

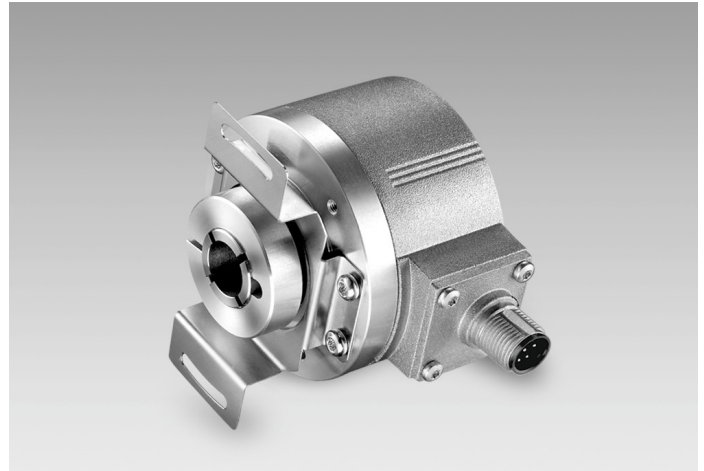
ExEIL580-B

With blind hollow shaft

100...5000 pulses per revolution

Overview

- Size ø58 mm
- Precise optical sensing
- Output signal level TTL or HTL
- Blind hollow shaft, ø8...15 mm
- Connection axial, radial or tangential
- Pulses per revolution up to 5000
- High resistance to shock and vibrations
- Option 0122, Explosion protection zone 22



Technical data

Technical data - electrical ratings

Voltage supply	5 VDC ±5 % 8...30 VDC 4.75...30 VDC
Reverse polarity protection	Yes
Short-circuit proof	Yes (HTL) Yes (TTL, max. 1 s and 1 signal)
Consumption w/o load	≤70 mA
Pulses per revolution	100 ... 5000
Phase shift	90 ° ±10°
Duty cycle	40...60 %
Reference signal	Zero pulse, width 90° ±10 %
Sensing method	Optical
Output frequency	≤300 kHz (TTL) ≤160 kHz (HTL)
Output signals	A+, B+, R+, A-, B-, R-
Output stages	TTL/RS422 HTL/push-pull
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL 508 / CSA 22.2

Technical data - mechanical design

Size (flange)	ø58 mm
Shaft type	ø8...15 mm (blind hollow shaft) ø9.52 mm (blind hollow shaft) ø12.7 mm (blind hollow shaft)
Protection EN 60529	IP 65
Operating speed	≤8000 rpm (+20 °C) ≤8000 rpm (+40 °C) ≤5000 rpm (+60 °C)
Starting torque	≤0,02 Nm (+20 °C)
Material	Housing: aluminium die-cast Flange: aluminium
Ambient temperature	-20...+60 °C
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 30 g, 10-2000 Hz DIN EN 60068-2-27 Shock 250 g, 6 ms
Explosion protection	II 3 D Ex tc IIIC T135°C Dc X (dust): see special conditions "X"
Connection	Flange connector M12, 8-pin Flange connector M23, 12-pin Cable
Weight approx.	300 g

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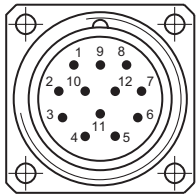
Terminal assignment

Flange connector M23, 12-pin / cable

Pin	Core color	Assignment
1	pink	B-
2	–	–
3	blue	R+
4	red	R-
5	green	A+
6	yellow	A-
7	–	–
8	grey	B+
9	–	–
10	white	GND
11	–	–
12	brown	UB

Screen: Connected to housing

Cable data: PVC, [4x2x0.14 mm²], bending radius >32.5 mm, outer diameter 6.5 mm



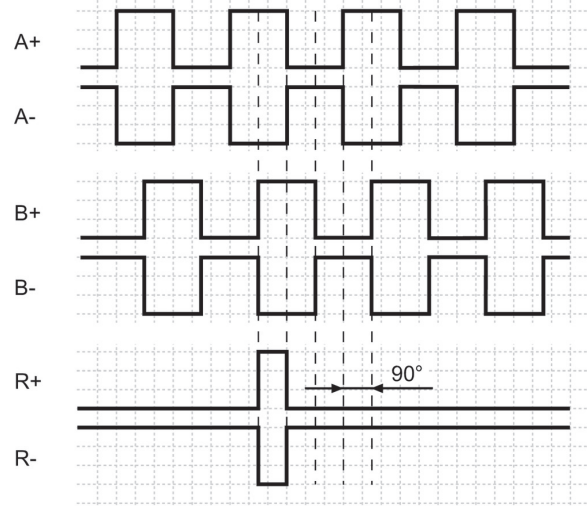
Flange connector M12, 8-pin

Pin	Assignment
1	GND
2	UB
3	A+
4	A-
5	B+
6	B-
7	R+
8	R-



Output signals

Clockwise rotating direction when looking at flange.



