



## Safety Switches Selection Guide

Easy to find, easy to choose:  
Safety switches and sens:Control – safe control solutions

## The complete product range

### Safety switches

The product recommendations in this selection guide represent just a small part of our safety switch portfolio.

If you cannot locate out the correct safety switch for your application in this guide we recommend you look at our catalog or visit our homepage to see the range of safety switches:

#### Electro-mechanical safety switches



- Safety switches with separate actuator
- Safety locking devices
- Safety positioning switches
- Safety hinge switches

#### Non-contact safety switches



- Magnetic safety switches
- Transponder safety switches
- Inductive safety switches

#### Safety command devices



- Emergency stop pushbuttons
- Rope pull switches
- Enabling switches

### sens:Control – safe control solutions

The recommended safe control solutions in this selection guide reflects just a small part of the portfolio.

For further combinations between safety switches and opto-electronic protective devices with safety relays, safety controllers and network solutions see our printed catalog or contact the SICK representative in your country.

In our catalog and on our homepage you will find our complete line of products.

#### Safety relays



- Safety relays, series UE10 to UE48

#### Safety controllers



- Modular safety controllers
- Compact safety controllers
- Flexible safety controllers
- Safety remote controllers

#### Network solutions



- PROFIsafe
- AS-Interface Safety at Work
- DeviceNet Safety
- Gateways

Industrial Safety Systems.  
Made by SICK.



### safetyPLUS®

from SICK covers a broad range of competence for the safety of workers and machines.

safetyPLUS® is backed by a worldwide versatile product portfolio of devices, services and safety software.



## Safety products from SICK: Easy to choose and efficient to use

This guide contains a range of safety switches and the appropriate products from sens:Control – safe control solutions.

	Page
<p><b>Example applications</b> Choose the safety switch that best meets your requirements based on application examples.</p>	4 – 5
<p><b>Characteristics “Performance Level” and “Category”</b> On the basis of the safety-engineering characteristics “Performance Level” and “Category” the selection matrix will lead you to the correct safety relay or safety controller.</p>	6 – 7
<p><b>Practical help applying the products</b> Mounting examples and connection diagrams are provided to make installation easier.</p>	<div style="display: flex; justify-content: space-between;"> <div>Mounting examples</div> <div>8</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Connection diagrams</div> <div>10</div> </div>
<p><b>Ordering information</b> Easy-to-use ordering tables provide product and accessory part numbers.</p>	<div style="display: flex; justify-content: space-between;"> <div>Safety switches</div> <div>14</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Safe control solutions</div> <div>19</div> </div>

### Important note:

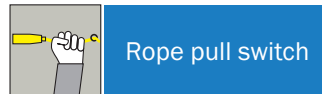
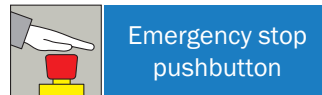
In this guide we refer to various standards. We used the latest available version of the standards that could be incorporated before printing.

Please note: if international or national standards and regulations exist, they should be given preference particularly with regard to the safety-engineering characteristics in machine oriented product standards (C standards).

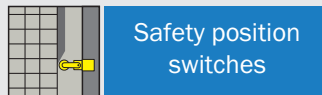
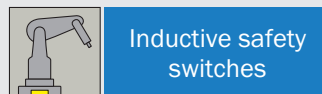
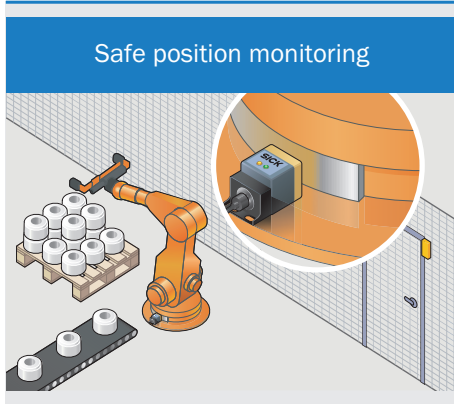
SICK offers you a complete support package, which is available for the entire service life of your machine and which encompasses planning and commissioning to maintenance, repair and updating of your system. Service – configured to suit your own requirements. Please contact the SICK representative in your country.

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# Easy to find: The right safety switch



① High distances, e.g., conveyor belts, production lines, etc.



① Robots, end position, pivot arm, automated guided vehicles, etc.

① Easy to mount. High demand for mechanical tolerance (misalignment), hygiene (food industry), wear (high number of switching actuations), etc.

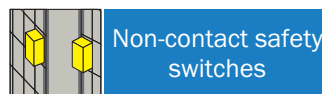
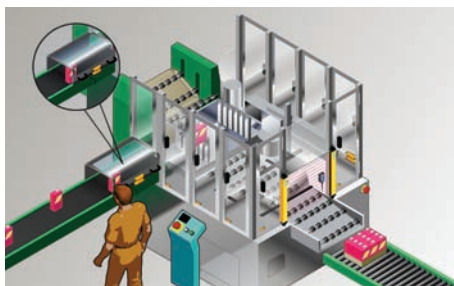


① Doors, flaps, covers, etc.

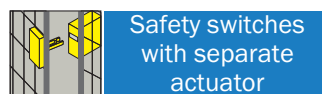
① Protection of people (stopping/run-down), protection of processes



① High protection against manipulation



① Easy to mount. High demand for mechanical tolerance (misalignment), hygiene (food industry), wear (high number of switching actuations), etc.



