

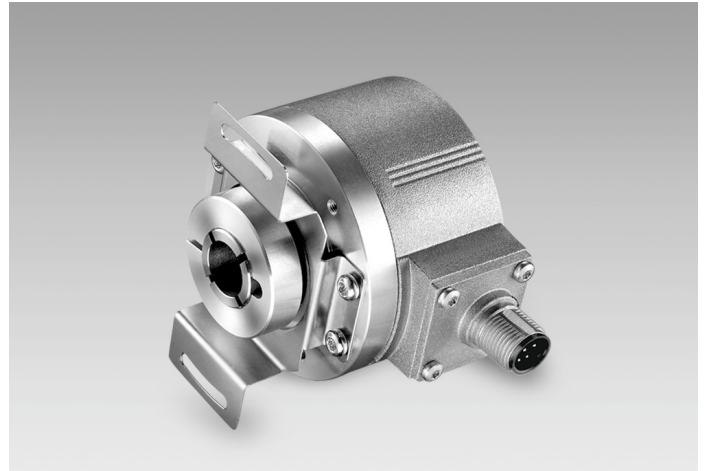
EIL580-B

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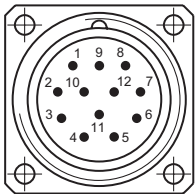
Terminal assignment

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 mm²], bending radius >32.5 mm, outer diameter approx. 6.4 mm



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

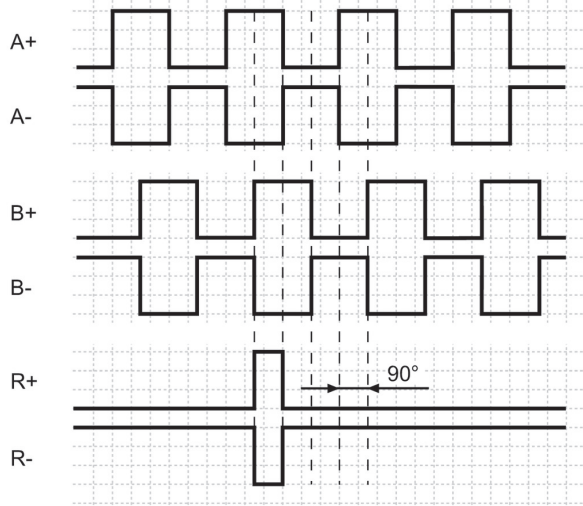
Flange connector M12, 8-pin

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

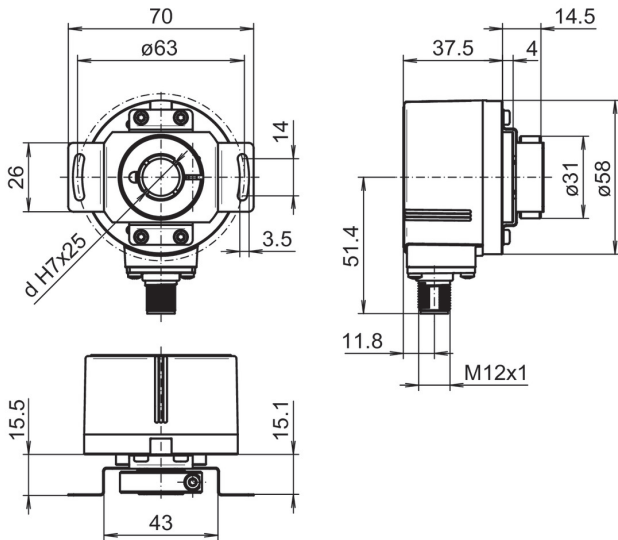
Outputs	TTL/RS422
Output level High	≥2.5 V
Output level Low	≤0.5 V
Load	≤20 mA

