

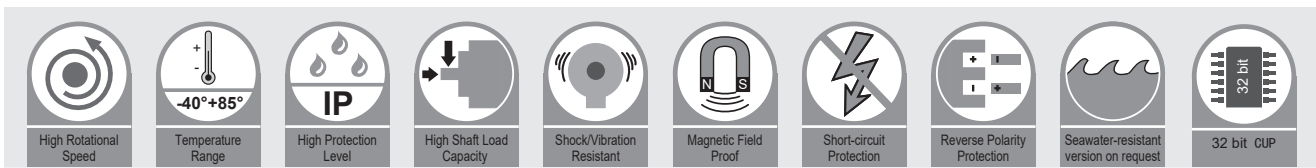
Absolute Encoders — Singleturn

Miniature Magnetic SSI

W52-36SX / 36HX



- Outer diameter 36 mm, ideal for use in tight space
- Magnetic sensor technology offer a resolution of up to 16 bits
- High protection up to IP 69K
- Cathodic corrosion protection (>720 hrs salt sprayresistance)
- Wide temperature range from - 40°C up to +85°C



Highlight:

- High quality mechanical structure
- Magnetic sensor technology
- Free from the influence of magnetic field
- SSI interface, with SET and DIR functions

Mechanical characteristics

Max. Speed	Industrial type: 12000 rpm; Heavy-duty and stainless steel type: 6000 rpm		
Starting torque	≤ 3 Ncm (at 20°C)		
Moment of inertia	≤ 20 gcm ²		
Shaft load capacity	Industrial type: Axial 40 N; Radial 110 N Heavy-duty type: Axial 180 N; Radial 180 N Stainless steel type: Axial 300 N; Radial 300 N		
Weight	approx. 0.105 kg		
Protection acc. to EN 60 529	IP 65, optional IP 69K		
Working temperature range	- 40°C ... + 85°C; (- 30°C ... + 70°C with cable outlet)		
Materials	Shaft: Stainless steel (V2A) Flange: Aluminum or stainless steel Housing: Steel or stainless steel		
Shock resistance acc. to EN 60068-2-29	Industrial type: ≤ 1000 m/s ² (6 ms) Heavy-duty and stainless steel type: ≤ 3000 m/s ² (6 ms)		
Vibration resistance acc. to EN 60068-2-6	Industrial type: ≤ 100 m/s ² (10 Hz ... 1000Hz) HD and stainless steel type: ≤ 300 m/s ² (10 Hz ... 1000Hz)		
Mechanical lifetime	40/60	40/80	40/110
(10 ⁸ revolutions with Fa/Fr)	247	104	40

Interface characteristics SSI

Power supply	5 ... 30 VDC
Current consumption	50 mA
Interface	SSI
Output driver	RS 422
Clock frequency	100 kHz ... 2 MHz
Monoflop time	> 25 μs
Start-up time	< 250 ms
Code	Gray/Binary
Singleturn resolution	Max. 16 bits
Function	Preset ⁽¹⁾ ; count direction ⁽²⁾
Short circuit protection	yes
Reverse polarity protection	yes
UL approval	E468583
CE compliant acc. to	EN 61000-6-4; EN61000-6-2

Additional incremental output (A/B/Z)

Output	RS-422	HTL
Resolution	1024, 2048, 4096, 8192, 16384 ppr	
Output channel	A, /A; B, /B; Z, /Z	
Type of output	90° ± 4.5° Square pulse	
Output frequency	Max. 200 kHz	
Signal level	high: Min. 2.5 V	Min. +U - 2 V
	Low: Max. 0.5 V	Max. 0.5 V
Short circuit protection	yes	yes

- (1) The encoder can be set to zero at any position by means of a HIGH signal on the SET input. Once the SET function has been triggered, the encoder requires an internal processing time of typ. 300ms; during this time the power supply must not be switched off.
- (2) The counter direction can be changed by means of a HIGH signal on the DIR input. If a LOW signal on the DIR input, output values are counted increase when the shaft is turning clockwise. And if a HIGH signal on the DIR input, output values are counted increase when the shaft is turning counter-clockwise.