① Easy handling and flexible mounting



Recommended product

ES21

i150RP



IN4000



Metal housing

YES ⓘ Robust

i110P  
i110R

NO ⓘ Compact

i10P  
i10R

Integrated door monitoring

YES ⓘ Evaluation of door position and interlocking position

i10 Lock  
i15 Lock

NO ⓘ Evaluation of interlocking position

i14 Lock



Metal housing

YES ⓘ Robust

i110H

NO ⓘ Compact

i10H



High protection against manipulation

YES

Transponder safety switches

T4000 Multi  
T4000 Compact

NO

Magnetic safety switches

RE21



Metal housing




YES ⓘ Robust

i110S

NO ⓘ Compact

i12S  
i16S  
i17S



Stopping category	Safety relays							Up to performance level	Up to category
	0								
	 UE23-2MF			 UE43-3AR UE43-2MF UE43-4AR UE43-3MF		 T4000 Evaluation unit			
Up to performance level	c	d	e	c	d	e	e		
Recommended product	1	3	4	1	3	4	4		
ES21	1	-	-	1	1 <sup>1)</sup>	1 <sup>2)</sup>	-		
i150RP	1	-	-	1	1 <sup>1)</sup>	1 <sup>2)</sup>	-		
IN4000 Direct	-	-	-	-	-	-	-		
i110P	1	-	-	1	2 <sup>1)</sup>	2 <sup>2)</sup>	-		
i110R	1	-	-	1	2 <sup>1)</sup>	2 <sup>2)</sup>	-		
i10P	1	-	-	1	2 <sup>1)</sup>	2 <sup>2)</sup>	-		
i10R	1	-	-	1	2 <sup>1)</sup>	2 <sup>2)</sup>	-		
i10 Lock	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
i15 Lock	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
i14 Lock	-	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
i110H	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
i10H	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
T4000 Multi	-	-	-	-	-	-	1		
T4000 Compact	-	-	-	-	-	-	-		
RE21	-	-	-	-	-	-	-		
i110S	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
i12S	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
i16S	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		
i17S	1	-	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	-		





Number of safety switches for performance level resp. category

**Standards of the safety-engineering characteristics**  
 The safety-engineering characteristics in the table refer to the following standards:  
 ■ Stopping category: EN 60204-1  
 ■ Category: EN ISO 13849-1  
 ■ Performance level: EN ISO 13849-1. Method of calculation see EN ISO 13849-1, Annex C.

<sup>1)</sup> Dual-channel wiring  
<sup>2)</sup> Dual-channel wiring with cross-circuit detection  
 → Connection diagrams page 10 and 11  
<sup>3)</sup> Second safety switch for monitoring the protective device, e.g. i10R / i110R safety position switch or i10H / i110H safety hinge switch. → Mounting example page 9, no. 5  
 Dual-channel wiring  
 The safety level of the locking function is not described here!



# Easy to choose: The right safe control solution

Safety relays						Safety controllers					
0			1			0 and 1					
 UE44-3SL			 UE45-3S1			 Flexi Classic			 Flexi Soft		
c	d	e	c	d	e	c	d	e	c	d	e
1	3	4	1	3	4	1	3	4	1	3	4
-	-	-	1	1 <sup>1)</sup>	-	1	1 <sup>1)</sup>	1 <sup>2)</sup>	1	1 <sup>1)</sup>	1 <sup>2)</sup>
-	-	-	1	1 <sup>1)</sup>	-	1	1 <sup>1)</sup>	1 <sup>2)</sup>	1	1 <sup>1)</sup>	1 <sup>2)</sup>
-	-	-	-	-	-	1	1 <sup>4)</sup>	1 <sup>4)</sup>	1	1 <sup>4)</sup>	1 <sup>4)</sup>
-	-	-	1	2 <sup>1)</sup>	-	1	2 <sup>1)</sup>	2 <sup>2)</sup>	1	2 <sup>1)</sup>	2 <sup>2)</sup>
-	-	-	1	2 <sup>1)</sup>	-	1	2 <sup>1)</sup>	2 <sup>2)</sup>	1	2 <sup>1)</sup>	2 <sup>2)</sup>
-	-	-	1	2 <sup>1)</sup>	-	1	2 <sup>1)</sup>	2 <sup>2)</sup>	1	2 <sup>1)</sup>	2 <sup>2)</sup>
1	2 <sup>6)</sup>	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
1	2 <sup>6)</sup>	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
1	2 <sup>6)</sup>	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
-	-	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
-	-	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	1	1 <sup>1)</sup>	-	1	1 <sup>1)</sup>	-
-	-	-	-	-	-	1 <sup>1)</sup>	1 <sup>1)</sup>	1 <sup>2)</sup>	1 <sup>1)</sup>	1 <sup>1)</sup>	1 <sup>2)</sup>
-	-	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
-	-	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
-	-	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>
-	-	-	1	2 <sup>3)</sup>	-	1	2 <sup>3)</sup>	2 <sup>5)</sup>	1	2 <sup>3)</sup>	2 <sup>5)</sup>

<sup>4)</sup> Dual-channel wiring  
Depending on the application additional measures may be necessary, e.g. second safety switch for manipulation prevention.

<sup>5)</sup> Second safety switch for monitoring the protective device, e.g. i10R / i110R safety position switch or i10H / i110H safety hinge switch. → Mounting example page 9, no. 5  
Dual-channel wiring with cross-circuit detection. → Connection diagram page 12  
The safety level of the locking function is not described here!

<sup>6)</sup> Second safety switch for monitoring the protective device, e.g. i10R / i110R safety position switch or i10H / i110H safety hinge switch. → Mounting example page 9, no. 5  
Mechanical locked  
Dual-channel wiring. → Connection diagram page 13

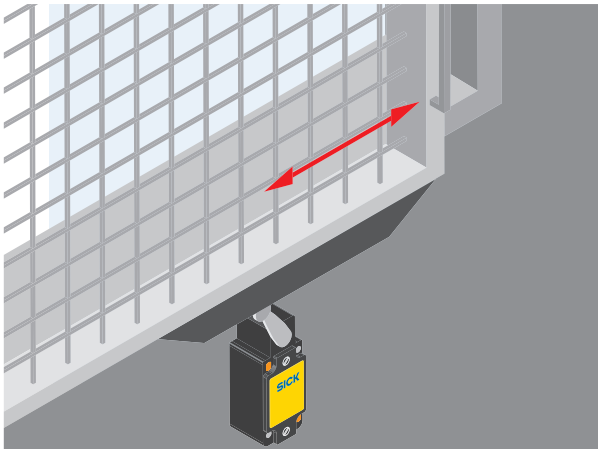
# Practical help applying the products

further information see  
[www.mysick.com](http://www.mysick.com)



