

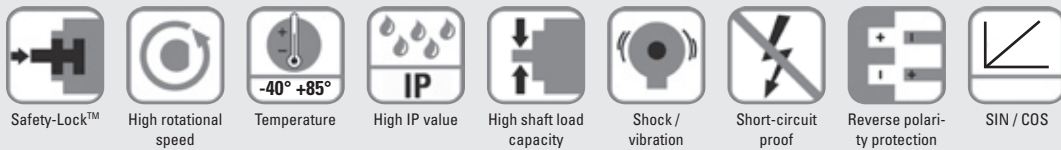
Rotary Measuring Technology

Absolute Singleturn Encoders **Sendix absolut** **Typ 3651/ 3671 (Shaft / Hollow shaft)** **analogue**



Thanks to their different interfaces and measurement ranges, the Sendix 3651 and Sendix 3671 singleturn encoders, in shaft and hollow shaft versions, are particularly flexible in use. A green and a red LED, acting as reference point and fault indicators, ensure easy installation and troubleshooting.

Protected up to IP 69K, shock-tested and resistant against extreme temperature variations, the Sendix are suitable even for the most demanding outdoor uses.



Safe operation

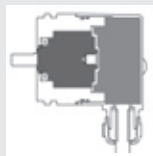
- Contactless measuring system for long-life non-wear applications
- Rugged die cast housing and IP protection up to 69K for an exceptional tightness
- High shock and vibration resistance for an exceptional robustness

Compact and effective

- Outside diameter of only 36 mm
- The shaft version can be mounted on a very small radius, with a diameter of only 26 mm.
- The hollow shaft version is fitted with a blind hole with a diameter of up to 10 mm. It can be mounted according to the needs, with a torque stop pin or a stator coupling.

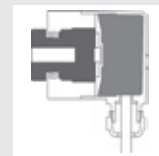
Safety-Lockplus™

IP69k protection on the flange side, robust bearing assemblies with interlocking bearings, mechanically protected shaft seal



Sensor-Protect™

Fully encapsulated electronics, separate mechanical bearing assembly



Order code Shaft version

8.3651 . XXXX . XXXX

1 Flange
2 = Synchro flange

3 Output circuit / Power supply
3 = Current output, 18 ... 30 V DC
4 = Voltage output, 18 ... 30 V

5 Measurement range
1 = 1 x 360°
2 = 1 x 180°
3 = 1 x 90°
4 = 1 x 45°

7 Option 1
1 = Count direction cw*
2 = Count direction ccw*

Preferred types are underlined

2 Shaft (ø x L)
3 = ø 6 x 12,5 mm
5 = ø 6,35 x 12,5 mm
6 = ø 8 x 12,5 mm

4 Type of connection
2 = Cabel radial (1 m PUR)
4 = M12 connector radial

6 Output
3 = 4 ... 20 mA
4 = 0 ... 10 V

8 Option 2
1 = IP67
2 = IP69K

Corresponding mating connector:
05.B-8151-0/9

Seawater resistant version on request

Order code Hollow shaft

8.3671 . XXXX . XXXX

1 Flange
2 = with torque stop
5 = with stator coupling

3 Output circuit / Power supply
3 = Current output, 18 ... 30 V DC
4 = Voltage output, 18 ... 30 V

5 Measurement range
1 = 1 x 360°
2 = 1 x 180°
3 = 1 x 90°
4 = 1 x 45°

7 Option 1
1 = Count direction cw*
2 = Count direction ccw*

Preferred types are underlined

2 Hollow shaft
2 = ø 6 mm
3 = ø 6,35 (1/4")
4 = ø 8 mm
6 = ø 10 mm

4 Type of connection
2 = Cabel radial (1 m PUR)
4 = M12 connector radial

6 Output
3 = 4 ... 20 mA
4 = 0 ... 10 V

8 Option 2
1 = IP67
2 = IP69K

Corresponding mating connector:
05.B-8151-0/9

Seawater resistant version on request

* cw = increasing code values when shaft turning clockwise (cw).
Top view on shaft.

Suitable accessories:

– further cables and connectors, also pre-assembled, can be found in the Connection Technology section.
– further mounting attachments and stator couplings can be found in the Accessories section.

