

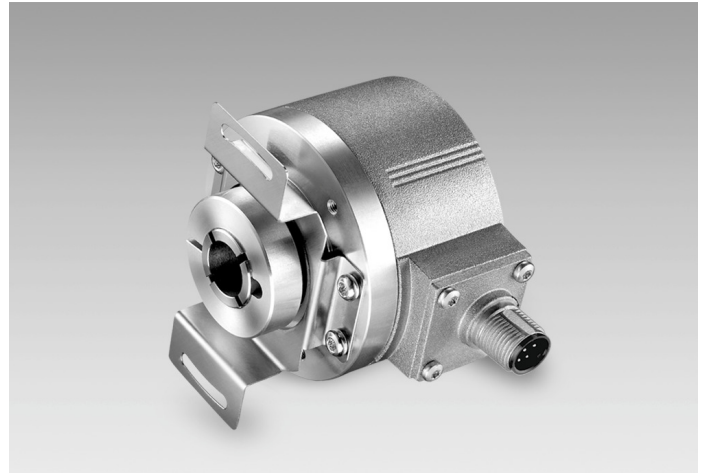
## EIL580-B

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 protection up to IP 67
- High resistance to shock and vibrations



### 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
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 (without shaft seal) IP 67 (with shaft seal)
Operating speed	≤6000 rpm (+20 °C, IP 67) ≤8000 rpm (+20 °C, IP 65)
Starting torque	≤0.02 Nm (+20 °C, IP 65) ≤0.025 Nm (+20 °C, IP 67)
Material	Housing: aluminium die-cast Flange: aluminium
Operating temperature	-40...+85 °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
Connection	Flange connector M12, 8-pin Flange connector M23, 12-pin Cable
Weight approx.	300 g

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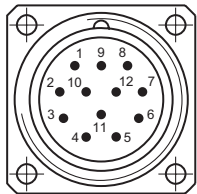
## Terminal assignment

### 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 mm<sup>2</sup>], bending radius >32.5 mm, outer diameter approx. 6.4 mm



Flange connector M23, pin contacts, 12-pin, counterclockwise (CCW)

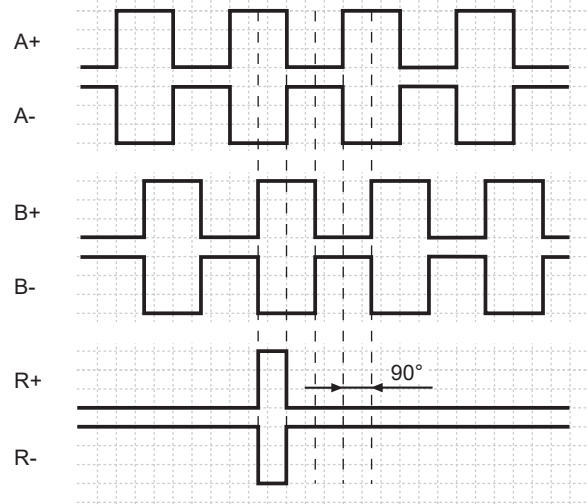
### Flange connector M12, 8-pin

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

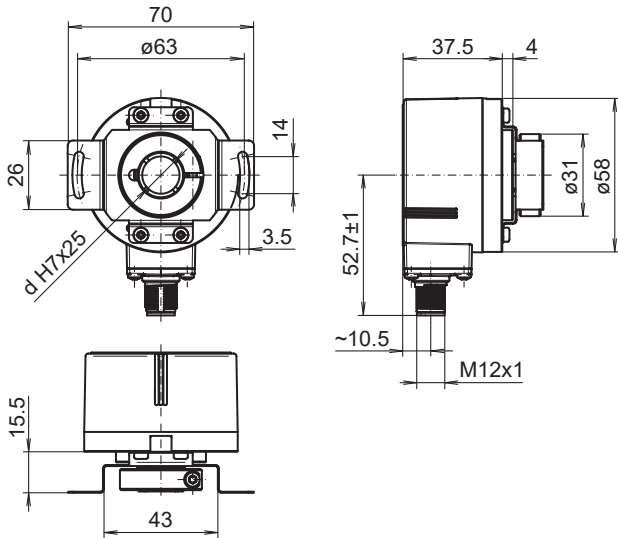
Outputs	HTL/Push-pull
Output level High	≥UB -3 V
Output level Low	≤1.5 V
Load	≤20 mA