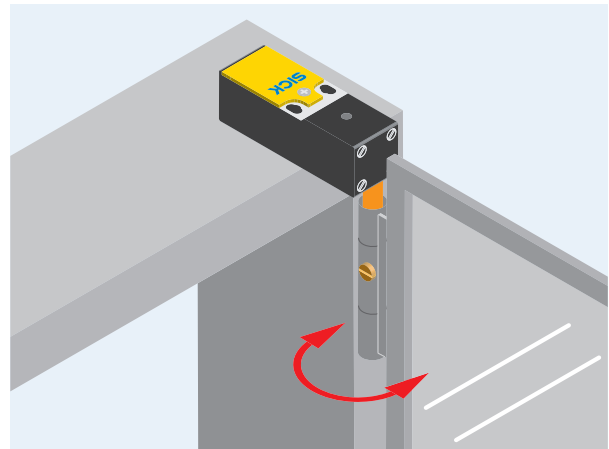
## Mounting examples

### 1. Safety position switch



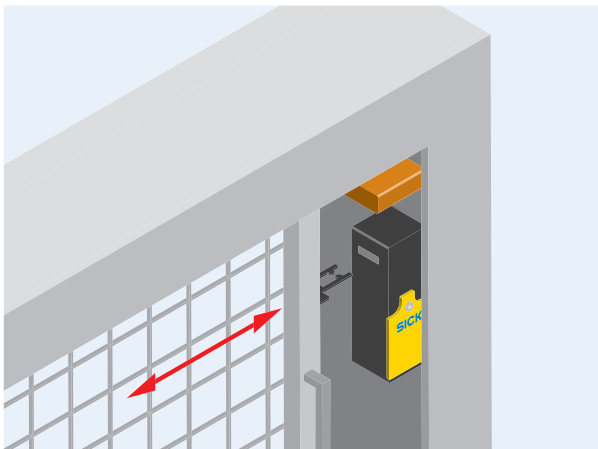
The safety position switch has to be mounted such that the required actuator travel will be achieved safely.  
Height and angle of the cam must be tuned to the safety switch.

### 2. Safety hinge switch



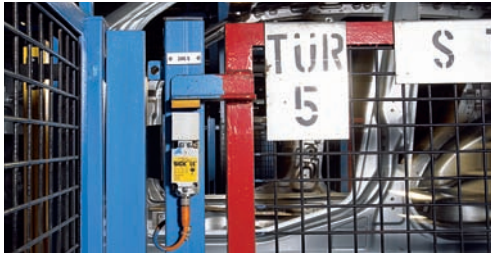
The shaft of the safety hinge switch and the door hinge must be connected, fixed and protected against position modification.

### 3. Safety switch with separate actuator



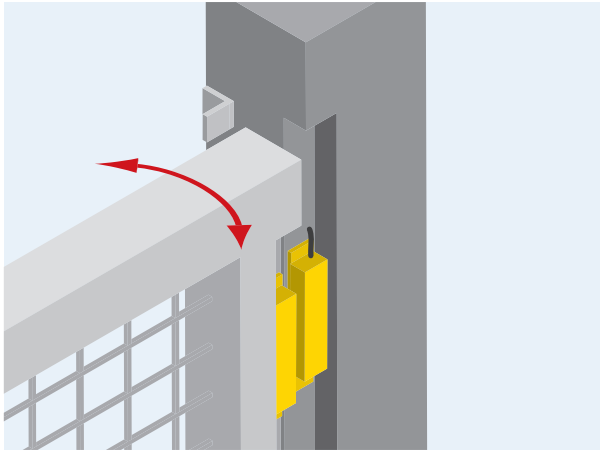
The actuator must be easily inserted into the actuating head of the safety switch. Safety switches shall not be used as a limit-stop. An additional limit-stop has to be mounted for the movable part of the guard.





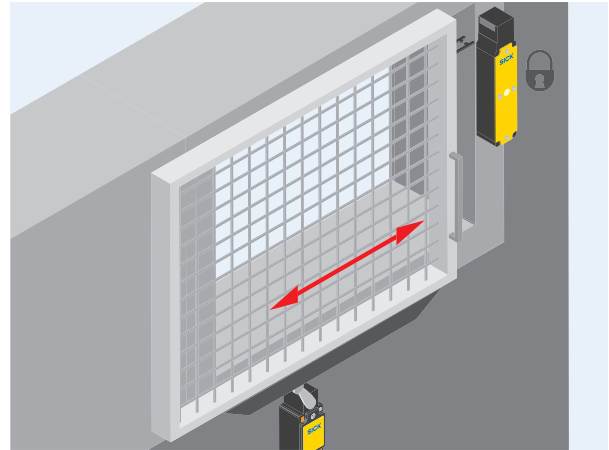
## Practical help applying the products

### 4. Magnetic safety switch



The mounting position of magnetic safety switches is arbitrary, but it has to be assured that the alignment marking of the read head and the actuator are in one line. An additional limit-stop has to be mounted for the movable part of the guard.

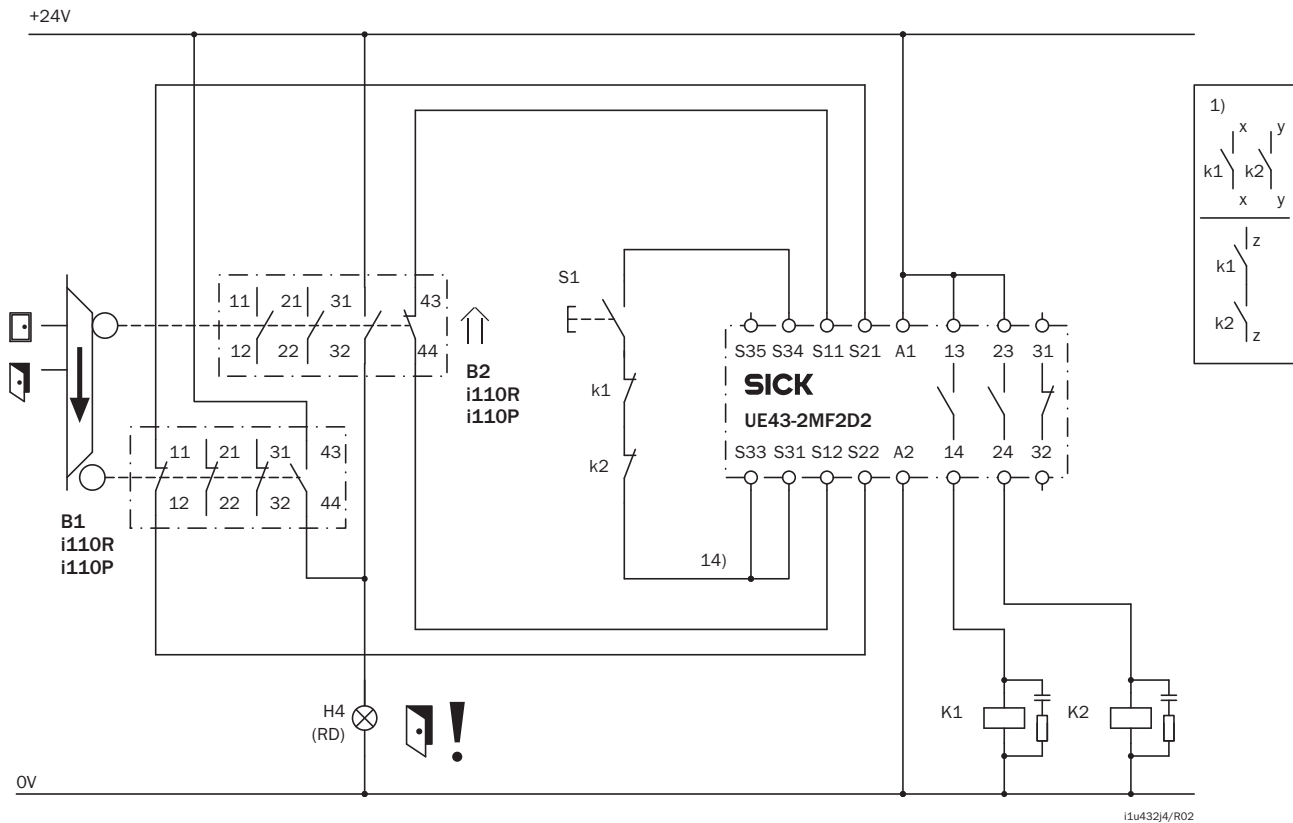
### 5. Safety locking device and safety position switch



