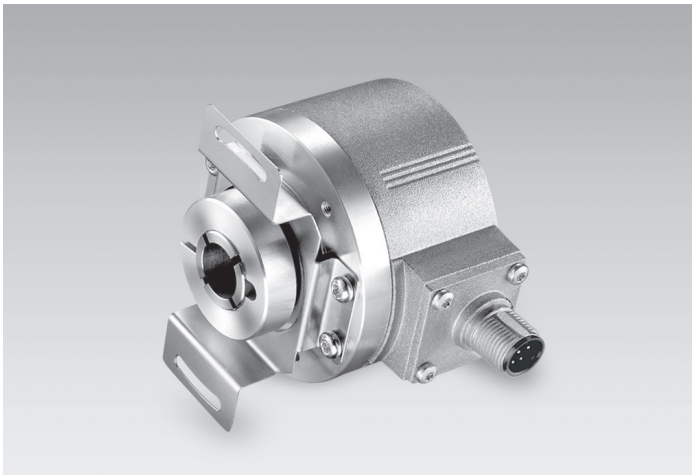
EIL580-T

With through hollow shaft

100…5000 pulses per revolution

Overview

- Size ø58 mm
- Precise optical sensing
- Output signal level TTL or HTL
- Through hollow shaft, ø8…15 mm
- Connection 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 (through hollow shaft) ø9.52 mm (through hollow shaft) ø12.7 mm (through hollow shaft)
Protection DIN EN 60529	IP 65 (without shaft seal) IP 67 (with shaft seal)
Operating speed	≤3000 rpm (+20 °C, IP 67) ≤6000 rpm (+20 °C, IP 65)
Starting torque	≤0,025 Nm (+20 °C, IP 65) ≤0,03 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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EIL580-T

With through hollow shaft

100…5000 pulses per revolution

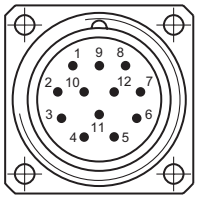
Terminal assignment

Flange connector M23, 12-pin / cable

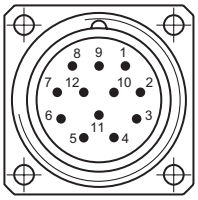
Pin	Core color	Assignment
1	pink	B-
2	–	–
3	blue	R+
4	red	R-
5	green	A+
6	yellow	A-
7	–	–
8	grey	B+
9	–	–
10	white	GND
11	–	–
12	brown	UB

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 M23, pin contacts, 12-pin, clockwise (CW)

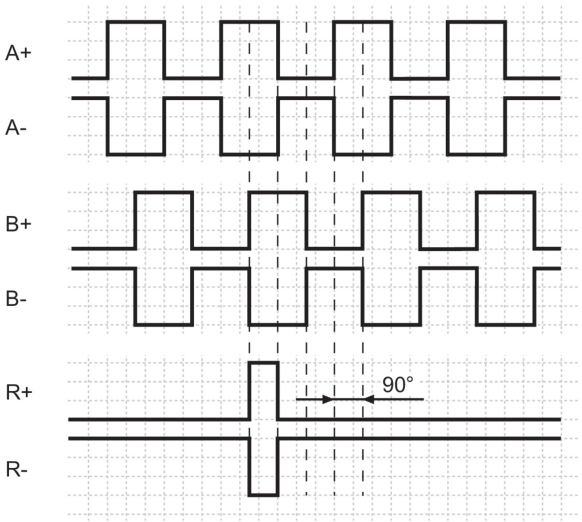
Flange connector M12, 8-pin

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

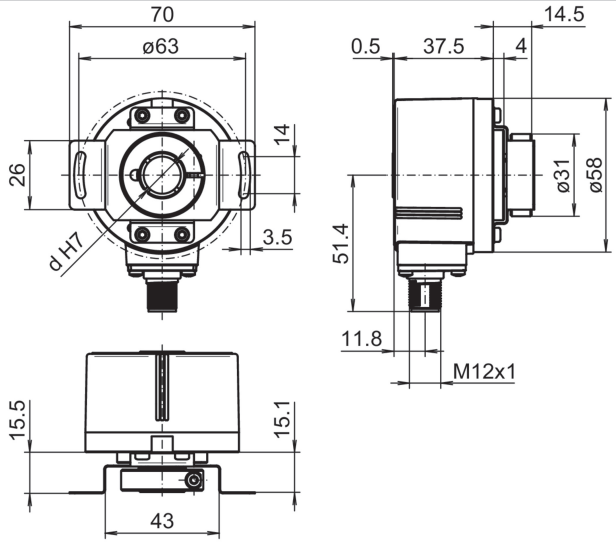
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EIL580-T

