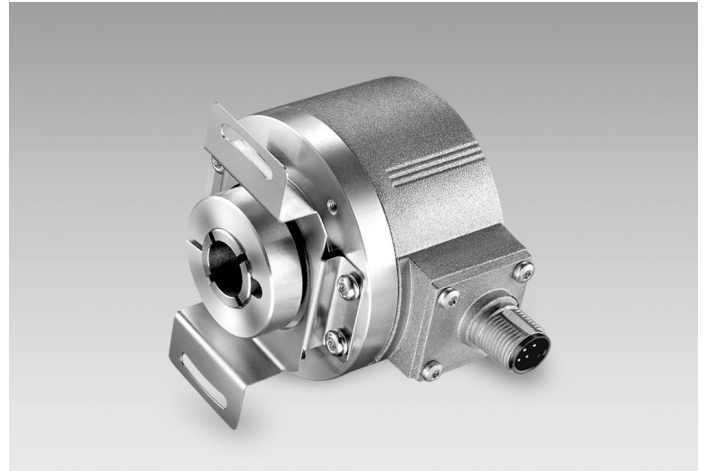


## EIL580-T

With through hollow shaft  
 100...5000 pulses per revolution

### Overview

- Size  $\varnothing 58$  mm
- Precise optical sensing
- Output signal level TTL or HTL
- Through hollow shaft,  $\varnothing 8...15$  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 $\pm 5$ % 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	$\leq 70$ mA
Pulses per revolution	100 ... 5000
Phase shift	$90^\circ \pm 10^\circ$
Duty cycle	40...60 %
Reference signal	Zero pulse, width $90^\circ \pm 10$ %
Sensing method	Optical
Output frequency	$\leq 300$ kHz (TTL) $\leq 160$ 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)	$\varnothing 58$ mm
Shaft type	$\varnothing 8...15$ mm (through hollow shaft) $\varnothing 9.52$ mm (through hollow shaft) $\varnothing 12.7$ mm (through hollow shaft)
Protection EN 60529	IP 65 (without shaft seal) IP 67 (with shaft seal)
Operating speed	$\leq 3000$ rpm (+20 °C, IP 67) $\leq 6000$ rpm (+20 °C, IP 65)
Starting torque	$\leq 0,025$ Nm (+20 °C, IP 65) $\leq 0,03$ 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

# EIL580-T

With through hollow shaft  
100...5000 pulses per revolution

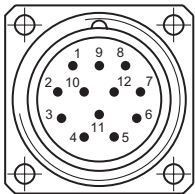
## Terminal assignment

### 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

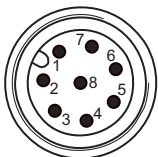
Cable data: PVC, [4x2x0.14 mm<sup>2</sup>], bending radius >32.5 mm, outer diameter approx. 6.4 mm



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

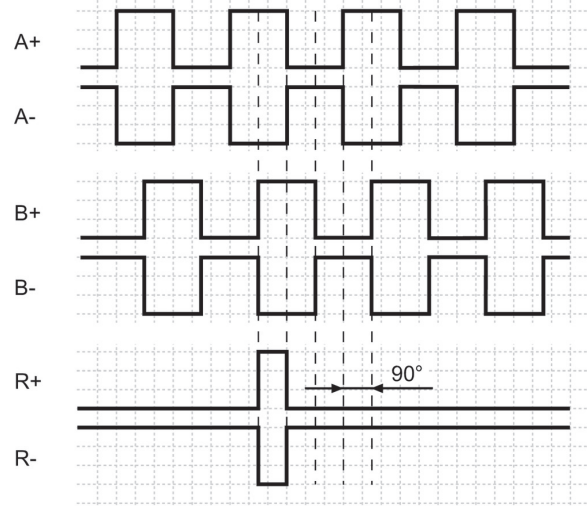
### Flange connector M12, 8-pin

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

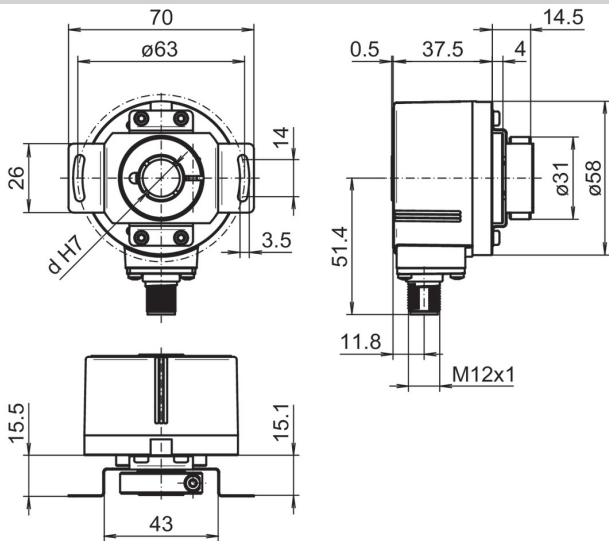
Outputs	TTL/RS422
Output level High	≥2.5 V
Output level Low	≤0.5 V
Load	≤20 mA