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Mechanical characteristics:	
Maximum speed	6000 min ⁻¹
Starting torque	< 0,06 Nm
Shaft load capacity	radial 40 N axial 20 N
Weight	ca. 0.2 kg
Protection to EN 60 529/DIN 40050-9	IP 67 / IP 69k
EX approval for hazardous areas	optional Zone 2 and 22
Working temperature range	-40 °C ... +85 °C
Materials	Shaft/Hollow shaft stainless steel Flange Aluminium Housing Zinc die-cast Cable PUR
Shock resistance acc. to DIN-IEC 68-2-27	5000 m/s ² , 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6	300 m/s ² , 10 ... 2000 Hz
Permanent shock resistance to DIN-IEC 68-2-29	1000 m/s ² , 2 ms
Vibration (broad-band random) to DIN-IEC 68-2-64	5 ... 2500 Hz, 100 m/s ² - rms

Electrical characteristics current interface 4 ... 20 mA

Sensor	
Supply voltage	18 ... 30 V DC
Current consumption (w/o output load)	typ. 32 mA, max. 38 mA
Reverse polarity protection at power supply (Ub)	yes
Measuring range	45°, 90°, 180° or 360°
Resolution	12 Bit
Linearity	< 1° (360 ° measurement range)
Repeat accuracy (25 °C)	< 0,1° (360 ° measurement range)
Status LED	Red sensor break detection, monitoring of power supply Green reference point is lightening at cw: betw. 0° and 1° at ccw: betw. 0° and -1°

Current loop

Output load	max. 900 Ohm at 24 V DC
Setting time:	< 1 ms (R _{load} = 400 Ohm, 25°C)
Short-circuit proof outputs	
When the supply voltage is correctly applied, then output to output is short-circuit protected. But not output to 0 V or to +Ub. Supply voltage and sensor output signal are not galvanically isolated.	

General characteristics
RoHS compliant acc. to EU guideline 2002/95/EG
Conforms to CE requirements acc. to EN 61000-6-2, EN 61000-6-4, EN 61000-6-3 and EN 61000-4-8 (behaviour under magnetic influence).

Electrical characteristics voltage interface 0 ... 10 V

Sensor	
Supply voltage	18 ... 30 V DC
Current consumption (w/o output load)	typ. 29 mA, max. 35 mA
Reverse polarity protection at power supply (Ub)	yes
Measuring range	45°, 90°, 180° or 360°
Resolution	12 Bit
Linearity	< 1° (360 ° measurement range)
Repeat accuracy (25 °C)	< 0,1° (360 ° measurement range)

0 ... 10 V Voltage output

Current output	max. 10 mA
Setting time	< 1 ms (R _{last} ≥ 1 KOhm, 25°C)
Short-circuit proof outputs	
When the supply voltage is correctly applied, then output to output is short-circuit protected. But not output to 0 V or to +Ub. Supply voltage and sensor output signal are not galvanically isolated.	
Status LED	Green reference point is lightening at cw: betw. 0° and 1° at ccw: betw. 0° and -1°

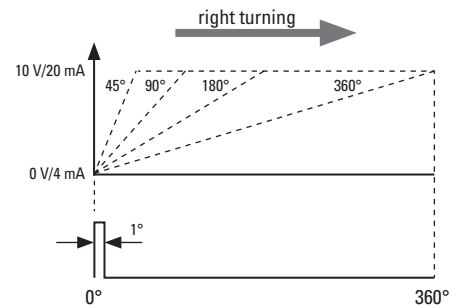
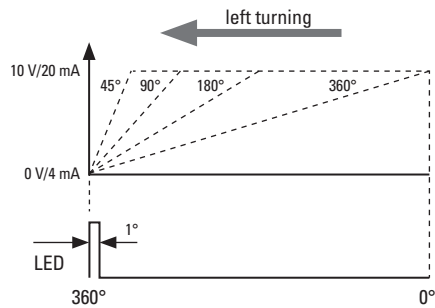
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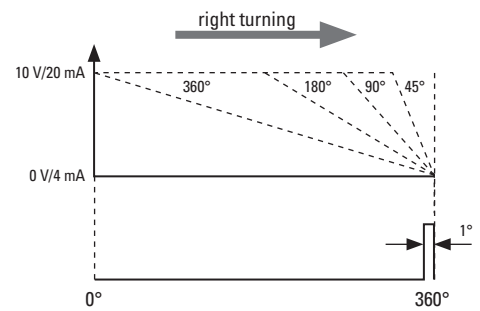
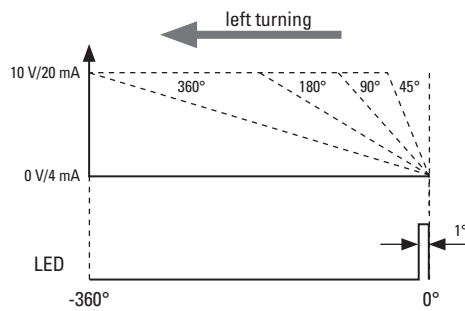
Example (output signal profile)