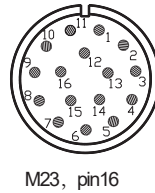
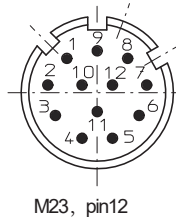
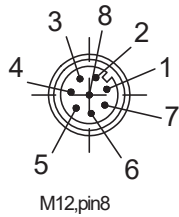
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Terminal assignment

Signal	Ub	GND	+C	-C	+D	-D	SET	DIR	A	/A	B	/B	Z	/Z	Shield
Cable (Colour)	BN	WH	GN	YE	GY	PK	BU	RD	BK	VT	GY/PK	RD/BU	WH/GN	BN/GN	Shield
M12 connector, 8-pin	2	1	3	4	5	6	7	8	-	-	-	-	-	-	
M23 connector, 12-pin	2	1	3	4	5	6	7	8	9	10	11	12	-	-	
M23 connector, 16-pin	11	12	2	1	3	4	9	8	5	6	7	10	13	14	



Order Code **W52-36SN-X X X X-G XX 00 X**
 Shaft version Type **h a b c d e f g**

- a** Flange
 3 = 36mm Synchro flange, IP65
 5 = 58mm Synchro flange, IP65
 A = 42mm Synchro flange, IP65
 7 = 58mm Clamping flange, IP65
- b** Shaft
 2 = Ø 6 x 11.5 mm
 5 = Ø 10 x 20 mm
- c** Interface / Power supply *
 2 = SSI / 5 ... 30 VDC
 7 = SSI / 5 ... 30 VDC
 RS422 1024 ppr (with channel Z)
 8 = SSI / 5 ... 30 VDC
 HTL 1024 ppr (with channel Z)
 9 = SSI / 5 ... 30 VDC
 RS422 2048 ppr (with channel Z)
 A = SSI / 5 ... 30 VDC
 HTL 2048 ppr (with channel Z)
- d** Type of connection
 1 = Axial cable, 1 m
 2 = Radial cable, 1 m
 3 = M12 connector, axial
 5 = M12 connector, radial
 7 = M23, 12pin connector, radial
 9 = M23, 16pin connector, radial**
- e** Code
 G = Gray
 B = Binary
- f** Singleturn resolution
 12 = 12 bit
 13 = 13 bit
 16 = 16 bit
- g** Function
 1 = No additional function
 2 = SET button***
- h** Type
 N = Industrial type
 H = Heavy-duty type****
 S = Stainless steel type*****

*Other resolution on demand. **Only for industrial (type N) products with incremental output. ***Only used for industrial (type N) products with no incremental output and radial outlet direction
 ****When the type is H, the flange mode can only be 3, the shaft diameter mode is 5, and the protection level is IP69K.
 *****When the type is S, the flange mode can only be A and 7, the shaft diameter mode is 5, and the protection class is IP69K.

Order Code **W52-36HN-X X X X-G XX 00 X**
 Hollow Shaft Type **a b c d e f g**

- a** Flange
 3 = With short single arm spring
 4 = With long single arm spring
 8 = With D-wing spring coupling
- b** Hollow shaft (blind hollow shaft)
 2 = Ø 6 mm
 4 = Ø 8 mm
 5 = Ø 10 mm
 6 = Ø 12 mm
- c** Interface / Power supply *
 2 = SSI / 5 ... 30 VDC
 7 = SSI / 5 ... 30 VDC
 RS422 1024 ppr (with channel Z)
 8 = SSI / 5 ... 30 VDC
 HTL 1024 ppr (with channel Z)
 9 = SSI / 5 ... 30 VDC
 RS422 2048 ppr (with channel Z)
 A = SSI / 5 ... 30 VDC
 HTL 2048 ppr (with channel Z)
- d** Type of connection
 1 = Axial cable, 1 m
 2 = Radial cable, 1 m
 3 = M12 connector, axial
 5 = M12 connector, radial
 7 = M23, 12pin connector, radial
 9 = M23, 16pin connector, radial**
- e** Code
 G = Gray
 B = Binary
- f** Singleturn resolution
 12 = 12 bit
 13 = 13 bit
 16 = 16 bit
- g** Function
 1 = No additional function
 2 = SET button***

