms (IEC 60068-2-29)	
Integrated laser alignment aid		
Laser class	1, IEC 60825-1:2007 ²⁾	-
Light sender/type of light	LED (visible red light)	-
Wave length	650 nm	-

¹⁾ Without beam coding, with 1 x sampling, no cascaded systems. Other response times, see operating instructions.

²⁾ Eye-safe

Functional data: basic functions

	C4000 Fusion without extension connection	C4000 Fusion with extension connection on the receiver
Restart interlock		✓
Restart interlock (delivery status)		External
External device monitoring		✓
External device monitoring (delivery status)		Deactivated
Beam coding		✓
Beam coding (delivery status)		Non-coded
Multiple sampling		✓
Multiple sampling (delivery status)		3 x sampling
Direction monitoring		✓
Reduced resolution		✓
Extension connection	-	✓
Emergency stop / bypass at extension connection	-	✓
Bypass (with UE402)		✓
Operating mode switching (with UE402)		✓
Virtual photoelectric switches	-	✓
Safe device communication via EFI/SDL		✓
SDL interface		✓
Configuration method	PC with CDS (configuration and diagnostic software)	

Functional data: blanking

	C4000 Fusion without extension connection	C4000 Fusion with extension connection on the receiver
Object entry monitoring		✓
Goods detection		✓
Object size monitoring		✓ ¹⁾
Teach-in of individual objects		✓
Object gap suppression		✓ ¹⁾
Pallet detection		✓
Object pattern recognition		✓
Detection of geometrically even objects		✓

¹⁾ Only in case when blanking of a single object is configured.

Electrical data

System part	Sender	Receiver
System connection	Hirschmann plug M26 x 11 + FE	
Connecting cable length	Max. 50 m	
Connecting cable wire cross-section	0.75 mm ²	
Extension connection (depending on type)		Hirschmann socket M26 x 11 + FE
Configuration connection	M8 x 4	
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC) ¹⁾	
Residual ripple	$\leq 10\%$ ²⁾	
Power consumption	Max. 1 A	Max. 1.8 A
Safety outputs (OSSD)		
	Type of output	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
	Switching voltage HIGH	24 V DC ($V_S - 2.25$ V DC ... V_S)
	Switching voltage LOW	2 V DC
	Switching current	Max. 500 mA
Display elements	7-segment	

¹⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

²⁾ Within the limits of V_S .

UE402 switching amplifier

General data

Safety related parameters		
	Type	Type 4 (IEC 61496)
	Safety integrity level	SIL3 (IEC 61508), SILCL3 (IEC 62061)
	Category	Category 4 (EN ISO 13849)
	Performance level	PL e (EN ISO 13849)
	PFHd (mean probability of a dangerous failure per hour)	15×10^{-9} (EN ISO 13849)
	T _M (Mission Time)	20 years (EN ISO 13849)
Protection class		III (IEC 536:1976)
Enclosure rating		IP 20 (IEC 60529)
Ambient operating temperature from ... to		0 °C ... +55 °C
Air humidity from ... to		15 % ... 95 %, non-condensing
Storage temperature from ... to		-25 °C ... +70 °C
Weight		120 g
Housing material		Plastic

Functional data

Bypass	✓
Operating mode switching	✓

Electrical data

Supply voltage V _s	24 V DC (19.2 V DC ... 28.8 V DC)
Residual ripple	≤ 10 %
Power consumption	Max. 110 mA
Switch-on time	Max. 4 s
IN A1 ... A6, MCC-BDC, MCC-TDC	
Switching voltage HIGH	24 V DC (11 V DC ... 30 V DC)
Switching voltage LOW	-30 V DC ... 5 V DC
Switching current HIGH	6 mA ... 20 mA
Switching current LOW	-3 mA ... 0.5 mA
Change over time operating mode selection	Max. 2 s
IN B1, IN B2, OUT B1, OUT B2	
Change over time bypass	Max. 2 s
Synchronous time monitoring	200 ms

Safety outputs

Connection type	Screw-terminal connector
Conductor cross-section	0.25 mm ² ... 2.5 mm ²

F

Dimensional drawings

C4000 Fusion without extension connection

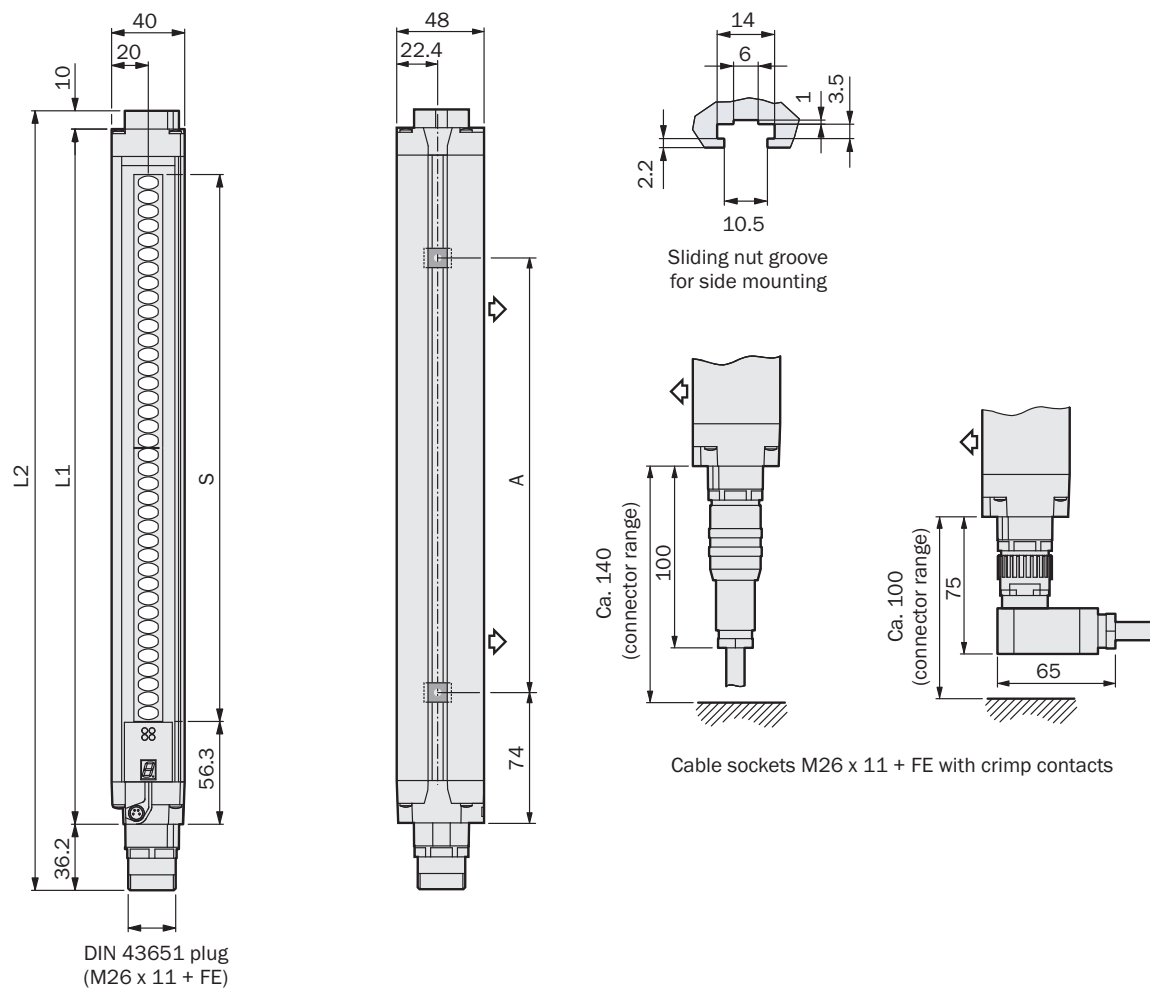


Illustration C4000 without extension connection, sender. Receiver mirror image

Protective field height S	L1	L2	A
300	381	427	224
450	532	578	374
600	682	728	524
750	833	879	674
900	984	1030	824
1050	1134	1180	974
1200	1283	1329	1124
1350	1435	1481	1274
1500	1586	1632	1424
1650	1736	1782	1574
1800	1887	1933	1724

Dimensions in mm

C4000 Fusion with extension connection

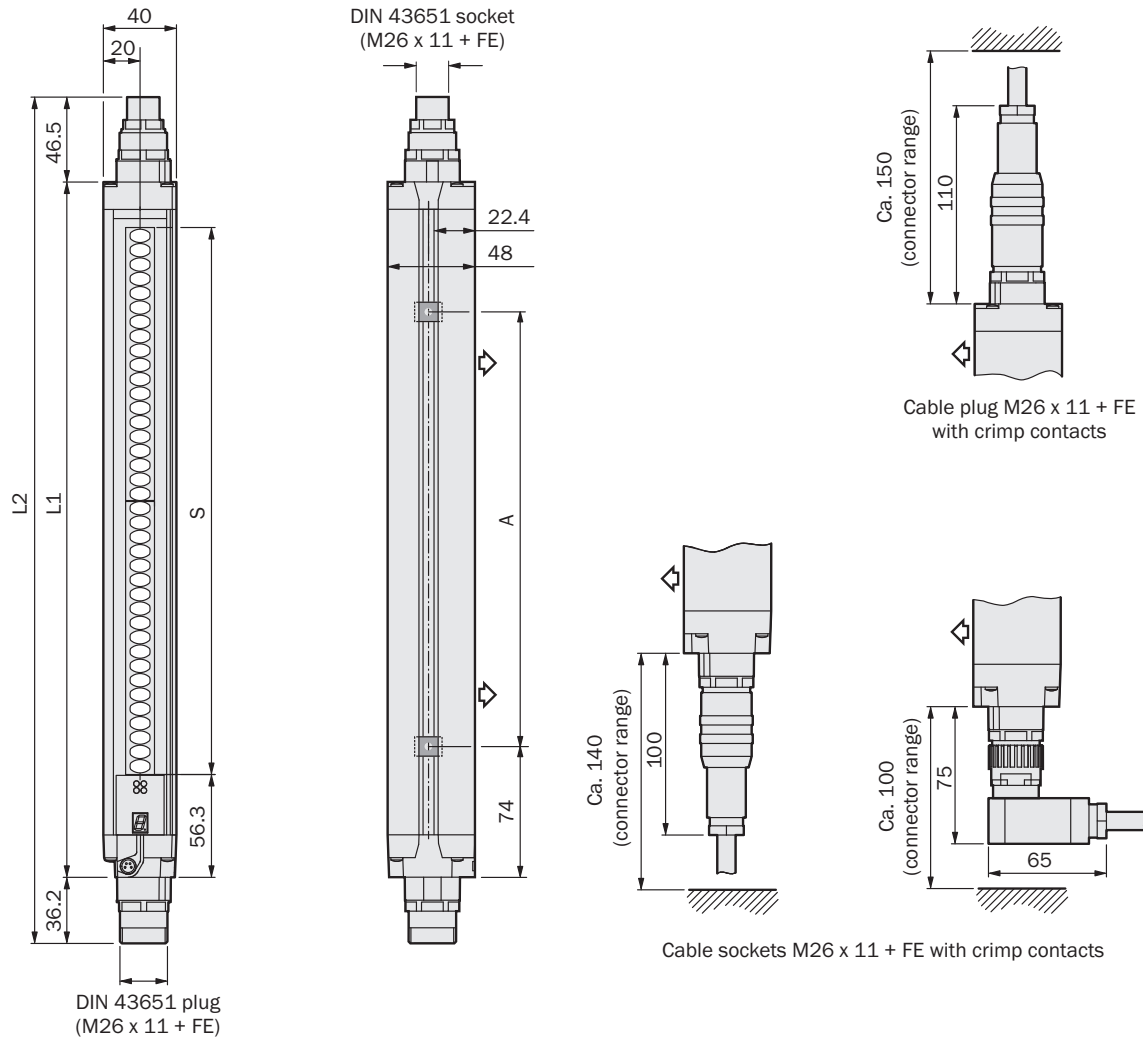


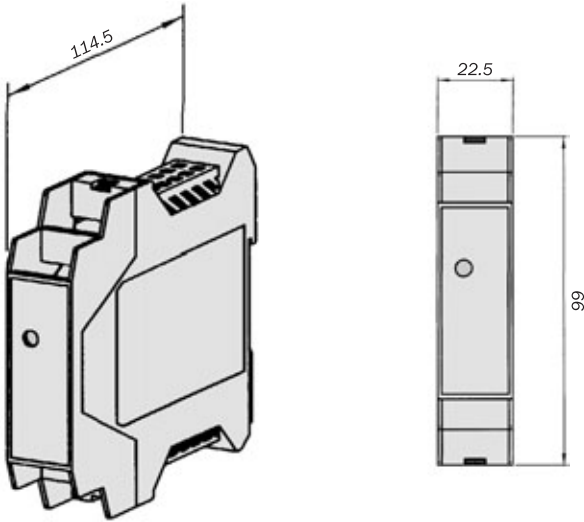
Illustration C4000 with extension connection, sender. Receiver mirror image

Protective field height S	L1	L2	A
300	381	464	224
450	532	614	374
600	682	765	524
750	833	915	674
900	984	1066	824
1050	1134	1216	974
1200	1283	1366	1124
1350	1435	1517	1274
1500	1586	1669	1424
1650	1736	1818	1574
1800	1887	1969	1724

Dimensions in mm



UE402 switching amplifier



Dimensions in mm

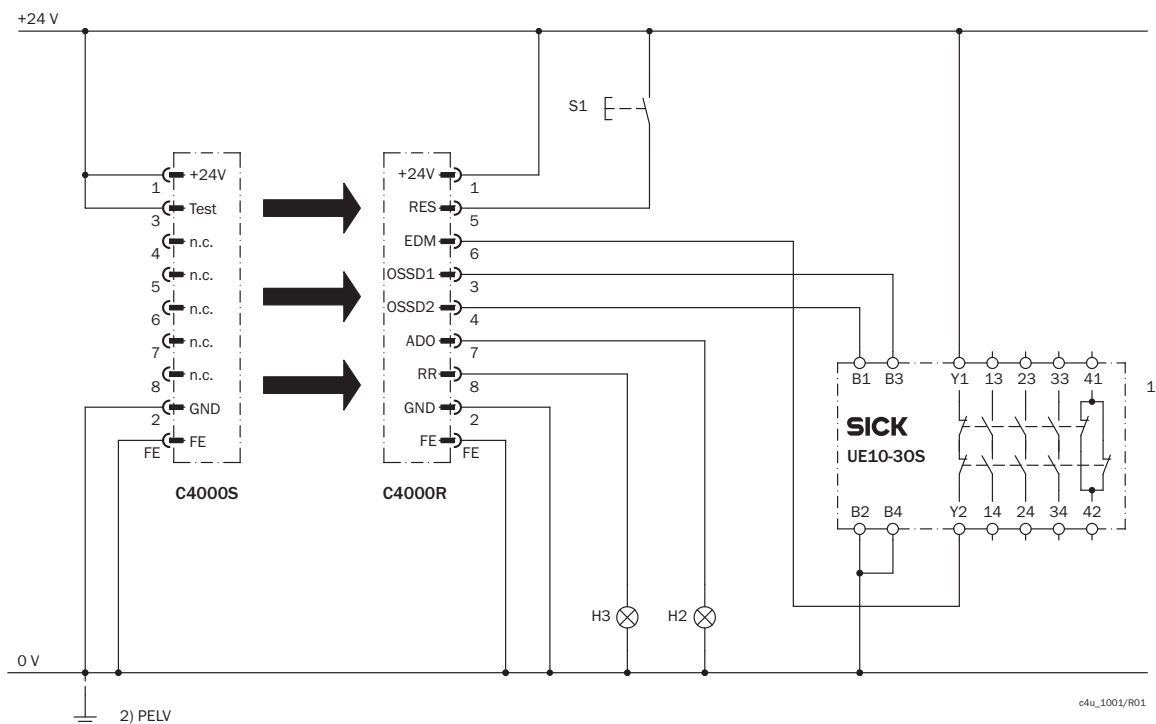


Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C4000 Fusion on UE10-30S safety relay

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Task

Connection of a C4000 Standard/Advanced/Palletizer/Fusion safety light curtain to UE10-30S. Operating mode: with restart interlock and external device monitoring.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the yellow LED on the receiver and the H3 lamp flash. The system is ready for switch-on. The system is enabled by pressing S1 (button is pressed and released). The OSSD1 and OSSD2 outputs are live and the UE10-30S is switched on. Upon interruption of one or several of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

Fault analysis

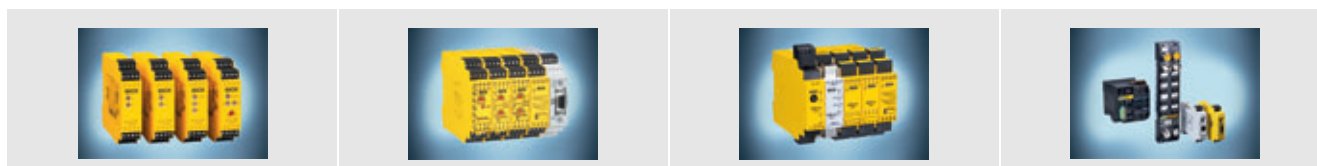
OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The erroneous behavior of the

UE10-30S will be detected. The shutdown function is retained. On manipulation (e.g., jamming) of the S1 button, the system does not enable the output current circuits. H2 lamp is illuminated if there is contamination (adjustable parameter).

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
- 2) PELV in accordance with the requirements in EN 60204-1 / 6.4 Take note of the operating instructions of the integrated devices.


sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847
	Mounting kit 11, replacement bracket, suitable for replacement of FGS	4	BEF-3WNGBCST4	2021646
	Stand, for horizontal mounting of C4000 Fusion, Entry/Exit, and Palletizer safety light curtains and M4000 Area multiple light beam safety devices, for mounting heights from 70 mm to 780 mm	2	BEF-3HHOCAST2	2041661



Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600



Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	2.5 m	DOL-0612G2M5075KM0	2022544
			5 m	DOL-0612G05M075KM0	2022545
			7.5 m	DOL-0612G7M5075KM0	2022546
			10 m	DOL-0612G10M075KM0	2022547
			15 m	DOL-0612G15M075KM0	2022548
			20 m	DOL-0612G20M075KM0	2022549
			30 m	DOL-0612G30M075KM0	2022550
			50 m	DOL-0612G50MD75KM0	2033548


Connectors

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable plug M26 x 11 + FE	Straight	STE-0612G000GA3KM0	6021191
		Angled	STE-0612W000GA3KM0	6021192

Cable receptacles

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Hirschmann cable socket M26 x 11 + FE	Straight	DOS-0612G000GA3KM0	6020757
		Angled	DOS-0612W000GA3KM0	6020758


Configuration connection cables

Figure	Description	Connection type	Cable length	Type	Part no.
	For connecting the configuration connection to the PC	M8 x 4, SUB-D 9-pin	2 m	DSL-8D04G02M025KM1	6021195
			10 m	DSL-8D04G10M025KM1	2027649


Terminators

Description	Remark	Type	Part no.
Terminal with 182 Ω resistance for pin 9 and 10 on the system connection	For improving the EMC behavior if EFI device communication is not used	Terminal with 182 Ω resistance	2027227

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves





Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMMEAAL2	2045883
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

Additional front screens


Figure	Suitable for protective field height	Part no.
 <p>Example of use</p>	300 mm	2022412
	450 mm	2022413
	600 mm	2022414
	750 mm	2022415
	900 mm	2022416
	1050 mm	2022417
	1200 mm	2022418
	1350 mm	2022419
	1500 mm	2022420
	1650 mm	2022421
	1800 mm	2022422

Additional heavy-duty front screens

F

Figure	Suitable for protective field height	Part no.
 <p>Example of use</p>	300 mm	2026853
	450 mm	2026854
	600 mm	2026855
	750 mm	2026856
	900 mm	2026857
	1050 mm	2026858
	1200 mm	2026859
	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863



PNS75 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
	1800 mm	PNS75-184	1019424	

PNS125 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435


Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column	-	-	-	4056731


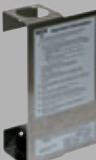
Configuration software

Figure	Description	Type	Part no.
	CDS (Configuration & Diagnostic Software)	CDS	2032314

Configuration tools

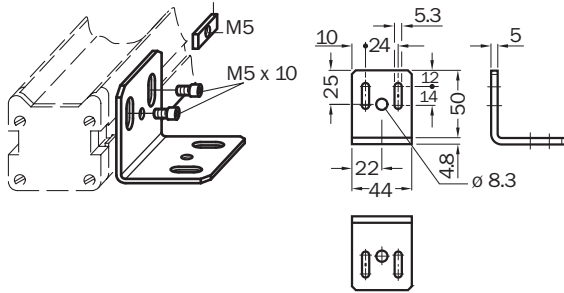
Figure	Description	Type	Part no.
	For saving and transferring configurations. For C4000 Standard, Advanced, Palletizer, Entry/Exit, Fusion and M4000 Advanced, Advanced Curtain, Area	Clone Plug for C4000 and M4000	1029665
		Wall mount	5318443

Device protection

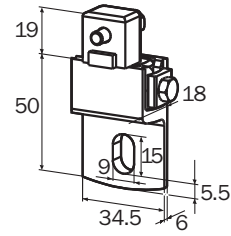
Figure	Description	Type	Part no.
	20 mm diameter	Test rod	2022600
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

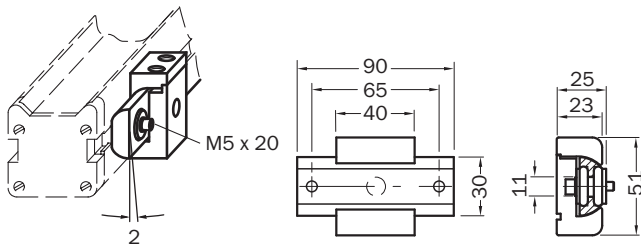
BEF-3WNGBAST4
Mounting kit 1, rigid



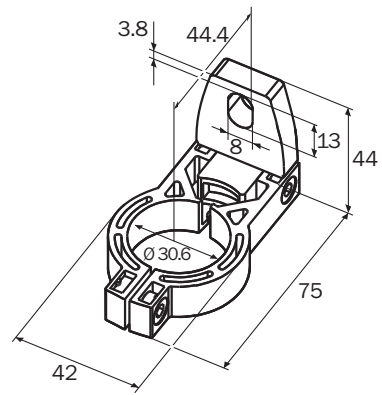
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



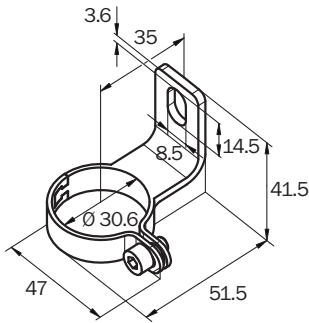
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



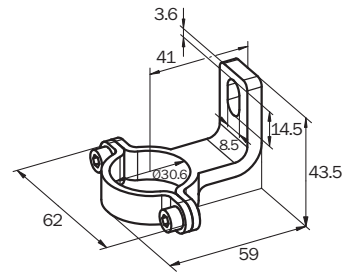
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



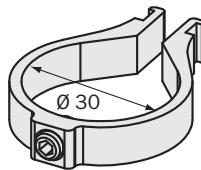
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