To recognize mechanical errors a redundant and divers arrangement of two safety switches is required.

## Connection diagrams

### Safety door circuit with two i110R/i110P safety position switches on a UE43-2MF safety relay



#### Task

Safety door circuit with two i110R/i110P safety position switches on a UE43-2MF safety relay. Both safety position switches are attached to the same safety door.

Operating mode: with restart interlock and external device monitoring.

#### Operating characteristics

After the application of the supply voltage the system is ready for operation. If the safety door is closed and K1 and K2 are de-energised and functioning correctly, the OSSDs on the UE43-2MF are switched on by pressing and releasing the button S1. The outputs (contacts 13-14 and 23-24) energise the contactors K1 and K2. If the safety door is opened, both channels in the UE43-2MF are shutdown. The UE43-2MF de-energises the contactors K1 and K2.

#### Fault analysis

The erroneous behaviour of one of the contactors K1 or K2 will be detected. The shutdown function is retained. On manipulation (e.g. jamming) of the button S1 or a short-circuit in the button's circuit, the system will not re-enable the output current circuits. On the occurrence of a short-circuit on one of the contacts on one of the safety position switches, the safety function is retained. The failure will be detected the next time the safety door is actuated. On the occurrence of a cross-circuit between the safety position switches contacts, the overcurrent protection in the UE43-2MF will be triggered. On the mechanical failure of a safety position switch, the safety function is retained. The failure will be detected the next time the safety door is actuated. The H4 LED indicates that the safety door is open.

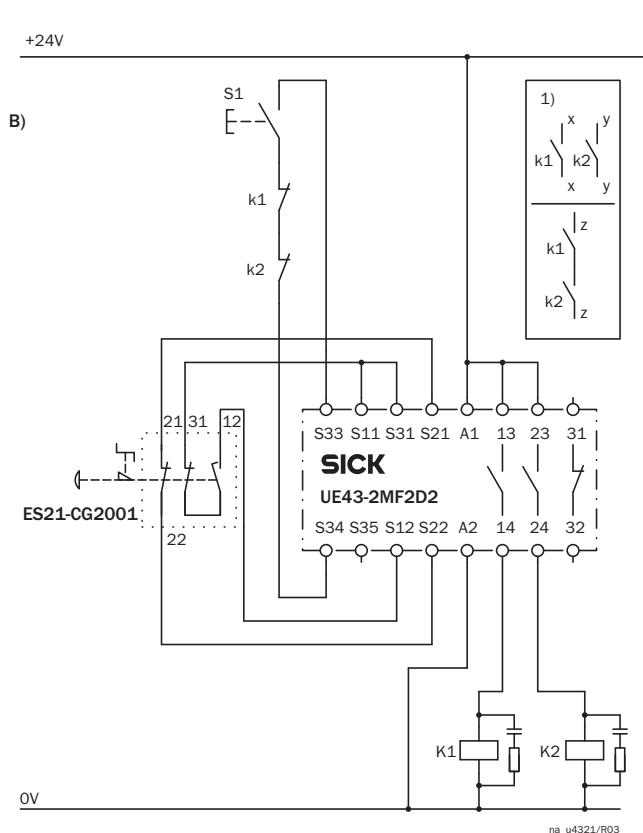
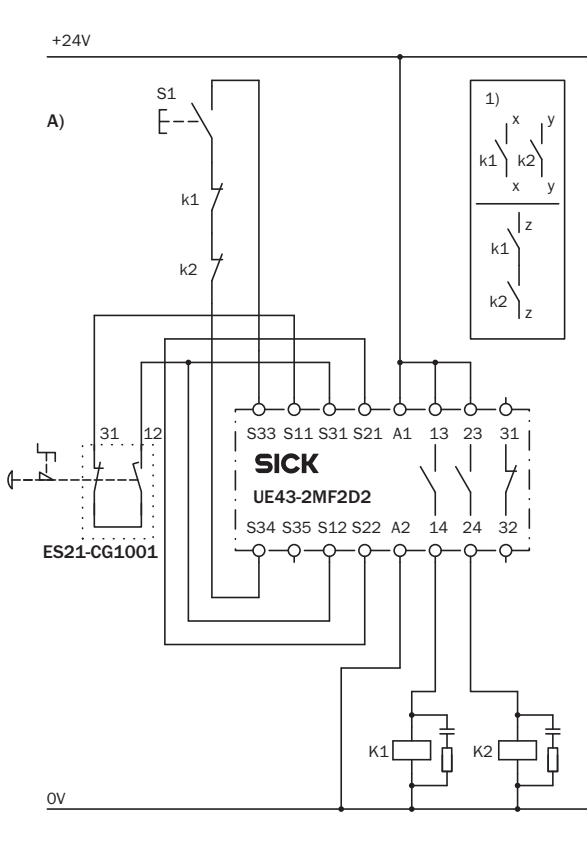
#### Notes

Take note of the operating instructions of the integrated devices.