Measurement range 45° / 90° / 180° / 360°

Version cw

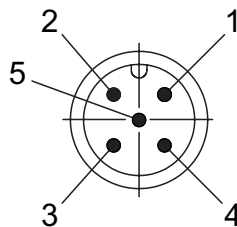


Version cww



Terminal assignment

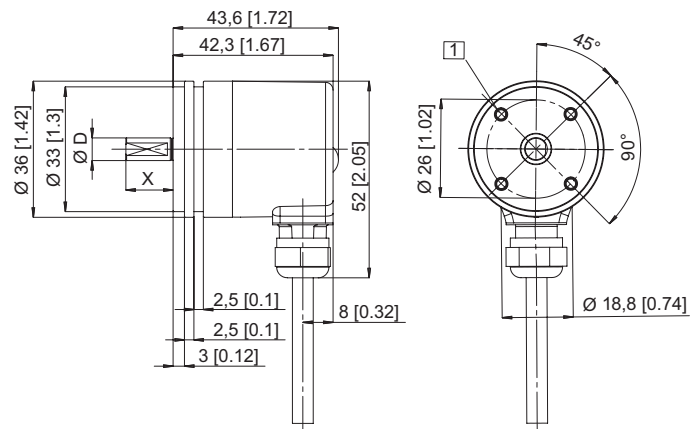
Sig.:	0V	+Ub	+I	-I
Col.:	WH	BN	GN	YE
M12/Pin:	3	2	4	5



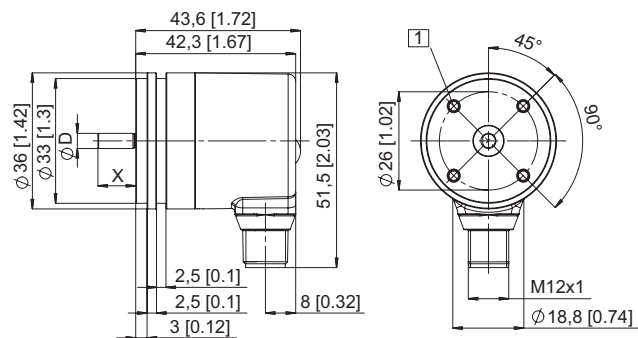
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Dimensions shaft version:
Synchro flange, \varnothing 36 mm

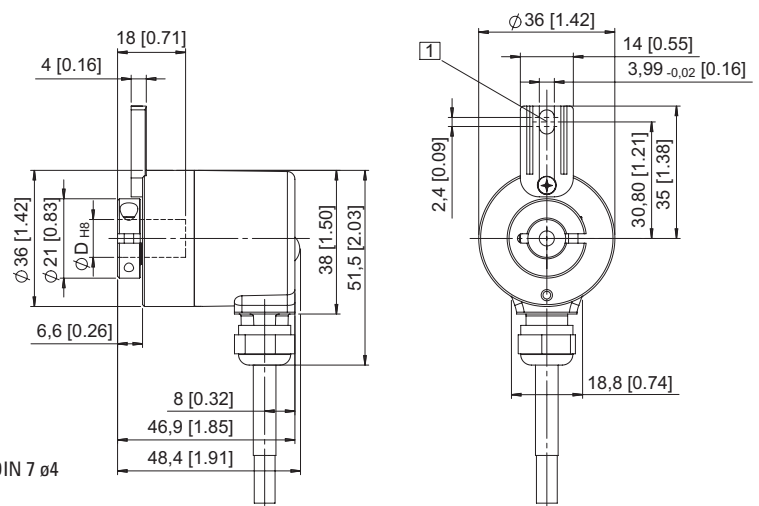


1 M3, 6 [0,24] deep



1 M3, 6 [0,24] deep

Dimensions hollow shaft version:
Flange with long torque stop, \varnothing 36 mm



1 Torque stop slot,
 Recommendation: cyl. pin. acc. DIN 7 \varnothing 4

With stator coupling, \varnothing 36 mm