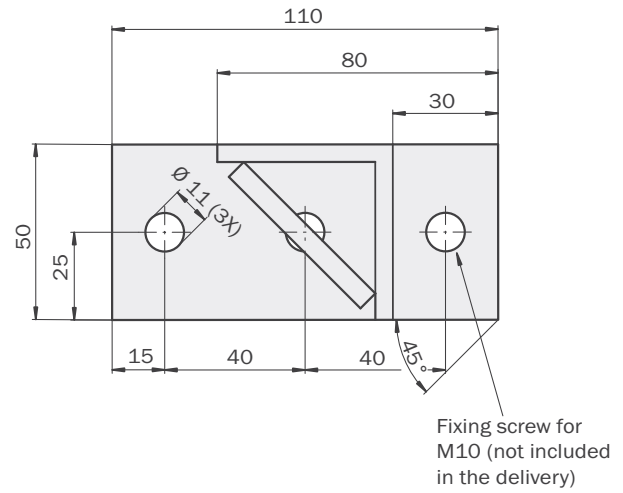
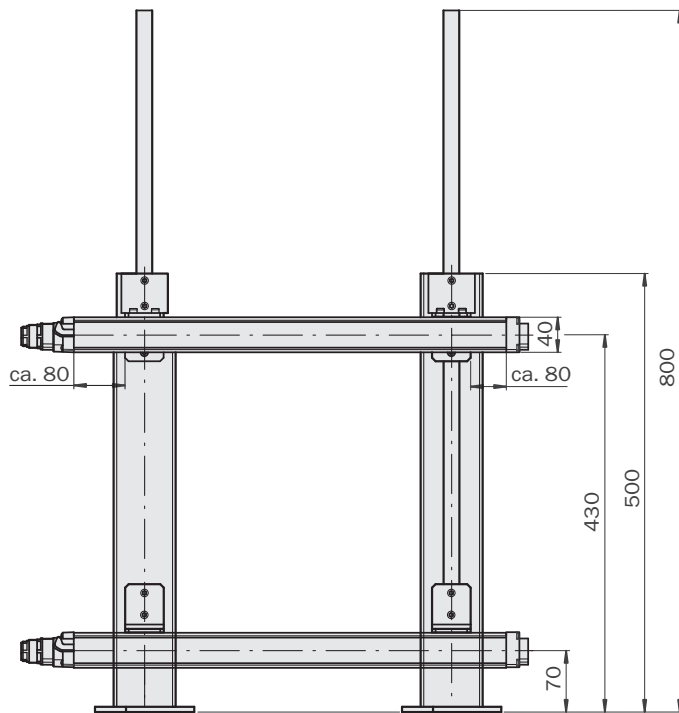
BEF-2SMMEAAL4, BEF-2SMMEAAL2
Omega bracket, flexible and quick installation with only one screw



Dimensions in mm

F

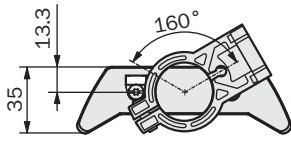
BEF-3HHOCAST2
Stand, for horizontal mounting



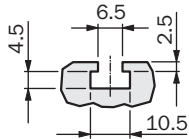
Dimensions in mm



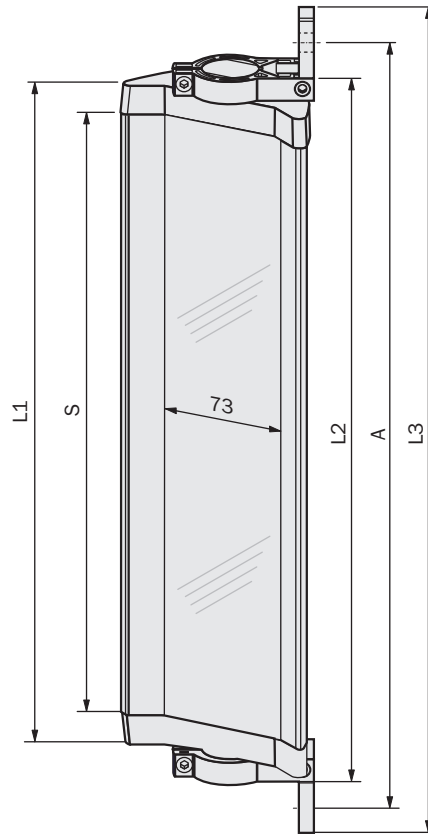
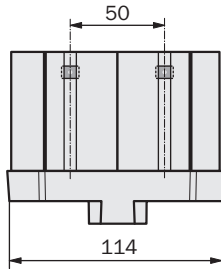
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

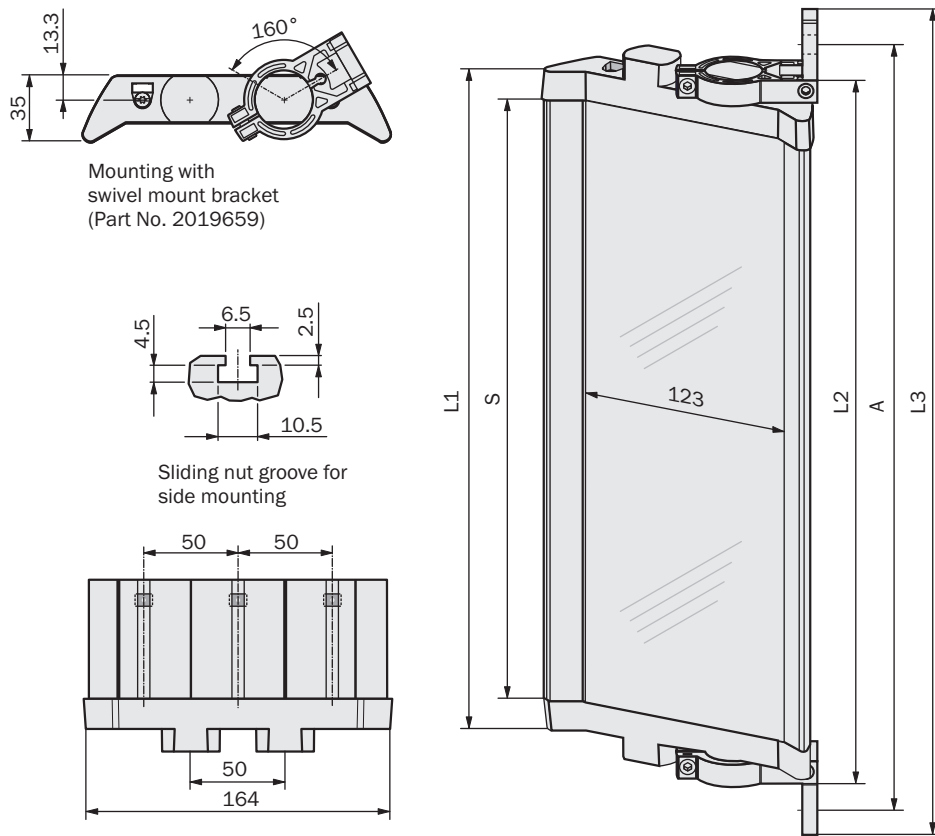


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm



F

- Optimal integration due to miniaturization
- Up to 3 systems can be cascaded
- Automatic beam coding
- Alignment and diagnostics via LED display
- External device monitoring (EDM) and reset
- Configuration without PC



Technical data overview

Protective field height (depending on type)	120 mm ... 1200 mm
Scanning range	Min. 0 m ... 6 m / typ. 0 m ... 8 m
Resolution (depending on type)	14 mm / 24 mm / 34 mm
Type	Type 2 (IEC 61496)
Safety integrity level	SIL2 (IEC 61508), SILCL2 (IEC 62061)
Enclosure rating	IP 65

Product description

The miniTwin2 safety light curtain is primarily used for hazardous point protection (finger and hand protection). Thanks to innovative technology, the device offers the customer significant advantages:

- Standardization of the sticks: the innovative Twin Sticks (S/R Stick) reduce the number of system components by up to 50 %. The clear advantages can be seen over the entire life cycle.
- Simplification of the service concept: the simple system construction reduces the effort for training courses and planning the service concept.
- Cost-effective machine integration: very small shape, cascading and fine graduation of the protective field lengths make possible flexible adaptation to the machine design.

- Handling: the simple, software-free commissioning is almost fully automatic. Modern industrial design combines the requirements for intuitive operation with durable appearance.

- The trend toward machines with high quality ergonomic design places special requirements on safety light curtains. For the first time, innovative ideas make it possible to use the optimal safety distance even in positions that were critical in the past.

- Standardization of the accessories: for the first time, innovative solutions make it possible to use additional safety functions on a 5-core cable. Easy to mount brackets ensure space-saving, simple commissioning and provide a cost-effective alternative to the special solutions used in the past.

In-system added value

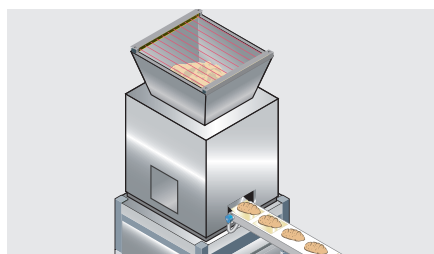
Combined with SICK safe control solutions

Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	O-2
Flexi Soft	✓	✓	✓	O-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

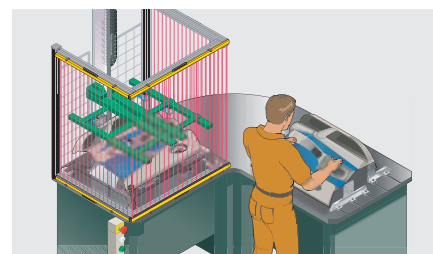
→ For more combinations, see annex

Applications

→ You can find more applications using the application finder at www.mysick.com



Food industry: Hazardous point protection at a funnel of a meat skimmer machine

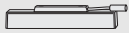
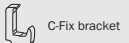
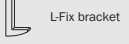
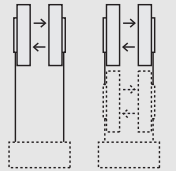


Parts-supplier industry: U-Shape like hazardous point protection at assembly machine

Further information	Page
→ Technical specifications	F-231
→ Dimensional drawings	F-232
→ Connection diagrams	F-232
→ Accessories	F-233
→ Systematic safety	A-0
→ Services	B-0

Ordering information

miniTwin2 as a standalone device or cascade end unit

Consisting of		Usage
1 x  Twin-Stick 2 x  C-Fix bracket 2 x  L-Fix bracket	<ul style="list-style-type: none"> ▪ Twin-Stick with standalone system plug and connecting cable with plug M12 x 4 + FE ▪ 2 C-Fix brackets with L-Fix bracket ▪ Operating instructions on CD-ROM 	 <ul style="list-style-type: none"> ▪ As a standalone device ▪ As a cascade end unit
Connection types		System connection: Plug M12 x 4 + FE
Scanning range		
	Minimum	0 m ... 6 m
	Typically	0 m ... 8 m

■ Resolution: 14mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01214BBC03BE0	1207793
180 mm		C2MT-01814BBC03BE0	1207794
240 mm	350 mm	C2MT-02414BBC03DE0	1207795
300 mm		C2MT-03014BBC03DE0	1207796
360 mm		C2MT-03614BBC03DE0	1207797
420 mm		C2MT-04214BBC03DE0	1207798
480 mm		C2MT-04814BBC03DE0	1207799
540 mm		C2MT-05414BBC03DE0	1207800
600 mm	700 mm	C2MT-06014BBC03FE0	1207801
660 mm		C2MT-06614BBC03FE0	1207802
720 mm		C2MT-07214BBC03FE0	1207803
780 mm		C2MT-07814BBC03FE0	1207813
840 mm		C2MT-08414BBC03FE0	1207814
900 mm		C2MT-09014BBC03FE0	1207816
960 mm		C2MT-09614BBC03FE0	1207817
1020 mm		C2MT-10214BBC03FE0	1207818
1080 mm		C2MT-10814BBC03FE0	1207819
1140 mm		C2MT-11414BBC03FE0	1207820
1200 mm	C2MT-12014BBC03FE0	1207821	



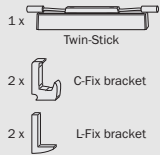
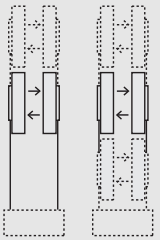
■ Resolution: 24 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01224BBC03BE0	1207822
180 mm		C2MT-01824BBC03BE0	1207823
240 mm	350 mm	C2MT-02424BBC03DE0	1207824
300 mm		C2MT-03024BBC03DE0	1207825
360 mm		C2MT-03624BBC03DE0	1207832
420 mm		C2MT-04224BBC03DE0	1207833
480 mm		C2MT-04824BBC03DE0	1207834
540 mm		C2MT-05424BBC03DE0	1207835
600 mm	700 mm	C2MT-06024BBC03FE0	1207836
660 mm		C2MT-06624BBC03FE0	1207837
720 mm		C2MT-07224BBC03FE0	1207838
780 mm		C2MT-07824BBC03FE0	1207839
840 mm		C2MT-08424BBC03FE0	1207840
900 mm		C2MT-09024BBC03FE0	1207841
960 mm		C2MT-09624BBC03FE0	1207842
1020 mm		C2MT-10224BBC03FE0	1207843
1080 mm		C2MT-10824BBC03FE0	1207844
1140 mm		C2MT-11424BBC03FE0	1207845
1200 mm	C2MT-12024BBC03FE0	1207846	

■ Resolution: 34 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01234BBC03BE0	1207847
180 mm		C2MT-01834BBC03BE0	1207848
240 mm	350 mm	C2MT-02434BBC03DE0	1207849
300 mm		C2MT-03034BBC03DE0	1207850
360 mm		C2MT-03634BBC03DE0	1207851
420 mm		C2MT-04234BBC03DE0	1207852
480 mm		C2MT-04834BBC03DE0	1207853
540 mm		C2MT-05434BBC03DE0	1207854
600 mm	700 mm	C2MT-06034BBC03FE0	1207855
660 mm		C2MT-06634BBC03FE0	1207856
720 mm		C2MT-07234BBC03FE0	1207857
780 mm		C2MT-07834BBC03FE0	1207858
840 mm		C2MT-08434BBC03FE0	1207859
900 mm		C2MT-09034BBC03FE0	1207860
960 mm		C2MT-09634BBC03FE0	1207861
1020 mm		C2MT-10234BBC03FE0	1207862
1080 mm		C2MT-10834BBC03FE0	1207863
1140 mm		C2MT-11434BBC03FE0	1207864
1200 mm	C2MT-12034BBC03FE0	1207865	

miniTwin2 as a cascaded host or guest device – not as a cascade end unit

Consisting of		Usage				
 <p>1 x Twin-Stick 2 x C-Fix bracket 2 x L-Fix bracket</p>	<ul style="list-style-type: none"> Twin-Stick with cascade system plug and 2 connecting cables with plug and socket M12 x 4 + FE 2 C-Fix brackets with L-Fix bracket Operating instructions on CD-ROM 	 <ul style="list-style-type: none"> As a cascaded host or guest device – not as a cascade end unit 				
Connection types		System connection: Plug M12 x 4 + FE Extension connection: Socket M12 x 4 + FE				
Scanning range		<table border="1"> <tr> <td>Minimum</td> <td>0 m ... 6 m</td> </tr> <tr> <td>Typically</td> <td>0 m ... 8 m</td> </tr> </table>	Minimum	0 m ... 6 m	Typically	0 m ... 8 m
Minimum	0 m ... 6 m					
Typically	0 m ... 8 m					

■ Resolution: 14 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01214BBC04BE0	1207866
180 mm		C2MT-01814BBC04BE0	1207867
240 mm	350 mm	C2MT-02414BBC04DE0	1207868
300 mm		C2MT-03014BBC04DE0	1207869
360 mm		C2MT-03614BBC04DE0	1207870
420 mm		C2MT-04214BBC04DE0	1207871
480 mm		C2MT-04814BBC04DE0	1207872
540 mm		C2MT-05414BBC04DE0	1207873
600 mm		700 mm	C2MT-06014BBC04FE0
660 mm	C2MT-06614BBC04FE0		1207875
720 mm	C2MT-07214BBC04FE0		1207876
780 mm	C2MT-07814BBC04FE0		1207877
840 mm	C2MT-08414BBC04FE0		1207878
900 mm	C2MT-09014BBC04FE0		1207879
960 mm	C2MT-09614BBC04FE0		1207880
1020 mm	C2MT-10214BBC04FE0		1207881
1080 mm	C2MT-10814BBC04FE0		1207882
1140 mm	C2MT-11414BBC04FE0		1207883
1200 mm	C2MT-12014BBC04FE0	1207884	



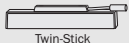

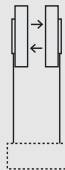
■ Resolution: 24 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01224BBC04BE0	1207885
180 mm		C2MT-01824BBC04BE0	1207886
240 mm	350 mm	C2MT-02424BBC04DE0	1207887
300 mm		C2MT-03024BBC04DE0	1207888
360 mm		C2MT-03624BBC04DE0	1207889
420 mm		C2MT-04224BBC04DE0	1207890
480 mm		C2MT-04824BBC04DE0	1207891
540 mm		C2MT-05424BBC04DE0	1207892
600 mm	700 mm	C2MT-06024BBC04FE0	1207893
660 mm		C2MT-06624BBC04FE0	1207894
720 mm		C2MT-07224BBC04FE0	1207895
780 mm		C2MT-07824BBC04FE0	1207896
840 mm		C2MT-08424BBC04FE0	1207897
900 mm		C2MT-09024BBC04FE0	1207898
960 mm		C2MT-09624BBC04FE0	1207899
1020 mm		C2MT-10224BBC04FE0	1207900
1080 mm		C2MT-10824BBC04FE0	1207901
1140 mm		C2MT-11424BBC04FE0	1207902
1200 mm	C2MT-12024BBC04FE0	1207903	

■ Resolution: 34 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01234BBC04BE0	1207904
180 mm		C2MT-01834BBC04BE0	1207905
240 mm	350 mm	C2MT-02434BBC04DE0	1207906
300 mm		C2MT-03034BBC04DE0	1207907
360 mm		C2MT-03634BBC04DE0	1207908
420 mm		C2MT-04234BBC04DE0	1207909
480 mm		C2MT-04834BBC04DE0	1207910
540 mm		C2MT-05434BBC04DE0	1207911
600 mm	700 mm	C2MT-06034BBC04FE0	1207912
660 mm		C2MT-06634BBC04FE0	1207913
720 mm		C2MT-07234BBC04FE0	1207914
780 mm		C2MT-07834BBC04FE0	1207915
840 mm		C2MT-08434BBC04FE0	1207916
900 mm		C2MT-09034BBC04FE0	1207917
960 mm		C2MT-09634BBC04FE0	1207918
1020 mm		C2MT-10234BBC04FE0	1207919
1080 mm		C2MT-10834BBC04FE0	1207920
1140 mm		C2MT-11434BBC04FE0	1207921
1200 mm	C2MT-12034BBC04FE0	1207922	

miniTwin2 as a standalone device

Consisting of		Usage	
1 x  Twin-Stick 2 x  O-Fix bracket	<ul style="list-style-type: none"> Twin-Stick with standalone system plug and 1 connecting cable with plug M12 x 4 + FE 2 O-Fix brackets Operating instructions on CD-ROM 		<ul style="list-style-type: none"> As a standalone device
Connection types		System connection: Plug M12 x 4 + FE	
Scanning range			
	Minimum	0 m ... 6 m	
	Typically	0 m ... 8 m	

■ Resolution: 14 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01214BBC03BB0	1207923
180 mm		C2MT-01814BBC03BB0	1207924
240 mm	350 mm	C2MT-02414BBC03DB0	1207925
300 mm		C2MT-03014BBC03DB0	1207926
360 mm		C2MT-03614BBC03DB0	1207927
420 mm		C2MT-04214BBC03DB0	1207928
480 mm		C2MT-04814BBC03DB0	1207929
540 mm		C2MT-05414BBC03DB0	1207930
600 mm		700 mm	C2MT-06014BBC03FB0
660 mm	C2MT-06614BBC03FB0		1207932
720 mm	C2MT-07214BBC03FB0		1207933
780 mm	C2MT-07814BBC03FB0		1207934
840 mm	C2MT-08414BBC03FB0		1207935
900 mm	C2MT-09014BBC03FB0		1207936
960 mm	C2MT-09614BBC03FB0		1207937
1020 mm	C2MT-10214BBC03FB0		1207938
1080 mm	C2MT-10814BBC03FB0		1207939
1140 mm	C2MT-11414BBC03FB0		1207940
1200 mm	C2MT-12014BBC03FB0	1207941	



■ Resolution: 24 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01224BBC03BB0	1207942
180 mm		C2MT-01824BBC03BB0	1207943
240 mm	350 mm	C2MT-02424BBC03DB0	1207944
300 mm		C2MT-03024BBC03DB0	1207945
360 mm		C2MT-03624BBC03DB0	1207946
420 mm		C2MT-04224BBC03DB0	1207947
480 mm		C2MT-04824BBC03DB0	1207948
540 mm		C2MT-05424BBC03DB0	1207949
600 mm	700 mm	C2MT-06024BBC03FB0	1207950
660 mm		C2MT-06624BBC03FB0	1207951
720 mm		C2MT-07224BBC03FB0	1207952
780 mm		C2MT-07824BBC03FB0	1207953
840 mm		C2MT-08424BBC03FB0	1207954
900 mm		C2MT-09024BBC03FB0	1207955
960 mm		C2MT-09624BBC03FB0	1207956
1020 mm		C2MT-10224BBC03FB0	1207957
1080 mm		C2MT-10824BBC03FB0	1207958
1140 mm		C2MT-11424BBC03FB0	1207959
1200 mm	C2MT-12024BBC03FB0	1207960	

■ Resolution: 34 mm

Protective field height	Cable length	Type	Part no.
120 mm	160 mm	C2MT-01234BBC03BB0	1207961
180 mm		C2MT-01834BBC03BB0	1207962
240 mm	350 mm	C2MT-02434BBC03DB0	1207963
300 mm		C2MT-03034BBC03DB0	1207964
360 mm		C2MT-03634BBC03DB0	1207965
420 mm		C2MT-04234BBC03DB0	1207966
480 mm		C2MT-04834BBC03DB0	1207967
540 mm		C2MT-05434BBC03DB0	1207968
600 mm	700 mm	C2MT-06034BBC03FB0	1207969
660 mm		C2MT-06634BBC03FB0	1207970
720 mm		C2MT-07234BBC03FB0	1207971
780 mm		C2MT-07834BBC03FB0	1207972
840 mm		C2MT-08434BBC03FB0	1207973
900 mm		C2MT-09034BBC03FB0	1207974
960 mm		C2MT-09634BBC03FB0	1207975
1020 mm		C2MT-10234BBC03FB0	1207976
1080 mm		C2MT-10834BBC03FB0	1207977
1140 mm		C2MT-11434BBC03FB0	1207978
1200 mm	C2MT-12034BBC03FB0	1207979	

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

Scanning range	0 m ... 6 m
Protective field height (depending on type)	120 mm ... 1200 mm
Safety related parameters (depending on type)	
Type	Type 2 (IEC 61496)
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)
Category	Category 2 (EN ISO 13849)
Test rate (internal test)	Standalone system: 58/s (EN ISO 13849) Cascaded systems: 47/s (EN ISO 13849)
Maximum demand rate	Standalone system: 34/min (EN ISO 13849) ¹⁾ Cascaded systems: 28/min (EN ISO 13849) ¹⁾
Performance level	PL d (EN ISO 13849), pay attention to optical characteristics! ²⁾
PFHd (mean probability of a dangerous failure per hour)	Standalone system: 2.4×10^{-8} (EN ISO 13849) Cascaded systems: 5.2×10^{-8} (EN ISO 13849)
T _M (Mission Time)	20 years (EN ISO 13849)
Response time (depending on type)	Max. 17 ms ³⁾
Synchronization	Optical, without separate synchronization
Protection class	III (EN 61140)
Enclosure rating	IP 65
Ambient operating temperature from ... to	-20 °C ... +55 °C
Storage temperature from ... to	-25 °C ... +70 °C
Air humidity from ... to	15 % ... 95 %, non-condensing
Housing cross-section (incl. system connection)	15 mm x 32 mm
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 60068-2-6
Shock resistance	10 g, 16 s (IEC 60068-2-29)

¹⁾ Between two demands on a safety-related response of the device at least 100 internal or external tests must be carried out.