*Other resolution on demand. **Only for industrial (type N) products with incremental output. ***Only used for industrial (type N) products with no incremental output and radial outlet direction

Abs. Encoder - ST

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Miniature Magnetic SSI

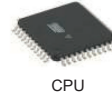
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Technology Introduction

Absolute magnetoelectric single coil technology

After years of technological development, the performance of magneto-electric encoders has reached the same level as optical encoders. This technology leap is based on a new generation of sensor systems. Products use custom Hall sensors and a powerful 32-bit microprocessor that can perform complex signal processing in a matter of microseconds. The application of these two technologies greatly improves the resolution, accuracy and data response time of the product.

- Product resolution up to 16 bit
- Accuracy up to $\pm 0.0878^\circ$
- Internal data refresh time $< 50 \mu\text{s}$



Accessories

Connection technology

Connector, self-assembly

M12 self-assembly

E1-1208-0101

Mounting accessory for shaft version

Coupling

Bellows coupling (aluminium alloy)
 $\varnothing 25\text{mm}$ for shaft 6 mm

T1-6000-2525-0606

Mounting accessory for hollow shaft version

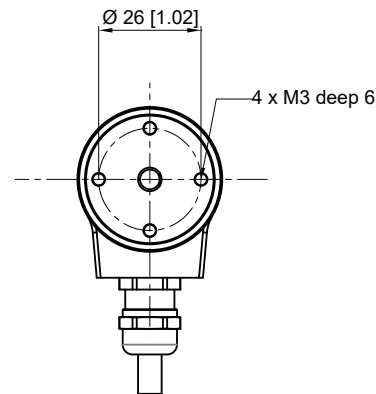
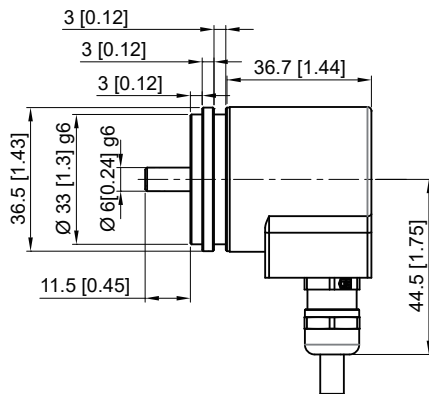
Stator coupling

Further accessories and exact order code
 please refer to the accessories section.

Dimensions

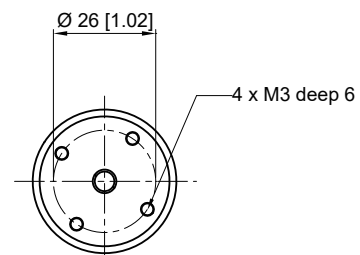
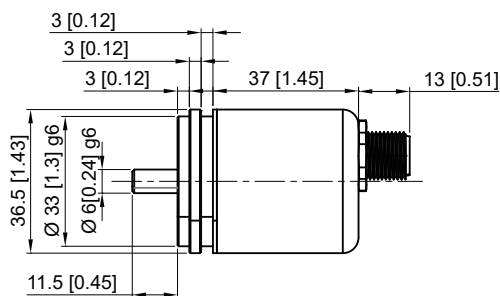
Shaft encoder

type of flange3, $\varnothing 6$ mm shaft, type of connection 2



Shaft encoder:

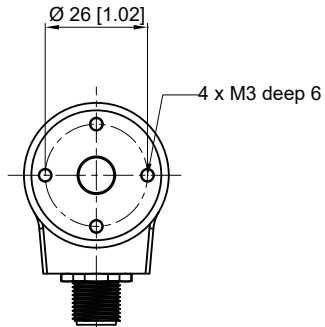
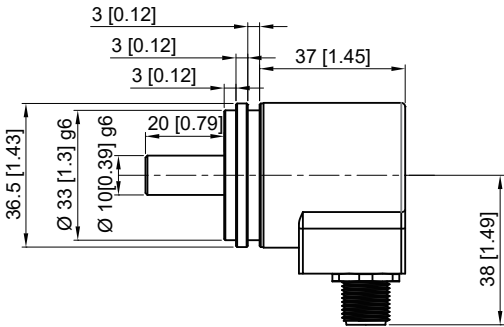
type of flange3, $\varnothing 6$ mm shaft, type of connection 3



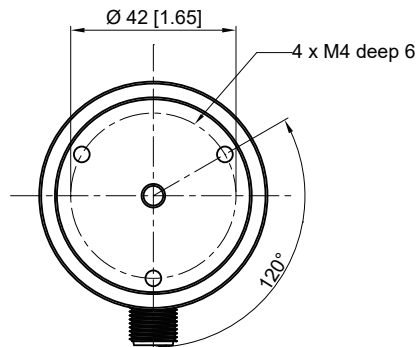
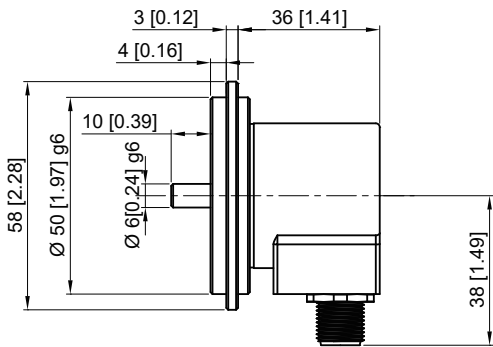
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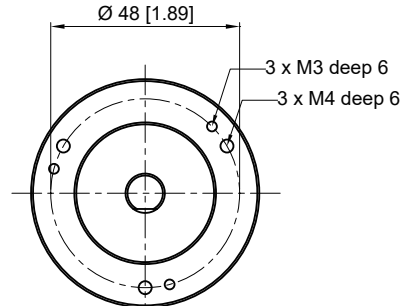
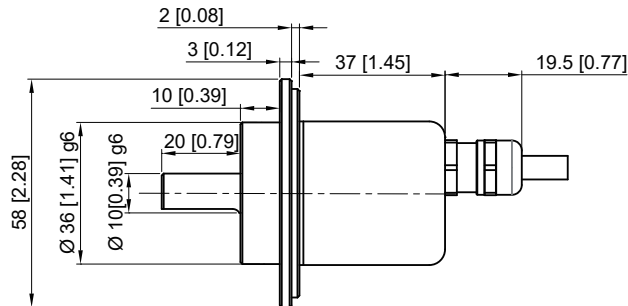
Shaft encoder:
type of flange3, Ø 10 mm shaft, type of connection 5



Shaft encoder:
type of flange5, Ø 6 mm shaft, type of connection 5



Shaft encoder:
type of flange7, Ø 10 mm shaft, type of connection 1



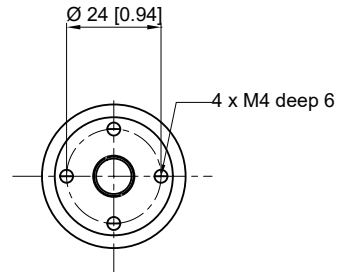
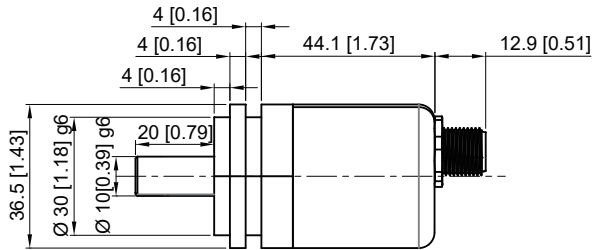
Abs. Encoder - ST