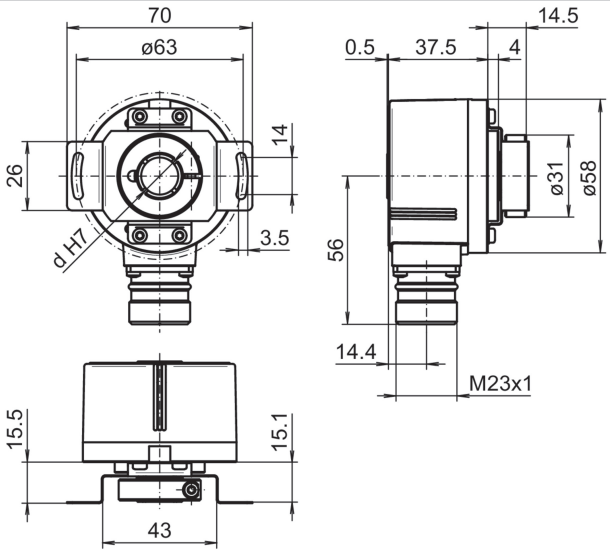
With through hollow shaft

100…5000 pulses per revolution

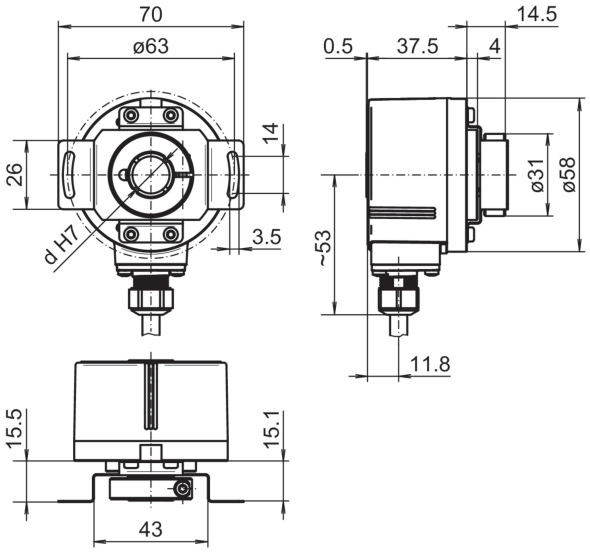
Dimensions



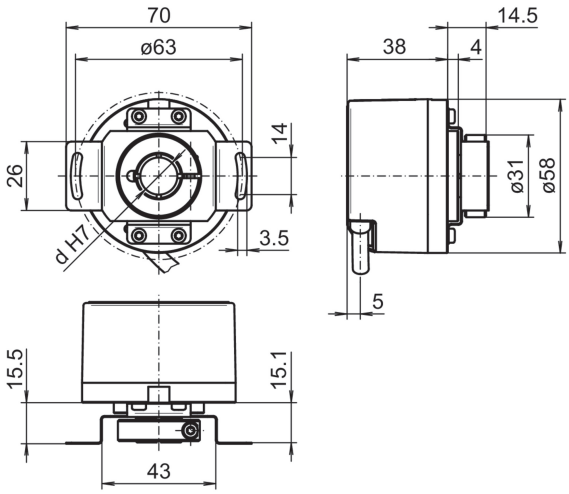
Clamping ring at A-side: Through hollow shaft, flange connector M12 radial



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



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



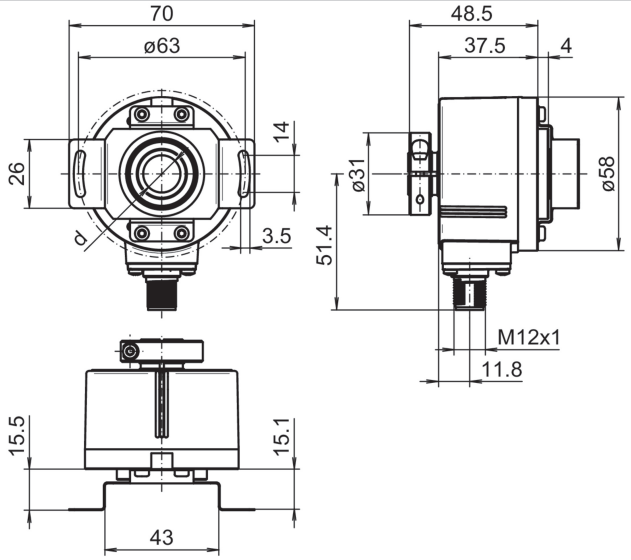
Clamping ring at A-side: Through hollow shaft, cable tangential