²⁾ The performance level does not contain any specific requirements on aspects such as the optical characteristics.
For more detailed information on this topic see page A-10

³⁾ Standalone devices, no cascaded systems. Other response times, see operating instructions.

Functional data

Restart interlock	✓
External device monitoring	✓
Beam coding	Automatic
Extension connection (depending on type)	✓
Configuration method	Hard wired

Electrical data

System connection	Plug M12 x 4 + FE
Connecting cable length	Max. 20 m ¹⁾
Connecting cable wire cross-section	0.34 mm ²
Supply voltage V _s	24 V DC (19.2 V DC ... 28.8 V DC)
Residual ripple	± 10 %
Switch-on time	Max. 3 s ²⁾
Display elements	LED

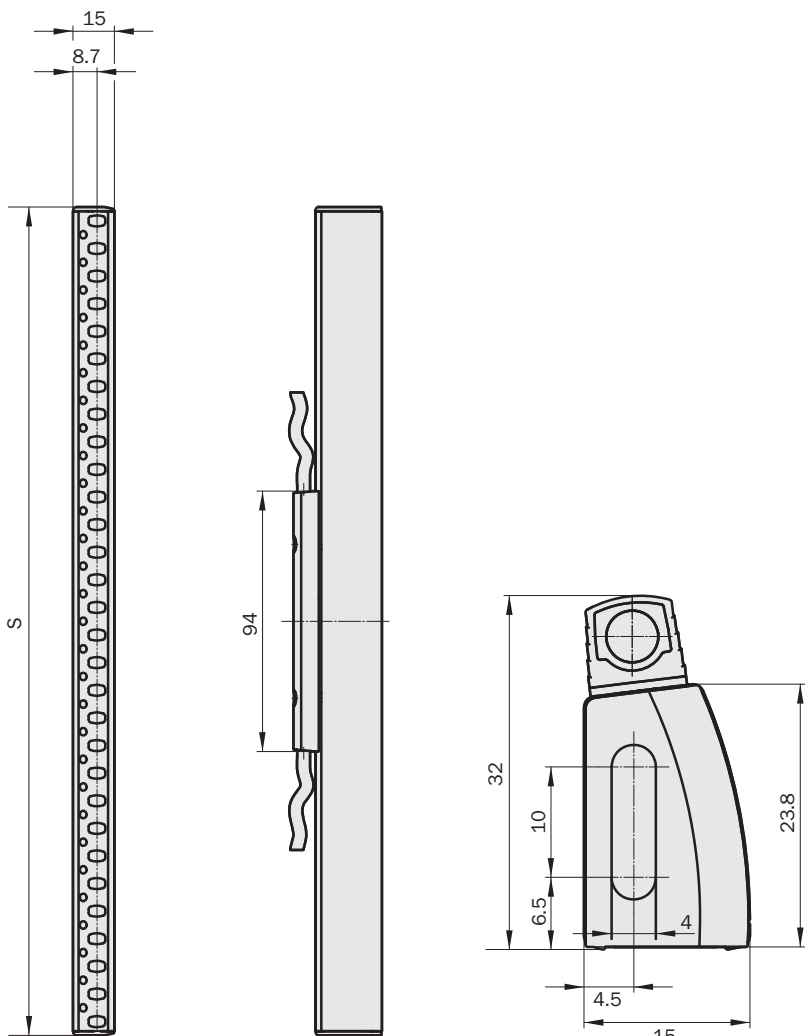
¹⁾ Depending on load, power supply and wire cross-section. The technical specifications must be observed.

²⁾ After applying the supply voltage

Dimensional drawings

miniTwin2

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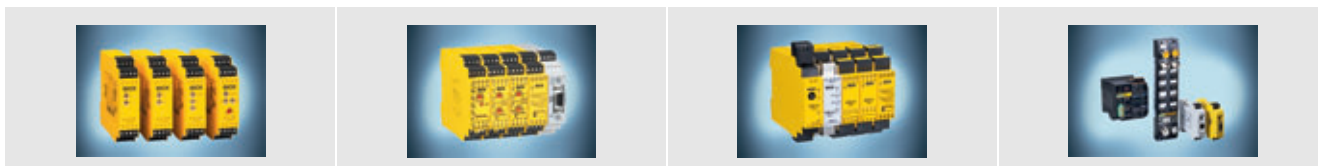
S = protective field height = housing length

Dimensions in mm

Connection diagrams

→ You can find connection diagrams at www.mysick.com




sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories




Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Combination C-Fix bracket with L-Fix bracket	2	BEF-3AAA0MKU2S04	2045843
	O-Fix bracket	2	BEF-3SHAEMKU2	2045835
	C-Fix-Flex bracket, adjustable +4° / -4°, metal version, for flat and connector side assembly	2	BEF-1SHABMAL2	2056598


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600


System plugs

Figure	Description	Cable length	Type	Part no.
	With 1 connecting cable, stripped	10 m	Standalone system plug	2051290
	With 1 connecting cable and plug M12 x 4 + FE	160 mm	Standalone system plug	2046447
		350 mm	Standalone system plug	2046449
		700 mm	Standalone system plug	2046451
	With 2 connecting cables and 1 plug and 1 socket M12 x 4 + FE	160 mm	Cascade system plug	2046452
		350 mm	Cascade system plug	2046454
		700 mm	Cascade system plug	2046456

Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 5	Straight	2 m	DOL-1205-G02M	6008899
			5 m	DOL-1205-G05M	6009868
			10 m	DOL-1205-G10M	6010544
			15 m	DOL-1205-G15M	6029215
			20 m	DOL-1205-G20MAC	6036386


Connector

Figure	Connection type	Direction of cable outlet	Type	Part no.
	Plug M12 x 5	Straight	STE-1205-G	6022083

Cable receptacles

Connection type	Direction of cable outlet	Type	Part no.
Socket M12 x 5	Straight	DOS-1205-G	6009719

Extension connection cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Plug M12 x 5, socket M12 x 5	Plug straight/ socket straight	1 m	DSL-1205-G01MC	6029280
			2 m	DSL-1205-G02MC	6025931

PNS75 deflector mirrors


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Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424



PNS125 deflector mirrors

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435

Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter AR60 for miniTwin	-	-	-	4064710

Device protection

Figure	Description	Type	Part no.
	14 mm diameter	Test rod	2022599
	24 mm diameter	Test rod	2045592
	34 mm diameter	Test rod	2045593
	Test rod holder	BEF-3WNAAAAL1	2052249

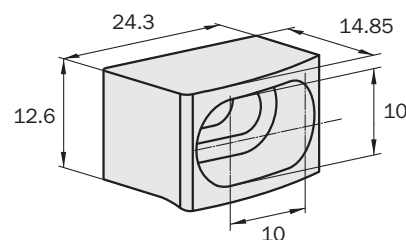
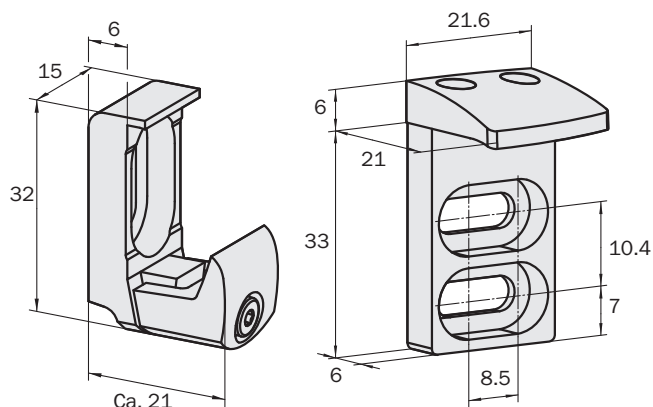
Dimensional drawings mounting systems

BEF-3AAA0MKU2S04

Combination C-Fix bracket with L-Fix bracket, 2 pieces each

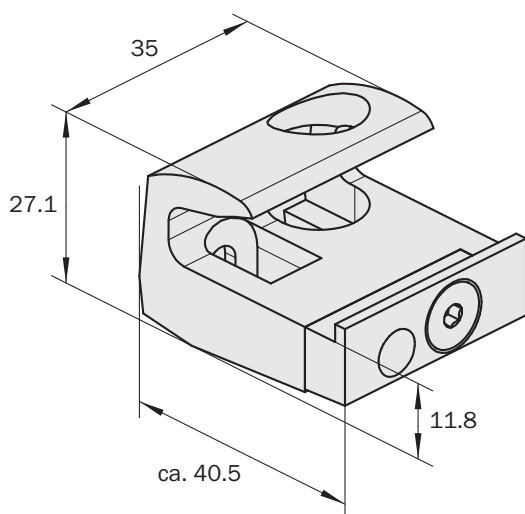
BEF-3SHAEMKU2

O-Fix bracket, 2 pieces



BEF-1SHABMAL2

C-Fix-Flex bracket, adjustable +4°/-4°, metal version, for flat and connector side assembly



Dimensions in mm



F

- External device monitoring (EDM)
- Self-test
- 7-segment display
- Diagnostics
- Alignment aid
- Beam coding



Technical data overview

Protective field height (depending on type)	150 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 6 m / 2.5 m ... 19 m
Resolution (depending on type)	20 mm / 30 mm / 40 mm
Type	Type 2 (IEC 61496)
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)
Enclosure rating	IP 65

Product description

With its high signal reserve, the C2000 Standard safety light curtain is also reliable under harsh industrial conditions. Functions and status information integrated in the device allows rapid commissioning and prevents unnecessary machine downtime. Its modular design achieves maximum machine safety while taking into account

economic considerations by precisely coordinating the characteristics of the device to the requirements. Safe control solutions and service concepts complete the product range to provide an ideal solution.

In-system added value

Combined with SICK safe control solutions

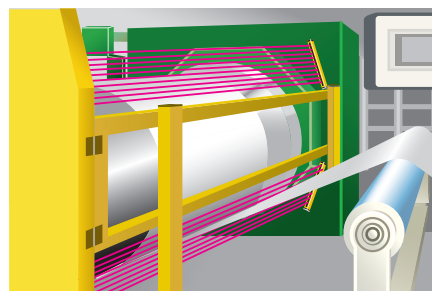
Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	O-2
Flexi Soft	✓	✓	✓	O-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

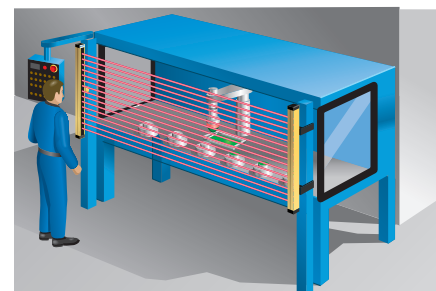
Applications

→ You can find more applications using the application finder at www.mysick.com

- Storage and conveyor technology
- Wood industry
- Textile industry
- Stone production
- Electronics industry
- Packaging industry



Textile industry: C2000 Standard on a warping machine



Printing industry: C2000 Standard on a pad printing machine

Further information	Page
→ Technical specifications	F-239
→ Dimensional drawings	F-241
→ Connection diagrams	F-243
→ Accessories	F-244
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C2000 Standard

Housing cross-section	
Protective field heights 150 mm to 1200 mm	34 mm x 29 mm
Protective field heights 1350 mm to 1800 mm	48 mm x 40 mm
Usage	As a standalone system
Connection types	System connection: plug M12 x 8

■ Scanning range: 0 m ... 6 m

Resolution	Protective field height	Sender		Receiver	
		Type	Part no.	Type	Part no.
20 mm	150 mm	C20S-015102A11	1016563	C20E-015302A11	1016564
	300 mm	C20S-030102A11	1016448	C20E-030302A11	1016449
	450 mm	C20S-045102A11	1016573	C20E-045302A11	1016459
	600 mm	C20S-060102A11	1016574	C20E-060302A11	1016575
	750 mm	C20S-075102A11	1016579	C20E-075302A11	1016580
	900 mm	C20S-090102A11	1016584	C20E-090302A11	1016585
	1050 mm	C20S-105102A11	1016589	C20E-105302A11	1016590
30 mm	1200 mm	C20S-120102A11	1016464	C20E-120302A11	1016465
	150 mm	C20S-015103A11	1016475	C20E-015303A11	1016476
	300 mm	C20S-030103A11	1016568	C20E-030303A11	1016569
	450 mm	C20S-045103A11	1016454	C20E-045303A11	1016455
	600 mm	C20S-060103A11	1016477	C20E-060303A11	1016478
	750 mm	C20S-075103A11	1016479	C20E-075303A11	1016480
	900 mm	C20S-090103A11	1016481	C20E-090303A11	1016482
	1050 mm	C20S-105103A11	1016483	C20E-105303A11	1016484
	1200 mm	C20S-120103A11	1016594	C20E-120303A11	1016595
	1350 mm	C20S-135103A12	1016600	C20E-135303A12	1016601
	1500 mm	C20S-150103A12	1016605	C20E-150303A12	1016606
40 mm	1650 mm	C20S-165103A12	1016610	C20E-165303A12	1016611
	1800 mm	C20S-180103A12	1016615	C20E-180303A12	1016616
	150 mm	C20S-015104A11	1016565	C20E-015304A11	1016566
	300 mm	C20S-030104A11	1016570	C20E-030304A11	1016571
	450 mm	C20S-045104A11	1016456	C20E-045304A11	1016457
	600 mm	C20S-060104A11	1016576	C20E-060304A11	1016577
	750 mm	C20S-075104A11	1016581	C20E-075304A11	1016582
	900 mm	C20S-090104A11	1016586	C20E-090304A11	1016587
	1050 mm	C20S-105104A11	1016591	C20E-105304A11	1016592
	1200 mm	C20S-120104A11	1016596	C20E-120304A11	1016597
	1350 mm	C20S-135104A12	1016603	C20E-135304A12	1016604
1500 mm	C20S-150104A12	1016608	C20E-150304A12	1016609	
1650 mm	C20S-165104A12	1016613	C20E-165304A12	1016614	
1800 mm	C20S-180104A12	1016618	C20E-180304A12	1016619	

F

■ Scanning range: 2.5 m ... 19 m

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Resolution	Protective field height	Sender		Receiver	
		Type	Part no.	Type	Part no.
20 mm	150 mm	C20S-015202A11	1016631	C20E-015302A11	1016564
	300 mm	C20S-030202A11	1016632	C20E-030302A11	1016449
	450 mm	C20S-045202A11	1016458	C20E-045302A11	1016459
	600 mm	C20S-060202A11	1016633	C20E-060302A11	1016575
	750 mm	C20S-075202A11	1016634	C20E-075302A11	1016580
	900 mm	C20S-090202A11	1016635	C20E-090302A11	1016585
	1050 mm	C20S-105202A11	1016636	C20E-105302A11	1016590
	1200 mm	C20S-120202A11	1016466	C20E-120302A11	1016465
30 mm	150 mm	C20S-015203A11	1016567	C20E-015303A11	1016476
	300 mm	C20S-030203A11	1016572	C20E-030303A11	1016569
	450 mm	C20S-045203A11	1016460	C20E-045303A11	1016455
	600 mm	C20S-060203A11	1016578	C20E-060303A11	1016478
	750 mm	C20S-075203A11	1016583	C20E-075303A11	1016480
	900 mm	C20S-090203A11	1016588	C20E-090303A11	1016482
	1050 mm	C20S-105203A11	1016593	C20E-105303A11	1016484
	1200 mm	C20S-120203A11	1016599	C20E-120303A11	1016595
	1350 mm	C20S-135203A12	1016602	C20E-135303A12	1016601
	1500 mm	C20S-150203A12	1016607	C20E-150303A12	1016606
	1650 mm	C20S-165203A12	1016611	C20S-165203A12	1016612
	1800 mm	C20S-180203A12	1016617	C20E-180303A12	1016616
40 mm	150 mm	C20S-015204A11	1016637	C20E-015304A11	1016566
	300 mm	C20S-030204A11	1016638	C20E-030304A11	1016571
	450 mm	C20S-045204A11	1016462	C20E-045304A11	1016457
	600 mm	C20S-060204A11	1016639	C20E-060304A11	1016577
	750 mm	C20S-075204A11	1016640	C20E-075304A11	1016582
	900 mm	C20S-090204A11	1016641	C20E-090304A11	1016587
	1050 mm	C20S-105204A11	1016642	C20E-105304A11	1016592
	1200 mm	C20S-120204A11	1016643	C20E-120304A11	1016597
	1350 mm	C20S-135204A12	1016644	C20E-135304A12	1016604
	1500 mm	C20E-150304A12	1016609	C20S-150204A12	1016646
	1650 mm	C20S-165204A12	1016647	C20E-165304A12	1016614
	1800 mm	C20S-180204A12	1016648	C20E-180304A12	1016619

Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	20 mm / 30 mm / 40 mm	
Scanning range (depending on type)	0 m ... 6 m / 2.5 m ... 19 m	-
Protective field height (depending on type)	150 mm ... 1800 mm	
Safety related parameters		
Type	Type 2 (IEC 61496)	
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)	
Category	Category 2 (EN ISO 13849)	
Test rate (internal test)	13/s (EN ISO 13849)	
Maximum demand rate	8/min (EN ISO 13849) ¹⁾	
Performance level	PL d (EN ISO 13849), pay attention to optical characteristics! ²⁾	
PFHd (mean probability of a dangerous failure per hour)	2.2 x 10 ⁻⁸ (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 34 ms
Synchronization	Optical, without separate synchronization	
Protection class	III	
Enclosure rating	IP 65 (EN 60529)	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section (depending on type)		
Protective field heights 150 mm to 1200 mm	34 mm x 29 mm	
Protective field heights 1350 mm to 1800 mm	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 68-2-6	
Shock resistance	10 g, 16 ms (IEC 68-2-29)	

¹⁾ Between two demands on a safety-related response of the device at least 100 internal or external tests must be carried out.

²⁾ The performance level does not contain any specific requirements on aspects such as the optical characteristics.
For more detailed information on this topic, see page A-10.

Functional data

System part	Sender	Receiver
External device monitoring	-	✓
Beam coding		✓
Configuration method	Hard wired	

Electrical data

System part	Sender	Receiver
System connection	Plug M12 x 8	
Connecting cable length	Max. 15 m ¹⁾	
Connecting cable wire cross-section	0.25 mm ²	
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 5 %	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	Min. $V_S - 2.25$ V DC
Switching current	-	Max. 500 mA
Display elements	LED/7-segment	

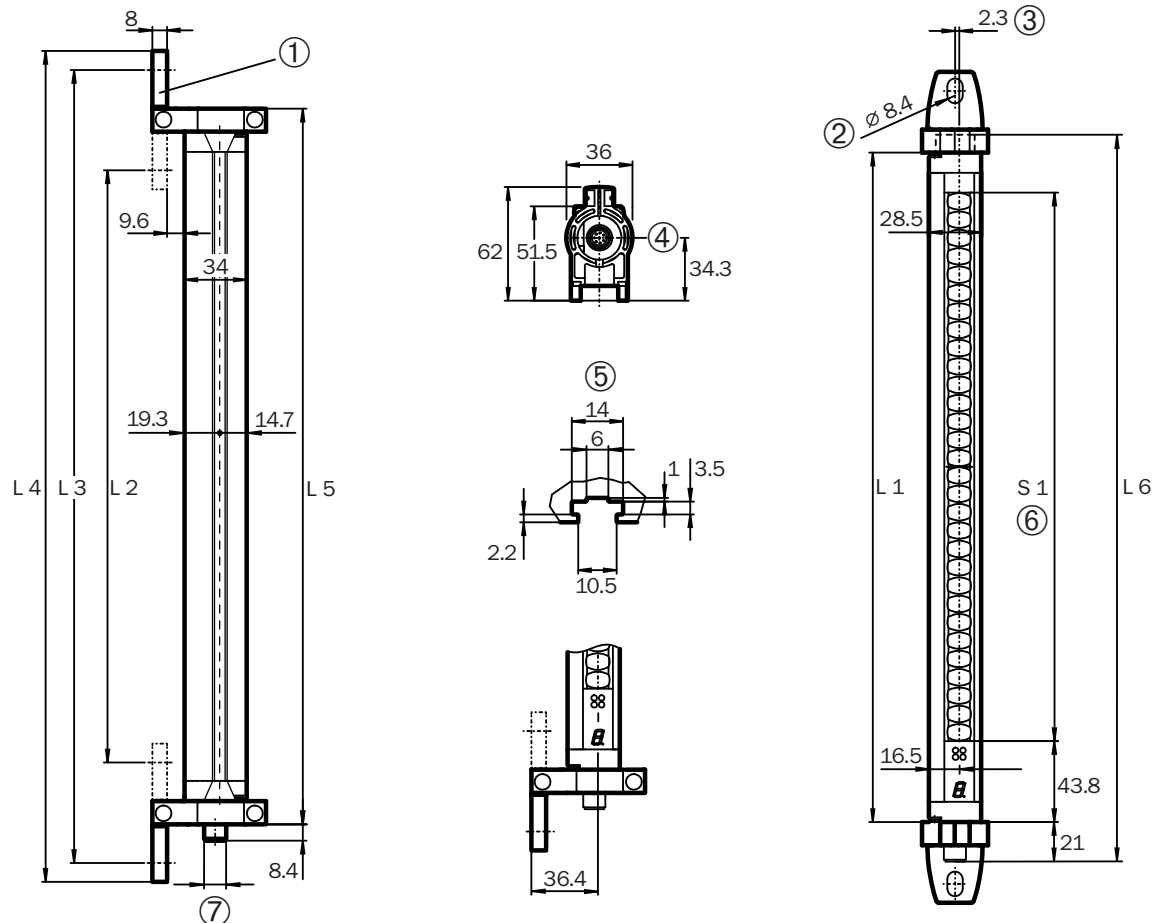
¹⁾ The length of the connecting cable is limited, because wire resistance is max. 4 Ohm.

²⁾ Upper and lower limit values of voltage supply not be infringed.

