

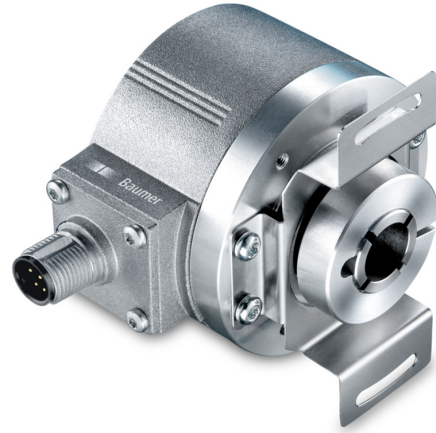
ExEIL580-B

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	EN 61000-6-2
Emitted interference	EN 61000-6-3

Technical data - mechanical design

Size (flange)	ø58 mm
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Technical data - mechanical design

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	EN 60068-2-6 Vibration 30 g, 10-2000 Hz 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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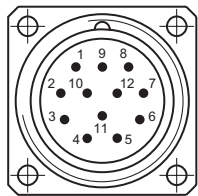
Terminal assignment

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



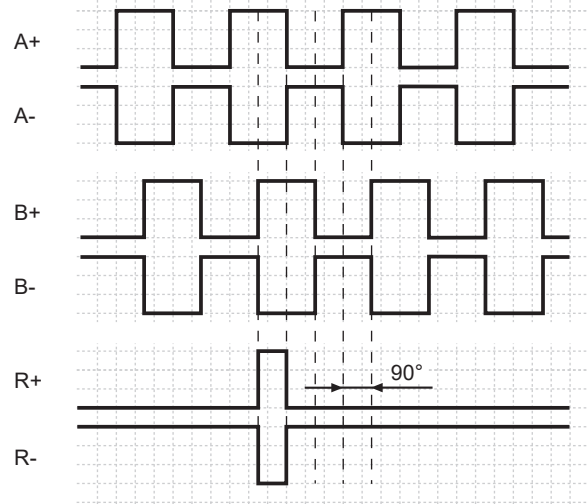
Flange connector M12, 8-pin

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	≥2.5 V
Output level Low	≤0.5 V
Load	≤20 mA

Outputs	HTL/Push-pull
Output level High	≥UB -3 V
Output level Low	≤1.5 V
Load	≤20 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

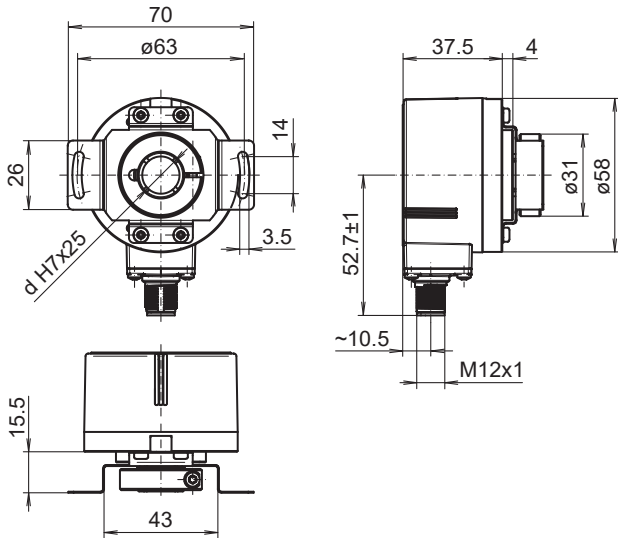
	ambient temperature	rotation speed
solid shaft	20 °C	≤ 12000 rpm
	40 °C	≤ 11000 rpm
	60 °C	≤ 8000 rpm
through hollow shaft	20 °C	≤ 6000 rpm
	40 °C	≤ 4500 rpm
	60 °C	≤ 2500 rpm
blind hollow shaft	20 °C	≤ 8000 rpm
	40 °C	≤ 8000 rpm
	60 °C	≤ 5000 rpm

