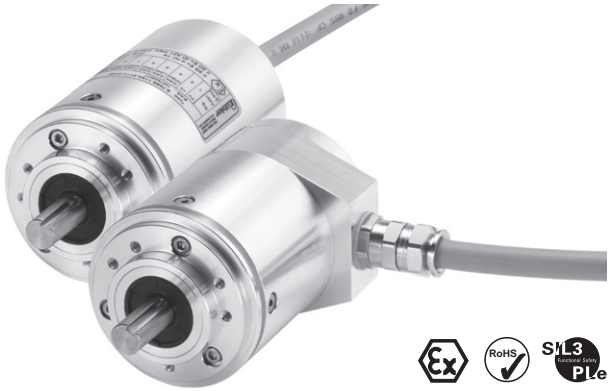
ATEX, optical | **Sendix 7014 SIL (Shaft)** | **SinCos**



Ex protection and Functional Safety in one device.

The incremental encoders Sendix 7014 SIL are perfectly suited for use in safety-related applications up to SIL3 according to DIN EN ISO 61800-5-2 or PLe to DIN EN ISO 13849.

In addition, these devices ensure Ex protection in a compact 70 mm housing out of seawater-resistant aluminium.

Ex approval | Safety-Lock™ | High rotational speedv | High IP value | High shaft load capacity | Shock / vibration resistant | Magnetic field proof | Short-circuit proof | Reverse polarity protection | Optical sensor | Seawater-resistant

Functional Safety

- Certified by the German Institute for Occupational Safety (IFA)
- Suitable for SIL3 applications acc. to DIN EN ISO 61800-5-2
- Suitable for PLe applications acc. to DIN EN ISO 13849
- With incremental SinCos tracks

ATEX compliant

- "Flameproof-enclosure" version: approved for zone 1, 2 and 21, 22
- Zone 1, 2 and 21, 22: Ex II 2G Ex d IIC T6 and Ex II 2D Ex tD A21 IP6X T85°C

Order code Shaft version

8.7014SIL	.	1	X	2	X	.	XXXX	.	XXXX
Type		a	b	c	d		e		f

a *Flange*
1 = clamping-synchronous flange ø 70 mm, IP67

b *Shaft (ø x L)*
1 = 12 x 25 mm, with keyway for 4 x 4 mm key
2 = 10 x 20 mm, with flat

c *Interface / Power supply*
2 = SinCos / 10 ... 30 V DC

d *Type of connection*
1 = axial cable (2 m PUR)
2 = radial cable (2 m PUR)
A = axial cable (length > 2 m)
B = radial cable (length > 2 m)

e *Pulse rate*
1024, **2048**

f *Cable length in dm* [1)]
0050 = 5 m
0100 = 10 m
0150 = 15 m

optional on request
- special cable length

Further accessories can be found in the Accessories section or in the Accessories area of our website at: www.kuebler.com/accessories.
Additional connectors can be found in the Connection Technology section or in the Connection Technology area of our website at: www.kuebler.com/connection_technology.
You will find an overview of our systems and components for Functional Safety under www.kuebler.com/safety

1) Not applicable with connection types 1 and 2

ATEX, optical | Sendix 7014 SIL (Shaft) | SinCos

Explosion protection

EC type-examination certificate	PTB09 ATEX 1106 X
Category (gas)	Ex II 2G Ex d IIC T6
Category (dust)	Ex II 2D Ex tD A21 IP6X T85°C
Directive 94/9 EC	EN 60079-0; DIN EN 60079-1 EN 61241-0; DIN EN 61241-1

Mechanical characteristics

Max. speed		continuous 6 000 min^{-1}
Starting torque		< 0.05 Nm
Moment of inertia		4.0 x 10^{-6} kgm^2
Load capacity of shaft	radial axial	80 N 40 N
Weight		approx. 0.6 kg
Protection EN 60 529		IP67
Working temperature range		-40°C ... +60°C
Materials	shaft flange / housing cable	stainless steel seawater-resistant Al, type AlSiMgMn (EN AW-6082) or stainless steel PUR
Shock resistance acc. EN 60068-2-27		2500 m/s^2, 6 ms
Vibration resistance acc. EN 60068-2-6		100 m/s^2, 55 ... 2000 Hz

General electrical characteristics

Power supply	10 ... 30 V DC
Current consumption (w/o output load)	max. 45 mA
Reverse polarity protection for power supply (U_B)	yes
CE compliant acc. to	EN 61000-6-2, EN 61000-6-4 and EN 61000-6-3
RoHS compliant acc. to	EU guideline 2002/95/EG

Output SinCos (A / B)

Max. frequency -3dB	400 kHz
Signal level	1 Vpp (± 20%)
Short circuit proof	yes [1]