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Dimensional drawings

Protective field heights 150 mm ... 1200 mm



Sender with swivel mount, small housing (receiver mirror image)

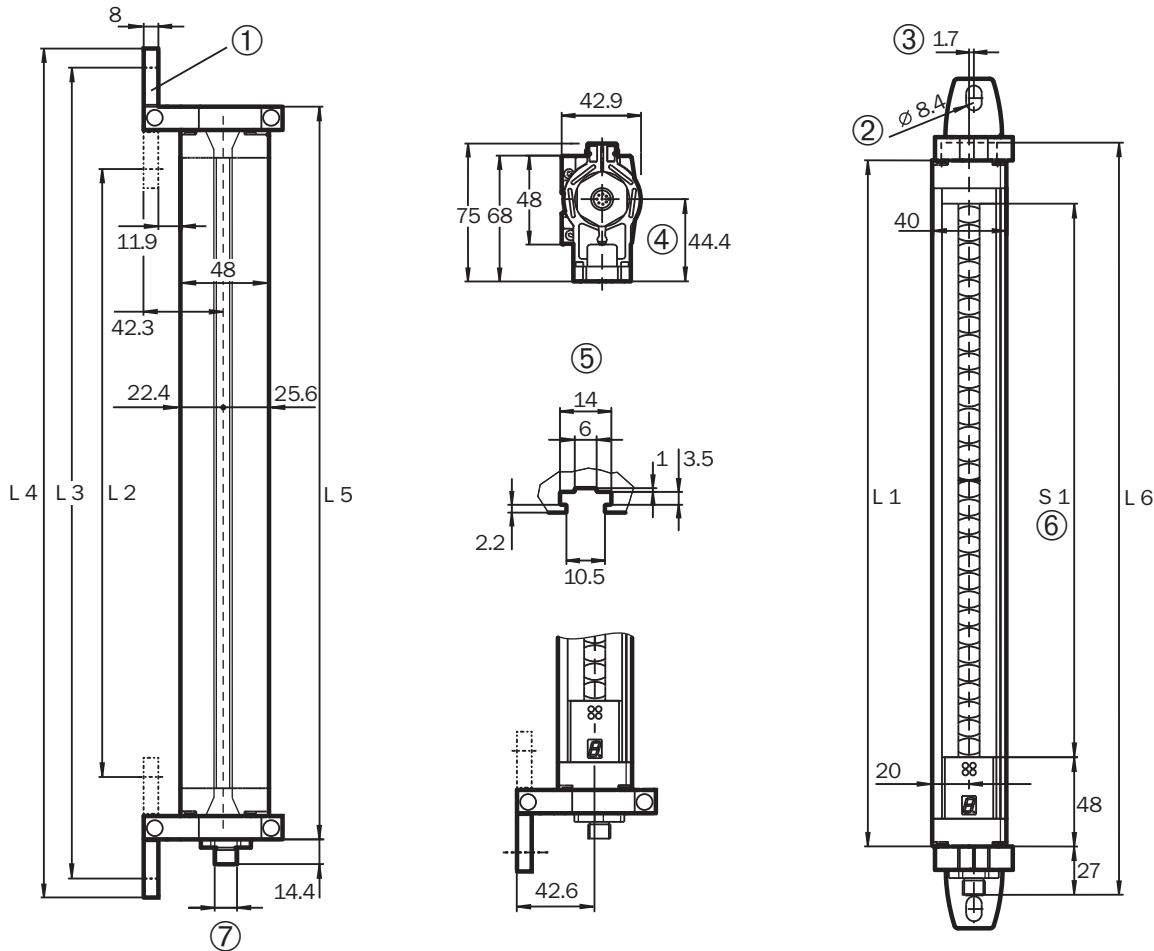
- ① Mounting clamp
- ② Hexagon screw M8, DIN 933 with washer DIN 9021 (not supplied with delivery)
- ③ Center of light beam offset
- ④ Adjustment
- ⑤ Sliding nut groove for side mounting
- ⑥ Protective field height
- ⑦ Plug M12 x 8

S1	L1	L2	L3	L4	L5	L6
150	246	204	313	334	271	276
300	364	322	432	452	390	394
450	515	473	582	603	540	545
600	666	623	733	754	691	696
750	816	774	884	904	841	846
900	967	924	1034	1055	992	997
1050	1117	1075	1185	1205	1142	1147
1200	1266	1224	1334	1345	1292	1298

Dimensions in mm

Protective field heights 1350 mm ... 1800 mm

F



Sender unit with swivel mount, large housing profile (receiver unit mirror image)

- ① Mounting clamp
- ② Hexagon screw M8, DIN 933 with washer DIN 9021 (not supplied with delivery)
- ③ Center of light beam offset
- ④ Adjustment
- ⑤ Sliding nut groove for side mounting
- ⑥ Protective field height
- ⑦ Plug M12 x 8

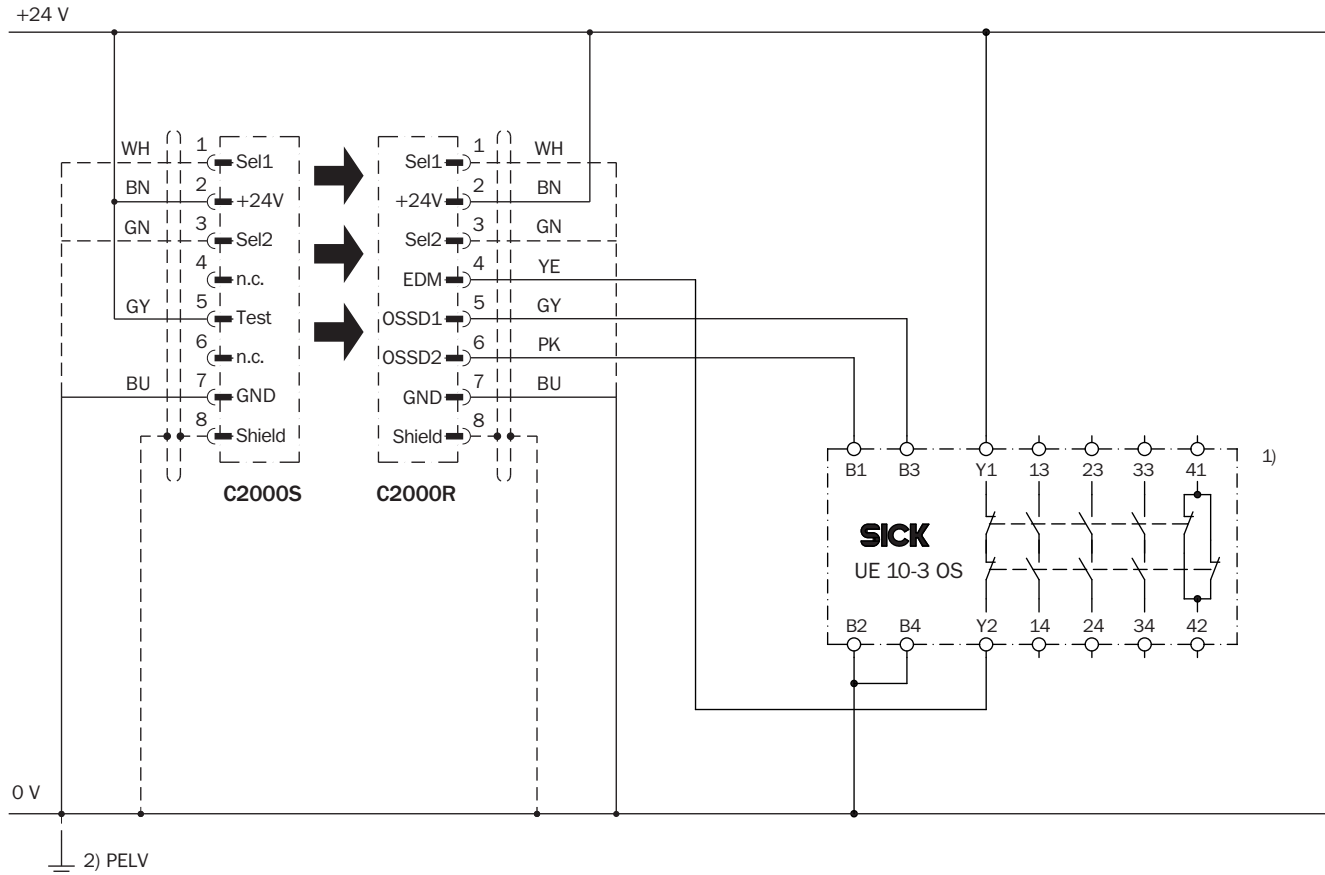
S1	L1	L2	L3	L4	L5	L6
1350	1426	1384	1494	1514	1452	1463
1500	1577	1535	1644	1665	1602	1614
1650	1727	1685	1795	1815	1752	1764
1800	1878	1836	1945	1966	1903	1915

Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C2000 Standard on UE10-30S safety relay



Task

Connection of a C2000 Standard safety light curtain to UE10-30S. Operating mode: without restart interlock and with external device monitoring.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the system is enabled. The OSSD1 and OSSD2 outputs are live, the UE10-30S is switched on. On the interruption of one of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

Fault analysis

OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The erroneous behavior of the UE10-30S will be detected. The shutdown function is retained.

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
- 2) PELV in accordance with the requirements in EN 60204-1 / 6.4 Take note of the operating instructions of the integrated devices.



sens:Control – safe control solutions



Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).









Accessories

Mounting systems for C2000, protective field heights 150 mm ... 1200 mm (small housing)


Figure	Description	Packing unit	Type	Part no.
	Mounting bracket, rigid	4	BEF-3WNKBAST4	2044068
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 1, swivel mount	4	BEF-2SMKEAKU4	2019649
	Stainless steel bracket, adjustable	4	BEF-2SMKEAES4	2030288
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMKEAAL4	2044848

F



Mounting systems for C2000, protective field heights 1350 mm ... 1800 mm (large housing)

Figure	Description	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAAL4	2044847


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 7 + FE	Straight	2.5 m	DOL-127SG2M5E25KM0	6020537
			5 m	DOL-127SG05ME25KM0	6020354
			7.5 m	DOL-127SG7M5E25KM0	6020353
			10 m	DOL-127SG10ME25KM0	6020352
			15 m	DOL-127SG15ME25KM0	6020872
	Socket M12 x 7 + FE	Angled	5 m	DOL-127SW05ME25KM0	6021342
			15 m	DOL-127SW15ME25KM0	6021343

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves

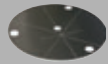




Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror

Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0


Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns, for C4000, C2000 and M2000 in large housing	2	BEF-2SMMEAL2	2045883
	Omega bracket, mounting kit for device columns, for C4000 and C2000 in small housing	2	BEF-2SMKEAL2	2045884
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

Additional front screens

Figure	Suitable for protective field height	Part no.
 <p>Example of use</p>	150 mm	2022404
	450 mm	2022406
	600 mm	2022407
	750 mm	2022408
	900 mm	2022409
	1050 mm	2022410
	1200 mm	2022411

Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 <p>Example of use</p>	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863

F




PNS75 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424


PNS125 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	Laser alignment aid AR60	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column				4056731
	Adapter for AR60, for small housing profile	-	-	-	4032462
	Adapter for AR60, for small housing profile in PU3Hxx-xxxxxxx device column				4056730

Configuration tools

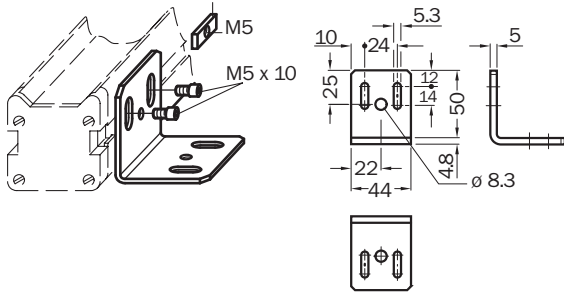
Figure	Description	Suitable for	Type	Part no.
	For deactivation of the external device monitoring and integrated restart interlock	C2000, M2000: deactivation of the external device monitoring; C4000 Micro, C4000 Basic Plus: deactivation of the external device monitoring and integrated restart interlock	Reset tool	6022103

Device protection

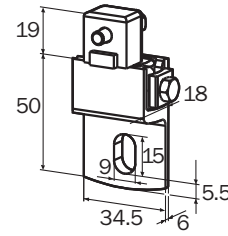
Figure	Description	Type	Part no.
	20 mm diameter	Test rod	2022600
	30 mm diameter	Test rod	2022602
	40 mm diameter	Test rod	2022604
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

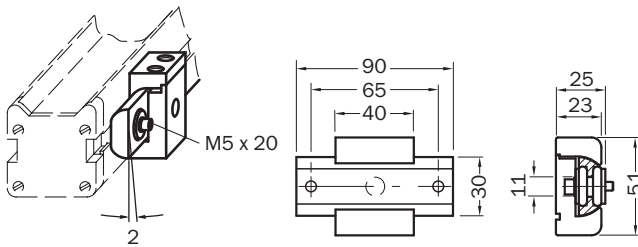
BEF-3WNGBAST4
Mounting kit 1, rigid



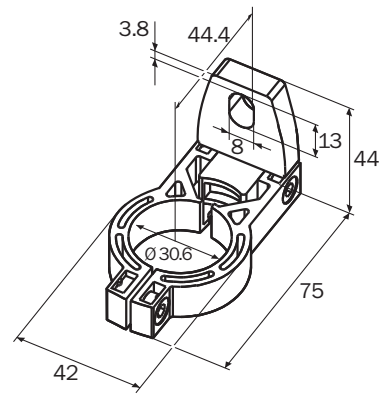
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



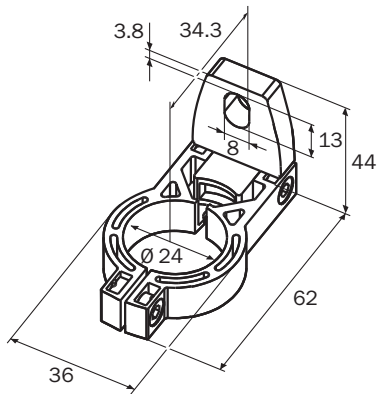
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



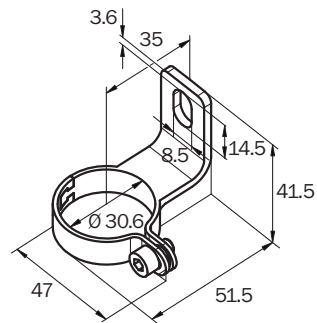
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



BEF-2SMKEAKU4
Mounting kit 1, swivel mount



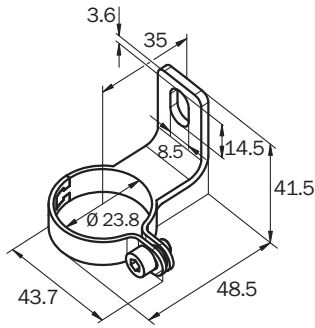
BEF-2SMMEAES4
Stainless steel bracket, adjustable



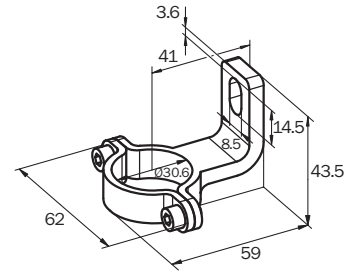
Dimensions in mm

F

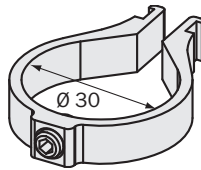
BEF-2SMKEAES4
Stainless steel bracket, adjustable



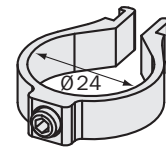
BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



BEF-2SMMEAAL4
Omega bracket, flexible and quick installation with only one screw



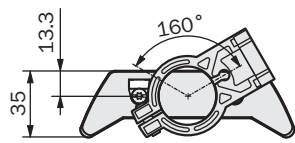
BEF-2SMKEAAL4
Omega bracket, flexible and quick installation with only one screw



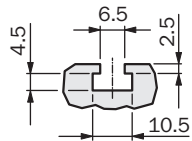
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Dimensions in mm

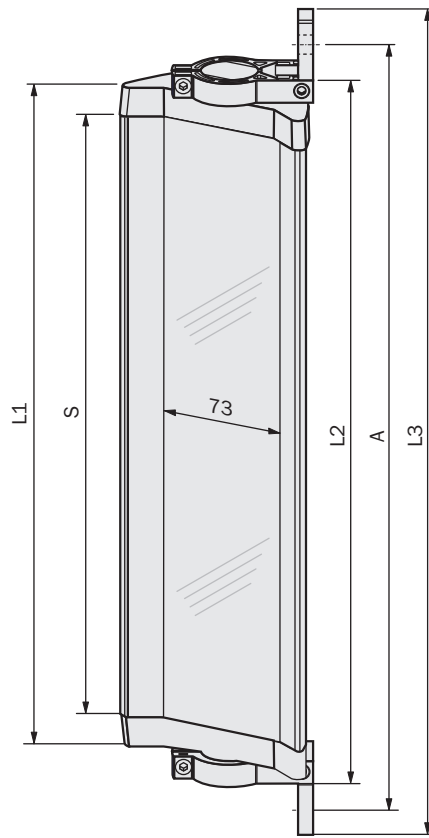
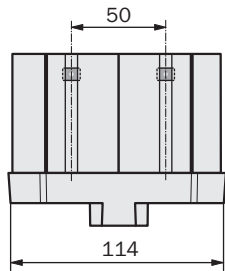
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

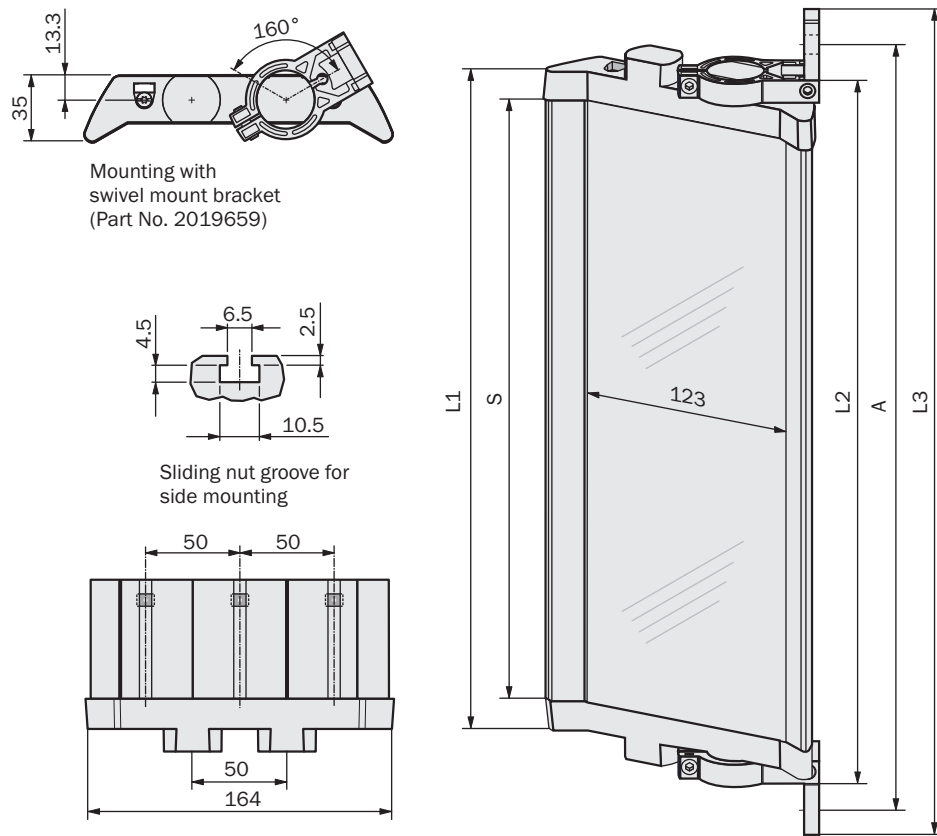


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Resistant materials	Stainless steel V4A, PMMA, PA 6
Enclosure rating	IP 69K, IP 67, IP 66, IP 65
Protective field height (depending on type)	150 mm ... 1200 mm
Scanning range (depending on type)	0 m ... 4.5 m / 2.5 m ... 14.5 m
Resolution	30 mm
Type	Type 2 (IEC 61496)

Product description

The IP69K housing in conjunction with the C2000 safety light curtain achieves the enclosure rating IP 69K. A high level of resistance against the usual cleaning agents is achieved by using suitable mate-

rials (V4A, PMMA, PA, PVC). A compensating element (membrane) prevents the plastic tubes from misting up and the entry of liquids. The cable is fed into the device through the proven PG connector.

In-system added value

Combined with SICK safe control solutions

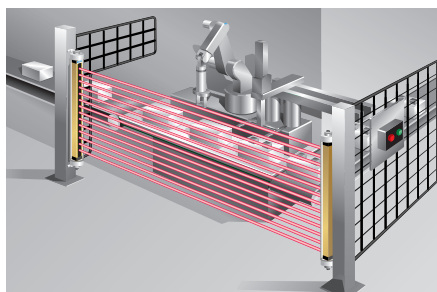
Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

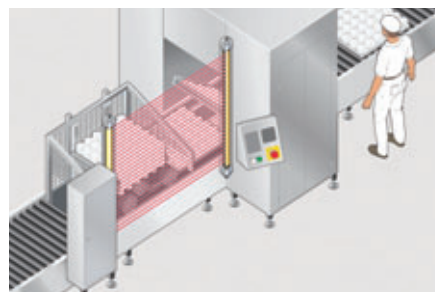
Applications

→ You can find more applications using the application finder at www.mysick.com

- Packaging industry
- Food industry
- Chemical industry
- Pharmaceutical industry
- Clean room systems



Hazardous point protection on a machining center in the hygiene area



Hazardous point protection on a cheese-making machine



- Enclosure ratings IP 69K, IP 67 and IP 66
- Resistant to wash down pressures up to 100 bar and wash down temperatures up to 80 °C
- ECOLAB and Diversey cleaning certificates
- Compact design in 50 mm acrylic tube with high hygiene and cleaning standards
- Chemical-resistant materials: stainless steel end caps, PMMA tube, PA membrane
- IP 69K-rated PVC cable and screw fitting
- Stainless steel brackets



Further information	Page
→ Ordering information	F-254
→ Technical specifications	F-255
→ Dimensional drawings	F-256
→ Connection diagrams	F-257
→ Accessories	F-258
→ Systematic safety	A-0
→ Services	B-0

Ordering information

IP69K Housing with integrated C2000 Standard sender or receiver unit,
including IP 69K-rated PVC cable

- Resolution: 30 mm
- Scanning range: 0 m ... 4.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C25S-015103C11	1024184	C25E-015303C11	1024185
300 mm	C25S-030103C11	1024187	C25E-030303C11	1024188
450 mm	C25S-045103C11	1024190	C25E-045303C11	1024191
600 mm	C25S-060103C11	1024193	C25E-060303C11	1024194
750 mm	C25S-075103C11	1024196	C25E-075303C11	1024197
900 mm	C25S-090103C11	1024199	C25E-090303C11	1024200
1050 mm	C25S-105103C11	1024202	C25E-105303C11	1024203
1200 mm	C25S-120103C11	1024205	C25E-120303C11	1024206

- Resolution: 30 mm
- Scanning range: 2.5 m ... 14.5 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C25S-015203C11	1024186	C25E-015303C11	1024185
300 mm	C25S-030203C11	1024189	C25E-030303C11	1024188
450 mm	C25S-045203C11	1024192	C25E-045303C11	1024191
600 mm	C25S-060203C11	1024195	C25E-060303C11	1024194
750 mm	C25S-075203C11	1024198	C25E-075303C11	1024197
900 mm	C25S-090203C11	1024201	C25E-090303C11	1024200
1050 mm	C25S-105203C11	1024204	C25E-105303C11	1024203
1200 mm	C25S-120203C11	1024207	C25E-120303C11	1024206

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Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution	30 mm	
Scanning range (depending on type)	0 m ... 4.5 m / 2.5 m ... 14.5 m	-
Protective field height (depending on type)	150 mm ... 1200 mm	
Safety related parameters		
Type	Type 2 (IEC 61496)	
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)	
Category	Category 2 (EN ISO 13849)	
Test rate (internal test)	13/s (EN ISO 13849)	
Maximum demand rate	8/min (EN ISO 13849) ¹⁾	
Performance level	PL d (EN ISO 13849), pay attention to optical characteristics! ²⁾	
PFHd (mean probability of a dangerous failure per hour)	2.2 x 10 ⁻⁸ (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 19 ms
Synchronization	Optical, without separate synchronization	
Protection class	III	
Enclosure rating	IP 69K, IP 67, IP 66, IP 65	
Materials		
End caps	Stainless steel V4A	
Plastic tube	PMMA	
Compensating element (membrane)	PA 6	
PG connector	PA 6	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing diameter	52 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 68-2-6	
Shock resistance	10 g, 16 ms (IEC 68-2-29)	

¹⁾ Between two demands on a safety-related response of the device at least 100 internal or external tests must be carried out.

²⁾ The performance level does not contain any specific requirements on aspects such as the optical characteristics.
For more detailed information on this topic, see page A-10.