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EIL580-T

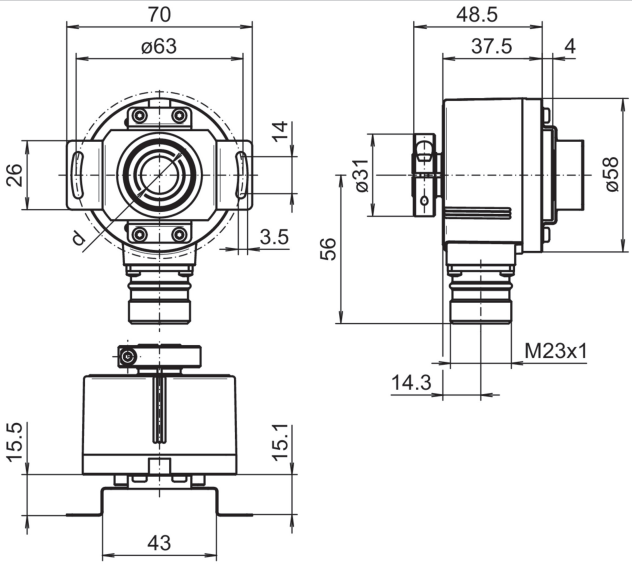
With through hollow shaft
100…5000 pulses per revolution

Dimensions



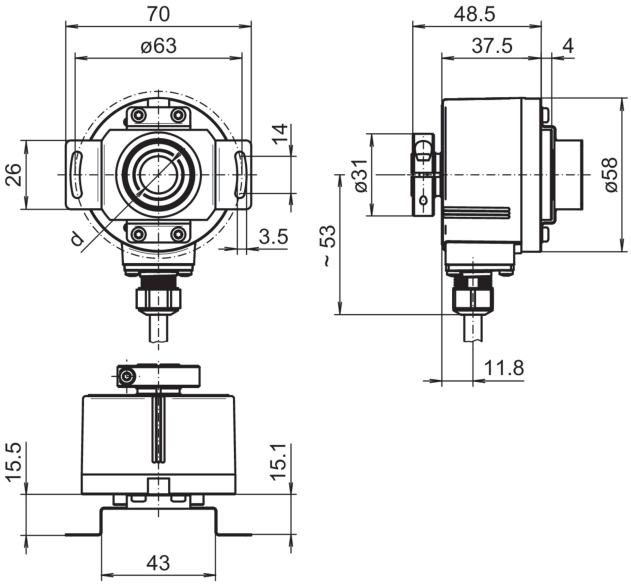
d H7: ø10, ø12, ø14
d G7: ø3/8" (ø9.52), ø1/2" (ø12.7)

Clamping ring at B-side: Through hollow shaft, flange connector M12 radial



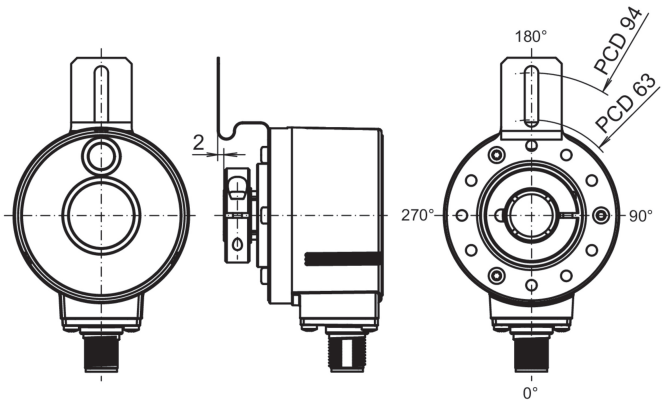
d H7: ø10, ø12, ø14
d G7: ø3/8" (ø9.52), ø1/2" (ø12.7)

Clamping ring at B-side: Through hollow shaft, flange connector M23 radial



d H7: ø10, ø12, ø14
d G7: ø3/8" (ø9.52), ø1/2" (ø12.7)