Trigger level

Outputs	TTL/RS422
Output level High	$\geq 2.5 \text{ V}$
Output level Low	$\leq 0.5 \text{ V}$
Load	$\leq 20 \text{ mA}$

Outputs	HTL/Push-pull
Output level High	$\geq \text{UB} - 3 \text{ V}$
Output level Low	$\leq 1.5 \text{ V}$
Load	$\leq 20 \text{ mA}$

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Explosion protection

 II 3 D Ex tc IIIC T135°C Dc X (dust)

General- and Special conditions „X“:

Only put the device into operation if ...

- all necessary precautions have been taken by the operator to make sure device and connector are fully protected against mechanical impacts or shocks in compliance with EN 60079-0, section 26.4.2 (Special conditions „X“).
- the connection is mechanically or electrically secured to prevent any interrupt while the contact is live (Special conditions „X“).
- it has been ensured the electrical connection of product variants with cable outlet or cable couplings is outside zone 22 (Special conditions „X“).
- it has been ensured the maximum operating speed in relation to the ambient temperature is within the specifications on the table „Maximum rotation speed below“ (Special conditions „X“).
- the specifications on the product label match the on-site conditions for use in hazardous areas (EX) (device group, category, zone, temperature class resp. maximum surface temperature).
- the specifications on the product label comply with the prevailing grid conditions.
- the device shows no visible trace of damage (resulting from transport or storage), and
- it has been ensured no explosive atmosphere, oils, acids, gases, vapors, radiation etc. are present during installation.

Observe standard EN 60079-14 for installation and commissioning.

Device operation must observe the installation and operating instructions. The intended use and application of the device comes under the relevant legislation as well as applicable directives and standards.

Maximum rotation speed

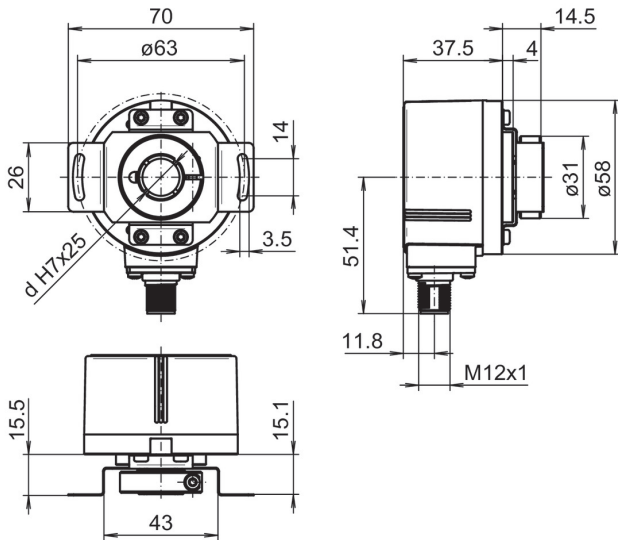
	ambient temperature	rotation speed
solid shaft	20 °C	≤ 12000 rpm
	40 °C	≤ 11000 rpm
	60 °C	≤ 8000 rpm
through hollow shaft	20 °C	≤ 6000 rpm
	40 °C	≤ 4500 rpm
	60 °C	≤ 2500 rpm
blind hollow shaft	20 °C	≤ 8000 rpm
	40 °C	≤ 8000 rpm
	60 °C	≤ 5000 rpm