Functional data

System part	Sender	Receiver
External device monitoring	-	✓
Beam coding	✓	
Configuration method	Hard wired	

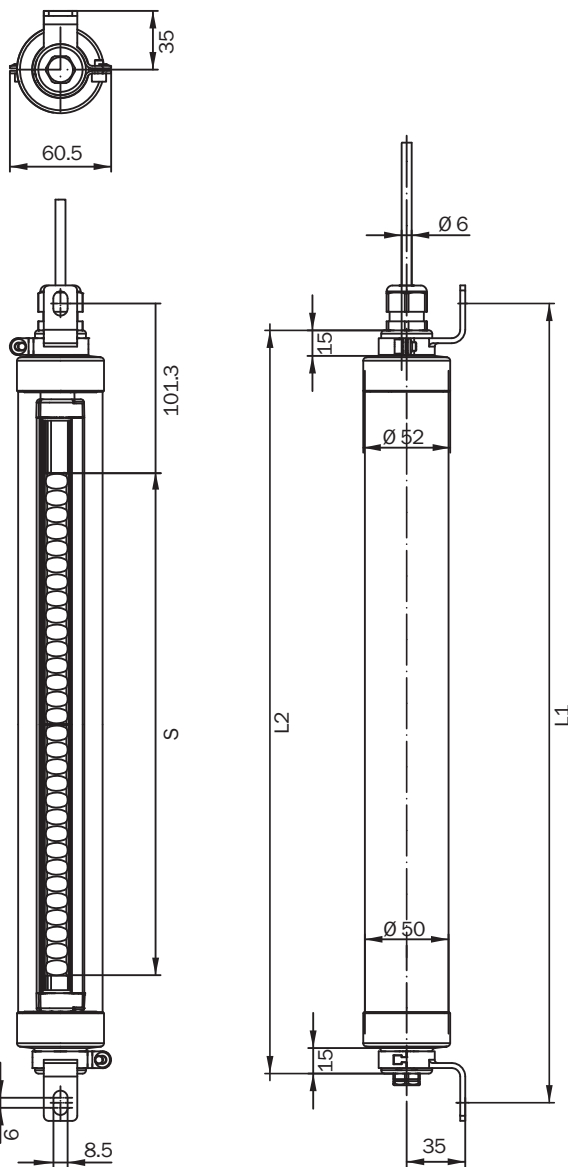
Electrical data

System part	Sender	Receiver
System connection	PVC cable, 15 m	
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC) ¹⁾	
Residual ripple	≤ 5 %	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	Min. $V_S - 2.25$ V DC
Switching current	-	Max. 500 mA

¹⁾ Upper and lower limit values of voltage supply not be infringed

Dimensional drawings

F



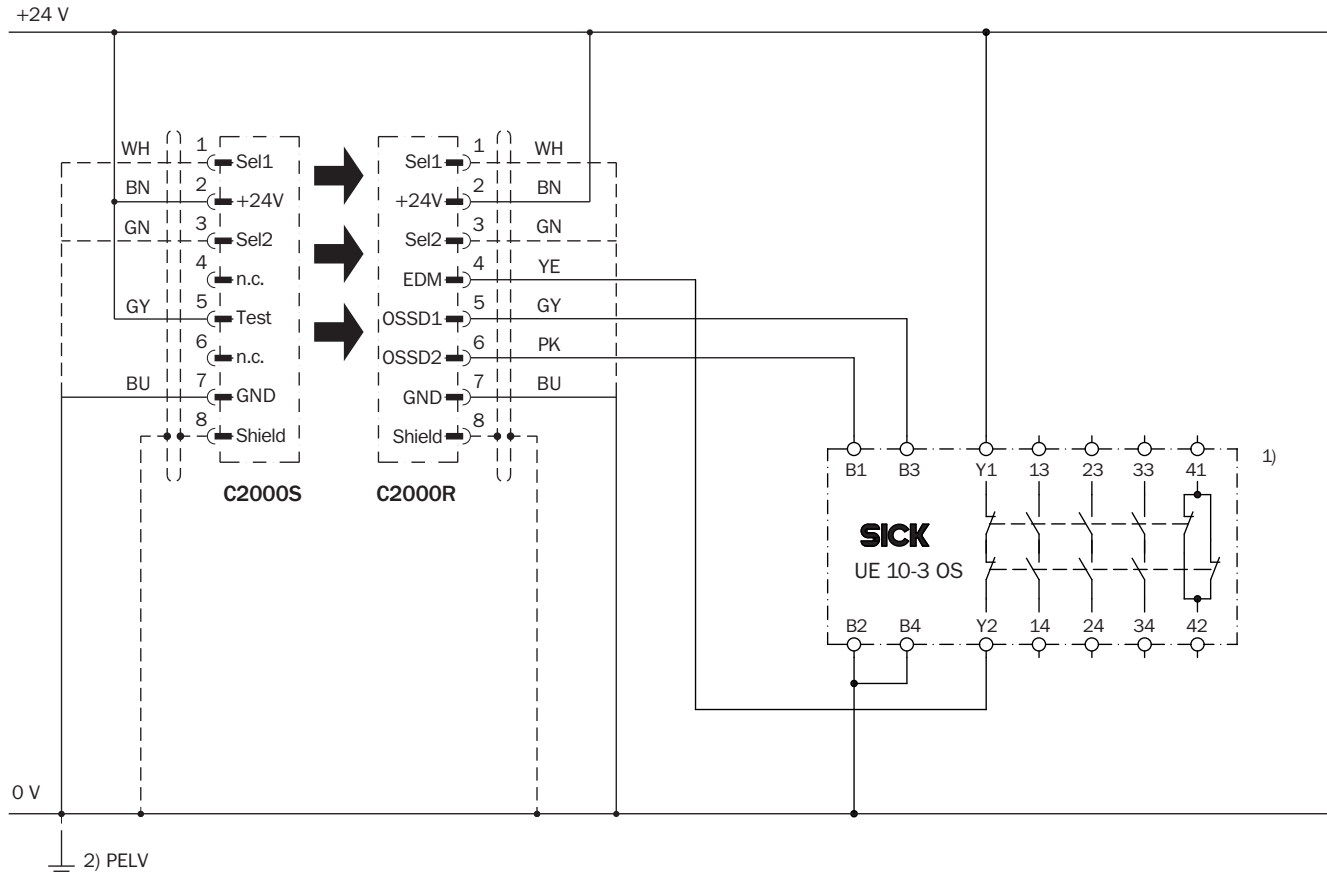
Protective field heght S	L1	L2
150	357	324
300	476	443
450	626	593
600	777	744
750	927	894
900	1078	1045
1050	1228	1195
1200	1382	1349

Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C2000 Standard on UE10-30S safety relay



Task

Connection of a C2000 Standard safety light curtain to UE10-30S. Operating mode: without restart interlock and with external device monitoring.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the system is enabled. The OSSD1 and OSSD2 outputs are live, the UE10-30S is switched on. On interruption of one of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

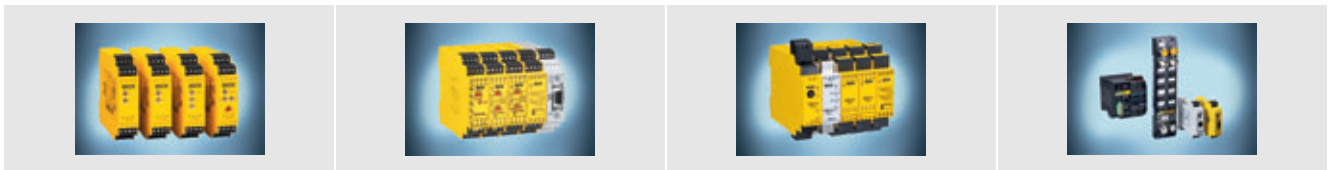
Fault analysis

OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The erroneous behavior of the UE10-30S will be detected. The shutdown function is retained.

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
- 2) PELV in accordance with the requirements in EN 60204-1 / 6.4 Take note of the operating instructions of the integrated devices.

sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Description	Packing unit	Type	Part no.
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Stainless steel support bracket	2	BEF-2AAADES2	2026849
	Venting membrane	-	Venting membrane	5309082
	For M12 cable socket	-	Assembly key	4034690

Sliding nuts


Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600

Power supply units


Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

F



Deflector mirror

Figure	Mirror material	Suitable for protective field height	Type	Part no.
	Stainless steel	750 mm	PNS75-079S05	1046075

Configuration tools

Figure	Description	Suitable for	Type	Part no.
	For deactivation of the external device monitoring and integrated restart interlock	C2000, M2000: deactivation of the external device monitoring; C4000 Micro, C4000 Basic Plus: deactivation of the external device monitoring and integrated restart interlock	Reset tool	6022103

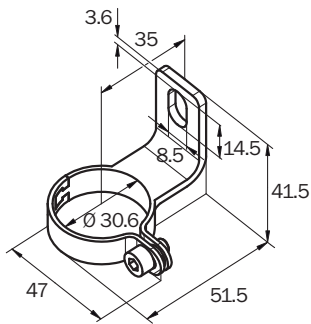
Device protection

Figure	Description	Type	Part no.
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

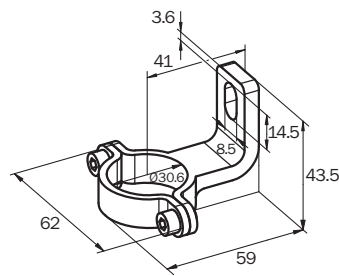
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Dimensional drawings mounting systems

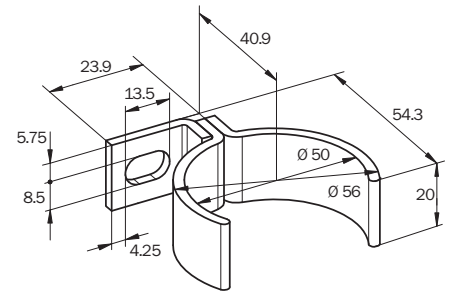
BEF-2SMMEAES4
Stainless steel bracket, adjustable



BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



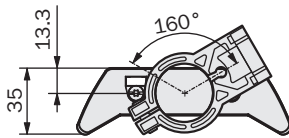
BEF-2AAADES2
Stainless steel support bracket



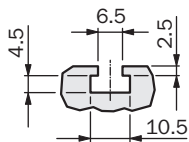
Dimensions in mm

Dimensional drawings PNS75 deflector mirror

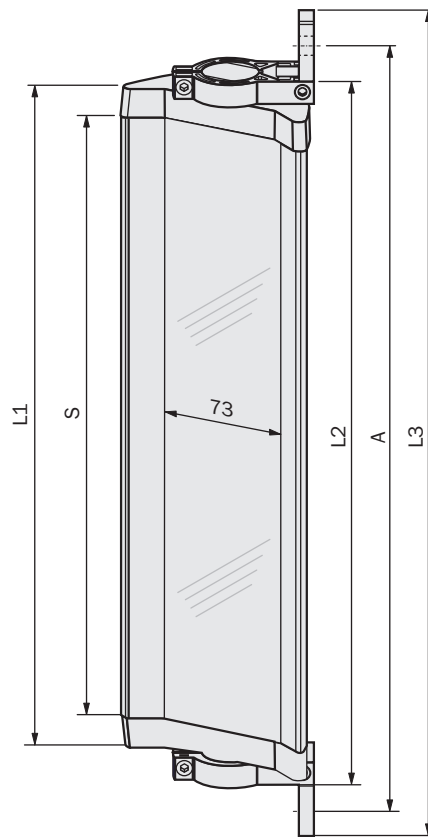
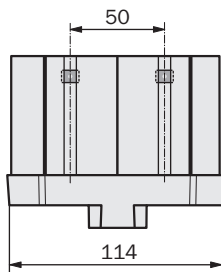
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Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting



Mirror height S	L1	L2	L3	A
790	822	846	910	890

Dimensions in mm

Technical data overview

Protective field height (depending on type)	150 mm ... 1200 mm
Scanning range	0 m ... 6 m
Resolution	30 mm
Type	Type 2 (IEC 61496)
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)
Enclosure rating	IP 54

Product description

With its high signal reserve, the C2000 Eco safety light curtain is also reliable under harsh industrial conditions. The C2000 Eco is designed for guard only function, but no additional functionality. The LED status indicator shows the status of the OSSDs and the supply voltage.

The light curtain is mounted with a low-cost side bracket. The 5-pole cable is another option to optimize expenses. Safe control solutions and service concepts complete the product range to provide an ideal solution.

In-system added value

Combined with SICK safe control solutions

Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52

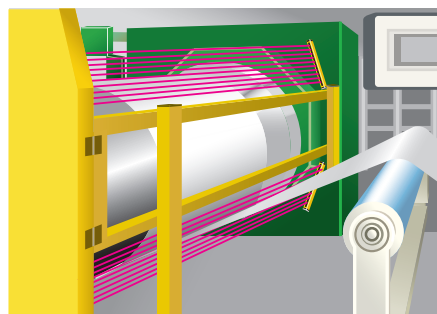
→ For more combinations, see annex

Applications

→ You can find more applications using the application finder at www.mysick.com

■ Wood industry

■ Textile industry



Textile industry: C2000 on a warping machine



- Self-test
- LED status display
- Mounting with side bracket



F

Further information	Page
→ Ordering information	F-262
→ Technical specifications	F-263
→ Dimensional drawings	F-264
→ Connection diagrams	F-265
→ Accessories	F-266
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C2000 Eco

Usage	As a standalone system
Connection types	System connection: Plug M12 x 5

- Resolution: 30 mm
- Scanning range: 0 m ... 6 m

Protective field height	Sender		Receiver	
	Type	Part no.	Type	Part no.
150 mm	C20S-015103D41	1041577	C20E-015303D41	1041578
300 mm	C20S-030103D41	1041579	C20E-030303D41	1041580
450 mm	C20S-045103D41	1041581	C20E-045303D41	1041582
600 mm	C20S-060103D41	1041583	C20E-060303D41	1041584
750 mm	C20S-075103D41	1041585	C20E-075303D41	1041586
900 mm	C20S-090103D41	1041587	C20E-090303D41	1041588
1050 mm	C20S-105103D41	1041589	C20E-105303D41	1041590
1200 mm	C20S-120103D41	1041591	C20E-120303D41	1041592

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Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution	30 mm	
Scanning range	0 m ... 6 m	-
Protective field height (depending on type)	150 mm ... 1200 mm	
Safety related parameters		
Type	Type 2 (IEC 61496)	
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)	
Category	Category 2 (EN ISO 13849)	
Test rate (internal test)	13/s (EN ISO 13849)	
Maximum demand rate	8/min (EN ISO 13849) ¹⁾	
Performance level	PL d (EN ISO 13849), pay attention to optical characteristics! ²⁾	
PFHd (mean probability of a dangerous failure per hour)	2.2 x 10 ⁻⁸ (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 19 ms
Synchronization	Optical, without separate synchronization	
Protection class	III	
Enclosure rating	IP 54 (EN 60529)	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	34 mm x 29 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 68-2-6	
Shock resistance	10 g, 16 ms (IEC 68-2-29)	

¹⁾ Between two demands on a safety-related response of the device at least 100 internal or external tests must be carried out.

²⁾ The performance level does not contain any specific requirements on aspects such as the optical characteristics.
For more detailed information on this topic, see page A-10.

Electrical data

System part	Sender	Receiver
System connection	Plug M12 x 5	
Connecting cable length	Max. 15 m ¹⁾	
Connecting cable wire cross-section	0.25 mm ²	
Supply voltage V _S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 5 %	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	Min. V _S - 2.25 V DC
Switching current	-	Max. 250 mA
Display elements	LED	

¹⁾ The length of the connecting cable is limited, because wire resistance is max. 4 Ohm

²⁾ Upper and lower limit values of voltage supply not be infringed

Dimensional drawings

C2000 Eco

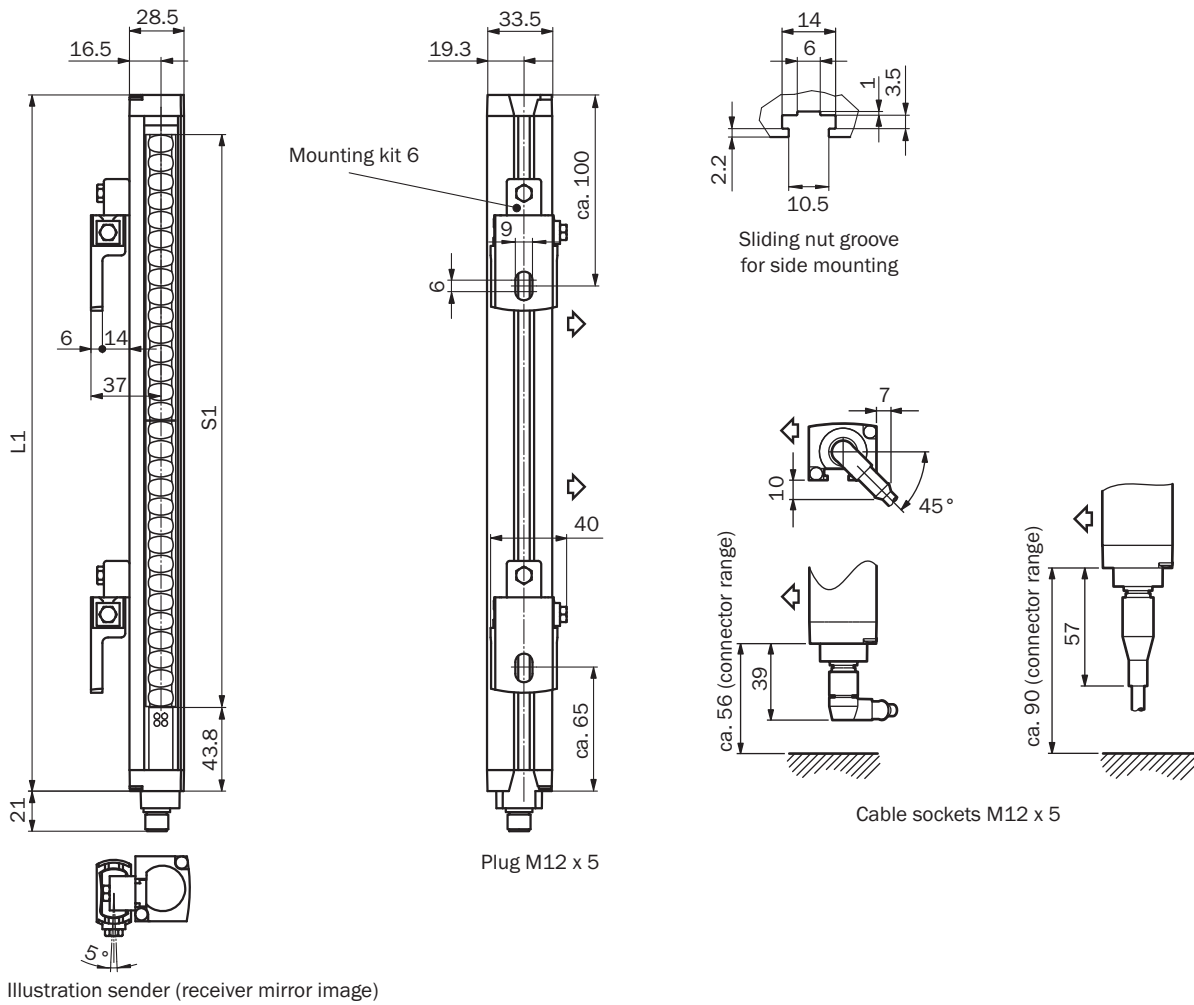


Illustration sender (receiver mirror image)

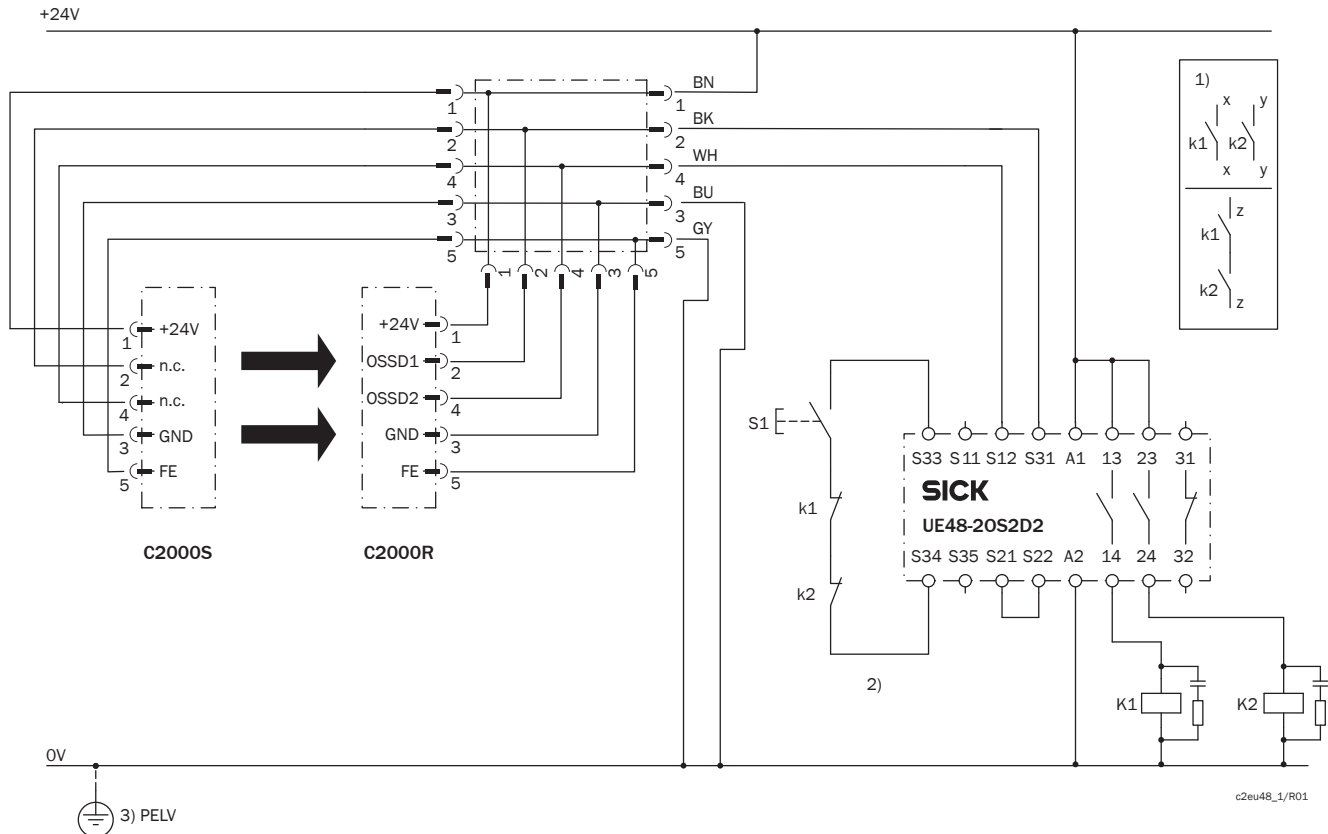
S1	L1
150	246
300	364
450	515
600	666
750	816
900	967
1050	1117
1200	1266

Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C2000 Eco with T-piece on UE48-20S safety relay



Task

Connection of a C2000 Eco safety light curtain with a T-piece to a UE48-20S safety relay. Operating mode: with restart interlock and external device monitoring.

Operating characteristics

When the light path is clear, the OSSD1 and OSSD2 outputs are live. When K1 and K2 are de-energized and functioning correctly, the system is ready for switch-on and waits for an input signal/switch-on signal. The UE48-20S is switched on by pressing and releasing the S1 button. The outputs (contacts 13 - 14 and 23 - 24) energize the K1 and K2 contactors. On interruption of one or several of the light beams in the active protective field, the OSSD1 and OSSD2 outputs shutdown the UE48-20S. The contactors K1 and K2 are de-energized.

Fault analysis

OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The erroneous behavior of one of

the contactors K1 or K2 will be detected. The shutdown function is retained. On manipulation (e.g., jamming) of the S1 button, the UE48-20S will not re-enable the output current circuits.