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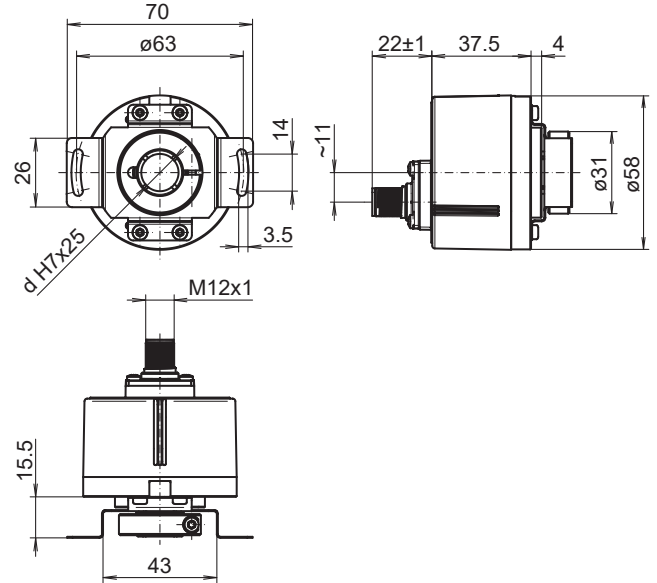
With blind hollow shaft

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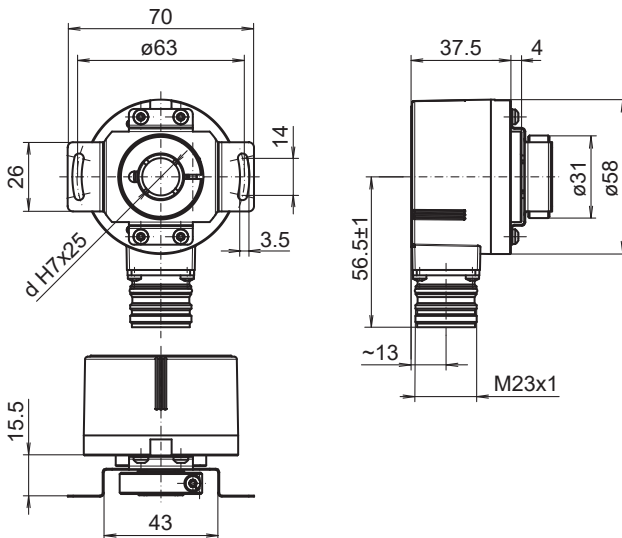
## Dimensions



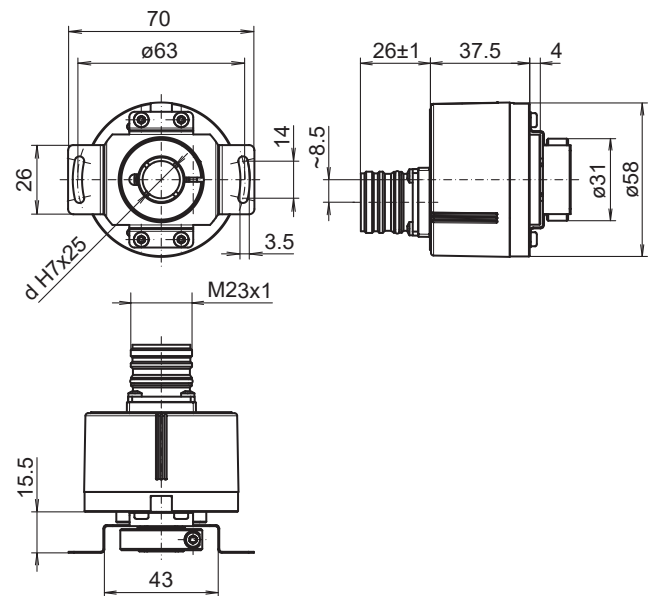
Clamping ring at A-side: Blind hollow shaft, flange connector M12 radial