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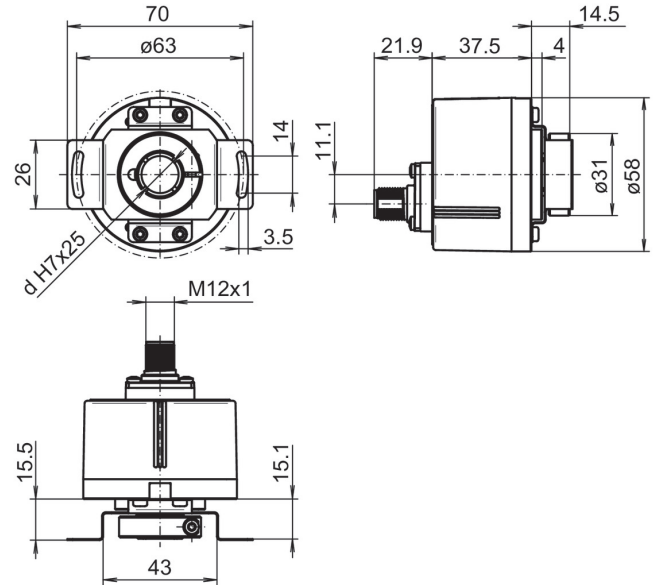
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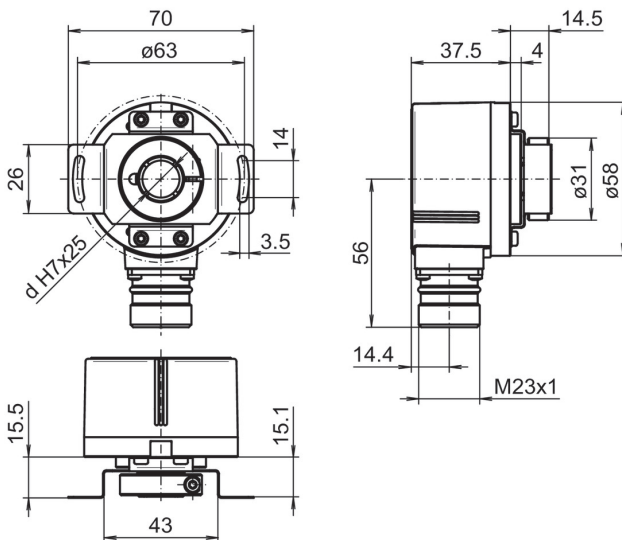
Dimensions



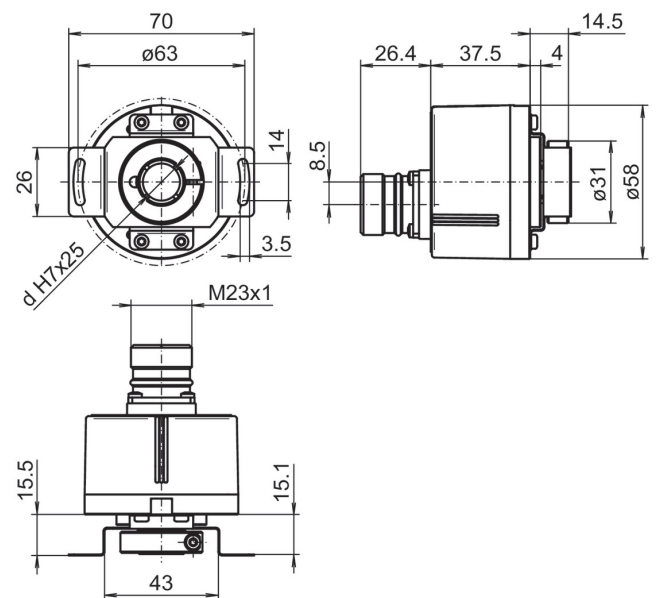
Clamping ring at A-side: Blind hollow shaft, flange connector M12 radial



Clamping ring at A-side: Blind hollow shaft, flange connector M12 axial



Clamping ring at A-side: Blind hollow shaft, flange connector M23 radial



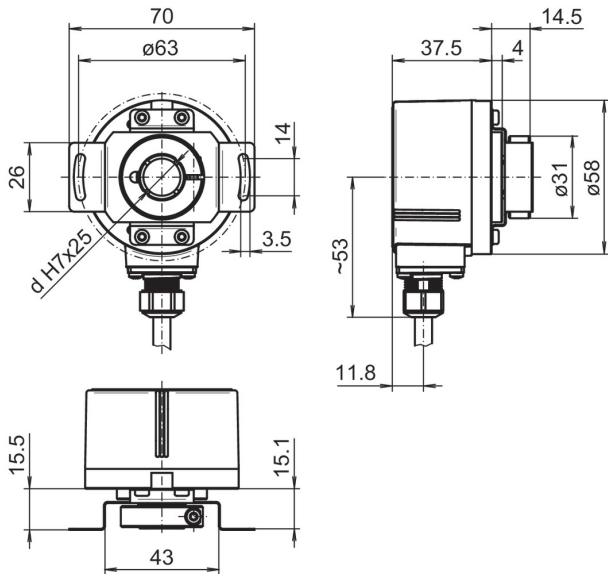
Clamping ring at A-side: Blind hollow shaft, flange connector M23 axial