# Practical help applying the products

## Emergency stop circuit with emergency stop pushbutton ES21 on UE43-2MF safety relay



### Task

Emergency stop circuit with emergency stop pushbutton ES21 on UE43-2MF safety relay.

Operating mode: with restart interlock and external device monitoring.

**A)** For single-channel emergency stop pushbuttons (switching element ES21-CG1001)

**B)** For dual-channel emergency stop pushbuttons (switching element ES21-CG2001)

### Operating characteristics

If the emergency stop pushbutton ES21 has not been actuated and K1 and K2 are de-energised and functioning correctly, the UE43-2MF is ready for switch on. The UE43-2MF is switched on by pressing and releasing the button S1. The outputs (contacts 13-14 and 23-24) energise the contactors K1 and K2. On the actuation of the emergency stop pushbutton, the UE43-2MF is shutdown and the contactors K1 and K2 are de-energised.

### Fault analysis

**A)** Cross-circuits in the emergency stop button circuit are not detected. The erroneous behaviour of one of the contactors K1 or K2 will be detected. The shutdown function is retained. On manipulation (e.g. jamming) or a cross-circuit on the button S1, the UE43-2MF will not re-enable the output current circuits.

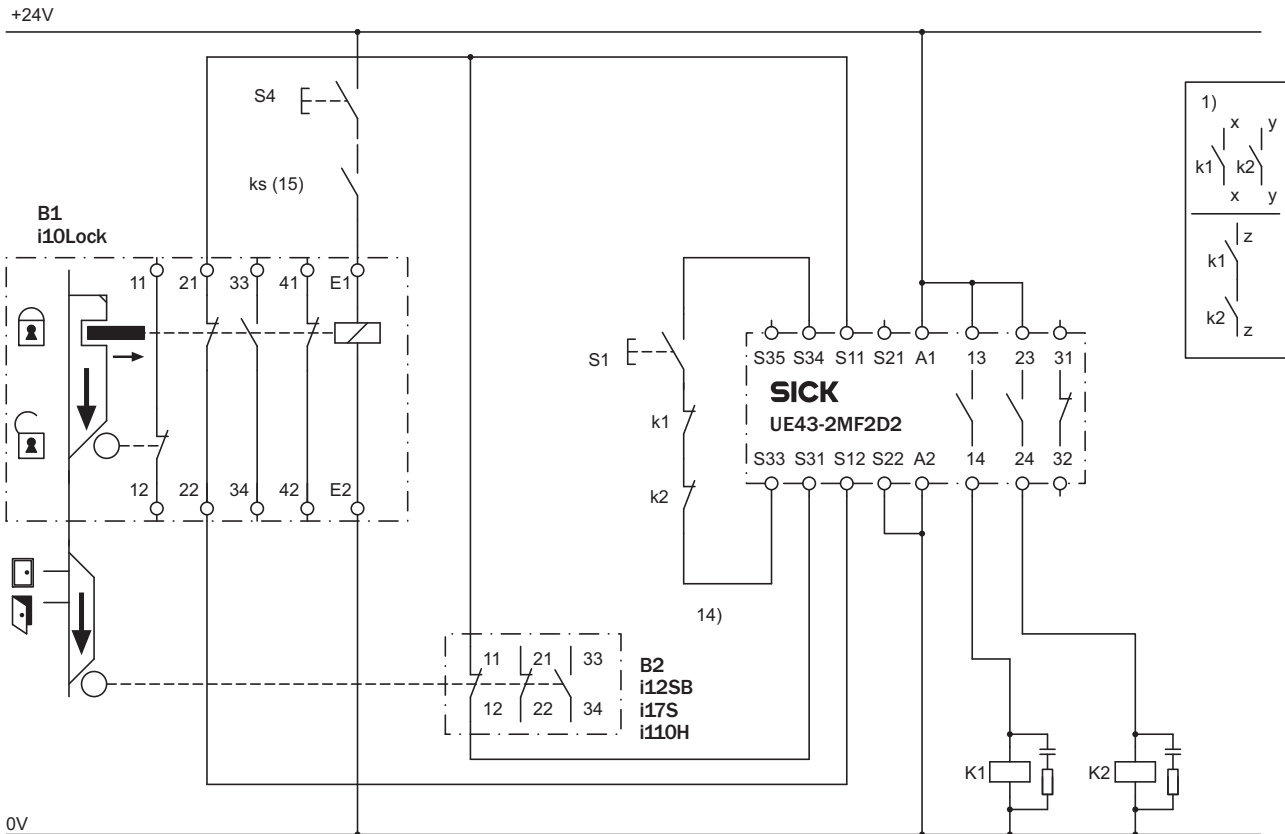
**B)** A short-circuit in an emergency stop button circuit will be detected and will trigger the inhibited state (lock-out) of the UE43-2MF. On a cross-circuit between the emergency stop button circuits, the overcurrent protection in the UE43-2MF will be triggered. The UE43-2MF shuts down. The erroneous behaviour of one of the contactors K1 or K2 will be detected. The shutdown function is retained. On manipulation (e.g. jamming) or a cross-circuit on the button S1, the UE43-2MF will not re-enable the output current circuits.

### Notes

Take note of the operating instructions of the integrated devices.

## Connection diagrams

### Safety door circuit with one safety switch with separate actuator and one safety locking device on UE43-2MF safety relay



i1u432a5/R01

#### Task

Safety door circuit with i12SB, i17S or i110H safety switch and i10 Lock safety locking device on UE43-2MF safety relay. Safety door mechanically locked and electrically unlocked. Operating mode: with restart interlock and external device monitoring.

#### Operating characteristics

The system is ready for operation after the application of the supply voltage. When the safety door is closed, it is mechanically locked. If the safety door is closed and K1 and K2 are de-energised and functioning correctly, the OSSDs on the UE43-2MF are switched on by pressing and releasing the button S1. The outputs (contacts 13-14 and 23-24) energise the contactors K1 and K2. If the safety door is unlocked by actuating the unlocking pushbutton S4, both channels on the UE43-2MF are shutdown. After the button S4 has been actuated, the safety door must be opened. The UE43-2MF de-energises the contactors K1 and K2. The unlocking must be interlocked with an additional enable ks (e.g. a standstill monitor).