Comments

1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.

2) The external device monitoring is only static.

3) PELV in accordance with the requirements in EN 60204-1 / 6.4

Take note of the operating instructions of the integrated devices.

This circuit can also be used for the UE48-30S.



sens:Control – safe control solutions




Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories


Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting bracket, rigid	4	BEF-3WNKBAST4	2044068
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600

Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 5, stripped	Straight	2 m	DOL-1205-G02M	6008899
			5 m	DOL-1205-G05M	6009868
			10 m	DOL-1205-G10M	6010544
			15 m	DOL-1205-G15M	6029215


Extension connection cables for the connection to T-connector

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Plug M12 x 5, socket M12 x 5	Plug straight/ socket straight	0.6 m	DSL-1205-G0M6C	6025930
			1 m	DSL-1205-G01MC	6029280
			1.5 m	DSL-1205-G1M5C	6029281
			2 m	DSL-1205-G02MC	6025931
			5 m	DSL-1205-G05MC	6029282
		Plug straight/ socket angled	0.6 m	DSL-1205-B0M6C	6029283
			1 m	DSL-1205-B01MC	6029284
			1.5 m	DSL-1205-B1M5C	6029286
			2 m	DSL-1205-B02MC	6029287
			5 m	DSL-1205-B05MC	6029288


T-junction

Remark	Connection type	Type	Part no.
T-connector plugs directly into receiver, splits the single home run from control cabinet between sender and receiver	Plug M12 x 5	DSC-1205T000025KM0	6030664

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves

Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646




F

Mirror columns with protective field height mirror


Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	150 mm	2022404
	300 mm	2022405
	450 mm	2022406
	600 mm	2022407
	750 mm	2022408
	900 mm	2022409
	1050 mm	2022410
	1200 mm	2022411



PNS75 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424


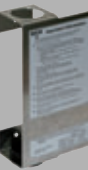
PNS125 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435

Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for small housing profile	-	-	-	4032462
	Adapter for AR60, for small housing profile in PU3Hx-xxxxxxx device column	-	-	-	4056730

Device protection

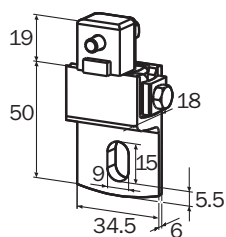
Figure	Description	Type	Part no.
	30 mm diameter	Test rod	2022602
	Test rod holder	BEF-3WNAAAAL1	2052249

F

Dimensional drawings mounting systems

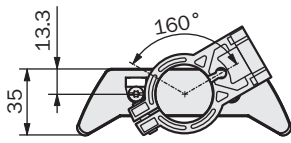
BEF-1SHABAZN4

Mounting kit 6, swivel function, side bracket

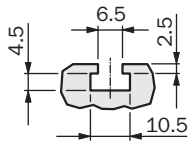


Dimensions in mm

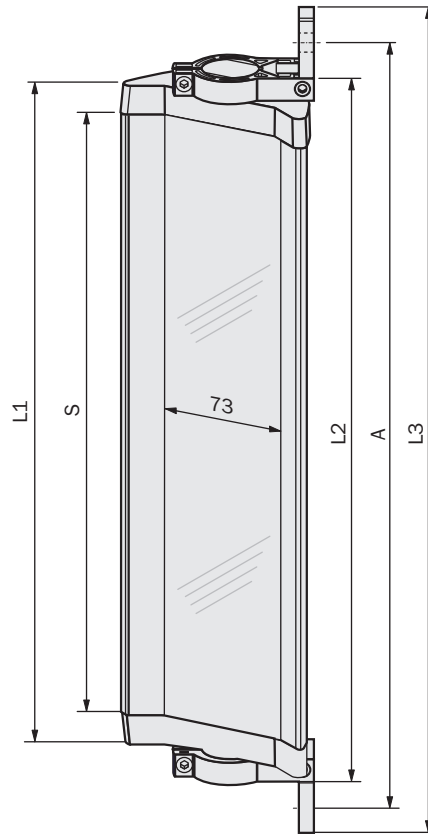
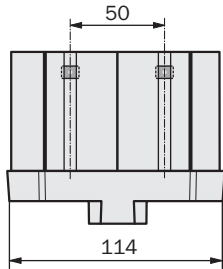
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

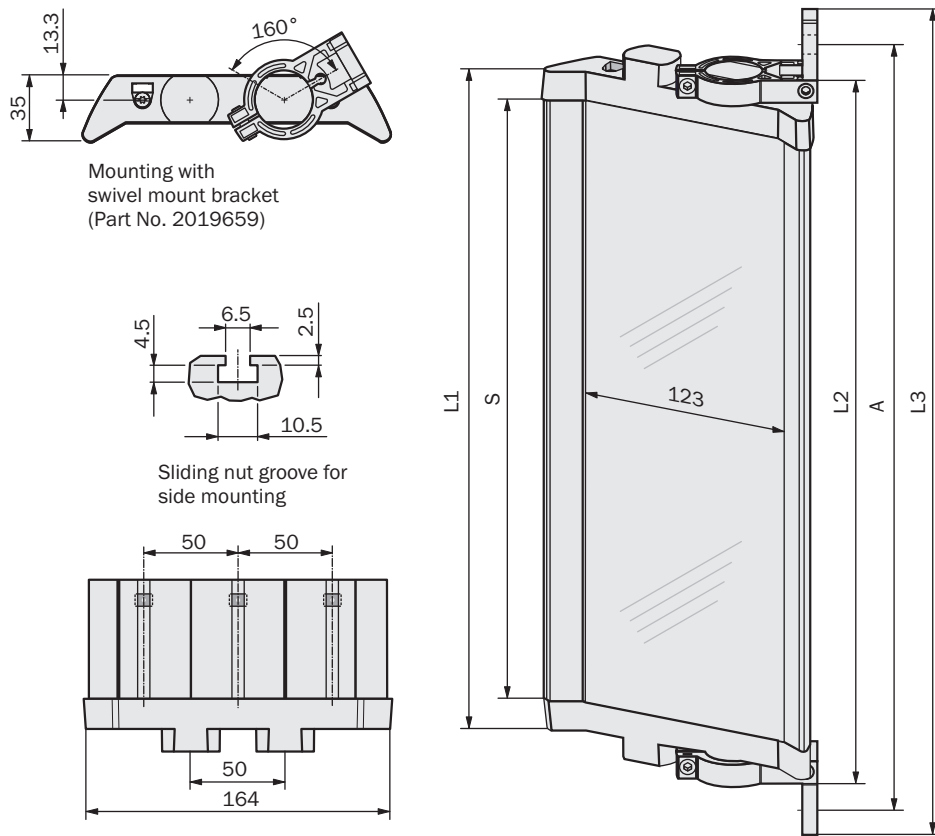


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

F



F

- Restart interlock (RES)
- External device monitoring (EDM)
- Self-test
- 7-segment display
- Diagnostics
- Alignment aid
- Beam coding



Technical data overview

Protective field height (depending on type)	300 mm ... 1200 mm
Scanning range (depending on type)	0 m ... 6 m / 2.5 m ... 19 m
Resolution (depending on type)	20 mm / 30 mm / 40 mm
Type	Type 2 (IEC 61496)
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)
Enclosure rating	IP 65 EN 60529

Product description

With its high signal reserve, the C2000 RES/EDM safety light curtain is also reliable under harsh industrial conditions. Functions and status information integrated in the device allow rapid commissioning and prevent unnecessary machine downtime. The modular design provides

maximum machine safety while taking into account economic considerations by precisely coordinating the characteristics of the device to the requirements.

Safe control solutions and service concepts complete the product range to provide an ideal solution.

In-system added value

Combined with SICK safe control solutions

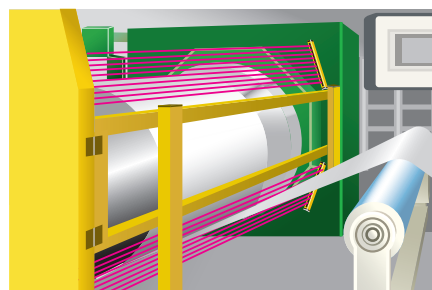
Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	O-2
Flexi Soft	✓	✓	✓	O-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

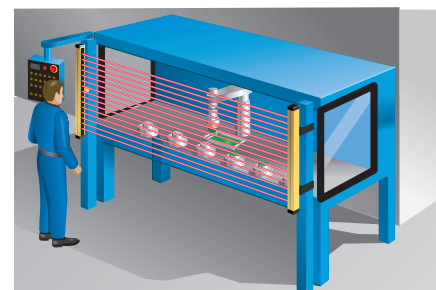
Applications

→ You can find more applications using the application finder at www.mysick.com

- Storage and conveyor technology
- Wood industry
- Textile industry
- Stone production
- Electronics industry
- Packaging industry



Textile industry: C2000 RES/EDM on a warping machine



Printing industry: C2000 RES/EDM on a pad printing machine

Further information	Page
→ Technical specifications	F-275
→ Dimensional drawings	F-277
→ Connection diagrams	F-278
→ Accessories	F-279
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C2000 RES/EDM

Usage	As a standalone system
Connection types	System connection: plug M12 x 8

■ Scanning range: 0 m ... 6 m

Resolution	Protective field height	Sender		Receiver	
		Type	Part no.	Type	Part no.
20 mm	300 mm	C20S-030102A11	1016448	C20E-030302A31	1042138
	450 mm	C20S-045102A11	1016573	C20E-045302A31	1042139
	600 mm	C20S-060102A11	1016574	C20E-060302A31	1042140
	750 mm	C20S-075102A11	1016579	C20E-075302A31	1042141
	900 mm	C20S-090102A11	1016584	C20E-090302A31	1042142
	1050 mm	C20S-105102A11	1016589	C20E-105302A31	1042143
	1200 mm	C20S-120102A11	1016464	C20E-120302A31	1042144
30 mm	300 mm	C20S-030103A11	1016568	C20E-030303A31	1041570
	450 mm	C20S-045103A11	1016454	C20E-045303A31	1041571
	600 mm	C20S-060103A11	1016477	C20E-060303A31	1041572
	750 mm	C20S-075103A11	1016479	C20E-075303A31	1041573
	900 mm	C20S-090103A11	1016481	C20E-090303A31	1041574
	1050 mm	C20S-105103A11	1016483	C20E-105303A31	1041575
	1200 mm	C20S-120103A11	1016594	C20E-120303A31	1041576
40 mm	300 mm	C20S-030104A11	1016570	C20E-030304A31	1042145
	450 mm	C20S-045104A11	1016456	C20E-045304A31	1042146
	600 mm	C20S-060104A11	1016576	C20E-060304A31	1042147
	750 mm	C20S-075104A11	1016581	C20E-075304A31	1042148
	900 mm	C20S-090104A11	1016586	C20E-090304A31	1042149
	1050 mm	C20S-105104A11	1016591	C20E-105304A31	1042150
	1200 mm	C20S-120104A11	1016596	C20E-120304A31	1042151

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■ Scanning range: 2.5 m ... 19 m

Resolution	Protective field height	Sender		Receiver	
		Type	Part no.	Type	Part no.
20 mm	300 mm	C20S-030202A11	1016632	C20E-030302A31	1042138
	450 mm	C20S-045202A11	1016458	C20E-045302A31	1042139
	600 mm	C20S-060202A11	1016633	C20E-060302A31	1042140
	750 mm	C20S-075202A11	1016634	C20E-075302A31	1042141
	900 mm	C20S-090202A11	1016635	C20E-090302A31	1042142
	1050 mm	C20S-105202A11	1016636	C20E-105302A31	1042143
	1200 mm	C20S-120202A11	1016466	C20E-120302A31	1042144
30 mm	300 mm	C20S-030203A11	1016572	C20E-030303A31	1041570
	450 mm	C20S-045203A11	1016460	C20E-045303A31	1041571
	600 mm	C20S-060203A11	1016578	C20E-060303A31	1041572
	750 mm	C20S-075203A11	1016583	C20E-075303A31	1041573
	900 mm	C20S-090203A11	1016588	C20E-090303A31	1041574
	1050 mm	C20S-105203A11	1016593	C20E-105303A31	1041575
	1200 mm	C20S-120203A11	1016599	C20E-120303A31	1041576
40 mm	300 mm	C20S-030204A11	1016638	C20E-030304A31	1042145
	450 mm	C20S-045204A11	1016462	C20E-045304A31	1042146
	600 mm	C20S-060204A11	1016639	C20E-060304A31	1042147
	750 mm	C20S-075204A11	1016640	C20E-075304A31	1042148
	900 mm	C20S-090204A11	1016641	C20E-090304A31	1042149
	1050 mm	C20S-105204A11	1016642	C20E-105304A31	1042150
	1200 mm	C20S-120204A11	1016643	C20E-120304A31	1042151

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Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	20 mm / 30 mm / 40 mm	
Scanning range (depending on type)	0 m ... 6 m / 2.5 m ... 19 m	-
Protective field height (depending on type)	300 mm ... 1200 mm	
Safety related parameters		
Type	Type 2 (IEC 61496)	
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)	
Category	Category 2 (EN ISO 13849)	
Test rate (internal test)	13/s (EN ISO 13849)	
Maximum demand rate	8/min (EN ISO 13849) ¹⁾	
Performance level	PL d (EN ISO 13849), pay attention to optical characteristics! ²⁾	
PFHd (mean probability of a dangerous failure per hour)	2.2 x 10 ⁻⁸ (EN ISO 13849)	
T _M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 34 ms
Synchronization	Optical, without separate synchronization	
Protection class	III	
Enclosure rating	IP 65 (EN 60529)	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section	34 mm x 29 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 68-2-6	
Shock resistance	10 g, 16 ms (IEC 68-2-29)	

¹⁾ Between two demands on a safety-related response of the device at least 100 internal or external tests must be carried out.

²⁾ The performance level does not contain any specific requirements on aspects such as the optical characteristics.
For more detailed information on this topic see page A-10

Functional data

System part	Sender	Receiver
Restart interlock	-	✓
External device monitoring	-	✓
Beam coding	✓	
Configuration method	Hard wired	

Electrical data

System part	Sender	Receiver
System connection	Plug M12 x 8	
Connecting cable length	Max. 15 m ¹⁾	
Connecting cable wire cross-section	0.25 mm ²	
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 5 %	
Safety outputs (OSSD)		
Type of output	-	2 PNP semiconductors, short-circuit protected, cross-circuit monitored
Switching voltage HIGH	-	Min. V_S - 2.25 V DC
Switching current	-	Max. 500 mA
Display elements	LED/7-segment	

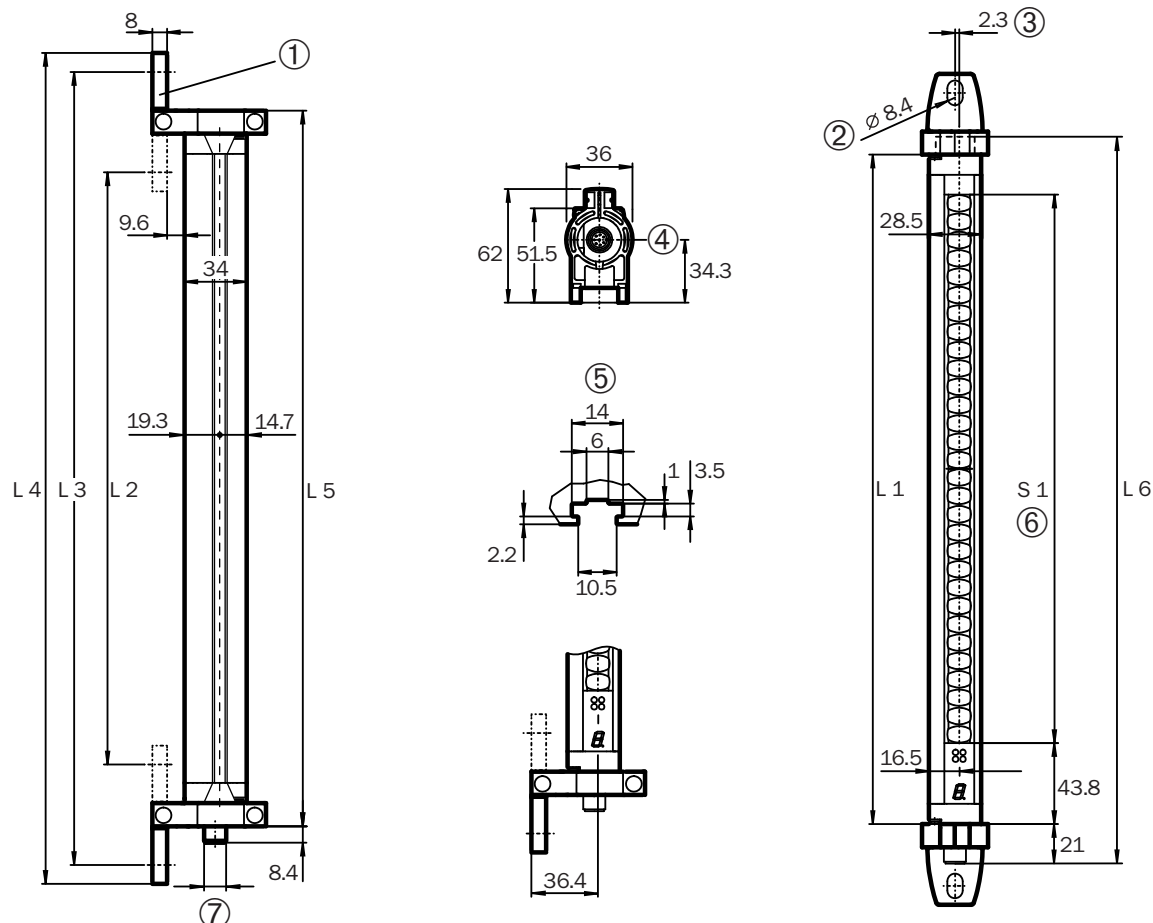
¹⁾ The length of the connecting cable is limited, because wire resistance is max. 4 Ohm

²⁾ Upper and lower limit values of voltage supply not be infringed

F

Dimensional drawings

C2000 RES/EDM



Sender with swivel mount (receiver mirror image)

- ① Mounting clamp
- ② Hexagon screw M8, DIN 933 with washer DIN 9021 (not supplied with delivery)
- ③ Center of light beam offset
- ④ Adjustment
- ⑤ Sliding nut groove for side mounting
- ⑥ Protective field height
- ⑦ Plug M12 x 8

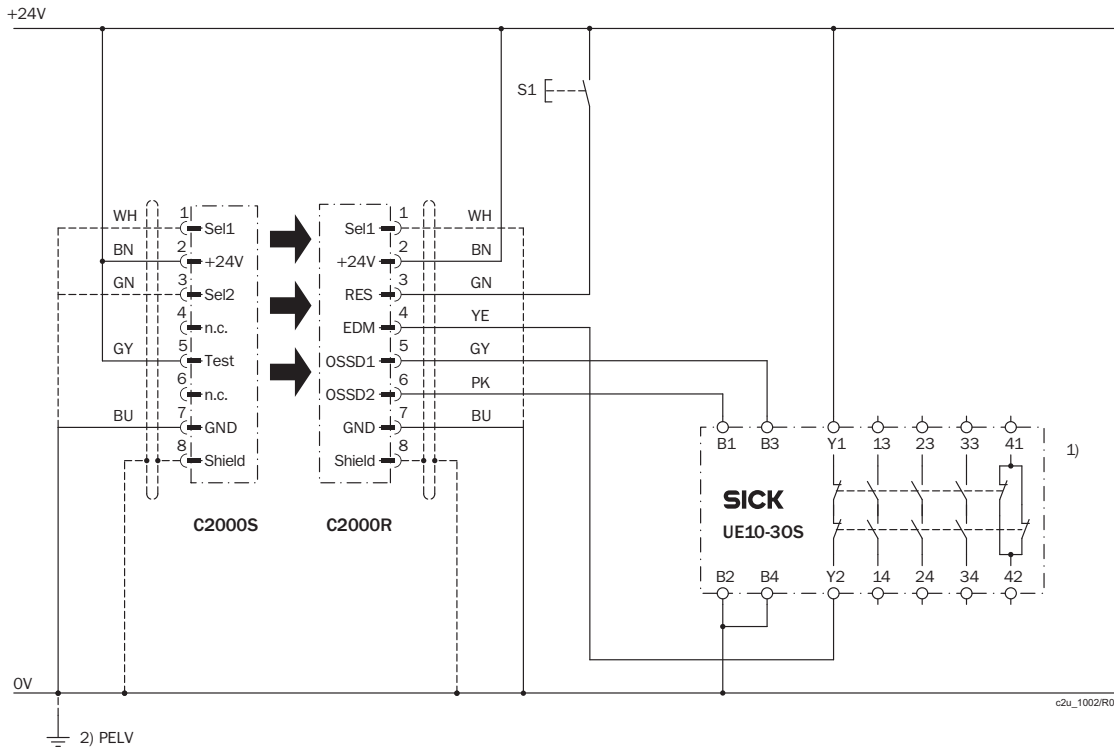
S1	L1	L2	L3	L4	L5	L6
150	246	204	313	334	271	276
300	364	322	432	452	390	394
450	515	473	582	603	540	545
600	666	623	733	754	691	696
750	816	774	884	904	841	846
900	967	924	1034	1055	992	997
1050	1117	1075	1185	1205	1142	1147
1200	1266	1224	1334	1345	1292	1298

Dimensions in mm

Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C2000 RES/EDM on UE10-30S safety relay



Task

Integration of a C2000 RES/EDM safety light curtain on UE10-30S. Operating mode: with restart interlock and external device monitoring.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the yellow LED on the receiver flashes. The system is ready to be switched on. The system is enabled by pressing S1 (button is pressed and released). The OSSD1 and OSSD2 outputs are live, the UE10-30S is switched on. On interruption of one of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

Fault analysis

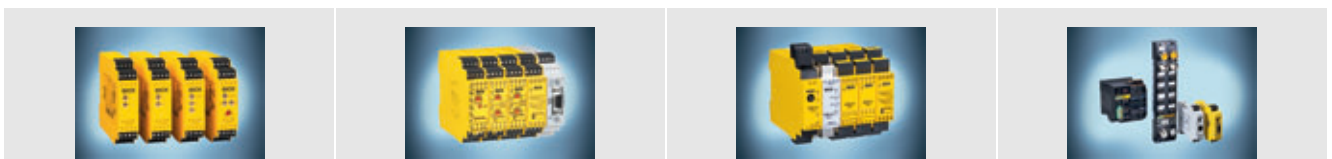
OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The incorrect functioning of the

UE10-30S will be detected and will not result in the loss of the shutdown function. On manipulation (e.g., jamming) of the S1 button, the system does not enable the output current circuits.

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel insertion in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
- 2) PELV in accordance with the requirements in EN 60204-1 / 6.4. Take note of the operating instructions of the integrated devices.





sens:Control – safe control solutions



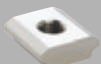
Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).