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

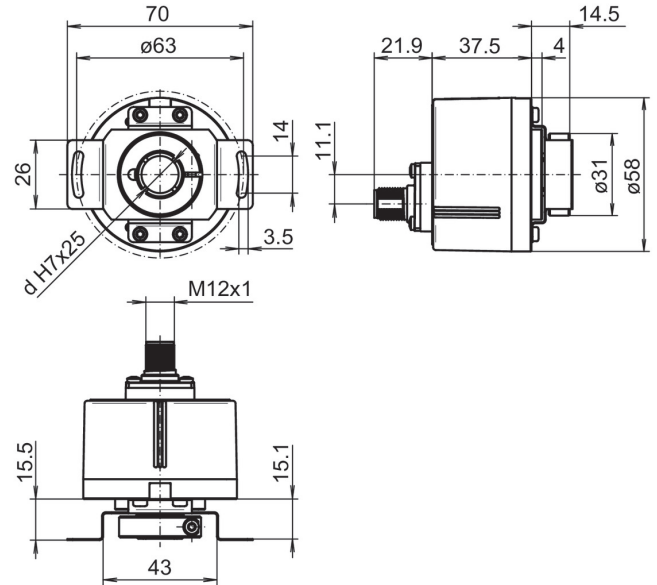
EIL580-B

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100...5000 pulses per revolution

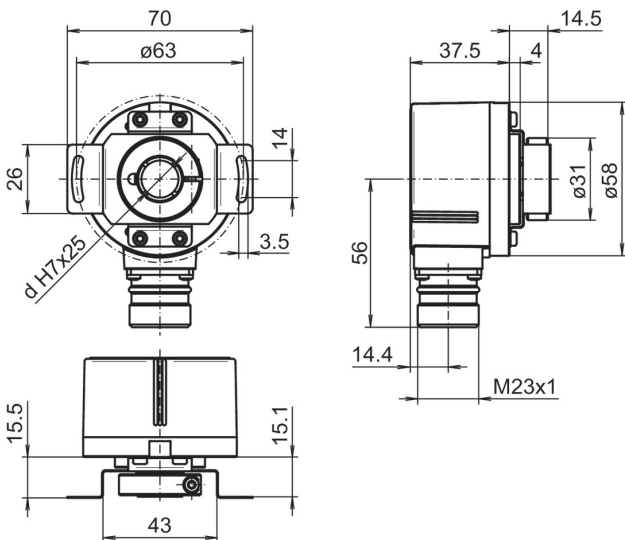
Dimensions



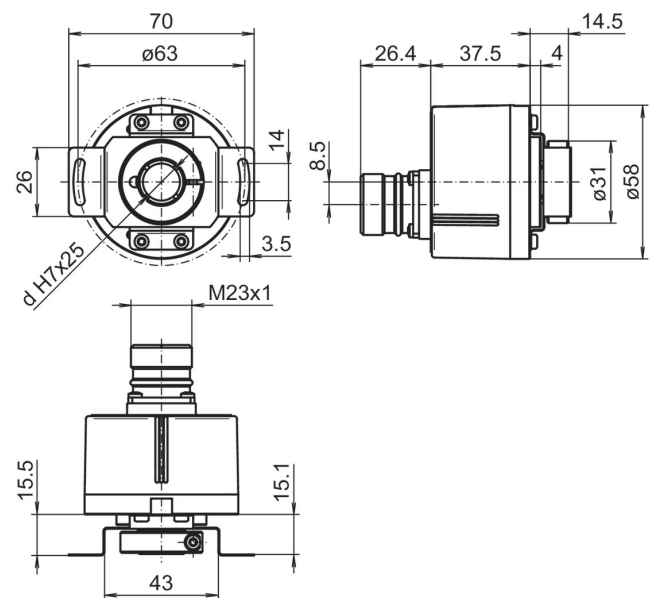
Clamping ring at A-side: Blind hollow shaft, flange connector M12 radial