Clamping ring at B-side: Through hollow shaft, cable radial



Flange version M: Mounting position torque support

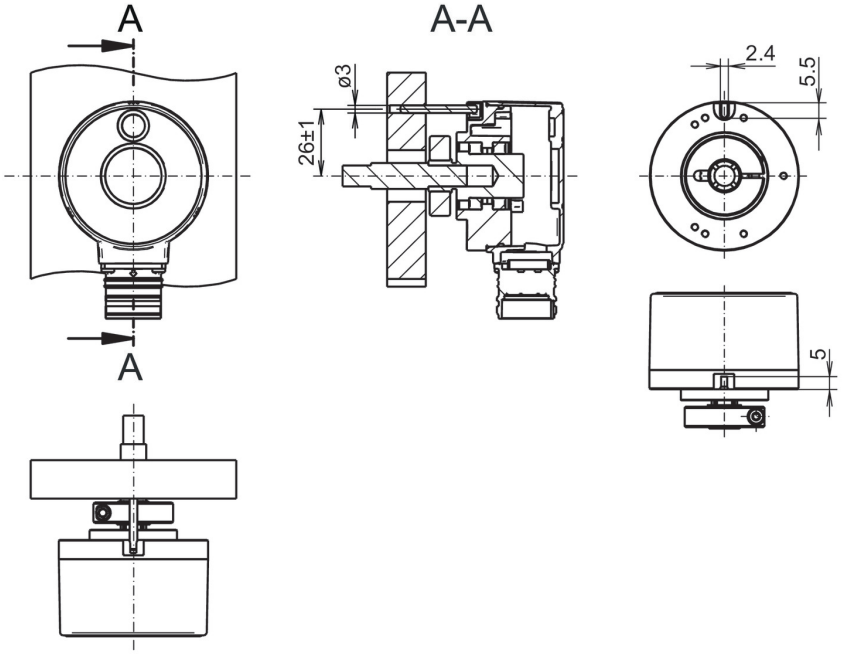
2020-04-28 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

EIL580-T

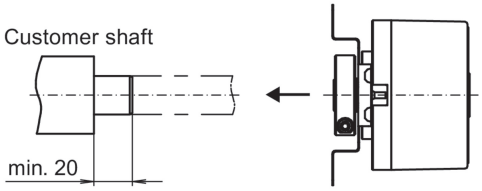
With through hollow shaft

100…5000 pulses per revolution

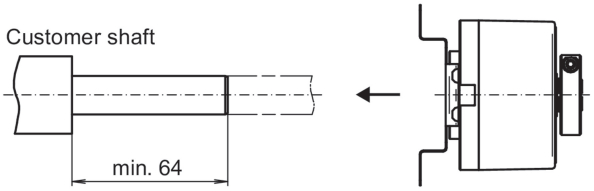
Dimensions



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



Clamping ring at A-side: Through hollow shaft



Clamping ring at B-side: Through hollow shaft

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EIL580-T

With through hollow shaft
100…5000 pulses per revolution

Ordering reference

	EIL580	-	T	#	##	.	#	##	#	.	####	.	A
Product													
	EIL580												
Shaft type													
Through hollow shaft			T										
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									
Through 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								
ø3/8" (ø9.52 mm), clamping ring, B-side					V3								
ø10 mm, clamping ring, B-side					B0								
ø12 mm, clamping ring, B-side					B2								
ø1/2" (ø12.7 mm), clamping ring, B-side					V4								
ø14 mm, clamping ring, B-side					B4								
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(1)								F					
Flange socket radial, M12, 8-pin, male contacts, CCW								B					
Cable tangential, 1 m								P					
Cable tangential, 2 m								Q					
Flange socket radial, M23, 12-pin, male contacts, CW(2)								E					
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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EIL580-T

With through hollow shaft
100…5000 pulses per revolution

Ordering reference

EIL580	-	T	#	##	.	#	##	#	.	####	.	A

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

-40...+85 °C	A

(1) Use suitable connection cables and M23 connectors with clockwise direction (CW). You can find these in our accessories “Connectors and cables”.
(2) Use suitable connection cables and M23 connectors with counterclockwise direction (CCW). You can find these in our accessories “Connectors and cables”.

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 ø8...10 mm for clamping at A or B side
11094675	Clamping ring 17/31/ 8 M3 8.8 for EIL580 hollow shaft ø12...15 mm for clamping at A side
11123483	Clamping ring 16/31/ 8 M3 8.8 for EIL580 hollow shaft ø12...14 mm for clamping at B side
11116921	Insulating sleeve ø10 mm/ø12 mm/25 mm long
11116923	Insulating sleeve ø12 mm/ø14 mm/25 mm long

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EIL580-T

With through hollow shaft
100…5000 pulses per revolution

Accessories	
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
11074551	Female connector M23, 12-pin, CCW
11222560	Female connector M23, 12-pin, CCW, with cable 1 m
11222561	Female connector M23, 12-pin, CCW, with cable 2 m
11222562	Female connector M23, 12-pin, CCW, with cable 5 m
11222563	Female connector M23, 12-pin, CCW, with cable 10 m

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