Accessories



Mounting systems

Figure	Property	Packing unit	Type	Part no.
	Mounting bracket, rigid	4	BEF-3WNKBAST4	2044068
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 1, swivel mount	4	BEF-2SMKEAKU4	2019649
	Stainless steel bracket, adjustable	4	BEF-2SMKEAES4	2030288
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMKEAAL4	2044848


Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600

Connecting cable

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	M12 x 7 + FE	Straight	2.5 m	DOL-127SG2M5E25KM0	6020537
			5 m	DOL-127SG05ME25KM0	6020354
			7.5 m	DOL-127SG7M5E25KM0	6020353
			10 m	DOL-127SG10ME25KM0	6020352
			15 m	DOL-127SG15ME25KM0	6020872
	M12 x 7 + FE	Angled	5 m	DOL-127SW05ME25KM0	6021342
			15 m	DOL-127SW15ME25KM0	6021343

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves





Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror


Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories

Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961
	Omega bracket, mounting kit for device columns	2	BEF-2SMKEAAL2	2045884
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938


Additional front screens

Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2022405
	450 mm	2022406
	600 mm	2022407
	750 mm	2022408
	900 mm	2022409
	1050 mm	2022410
	1200 mm	2022411

PNS75 deflector mirrors



Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
			1800 mm	PNS75-184

PNS125 deflector mirrors


Figure	Mirror material	For maximum protective field height	Type	Part no.		
	Glass	300 mm	PNS125-034	1019425		
		450 mm	PNS125-049	1019426		
		600 mm	PNS125-064	1019427		
		750 mm	PNS125-079	1019428		
		900 mm	PNS125-094	1019429		
		1050 mm	PNS125-109	1019430		
		1200 mm	PNS125-124	1019431		
		1350 mm	PNS125-139	1019432		
		1500 mm	PNS125-154	1019433		
		1650 mm	PNS125-169	1019434		
				1800 mm	PNS125-184	1019435

F



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for small housing profile	-	-	-	4032462
	Adapter for AR60, for small housing profile in PU3Hxx-xxxxxxx device column				4056730

Configuration tools

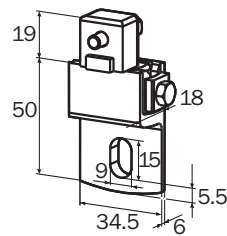
Figure	Description	Suitable for	Type	Part no.
	For deactivation of the external device monitoring and integrated restart interlock	C2000, M2000: deactivation of the external device monitoring; C4000 Micro, C4000 Basic Plus: deactivation of the external device monitoring and integrated restart interlock	Reset tool	6022103

Device protection

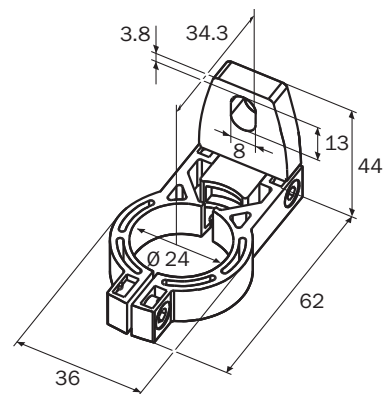
Figure	Description	Type	Part no.
	20 mm diameter	Test rod	2022600
	30 mm diameter	Test rod	2022602
	40 mm diameter	Test rod	2022604
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

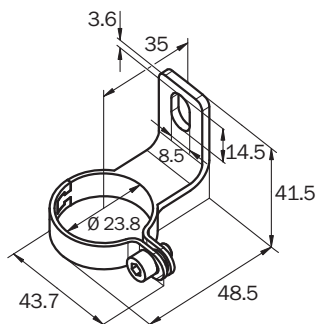
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



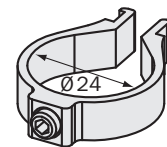
BEF-2SMKEAKU4
Mounting kit 1, swivel mount



BEF-2SMKEAES4
Stainless steel bracket, adjustable



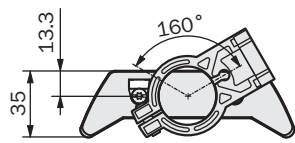
BEF-2SMKEAAL4
Omega bracket, flexible and quick installation with only one screw



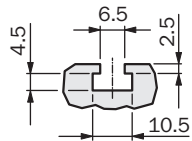
Dimensions in mm

F

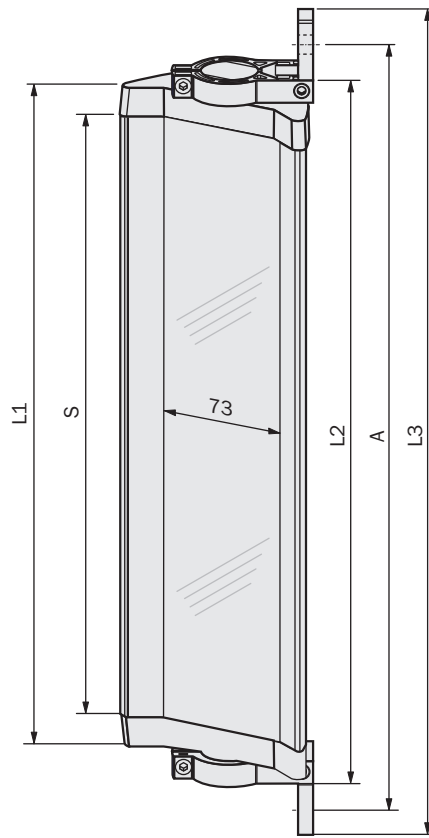
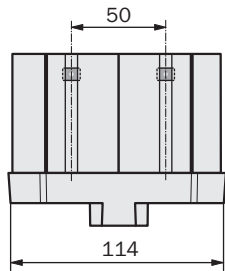
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

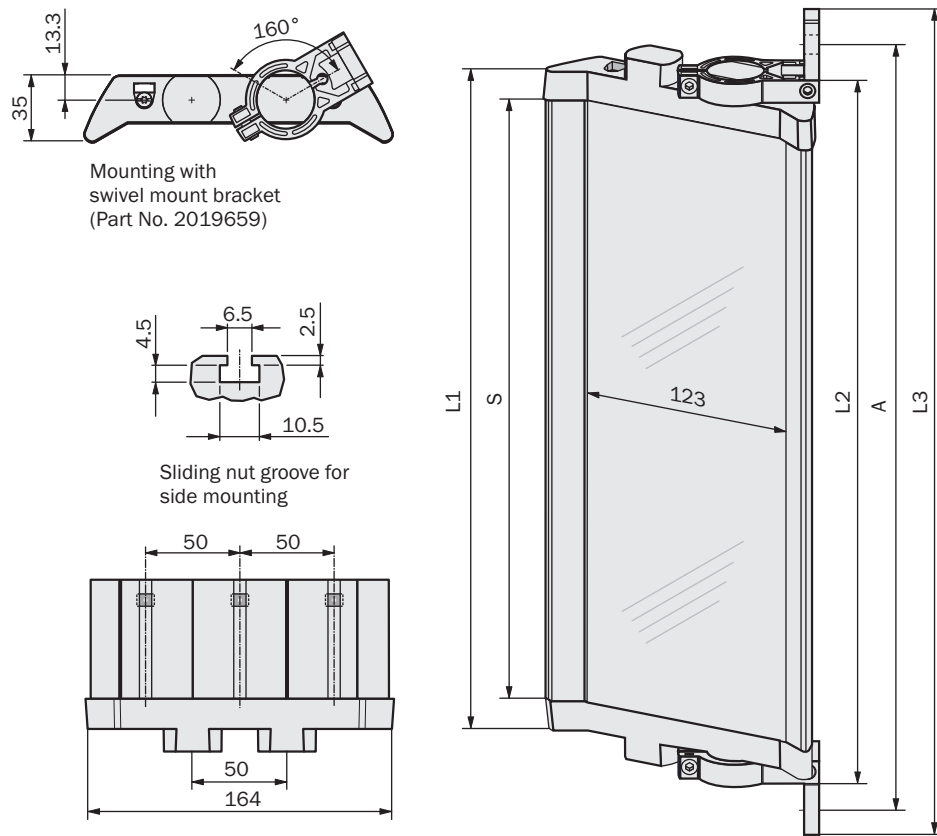


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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



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Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Technical data overview

Protective field height (depending on type)	300 mm ... 1800 mm
Scanning range (depending on type)	0 m ... 6 m / 2.5 m ... 19 m
Resolution (depending on type)	20 mm / 30 mm / 40 mm
Type	Type 2 (IEC 61496)
Safety integrity level	SIL2 (IEC 61508), SILCL2 (IEC 62061)
Enclosure rating	IP 65

Product description

With its high signal reserve, the C2000 Cascadable safety light curtain is also reliable under harsh industrial conditions. Functions and status information integrated in the device allow rapid commissioning and prevent unnecessary machine downtime.

The modular design provides maximum machine safety while taking into account economic considerations by precisely co-

ordinating the characteristics of the device to the requirements.

Safe control solutions and service concepts complete the product range to provide an ideal solution for the sector.

With the cascadable variants, safety light curtains can be flexibly adapted to the existing installation situation.

In-system added value

Combined with SICK safe control solutions

Combination with	Restart interlock	External device monitoring	Muting	Further information
Flexi Classic	✓	✓	✓	0-2
Flexi Soft	✓	✓	✓	0-25
UE48-20S	✓	✓	-	N-46
UE48-30S	✓	✓	-	N-52
UE10-30S	Contact expansion module			N-63

→ For more combinations, see annex

Applications

→ You can find more applications using the application finder at www.mysick.com

- Storage and conveyor technology
- Stone production
- Wood industry
- Electronics industry
- Paper and textile industry
- Packaging industry



Printing industry: C2000 Cascadable on a pad printing machine



- Cascade
 - Max. 3 devices
 - Max. 3 m cable length
- External device monitoring (EDM)
- Self-test
- 7-segment display
- Diagnostics
- Alignment aid
- Beam coding



F

Further information	Page
→ Ordering information	F-286
→ Technical specifications	F-288
→ Dimensional drawings	F-290
→ Connection diagrams	F-292
→ Accessories	F-293
→ Systematic safety	A-0
→ Services	B-0

Ordering information

C2000 Cascadable

Housing cross-section	Protective field heights 150 mm to 1200 mm Protective field heights 1350 mm to 1800 mm	34 mm x 29 mm 48 mm x 40 mm
Usage	As first, middle or last system in a cascade	
Connection types	System connection: plug M12 x 8 Extension connection: socket M12 x 8	

■ Scanning range: 0 m ... 6 m

Resolution	Protective field height	Sender		Receiver	
		Type	Part no.	Type	Part no.
20 mm	300 mm	C20S-030102A21	1018072	C20E-030302A21	1018073
	450 mm	C20S-045102A21	1018078	C20E-045302A21	1018079
	600 mm	C20S-060102A21	1018055	C20E-060302A21	1018056
	750 mm	C20S-075102A21	1018095	C20E-075302A21	1018096
	900 mm	C20S-090102A21	1018104	C20E-090302A21	1018105
	1050 mm	C20S-105102A21	1018113	C20E-105302A21	1018114
	1200 mm	C20S-120102A21	1018122	C20E-120302A21	1016970
30 mm	300 mm	C20S-030103A21	1018074	C20E-030303A21	1016974
	450 mm	C20S-045103A21	1018080	C20E-045303A21	1018081
	600 mm	C20S-060103A21	1018087	C20E-060303A21	1018089
	750 mm	C20S-075103A21	1018097	C20E-075303A21	1018098
	900 mm	C20S-090103A21	1018106	C20E-090303A21	1018107
	1050 mm	C20S-105103A21	1018115	C20E-105303A21	1018116
	1200 mm	C20S-120103A21	1018123	C20E-120303A21	1018124
	1350 mm	C20S-135103A22	1018057	C20E-135303A22	1018058
	1500 mm	C20S-150103A22	1018133	C20E-150303A22	1018134
	1650 mm	C20S-165103A22	1018139	C20E-165303A22	1018140
1800 mm	C20S-180103A22	1018145	C20E-180303A22	1018147	
40 mm	300 mm	C20S-030104A21	1016967	C20E-030304A21	1016973
	450 mm	C20S-045104A21	1018082	C20E-045304A21	1018083
	600 mm	C20S-060104A21	1018090	C20E-060304A21	1018091
	750 mm	C20S-075104A21	1018099	C20E-075304A21	1018100
	900 mm	C20S-090104A21	1018108	C20E-090304A21	1018109
	1050 mm	C20S-105104A21	1018117	C20E-105304A21	1018118
	1200 mm	C20S-120104A21	1018125	C20E-120304A21	1018126
	1350 mm	C20S-135104A22	1018129	C20E-135304A22	1018130
	1500 mm	C20S-150104A22	1018135	C20E-150304A22	1018136
	1650 mm	C20S-165104A22	1018141	C20E-165304A22	1018142
	1800 mm	C20S-180104A22	1018148	C20E-180304A22	1018149

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■ Scanning range: 2.5 m ... 19 m

Resolution	Protective field height	Sender		Receiver	
		Type	Part no.	Type	Part no.
20 mm	300 mm	C20S-030202A21	1018075	C20E-030302A21	1018073
	450 mm	C20S-045202A21	1018084	C20E-045302A21	1018079
	600 mm	C20S-060202A21	1018092	C20E-060302A21	1018056
	750 mm	C20S-075202A21	1018101	C20E-075302A21	1018096
	900 mm	C20S-090202A21	1018110	C20E-090302A21	1018105
	1050 mm	C20S-105202A21	1018119	C20E-105302A21	1018114
	1200 mm	C20S-120202A21	1016964	C20E-120302A21	1016970
30 mm	300 mm	C20S-030203A21	1016968	C20E-030303A21	1016974
	450 mm	C20S-045203A21	1018085	C20E-045303A21	1018081
	600 mm	C20S-060203A21	1018093	C20E-060303A21	1018089
	750 mm	C20S-075203A21	1018102	C20E-075303A21	1018098
	900 mm	C20S-090203A21	1018111	C20E-090303A21	1018107
	1050 mm	C20S-105203A21	1018120	C20E-105303A21	1018116
	1200 mm	C20S-120203A21	1018127	C20E-120303A21	1018124
	1350 mm	C20S-135203A22	1018131	C20E-135303A22	1018058
	1500 mm	C20S-150203A22	1018137	C20E-150303A22	1018134
	1650 mm	C20S-165203A22	1018143	C20E-165303A22	1018140
1800 mm	C20S-180203A22	1018150	C20E-180303A22	1018147	
40 mm	300 mm	C20S-030204A21	1018077	C20E-030304A21	1016973
	450 mm	C20S-045204A21	1018086	C20E-045304A21	1018083
	600 mm	C20S-060204A21	1018094	C20E-060304A21	1018091
	750 mm	C20S-075204A21	1018103	C20E-075304A21	1018100
	900 mm	C20S-090204A21	1018112	C20E-090304A21	1018109
	1050 mm	C20S-105204A21	1018121	C20E-105304A21	1018118
	1200 mm	C20S-120204A21	1018128	C20E-120304A21	1018126
	1350 mm	C20S-135204A22	1018132	C20E-135304A22	1018130
	1500 mm	C20S-150204A22	1018138	C20E-150304A22	1018136
	1650 mm	C20S-165204A22	1018144	C20E-165304A22	1018142
	1800 mm	C20S-180204A22	1018151	C20E-180304A22	1018149

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Technical specifications

→ You can find more detailed data in the operating instructions. Download at www.mysick.com

General data

System part	Sender	Receiver
Resolution (depending on type)	20 mm / 30 mm / 40 mm	
Scanning range (depending on type)	0 m ... 6 m / 2.5 m ... 19 m	-
Protective field height (depending on type)	300 mm ... 1800 mm	
Safety related parameters		
Type	Type 2 (IEC 61496)	
Safety integrity level	SIL2 (IEC 61508) SILCL2 (IEC 62061)	
Category	Category 2 (EN ISO 13849)	
Test rate (internal test)	13/s (EN ISO 13849)	
Maximum demand rate	8/min (EN ISO 13849) ¹⁾	
Performance level	PL d (EN ISO 13849), pay attention to optical characteristics! ²⁾	
PFHd (mean probability of a dangerous failure per hour)	2.2×10^{-8} (EN ISO 13849)	
T_M (Mission Time)	20 years (EN ISO 13849)	
Response time (depending on type)	-	Max. 34 ms
Synchronization	Optical, without separate synchronization	
Protection class	III	
Enclosure rating	IP 65 (EN 60529)	
Ambient operating temperature from ... to	0 °C ... +55 °C	
Storage temperature from ... to	-25 °C ... +70 °C	
Air humidity from ... to	15 % ... 95 %, non-condensing	
Housing cross-section (depending on type)		
Protective field heights 150 mm to 1200 mm	34 mm x 29 mm	
Protective field heights 1350 mm to 1800 mm	48 mm x 40 mm	
Vibration resistance	5 g (10 Hz ... 55 Hz), IEC 68-2-6	
Shock resistance	10 g, 16 ms (IEC 68-2-29)	

¹⁾ Between two demands on a safety-related response of the device at least 100 internal or external tests must be carried out.

²⁾ The performance level does not contain any specific requirements on aspects such as the optical characteristics.
For more detailed information on this topic, see page A-10.

Functional data

System part	Sender	Receiver
External device monitoring	-	✓
Beam coding		✓
Extension connection		✓
Configuration method	Hard wired	

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Electrical data

System part	Sender	Receiver
System connection	Plug M12 x 8	
Connecting cable length	Max. 15 m ¹⁾	
Connecting cable wire cross-section	0.25 mm ²	
Extension connection	Socket M12 x 8	
Connection cable length	Max. 3 m	
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC) ²⁾	
Residual ripple	≤ 5 %	
Safety outputs (OSSD)		
	Type of output	-
	Switching voltage HIGH	-
	Switching current	-
		2 PNP semiconductors, short-circuit protected, cross-circuit monitored
		Min. $V_s - 2.25$ V DC
		Max. 500 mA
Display elements	LED/7-segment	

¹⁾ The length of the connecting cable is limited, because wire resistance is max. 4 Ohm

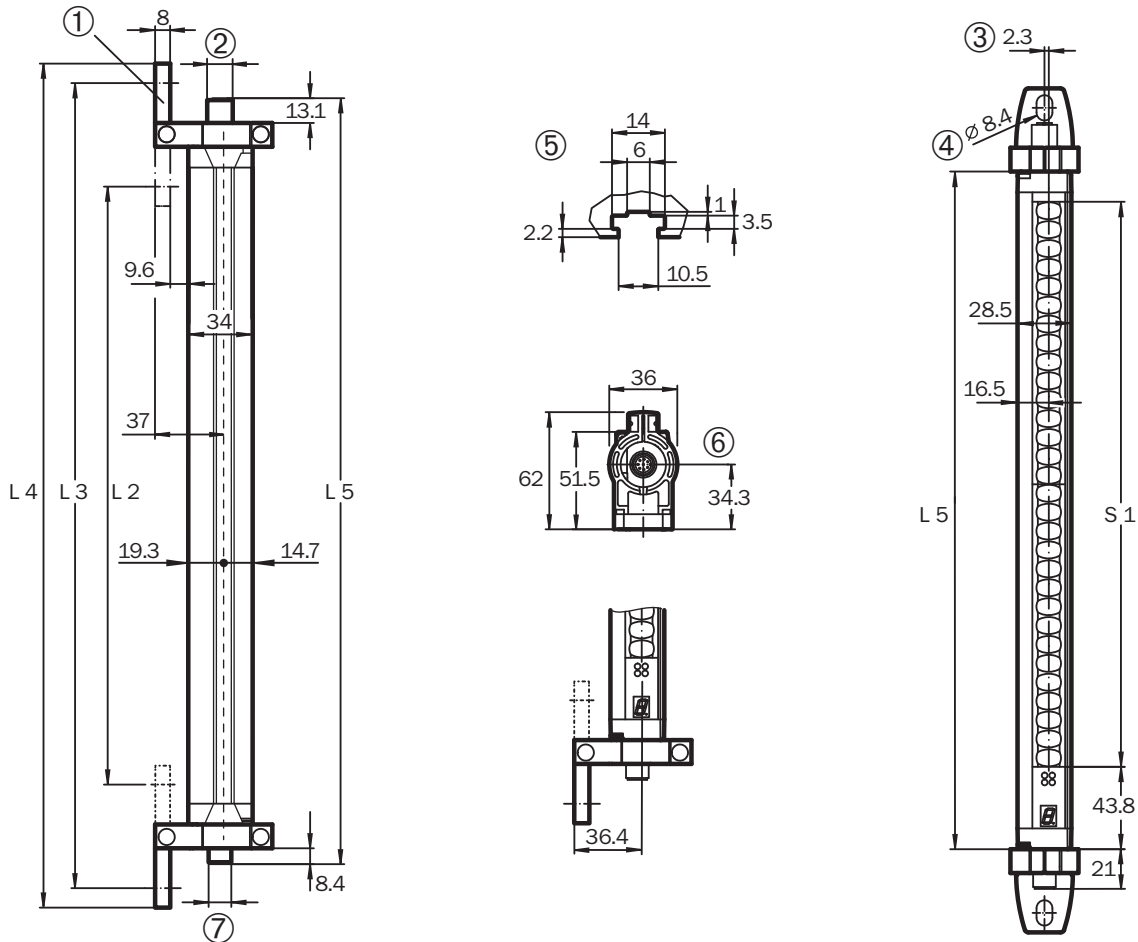
²⁾ Upper and lower limit values of voltage supply not be infringed



Dimensional drawings

Protective field heights 300 mm ... 1200 mm

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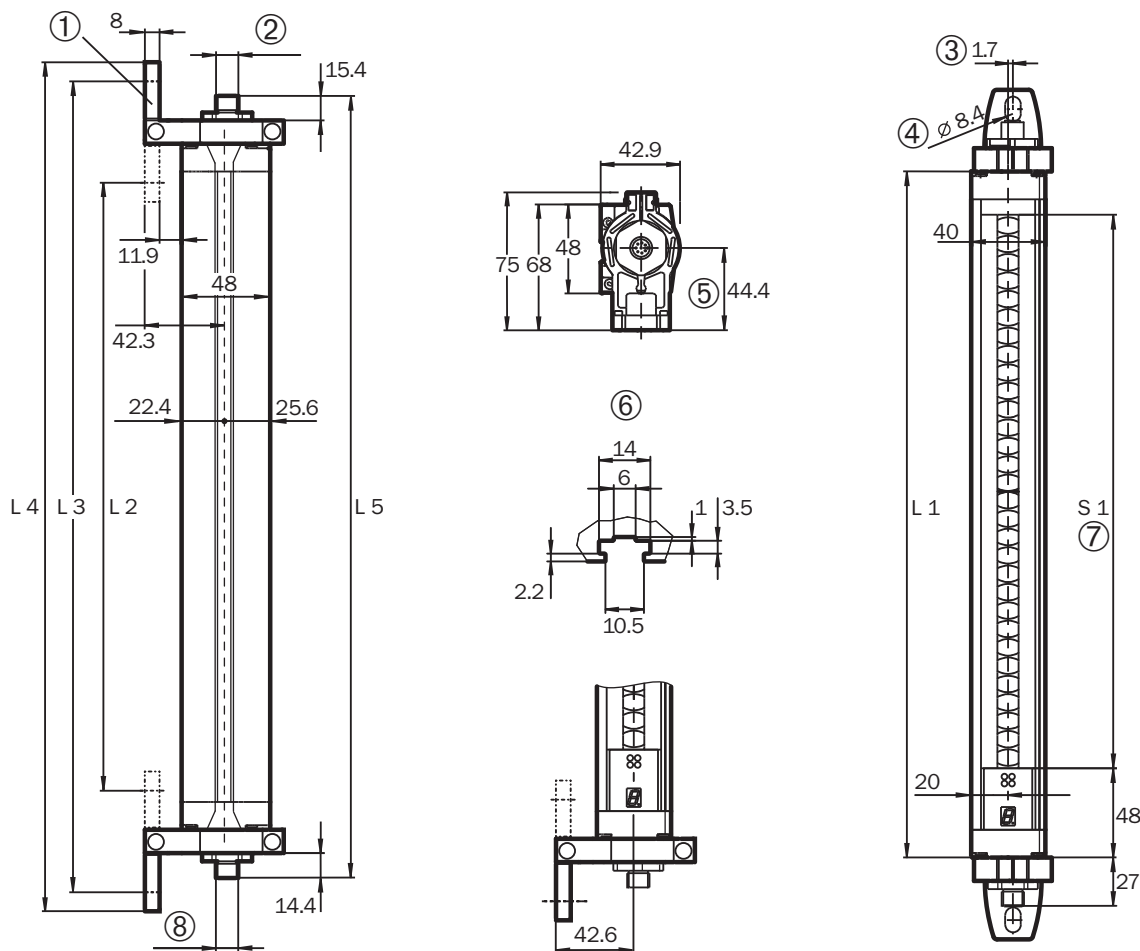
Sender with swivel mount, small housing (receiver mirror image)