#### Fault analysis

The erroneous behaviour of one of the contactors K1 or K2 will be detected. The shutdown function is retained. On manipulation (e.g. jamming) of the button S1 or a short-circuit in the button's circuit, the system will not re-enable the output current circuits. On the mechanical failure of the safety locking device or the safety switch, the safety function is retained. The failure will be detected the next time the safety door is actuated. On the occurrence of a short-circuit on one of the contacts on the safety switch or the safety locking device, the safety function is retained. The failure will be detected the next time the safety door is actuated. As cross-circuits cannot be detected, they must be prevented by the laying the wiring to the safety switch and safety locking device separately. In an emergency and in case of power failure, the safety locking device can be unlocked manually using the emergency unlocking.

#### Notes

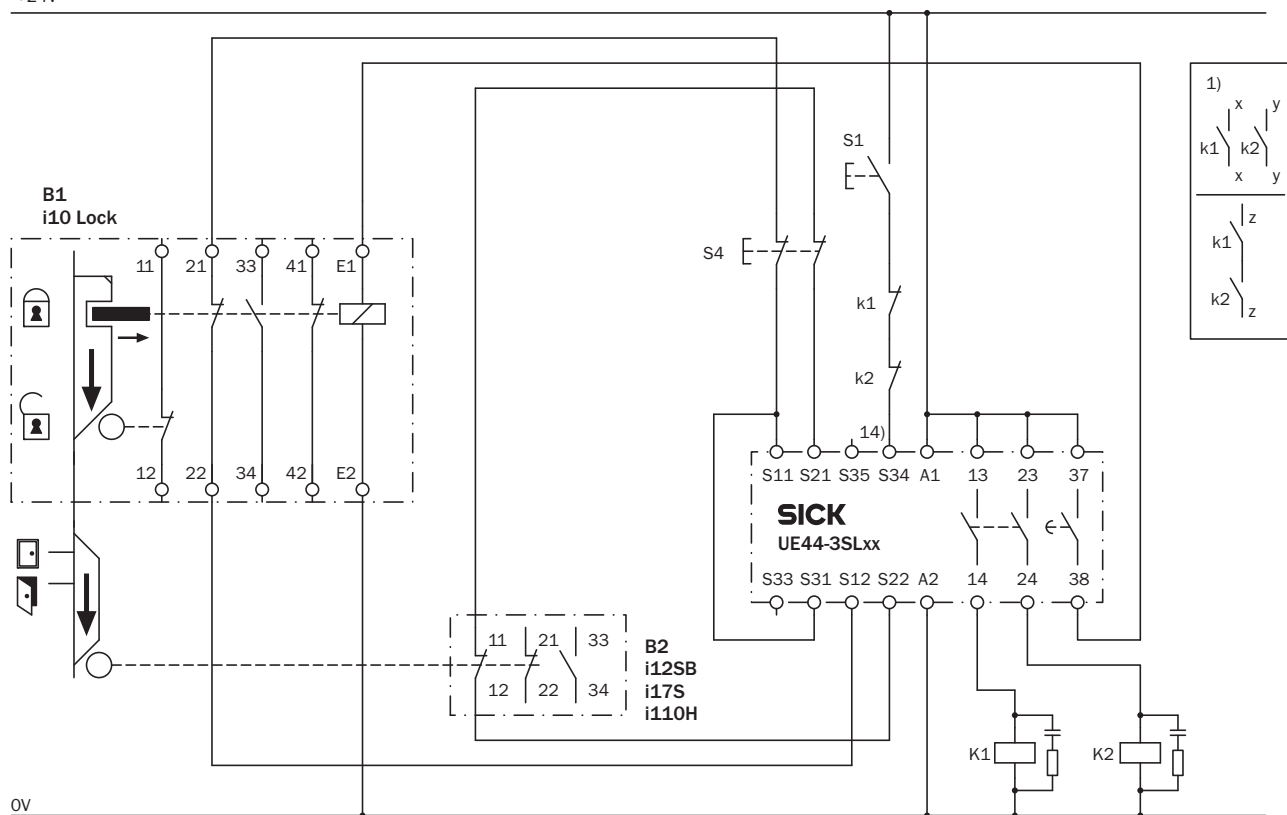
Take note of the operating instructions of the integrated devices.



# Practical help applying the products

## Safety door circuit with one safety switch with separate actuator and one safety locking device on a UE44-3SL safety relay

+24V



1tu433a9/R01

### Task

Safety door circuit with one i12SB, i17S or i110H safety switch and one i10 Lock safety locking device on a UE44-3SL safety relay.

Safety door mechanically locked and electrically unlocked.

Operating mode: with restart interlock and contactor monitoring.

### Operating characteristics

A power-up test is performed after the supply voltage is applied. After this test the system is ready for operation. The locking solenoid can now be operated using the contact 37-38 on the UE44-3SL. The safety door can now be actuated. If the safety door is closed and K1 and K2 are de-energised and functioning correctly, the contact 37-38 is opened when button S1 is pressed and released, the locking device is then activated. The outputs (contacts 13-14 and 23-24) then energise the contactors K1 and K2. To open the safety door, the button S4 must be actuated (request). As a result the UE44-3SL de-energises the contactors K1 and K2. After the time set has elapsed, the contact 37-38 is closed. The safety door can be opened.

### Fault analysis

The erroneous behaviour of one of the contactors K1 or K2 will be detected. The shutdown function is retained. On manipulation (e.g. jamming) of the button S1 or a short-circuit in the button's circuit, the system will not re-enable the output current circuits. On the mechanical failure of the safety locking device or the safety switch, the safety function is retained. In certain circumstances, the failure may still not have been detected the next time the safety door is actuated. On the occurrence of a short-circuit in the safety switch or in the safety locking device, the safety function is retained. In certain circumstances, the failure may still not have been detected the next time the safety door is actuated. On the occurrence of a cross-circuit between the safety switch and the safety locking device, the overcurrent protection in the UE44-3SL will be triggered. In an emergency and in case of power failure, the safety locking device can be unlocked manually using the emergency unlocking.





### Notes

Take note of the operating instructions of the integrated devices.