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



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



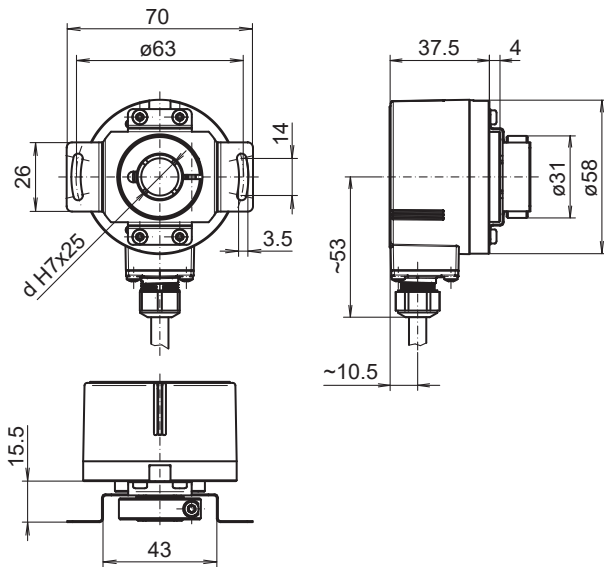
Clamping ring at A-side: Blind hollow shaft, flange connector M23 axial

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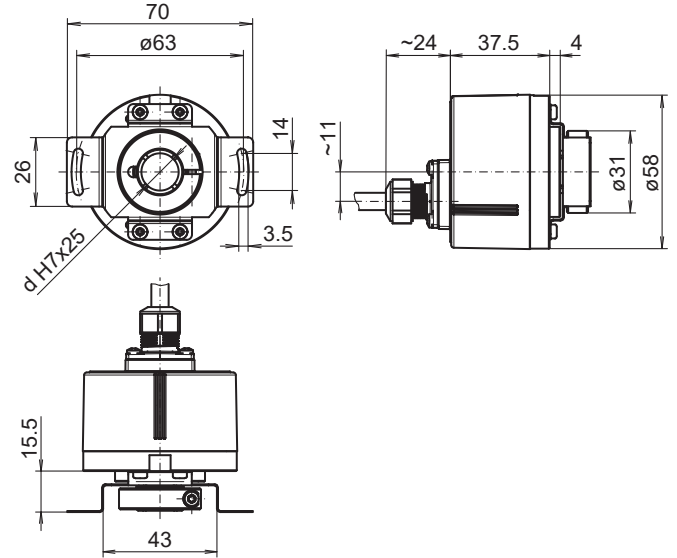
With blind hollow shaft