ExEIL580-B

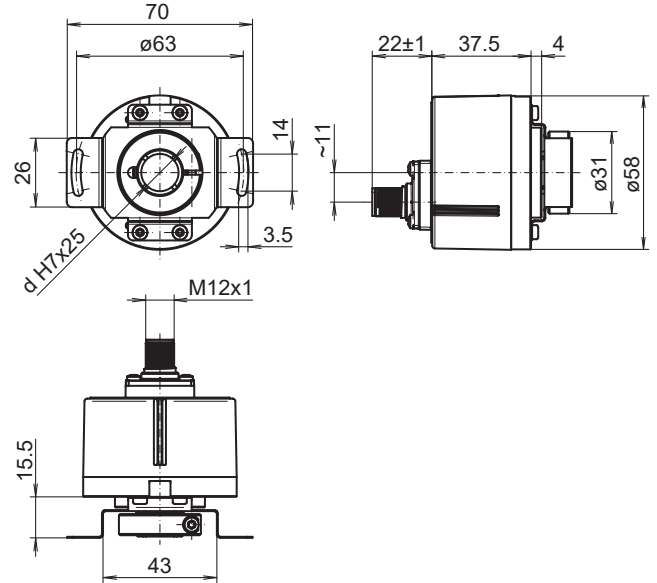
With blind hollow shaft

100...5000 pulses per revolution

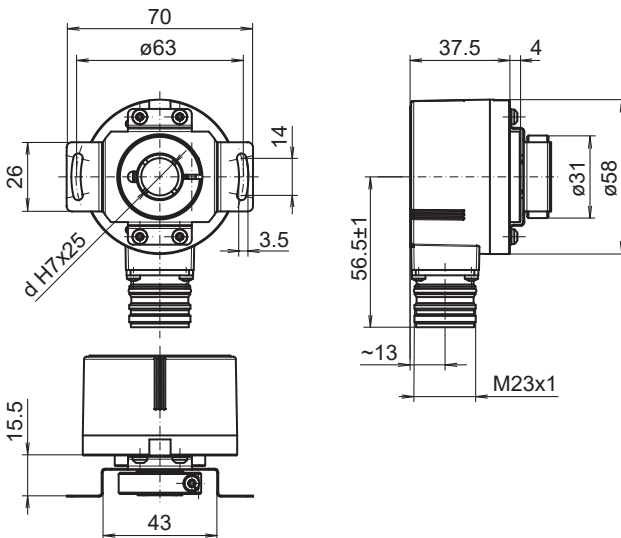
Dimensions



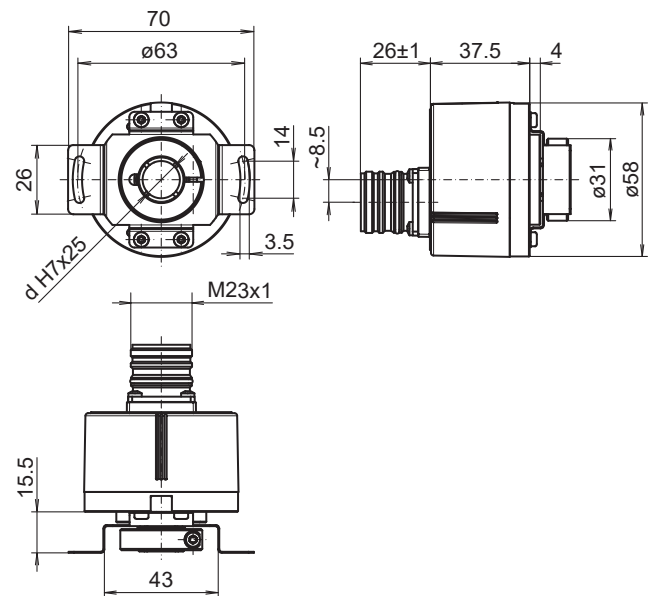
Clamping ring at A-side: Blind hollow shaft, flange connector M12 radial