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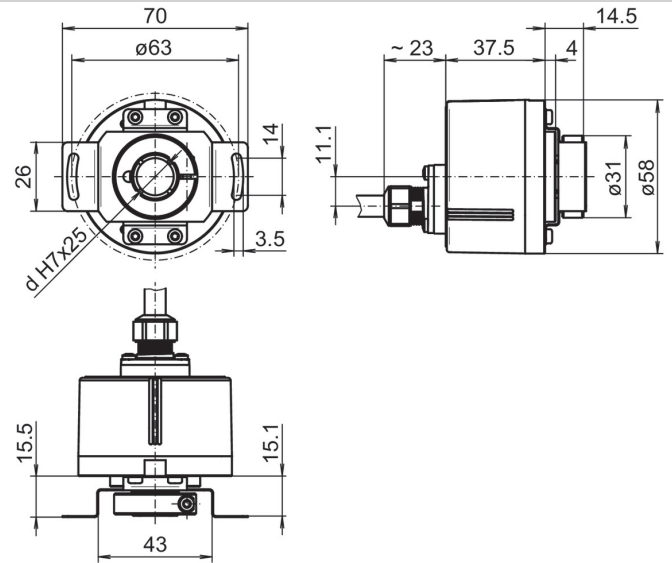
With blind hollow shaft

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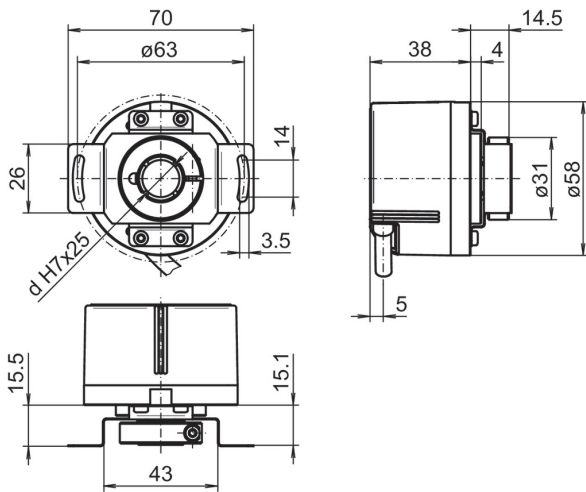
Dimensions



Clamping ring at A-side: Blind hollow shaft, cable radial



Clamping ring at A-side: Blind hollow shaft, cable axial



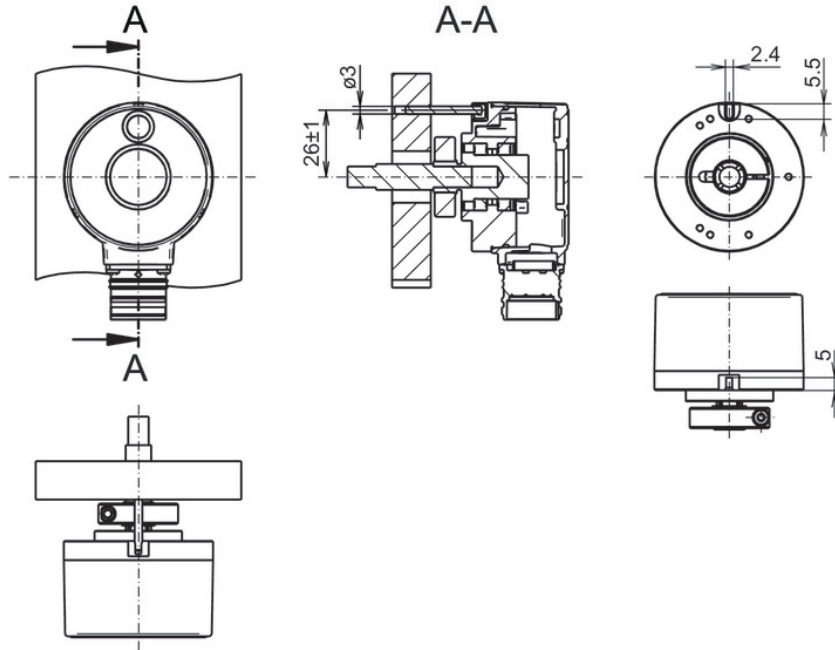
Clamping ring at A-side: Blind hollow shaft, cable tangential