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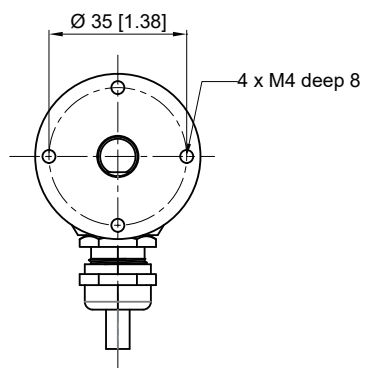
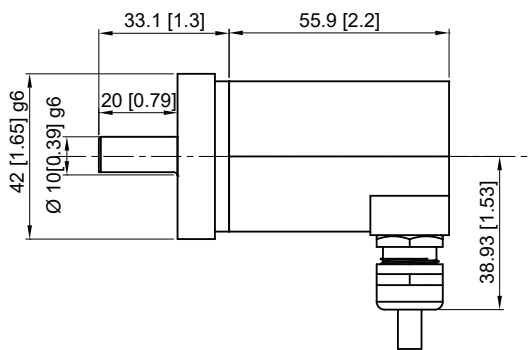
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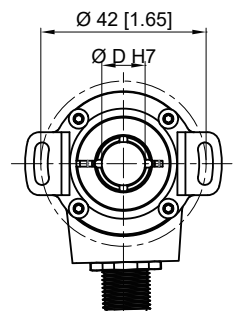
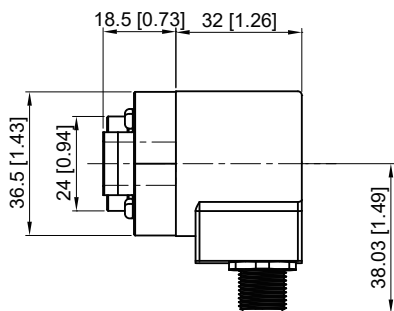
Heavy-duty shaft encoder:
type of flange3, Ø 10 mm shaft, type of connection 3



Sainless steel encoder IP68+IP96K:
type of flangeA, Ø 10 mm shaft, type of connection 2



Hollow shaft encoder:
type of flange 8, type of connection 5



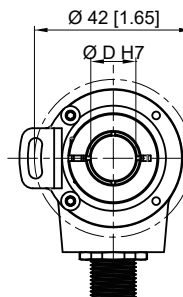
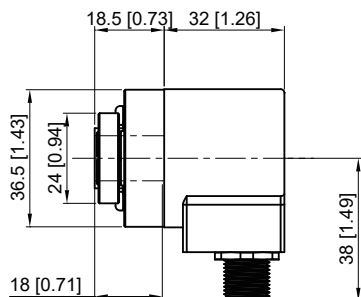
Blind hole depth: 15-18 mm

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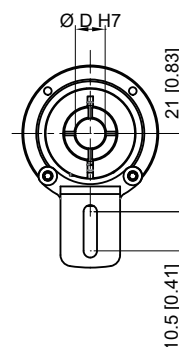
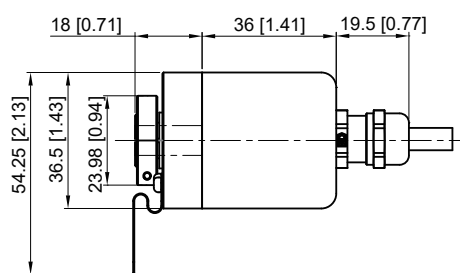
W52-36SX / 36HX

Hollow shaft encoder:
type of flange 3 , type of connection 5



Blind hole depth: 15-18 mm

Hollow shaft encoder:
type of flange 4 , type of connection 1



Blind hole depth: 15-18 mm

Other mounting types and accessories on your request.
please send us an email: info@heinlanz.com