# Ordering information safety switches





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Emergency stop							
Designation	Type		Number of		Housing material	Remarks	Part number
			positive action normally closed contacts	normally open contacts			
Emergency stop pushbutton	ES21-SA10F1		2	1	Plastic	Surface mounting	6036148
Emergency stop pushbutton	ES21-SB10G1		2	1	Plastic	Panel mounting	6036492
Rope pull switch	i150-RP223		2	2	Metal	With emergency stop integrated	6024884
Rope accessory set	iE110-P10		-	-	-	2 rope grippers, 1 tensioner, 6 eye-bolts, 10 m rope, 1 allan key	5311137



# Ordering information safety switches

Safe position monitoring								
Designation	Type		Number of			Housing material	Remarks	Part number
			positive action normally closed contacts	normally open contacts	safe semiconductor outputs			
Inductive safety switch	IN40-E0101K		-	-	2	Plastic	No actuator necessary, two safety capable outputs	6027388
Connecting cable	DOL-1204-G10M		-	-	-	-	With cable socket, cable length 10 m	6010543
Safety position switch	i110-PA313		3	1	-	Metal	Roller plunger, slow action switching element	6025104
Safety position switch	i110-RA313		3	1	-	Metal	Turning lever, slow action switching element	6025107
Safety position switch	i10-PA213		2	1	-	Plastic	Roller plunger, slow action switching element	6025088
Safety position switch	i10-RA213		2	1	-	Plastic	Turning lever, slow action switching element	6025085

# Ordering information safety switches

further information see  
[www.mysick.com](http://www.mysick.com)

## Monitoring of movable guards

Designation	Type		Solenoid monitoring		Door monitoring	Housing material	Remarks	Part number
			Number of positive action N/C contacts	N/O contacts	Number of N/C contacts			
Safety locking device	i10-M0233 Lock		2	1	1	Plastic	Locking type: mechanical, locking force 1200 N, solenoid operating voltage 24 V DC	6022580
Actuator	iE10-S1		-	-	-	-	Straight, rigid, door radius min. 1000 mm	5306527
Safety locking device	i15-MM0123 Lock		1	0	2	Plastic	Locking type: mechanical, locking force 1500 N, solenoid operating voltage 24 V DC, actuating element head of metal	6034024
Actuator	iE15-S1		-	-	-	-	Straight, rubber-mounted, door radius min. 300 mm	5319975
Safety locking device	i14-M0213 Lock		2	1	0	Plastic	Locking type: mechanical, locking force 1200 N, solenoid operating voltage 24 V DC	6025060
Actuator	iE14-S2		-	-	-	-	Straight, rigid, door radius min. 160 mm	5311133
Safety hinge switch	i110-HA213		2	1	-	Metal	Length of the shaft 36.5 mm, hollow shaft	6025072
Safety hinge switch	i10-HB213		2	1	-	Plastic	Length of the shaft 85 mm, solid shaft	6025053





# Ordering information safety switches

Designation	Type		Number of safe semi-conductor outputs		Housing material	Remarks	Part number
Transponder safety switch T4000 Multi	Sensor T4000 DNAC		-		Plastic	-	6021912
	Evaluation unit T4000-1RCA04		-		Plastic	For 1 ... 4 read heads	6029947
	Actuator T4000-1 KBA		-		Plastic	-	5306531
	Connecting cable T4000-DNA10C		-		-	With cable socket, cable length 10 m	6034392
Transponder safety switch T4000 Compact	T4000-2 DRNAC		2		Plastic	Sensor with integrated evaluation unit	6022052
Actuator	T4000-1 KBA		-		Plastic	-	5306531
Connecting cable	DOL-1208-G10MA		-		-	With cable socket, cable length 10 m	6022152
Designation	Type		Number of		Housing material	Remarks	Part number
			normally closed	normally open contacts			
Magnetic safety switch	RE21-DA05		1	1	Plastic	Sensor and actuator, cable length 5 m	6035617

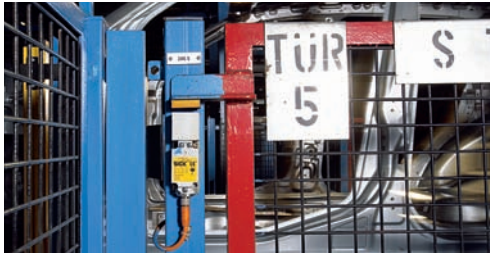
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# Ordering information safety switches







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Monitoring of movable guards (continuation)							
Designation	Type		Number of		Housing material	Remarks	Part number
			positive action normally closed contacts	normally open contacts			
Safety switch with separate actuator	i110-SA313		3	1	Metal	Tongue-operated actuator, retaining force 5 N	6025073
Actuator	iE110-S1		-	-	-	Straight, rigid, door radius min. 175 mm	5308758
	iE110-F1		-	-	-	Straight, fully flexible, door radius min. 60 mm	5308759
Safety switch with separate actuator	i12-SB213		2	1	Plastic	Tongue-operated actuator, retaining force 15 N	6025059
Actuator	iE12-S1		-	-	-	Straight, rigid, door radius min. 150 mm	5311131
	IE12-F1		-	-	-	Straight, semi flexible, door radius min. 60 mm	5308842
Safety switch with separate actuator	i16-SA203		2	0	Plastic	Tongue-operated actuator, retaining force 30 N	6025063
Actuator	IE16-S1		-	-	-	Straight, rigid, door radius min. 175 mm	5311128
	IE16-F1		-	-	-	Straight, fully flexible, door radius min. 60 mm	5311129
Safety switch with separate actuator	i17-SA213		2	1	Plastic	Tongue-operated actuator, retaining force 20 N	6025067
Actuator	iE17-S1		-	-	-	Straight, rigid, door radius min. 175 mm	5311130
	IE16-F1		-	-	-	Straight, fully flexible, door radius min. 60 mm	5311129