1) Short-circuit with 0V or output, only one channel at a time, supply voltage correctly applied

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Terminal assignment

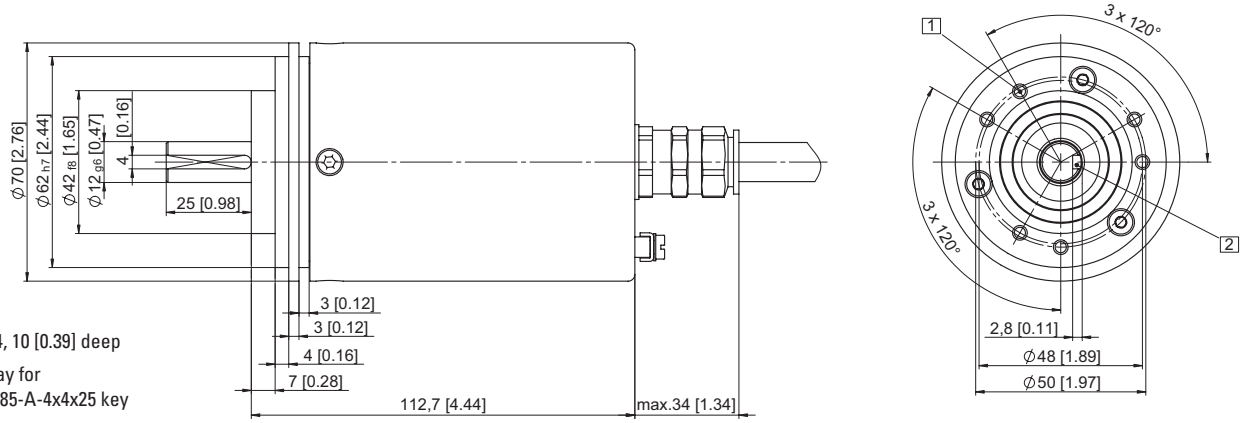
Interface	Type of connection	Cable								
2	1, 2, A, B	Signal:	GND	+V	A	$\overline{A}$	B	$\overline{B}$	PE	PE
		Cable marking:	6	1	7	8	9	10	YE/GN	Schirm

+V: Encoder power supply +V DC
GND: Encoder Ground GND (0V)
PE: Protective earth

A, $\overline{A}$: Incremental output channel A
B, $\overline{B}$: Incremental output channel B

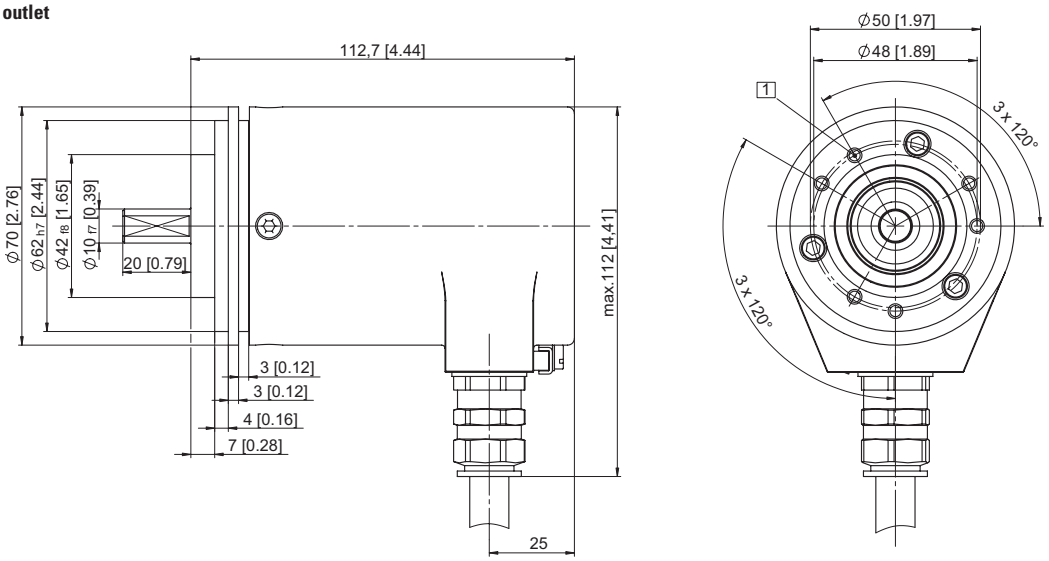
Dimensions

Shaft type 1 with axial cable outlet



1 6 x M4, 10 [0.39] deep
2 Keyway for DIN6885-A-4x4x25 key

Shaft type 2 with radial cable outlet



1 6 x M4, 10 [0.39] deep