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



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



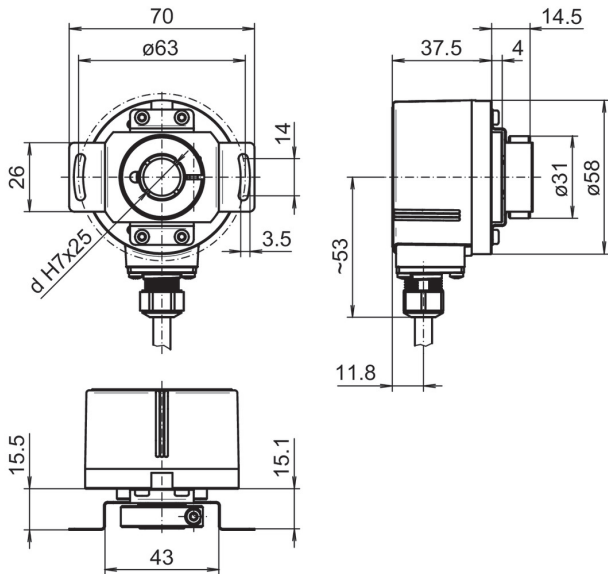
Clamping ring at A-side: Blind hollow shaft, flange connector M23 axial

EIL580-B

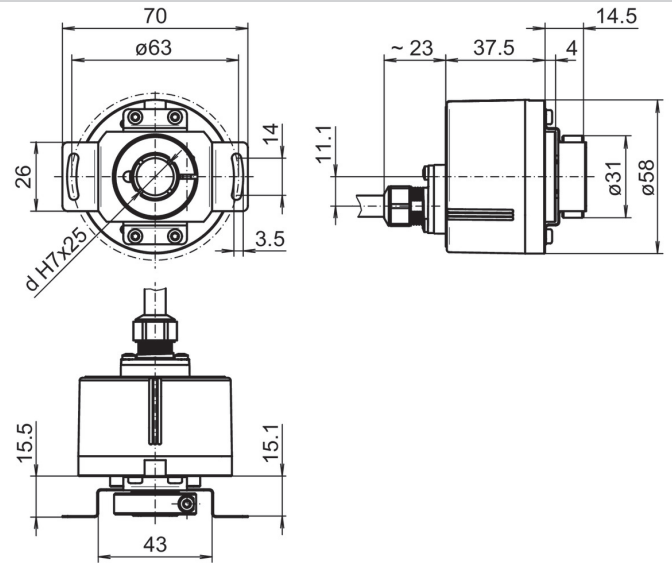
With blind hollow shaft

100...5000 pulses per revolution

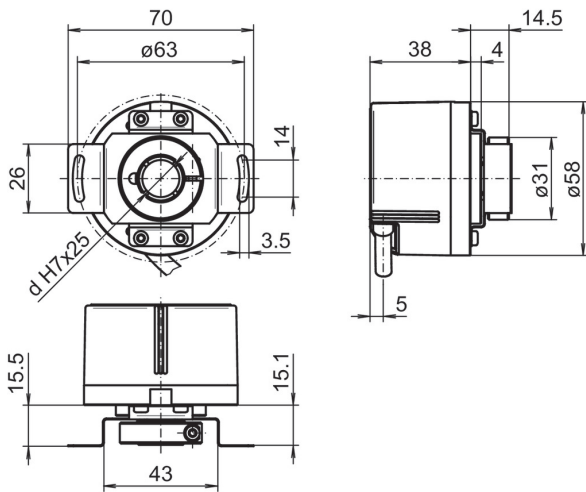
Dimensions



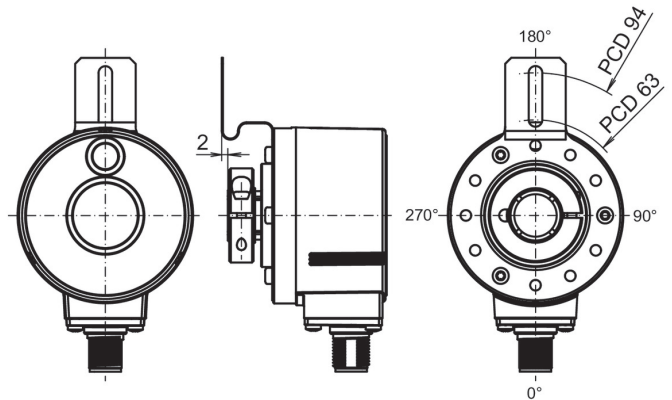
Clamping ring at A-side: Blind hollow shaft, cable radial