- ① Mounting clamp
- ② Plug M12 x 8
- ③ Center of light beam offset
- ④ Hexagon screw M8 DIN 933 with washer DIN 9021 (not supplied with delivery)
- ⑤ Sliding nut groove for side mounting
- ⑥ Adjustment
- ⑦ Plug M12 x 8

S1	L1	L2	L3	L4	L5
300	364	322	432	452	411
450	515	473	582	603	562
600	666	623	733	754	712
750	816	774	884	904	863
900	967	924	1034	1055	1013
1050	1117	1075	1185	1205	1164
1200	1266	1224	1334	1354	1313

Dimensions in mm

Protective field heights 1350 mm ... 1800 mm



Sender with swivel mount, large housing profile (receiver mirror image)

- ① Mounting clamp
- ② M12 x 8 socket
- ③ Center of light beam offset
- ④ Hexagon screw M8, DIN 933 with washer DIN 9021 (not supplied with delivery)
- ⑤ Adjustment
- ⑥ Sliding nut groove for side mounting
- ⑦ Protective field height
- ⑧ Plug M12 x 8

S1	L1	L2	L3	L4	L5
1350	1426	1384	1494	1514	1481
1500	1577	1535	1644	1665	1632
1650	1727	1685	1795	1815	1782
1800	1878	1836	1945	1966	1933

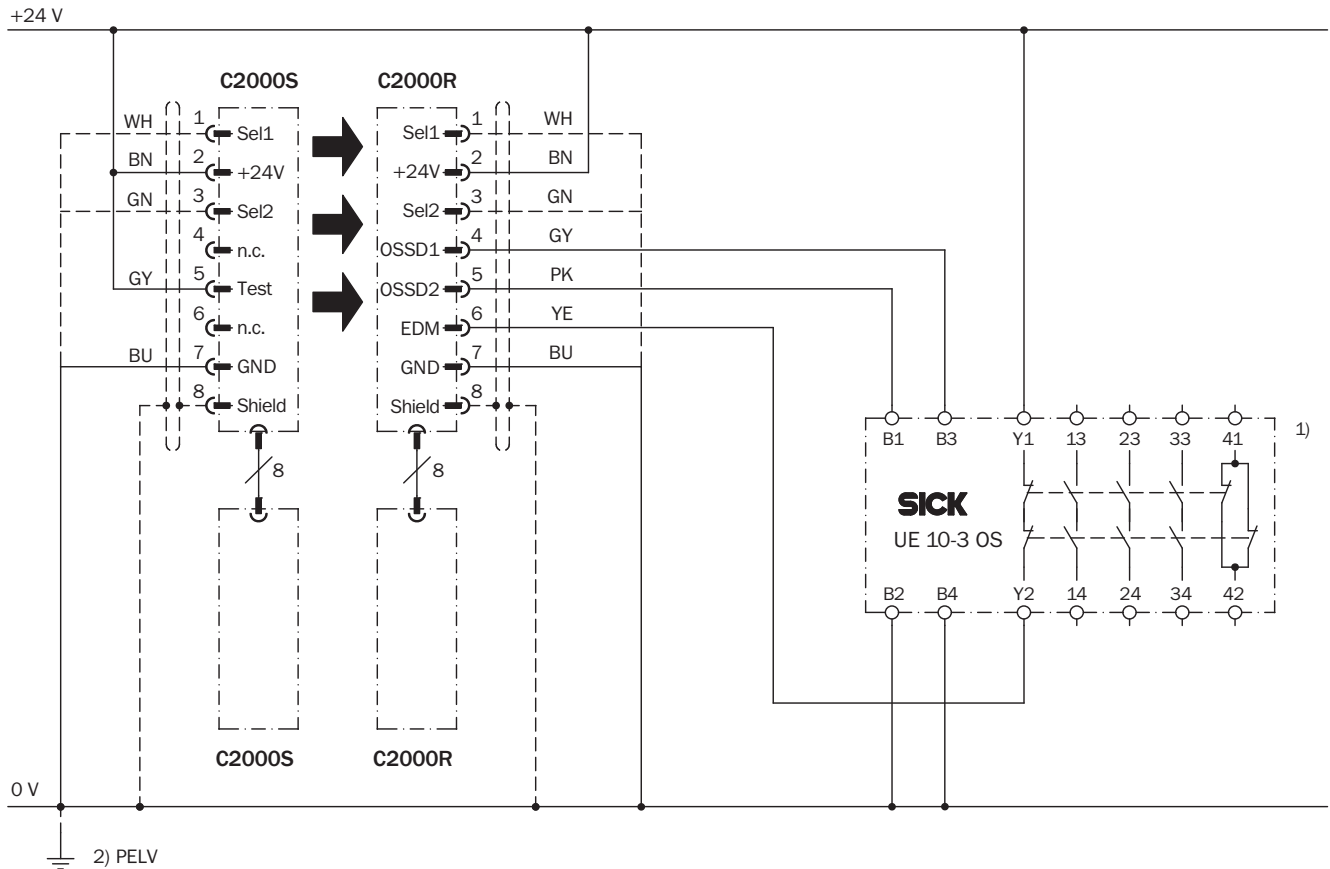
Dimensions in mm

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Connection diagrams

→ You can find more connection diagrams at www.mysick.com

C2000 Cascadable on UE10-30S safety relay



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Task

Connection of two cascaded C2000 Cascadable safety light curtains to UE10-30S.

Operating mode: without restart interlock and with external device monitoring. Restart interlock is realized via the machine control.

Operating characteristics

When the light path is clear and the UE10-30S is de-energized and functioning correctly, the system is enabled. The OSSD1 and OSSD2 outputs are live, the UE10-30S is switched on. On the interruption of one of the light beams, the UE10-30S is deactivated by the OSSD1 and OSSD2 outputs.

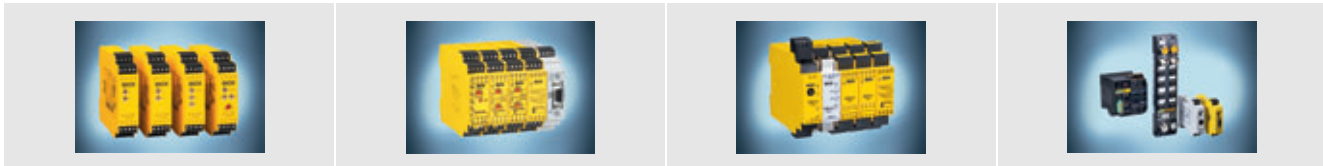
Fault analysis

OSSD cross-circuits and short-circuits are detected and lead to the inhibited state (lock-out). The erroneous behavior of the UE10-30S will be detected. The shutdown function is retained.

Comments

- 1) Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel integration in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.
- 2) PELV in accordance with the requirements in EN 60204-1 / 6.4
Take note of the operating instructions of the integrated devices.







sens:Control – safe control solutions



Optimal integration of all safety components leads to a complete solution with sens:Control – safe control solutions: Safety relays (from page N-0), safety controllers (from page O-0) and network solutions (from page P-0).









Accessories

Mounting systems for C2000, protective field heights 150 mm ... 1200 mm (small housing)


Figure	Description	Packing unit	Type	Part no.
	Mounting bracket, rigid	4	BEF-3WNKBAST4	2044068
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 1, swivel mount	4	BEF-2SMKEAKU4	2019649
	Stainless steel bracket, adjustable	4	BEF-2SMKEAES4	2030288
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMKEAAL4	2044848

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Mounting systems for C2000, protective field heights 1350 mm ... 1800 mm (large housing)

Figure	Description	Packing unit	Type	Part no.
	Mounting kit 1, rigid	4	BEF-3WNGBAST4	7021352
	Mounting kit 6, swivel function, side bracket	4	BEF-1SHABAZN4	2019506
	Mounting kit 3, adjustable, vibration-absorbing	4	BEF-1SHADAAL4	2017752
	Mounting kit 2, swivel mount	4	BEF-2SMMEAKU4	2019659
	Stainless steel bracket, adjustable	4	BEF-2SMMEAES4	2023708
	Reinforced stainless steel bracket, adjustable	4	BEF-2SMMVAES4	2026850
	Mounting kit, swivel mount, extendable	2	BEF-0SMMEA002	2046172
	Omega bracket, flexible and quick installation with only one screw	4	BEF-2SMMEAL4	2044847

Sliding nuts

Figure	Description	Remark	Packing unit	Part no.
	Sliding nuts	Included with delivery	4	2017550
	Sliding nuts for deflector mirrors	Suitable for PNS75 and PNS125	6	2030600


Connecting cables

Figure	Connection type	Direction of cable outlet	Cable length	Type	Part no.
	Socket M12 x 7 + FE	Straight	2.5 m	DOL-127SG2M5E25KM0	6020537
			5 m	DOL-127SG05ME25KM0	6020354
			7.5 m	DOL-127SG7M5E25KM0	6020353
			10 m	DOL-127SG10ME25KM0	6020352
			15 m	DOL-127SG15ME25KM0	6020872
	Socket M12 x 7 + FE	Angled	5 m	DOL-127SW05ME25KM0	6021342
			15 m	DOL-127SW15ME25KM0	6021343


Cascade connection cables

Connection type	Direction of cable outlet	Cable length	Type	Part no.
M12 x 8	Plug straight/ socket straight	0.25 m	DSL-127SGM25E25KM0	6021000
		0.5 m	DSL-127SG0M5E25KM0	6021001
		1 m	DSL-127SG01ME25KM0	6021002
		1.5 m	DSL-127SG1M5E25KM0	6021003
		2 m	DSL-127SG02ME25KM0	6021004
		2.5 m	DSL-127SG2M5E25KM0	6021005
		3 m	DSL-127SG03ME25KM0	6021006

Power supply units

Figure	Input voltage	Output voltage	Maximum output current	Part no.
	100 V AC ... 240 V AC	24 V DC	3.9 A	7028790
			2.1 A	7028789

Device columns with external grooves



Figure	Description	Max. installation length	Suitable for protective field height	Type	Part no.
	Robust device column with two external mounting grooves	965 mm	150 ... 600 mm	PU3H96-00000000	2045490
		1165 mm	150 ... 900 mm	PU3H11-00000000	2045641
		1265 mm	150 ... 1050 mm	PU3H13-00000000	2045642
		1720 mm	150 ... 1350 mm	PU3H17-00000000	2045643
		2020 mm	150 ... 1650 mm	PU3H21-00000000	2045644
		2250 mm	150 ... 1800 mm	PU3H22-00000000	2045645
		2400 mm	150 ... 1800 mm	PU3H24-00000000	2045646

Mirror columns with protective field height mirror




Figure	Column height	Mirror length	Type	Part no.
	1285 mm	900 mm	PM3C13-00030000	1043453
	1720 mm	1350 mm	PM3C17-00030000	1043454
	2000 mm	1650 mm	PM3C19-00030000	1043455
	2200 mm	1800 mm	PM3C20-00030000	1043456

→ For more detailed data on mirror columns and device columns, see page I-0

Column parts and accessories


Figure	Description	Packing unit	Type	Part no.
	For floor fastening	1	Adjusting plate	4031053
			Steel plug	5308961

Column parts and accessories (cont'd)


Figure	Description	Packing unit	Type	Part no.
	Omega bracket, mounting kit for device columns, for C4000, C2000 and M2000 in large housing	2	BEF-2SMMEAL2	2045883
	Omega bracket, mounting kit for device columns, for C4000 and C2000 in small housing	2	BEF-2SMKEAL2	2045884
	Suitable for all mirror columns PM3Sxx-xxxxxxx and PM3Cxx-xxxxxxx, including spacer bolt	1	Mirror kit for back area monitoring	2034938

Additional front screens


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Figure	Suitable for protective field height	Part no.
 Example of use	300 mm	2022405
	450 mm	2022406
	600 mm	2022407
	750 mm	2022408
	900 mm	2022409
	1050 mm	2022410
	1200 mm	2022411


Additional heavy-duty front screens

Figure	Suitable for protective field height	Part no.
 Example of use	1350 mm	2026860
	1500 mm	2026861
	1650 mm	2026862
	1800 mm	2026863




PNS75 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS75-034	1019414
		450 mm	PNS75-049	1019415
		600 mm	PNS75-064	1019416
		750 mm	PNS75-079	1019417
	Stainless steel	750 mm	PNS75-079S05	1046075
	Glass	900 mm	PNS75-094	1019418
		1050 mm	PNS75-109	1019419
		1200 mm	PNS75-124	1019420
		1350 mm	PNS75-139	1019421
		1500 mm	PNS75-154	1019422
		1650 mm	PNS75-169	1019423
		1800 mm	PNS75-184	1019424


PNS125 deflector mirrors

Figure	Mirror material	For maximum protective field height	Type	Part no.
	Glass	300 mm	PNS125-034	1019425
		450 mm	PNS125-049	1019426
		600 mm	PNS125-064	1019427
		750 mm	PNS125-079	1019428
		900 mm	PNS125-094	1019429
		1050 mm	PNS125-109	1019430
		1200 mm	PNS125-124	1019431
		1350 mm	PNS125-139	1019432
		1500 mm	PNS125-154	1019433
		1650 mm	PNS125-169	1019434
		1800 mm	PNS125-184	1019435



Laser alignment aid

Figure	Description	Scanning range	Voltage supply	Type of light	Part no.
	AR60 laser alignment aid	Max. 60 m	2 batteries, 1.5 V Micro/AAA	Visible red light, laser class 2 (IEC 60825): Do not stare into beam!	1015741
	Adapter for AR60, for large housing profile	-	-	-	4032461
	Adapter for AR60, for large housing profile in PU3Hxx-xxxxxxx device column				4056731
	Adapter for AR60, for small housing profile	-	-	-	4032462
	Adapter for AR60, for small housing profile in PU3Hxx-xxxxxxx device column				4056730

Configuration tools

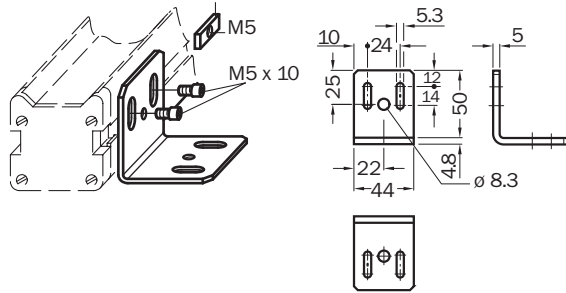
Figure	Description	Suitable for	Type	Part no.
	For deactivation of the external device monitoring and integrated restart interlock	C2000, M2000: deactivation of the external device monitoring; C4000 Micro, C4000 Basic Plus: deactivation of the external device monitoring and integrated restart interlock	Reset tool	6022103

Device protection

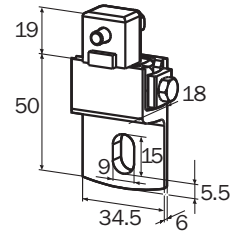
Figure	Description	Type	Part no.
	20 mm diameter	Test rod	2022600
	30 mm diameter	Test rod	2022602
	40 mm diameter	Test rod	2022604
	Test rod holder	BEF-3WNAAAAL1	2052249

Dimensional drawings mounting systems

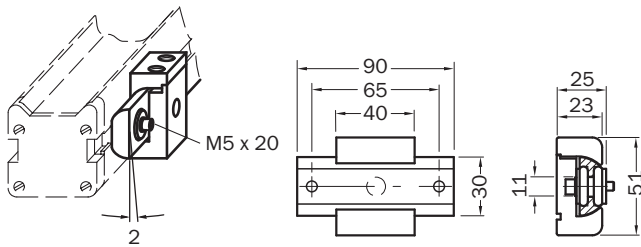
BEF-3WNGBAST4
Mounting kit 1, rigid



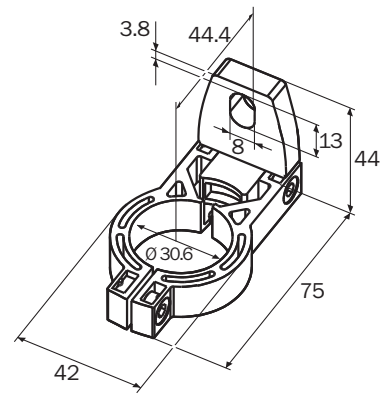
BEF-1SHABAZN4
Mounting kit 6, swivel function, side bracket



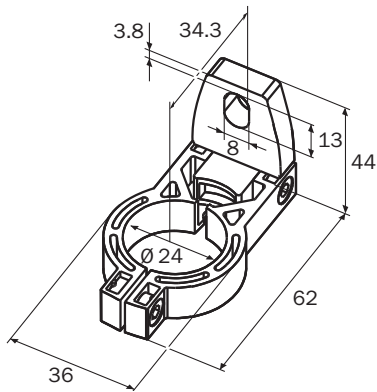
BEF-1SHADAAL4
Mounting kit 3, adjustable, vibration-absorbing



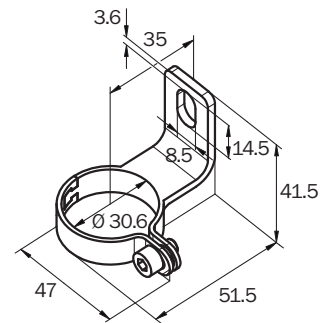
BEF-2SMMEAKU4
Mounting kit 2, swivel mount



BEF-2SMKEAKU4
Mounting kit 1, swivel mount



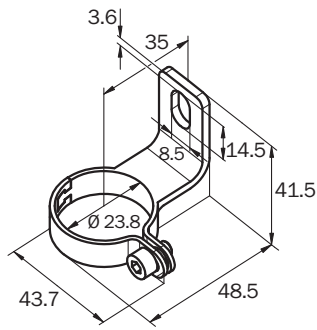
BEF-2SMMEAES4
Stainless steel bracket, adjustable



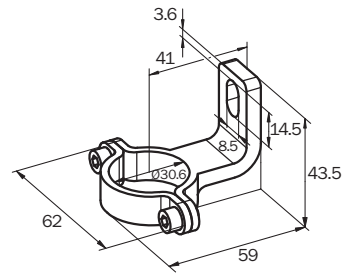
Dimensions in mm

F

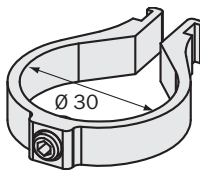
BEF-2SMKEAES4
Stainless steel bracket, adjustable



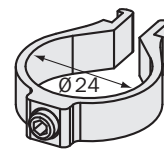
BEF-2SMMVAES4
Reinforced stainless steel bracket, adjustable



BEF-2SMMEAAL4
Omega bracket, flexible and quick installation with only one screw



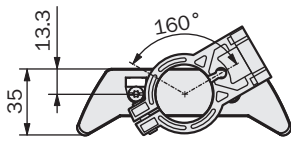
BEF-2SMKEAAL4
Omega bracket, flexible and quick installation with only one screw



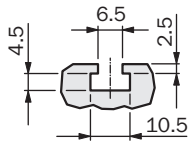
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Dimensions in mm

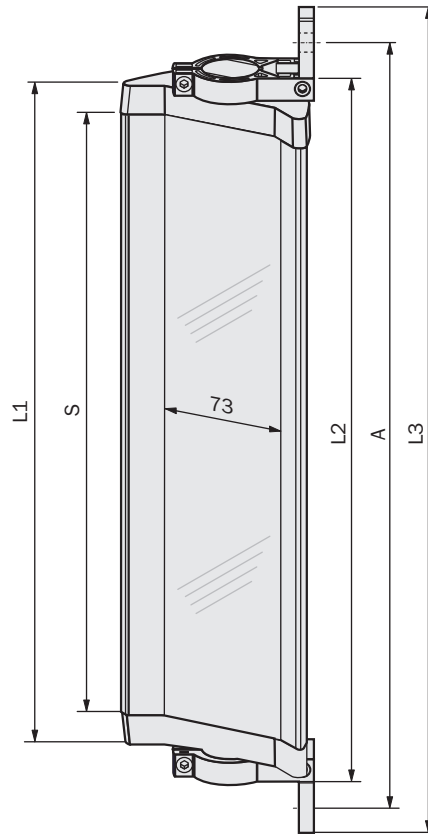
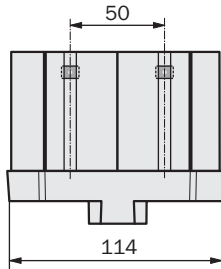
Dimensional drawings PNS75 deflector mirror



Mounting with swivel mount bracket (Part No. 2019659)



Sliding nut groove for side mounting

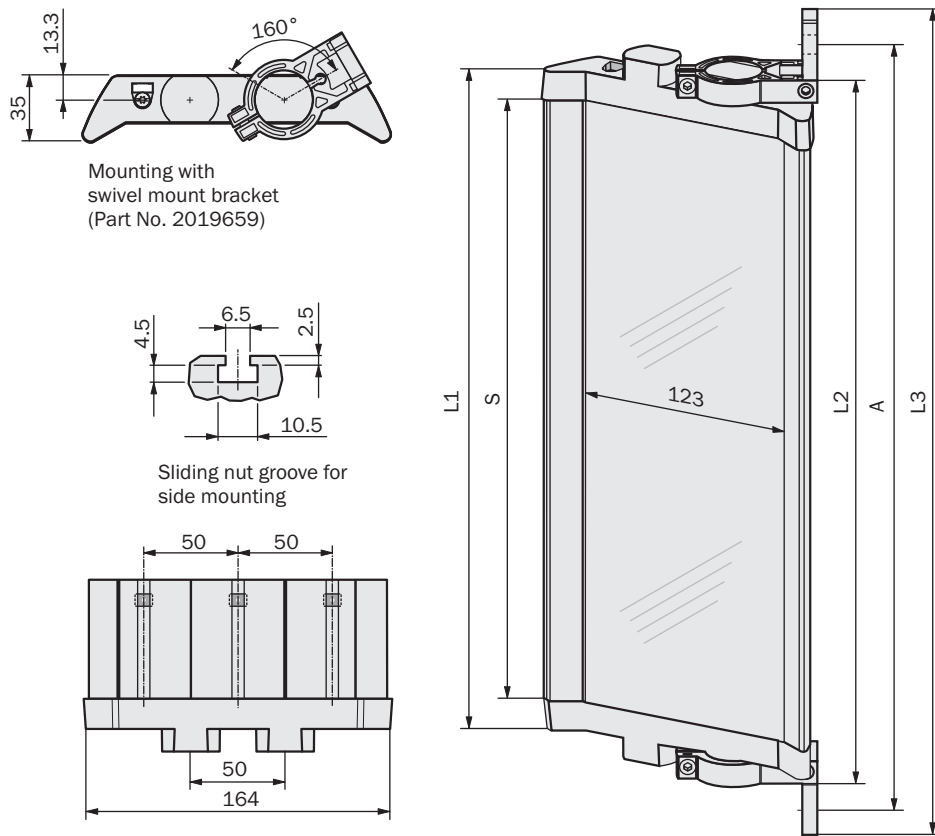


F

Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

Dimensional drawings PNS125 deflector mirror



Mirror height S	L1	L2	L3	A
340	372	396	460	440
490	522	546	610	590
640	672	696	760	740
790	822	846	910	890
940	972	996	1060	1040
1090	1122	1146	1210	1190
1240	1272	1296	1360	1340
1390	1422	1446	1510	1490
1540	1572	1596	1660	1640
1690	1722	1746	1810	1790
1840	1872	1896	1960	1940

Dimensions in mm

F