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



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



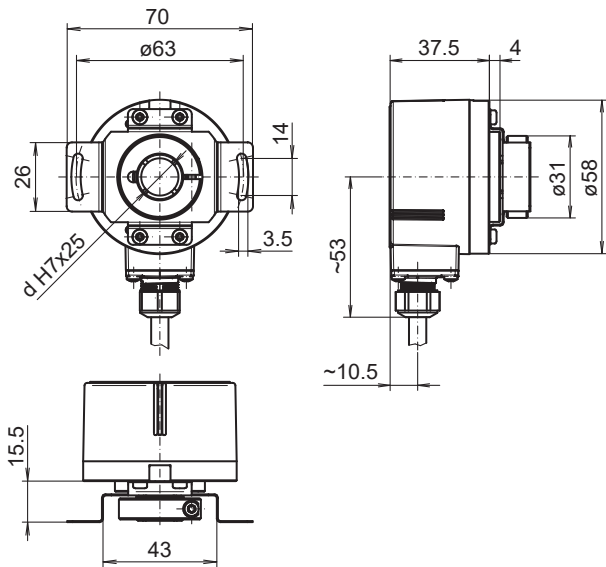
Clamping ring at A-side: Blind hollow shaft, flange connector M23 axial

ExEIL580-B

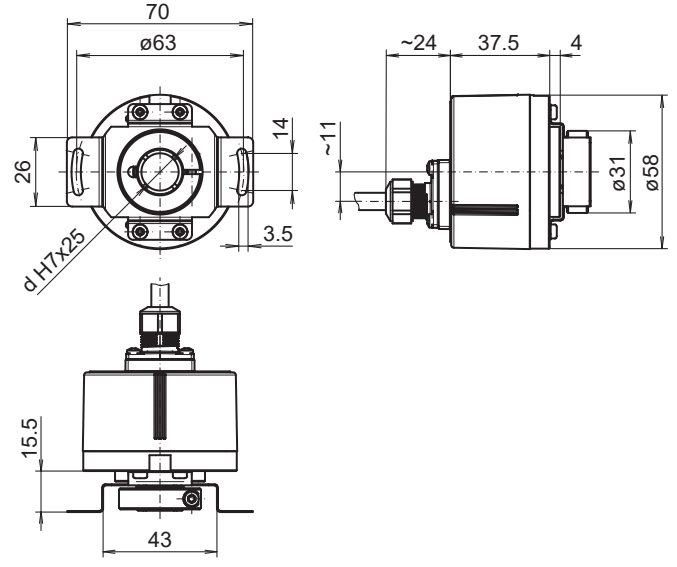
With blind hollow shaft

100...5000 pulses per revolution

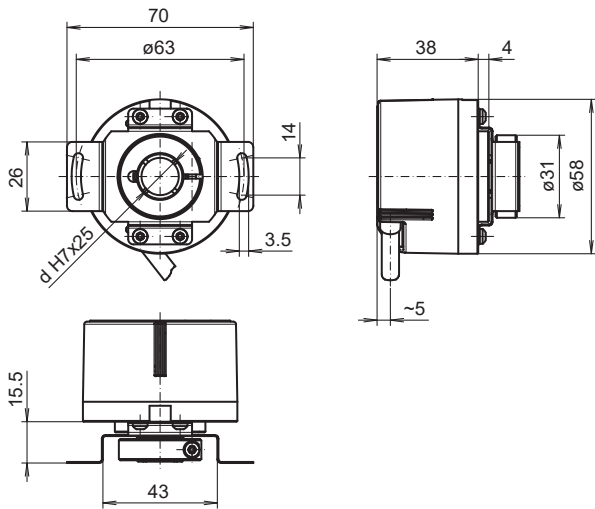
Dimensions



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



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



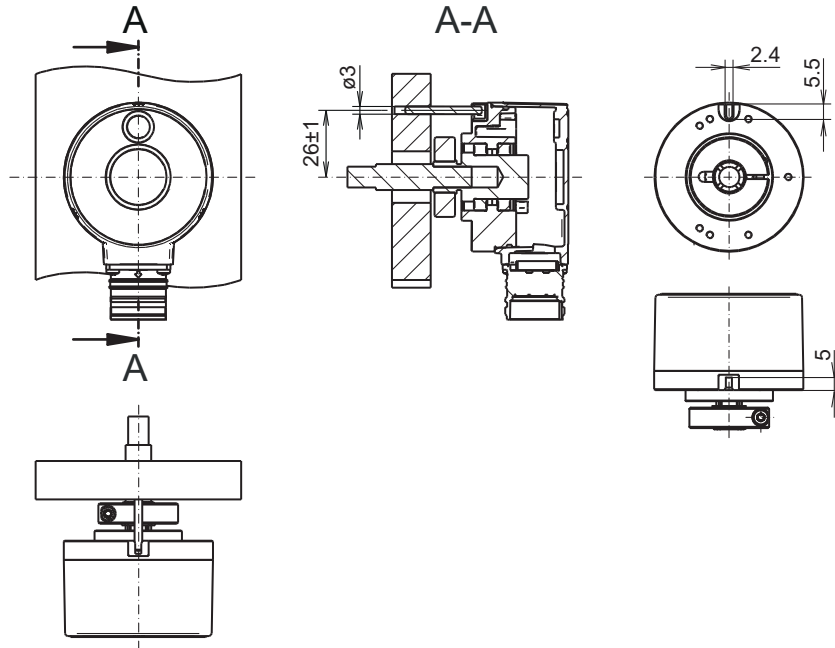
Clamping ring at A-side: Blind hollow shaft, cable tangential

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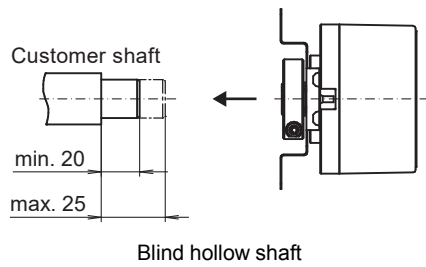
With blind hollow shaft

100...5000 pulses per revolution

Dimensions



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



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100...5000 pulses per revolution

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										
	ø10 mm, clamping ring, A-side					10										
	ø12 mm, clamping ring, A-side					12										
	ø14 mm, clamping ring, A-side					14										
	ø15 mm, clamping ring, A-side					15										
	ø3/8" (ø9.52 mm), clamping ring, A-side					U3										