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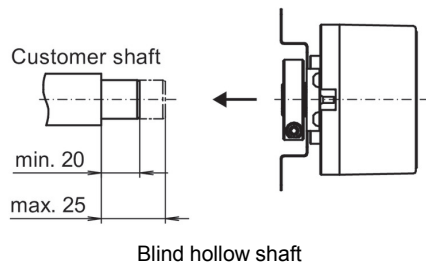
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Dimensions



Flange version P: Pin torque support, axial, clamping ring at A-side



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Ordering reference

Ordering reference		ExEIL580	-	B	#	##	.	5	##	#	.	####	.	F	/	0122
Product		ExEIL580														
Shaft type		Blind hollow shaft			B											
Flange (Hollow shaft)		Without stator coupling			N											
		With stator coupling ø63 mm			T											
		With stator coupling, 1-armed, hole circle ø63...94 mm, M4, mounting position 180°			M											
		Pin torque support 3 mm, axial/radial			P											
Blind hollow shaft		ø8 mm, clamping ring, A-side														08
		ø3/8" (ø9.52 mm), clamping ring, A-side														U3
		ø10 mm, clamping ring, A-side														10
		ø12 mm, clamping ring, A-side														12
		ø1/2" (ø12.7 mm), clamping ring, A-side														U4
		ø14 mm, clamping ring, A-side														14
		ø15 mm, clamping ring, A-side														15
Protection class		IP 65														5
Connection		Cable radial, 1 m														R
		Cable radial, 2 m														L
		Flange socket radial, M23, 12-pin, male contacts, CCW														F
		Flange socket radial, M12, 8-pin, male contacts, CCW														B
		Cable axial, 1 m														T
		Cable axial, 2 m														U
		Flange socket axial, M23, 12-pin, male contacts, CCW														D
		Flange socket axial, M12, 8-pin, male contacts, CCW														A
		Cable tangential, 1 m														P
		Cable tangential, 2 m														Q
Voltage supply / output		5 VDC, TTL/RS422, 6 channel														E
		8...30 VDC, TTL/RS422, 6 channel (Vout=5V)														H
		8...30 VDC, HTL/push pull, 6 channel														N
		4,75...30 VDC, HTL/push pull, 6 channel (Vout=Vin)														Q

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Ordering reference

ExEIL580 - B # ## . 5 ## # . ##### . F / 0122

Pulse number

100	100
120	120
150	150
200	200
250	250
256	256
300	300
360	360
400	400
500	500
512	512
600	600
720	720
800	800
900	900
1000	1000
1024	1024
1200	1200
1250	1250
1440	1440
1500	1500
1800	1800
2000	2000
2048	2048
2500	2500
3000	3000
3600	3600
4000	4000
4096	4096
5000	5000

Operating temperature

-20...+60 °C

F

Optionen BT

ATEX Zone 22

0122

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Accessories**Mounting accessories**

11066083	Mounting kit 006
11073119	Mounting kit 021
11067367	Mounting kit 028
11100198	Mounting kit 046
11113210	Mounting kit 047
11124300	Mounting kit 048
11106627	Fan cover clip 8 mm
11094674	Clamping ring 12/31/ 8 M3 8.8 for EIL580 hollow shaft \varnothing 8...10 mm for clamping at A or B side
11094675	Clamping ring 17/31/ 8 M3 8.8 for EIL580 hollow shaft \varnothing 12...15 mm for clamping at A side
11116921	Insulating sleeve \varnothing 10 mm/ \varnothing 12 mm/25 mm long
11116923	Insulating sleeve \varnothing 12 mm/ \varnothing 14 mm/25 mm long

Connectors and cables

11141051	Female connector M23 with pin lock, 12-pin, CW
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