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



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



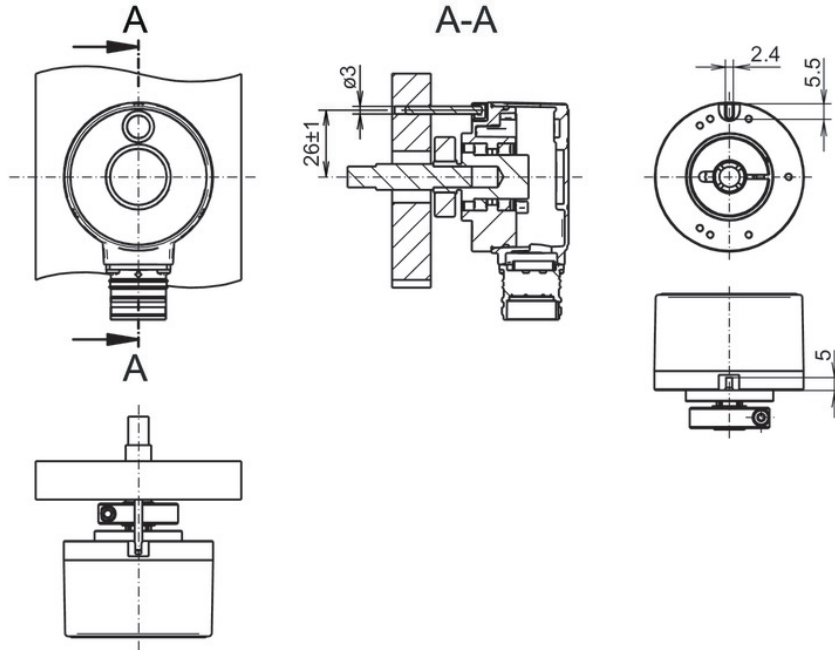
Flange version M: Mounting position torque support

EIL580-B

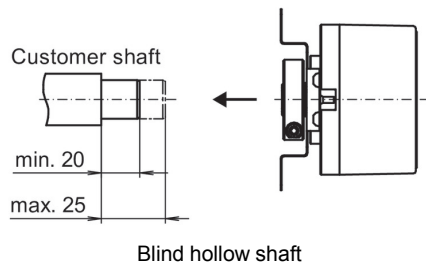
With blind hollow shaft

100...5000 pulses per revolution

Dimensions



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



EIL580-B

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Ordering reference

	EIL580	-	B	#	##	.	#	##	#	.	#####	A
Product	EIL580											
Shaft type												
Blind hollow shaft				B								
Flange (Hollow shaft)												
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							
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	
IP 67											7	
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

	EIL580	-	B	#	##	.	#	##	#	.	#####	A
Pulses per revolution												
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	
Operating temperature												
-40...+85 °C												A

2020-06-29 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

Connectors and cables

10127844	Connection cable 2 m shielded with female connector M12, 8-pin, straight (ESG 34FH0200G)
10129332	Connection cable 5 m shielded with female connector M12, 8-pin, straight (ESG 34FH0500G)
10129333	Connection cable 10 m shielded with female connector M12, 8-pin, straight (ESG 34FH1000G)
11053961	Connection cable 2 m shielded with female connector M12, 8-pin, angled (ESW 33FH0200G)
11053962	Connection cable 5 m shielded with female connector M12, 8-pin, angled (ESW 33FH0500G)
10170054	Connection cable 10 m shielded with female connector M12, 8-pin, angled (ESW 33FH1000G)
10164705	Female connector M23, 12-pin, CW
11095302	Female connector M23, 12-pin, CW, with cable 1 m
11100408	Female connector M23, 12-pin, CW, with cable 2 m
11100430	Female connector M23, 12-pin, CW, with cable 5 m
11100431	Female connector M23, 12-pin, CW, with cable 10 m