	ø1/2" (ø12.7 mm), clamping ring, A-side					U4										
Protection class																
	IP 65							5								
Connection																
	Flange socket axial, M12, 8-pin, male contacts, CCW									A						
	Flange socket radial, M12, 8-pin, male contacts, CCW									B						
	Flange socket axial, M23, 12-pin, male contacts, CCW									D						
	Flange socket radial, M23, 12-pin, male contacts, CCW									F						
	Cable radial, 2 m									L						
	Cable tangential, 1 m									P						
	Cable tangential, 2 m									Q						
	Cable radial, 1 m									R						
	Cable axial, 1 m									T						
	Cable axial, 2 m									U						
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

Optionen BT

ATEX Zone 22

Accessories

Mounting accessories

11066083	Torque arm, 1-arm (mounting kit 006)
11073119	Torque arm, 1-arm (mounting kit 021)
11067367	Torque arm, 1-arm (mounting kit 028)
11100198	Stator coupling, 2-armed (mounting kit 046)
11113210	Torque arm, 1-arm (mounting kit 047)
11124300	Torque arm, 1-arm (mounting kit 048)
11106627	Fan cover clip 8 mm
11094674	Clamping ring 12/31/ 8 M3 8.8
11094675	Clamping ring 17/31/ 8 M3 8.8
11116921	Insulating sleeve ø10 mm/ø12 mm/25 mm long
11116923	Insulating sleeve ø12 mm/ø14 mm/25 mm long

0122