100...5000 pulses per revolution

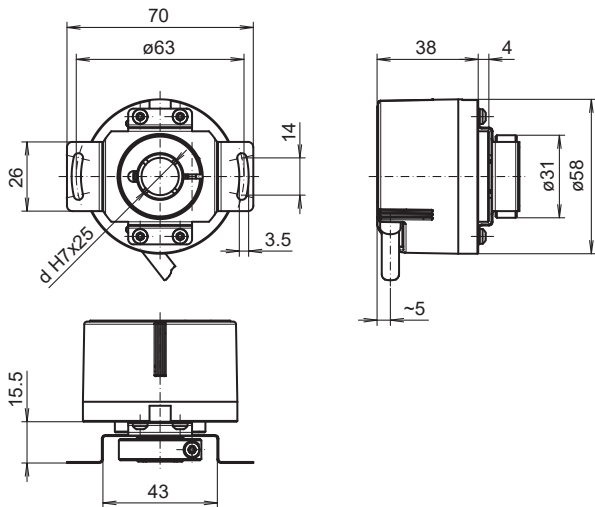
## Dimensions



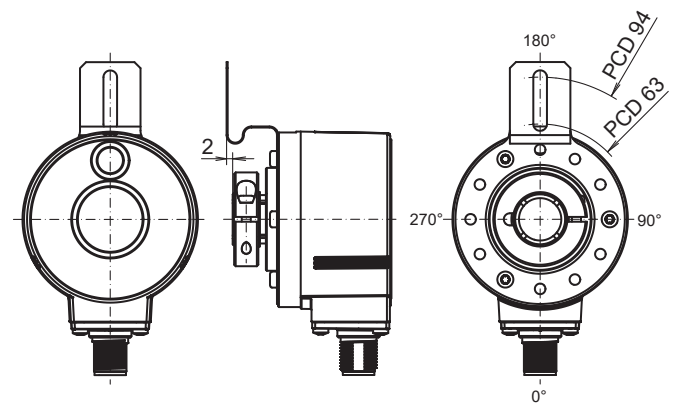
Clamping ring at A-side: Blind hollow shaft, cable radial



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



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



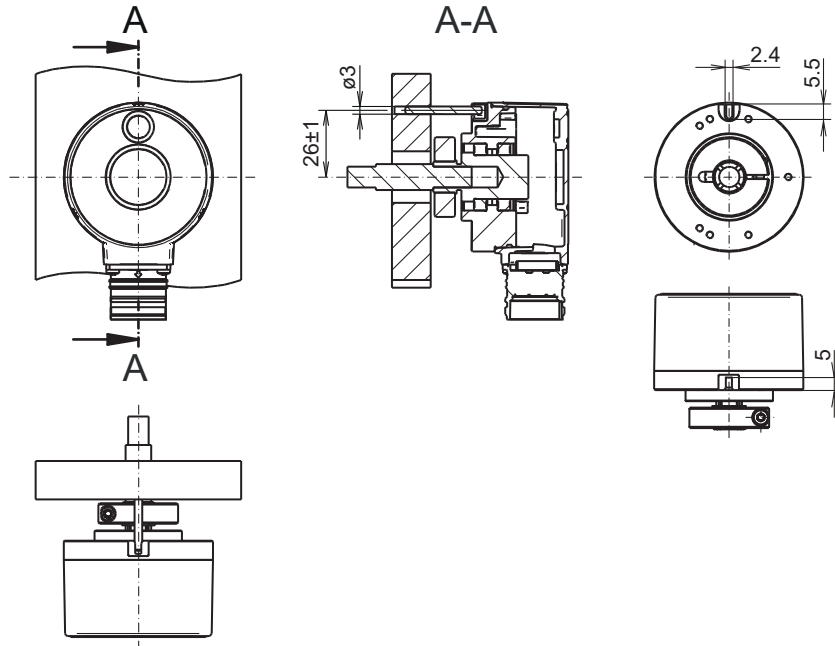
Flange version M: Mounting position torque support

# EIL580-B

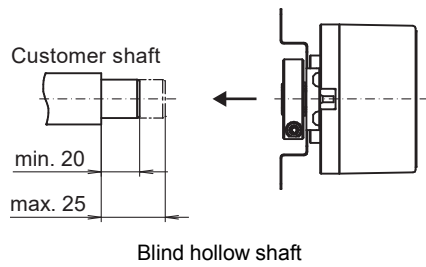
With blind hollow shaft

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## Dimensions



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



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## Ordering reference

		EIL580	-	B	#	##	.	#	##	#	.	#####	.	A
<b>Product</b>		EIL580												
<b>Shaft type</b>		Blind hollow shaft		B										
<b>Flange (Hollow shaft)</b>		Without stator coupling			N									
		With stator coupling, 1-armed, hole circle ø63...94 mm, M4, mounting position 180°			M									
		With stator coupling ø63 mm			T									
		Pin torque support 3 mm, axial/radial			P									
<b>Blind hollow shaft</b>		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		
<b>Protection class</b>		IP 65										5		
		IP 67										7		
<b>Connection</b>		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	
<b>Voltage supply / output</b>		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

	EIL580	-	B	#	##	.	#	##	#	.	#####	.	A
<b>Pulses per revolution</b>													
100													100
120													120
150													150
200													200
250													250
256													256
300													300
360													360
400													400
440													440
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
<b>Operating temperature</b>													
-40...+85 °C													A

2022-09-16 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

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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
11155325	Mounting kit 099
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