# Ordering information safe control solutions

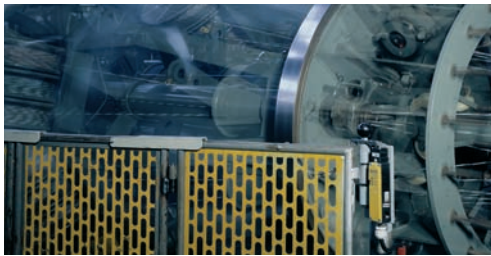
Safety relays																
Type	Input circuit (Number of channels)	Type of output	Number of enable current paths	Number of enable current paths with delayed on	Number of enable current paths with delayed off	Number of signalling current paths	Reactivation delay [ms]	Response delay time [s] (adjustable)	Switch off delay [s] (adjustable)	Supply voltage	Manual reset (monitored)	Automatic reset	Screw type terminals	Screw terminal connector	Part number	
UE23-2MF2D3		Single-channel	Re-lays	2	-	-	1	30 ... 80	-	-	24 V DC	✓	✓	✓	-	6026146
UE23-2MF2A4											115 V AC	✓	✓	✓	-	6026147
UE23-2MF2A3											230 V AC	✓	✓	✓	-	6026148
UE43-3AR2D2		Single- or dual-channel	Re-lays	3	-	-	1	10	-	-	24 V AC/DC	-	✓	✓	-	6034565
UE43-4AR2D2				4	-	-	0	10	-	-	24 V AC/DC	-	✓	✓	-	6034772
UE43-2MF2D2				2	-	-	1	25	-	-	24 V AC/DC	✓	✓	✓	-	6024893
UE43-2MF3D2				2	-	-	1	25	-	-	24 V AC/DC	✓	✓	✓	✓	6024894
UE43-3MF2D3		Single- or dual-channel	Re-lays	3	-	-	1	50	-	-	24 V DC	✓	✓	✓	-	6024897
UE43-3MF2A0											24 V AC	✓	✓	✓	-	6024898
UE43-3MF2A1											115 V AC	✓	✓	✓	-	6024899
UE43-3MF2A2											120 V AC	✓	✓	✓	-	6024900
UE43-3MF2A3											230 V DC	✓	✓	✓	-	6024901
T4000-1RCA02		-	Re-lays	2	-	-	2	max. 290	-	-	24 V DC	✓	✓	✓	-	6029946
UE44-3SL2D33		Single- or dual-channel	Re-lays	2	1	-	0	25	0.15 ... 3	-	24 V DC	✓	✓	✓	-	6024907
UE44-3SL2D330									1.5 ... 30	-	24 V DC	✓	✓	✓	-	6024909
UE45-3S12D33		Single- or dual-channel	Re-lays	2	-	1	0	25	-	0.15 ... 3	24 V DC	✓	✓	✓	-	6024911
UE45-3S12D330									1.5 ... 30	24 V DC	✓	✓	✓	-	6024913	

# Ordering information safe control solutions




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## Configuration via screwdriver: Modular safety controller Flexi Classic

Designation	Type		Input circuit (Number of channels)	Type of output	Number of enable current paths	Number of signalling current paths	Number of inputs	Cascadable	Delay time [s] (adjustable)	Supply voltage	Manual reset (monitored)	Automatic reset	Removable terminals	Part number
Main unit	UE410-MU3T5		Single- or dual-channel	PNP	4	-	4	-	0 ... 5	24 V DC	✓	✓	✓	6026136
	UE410-MU3T50								0 ... 50	24 V DC	✓	✓	✓	6026137
	UE410-MU3T300								0 ... 300	24 V DC	✓	✓	✓	6026138
Extension unit	UE410-XU3T5		Single- or dual-channel	PNP	4	-	4	✓	0 ... 5	24 V DC	✓	✓	✓	6032470
	UE410-XU3T300								0 ... 50	24 V DC	✓	✓	✓	6032471
	UE410-XU3T50								0 ... 300	24 V DC	✓	✓	✓	6032472
Input expansion unit	UE410-8DI3		Single- or dual-channel	-	-	-	8	✓	-	-	-	✓	6026139	
Relay module	UE410-2R03		-	Re-lays	2	1	1	-	-	-	-	-	✓	6026144
	UE410-4R03				2x2	2x1	2	-	-	-	-	-	-	✓
Safety relay	UE10-2FG3		-	Re-lays	2	2	2	-	-	-	-	-	✓	1043916
	UE12-2FG3				-	✓	-	-	-	-	✓	1043918		











## Ordering information safe control solutions

Designation	Type	Fieldbus	Type of output	Control outputs	Removable terminals	Part number	
Gateway	UE410-PRO3		PROFIBUS-DP	PNP	4	✓	6028407
	UE410-DEV3		DeviceNet	PNP	4	✓	6032469
	UE410-CAN3		CANopen	PNP	4	✓	6033111
	UE410-EN1		EtherNet/IP	PNP	4	✓	1042964
	UE410-EN3		Ethernet TCP/IP Modbus TCP	PNP	4	✓	1042193

# Ordering information safe control solutions

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## Configuration via software: Modular safety controller Flexi Soft

Designation	Type		Type of output	Number of enable current paths	Number of signalling current paths	Number of inputs	Cascadable	Supply voltage	EFI connection	Removable terminals	Remarks	Part number
Main unit	FX3-CPU000000		-	-	-	-	-	24 V DC	-	✓	Without memory plug and configuration connection cable	1043783
	FX3-CPU130002		-	-	-	-	-	24 V DC	✓	✓		1043784
Memory plug	FX3-MPL000001		-	-	-	-	-	24 V DC	-	-	-	1043700
Extension unit	FX3-XTIO84002		PNP	4	-	8	✓	24 V DC	-	✓	-	1044125
Input expansion unit	FX3-XTDI80002		-	-	-	8	✓	-	-	✓	-	1044124
Relay module	UE410-2R03		Relays	2	1	1	-	-	-	✓	-	6026144
	UE410-4R03			2x2	2x1	2	-	-	-	✓	-	6032677
Safety relay	UE10-2FG3		Relays	2	-	2	-	-	-	✓	-	1043916
	UE12-2FG3			✓	-	-	✓	-	-	-	-	1043918
Configuration connection cable	M8 x 4, SUB-D 9 pin, 2 m		-	-	-	-	-	-	-	-	-	6021195
Configuration connection cable (optional)	Converter RS-232 to USB, 35 cm		-	-	-	-	-	-	-	-	-	6035396



## Ordering information safe control solutions

Designation	Type	Fieldbus	Connection type configuration connection	Part number
Gateway	FX3-GPRO	PROFIBUS-DP	SUB-D 9 pole, female (RS-485)	1044075
	FX0-GENT	EtherNet/IP Ethernet TCP/IP	RJ45	1044072
	FX0-GMOD	Modbus TCP Ethernet TCP/IP	RJ45	1044073
	FX0-GPNT	PROFINET IO Ethernet TCP/IP	RJ45	1044074

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