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

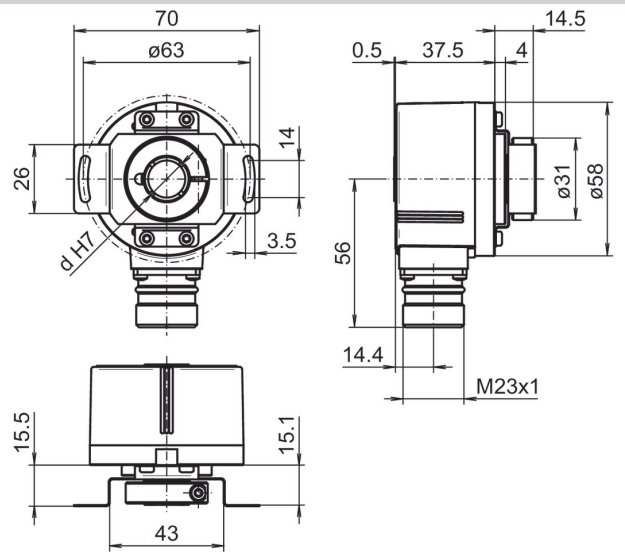
# EIL580-T

With through hollow shaft  
100...5000 pulses per revolution

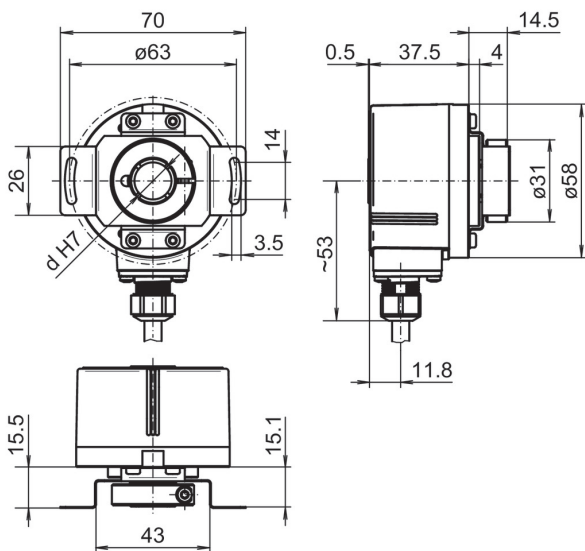
## Dimensions



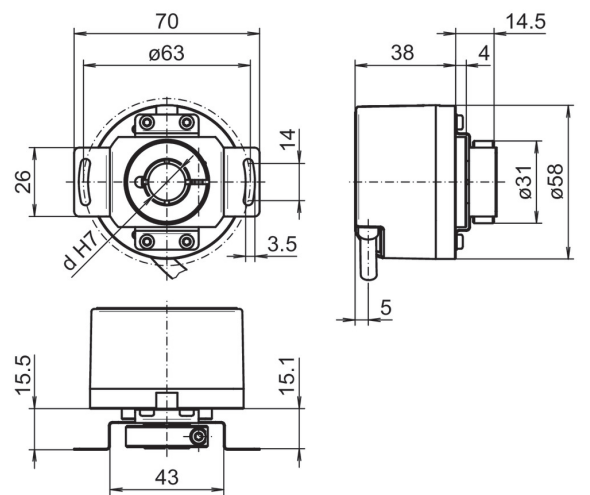
Clamping ring at A-side: Through hollow shaft, flange connector M12 radial



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



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

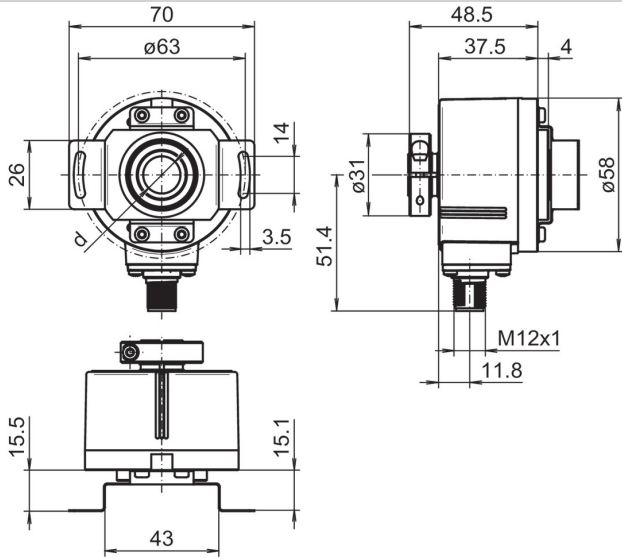


Clamping ring at A-side: Through hollow shaft, cable tangential

# EIL580-T

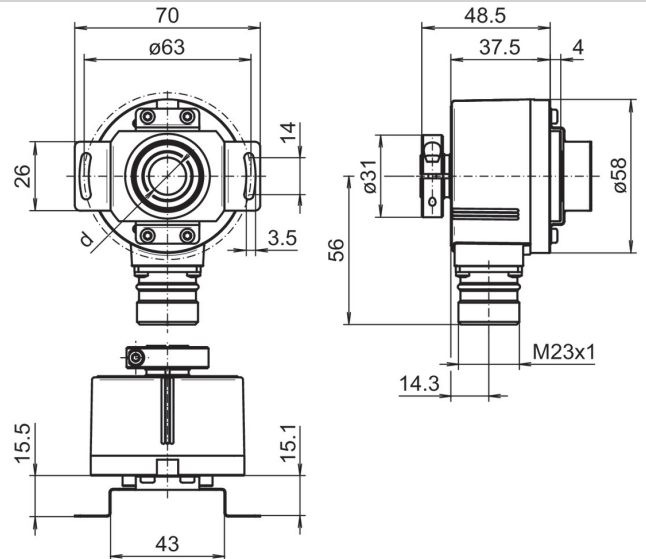
With through hollow shaft  
100...5000 pulses per revolution

## Dimensions



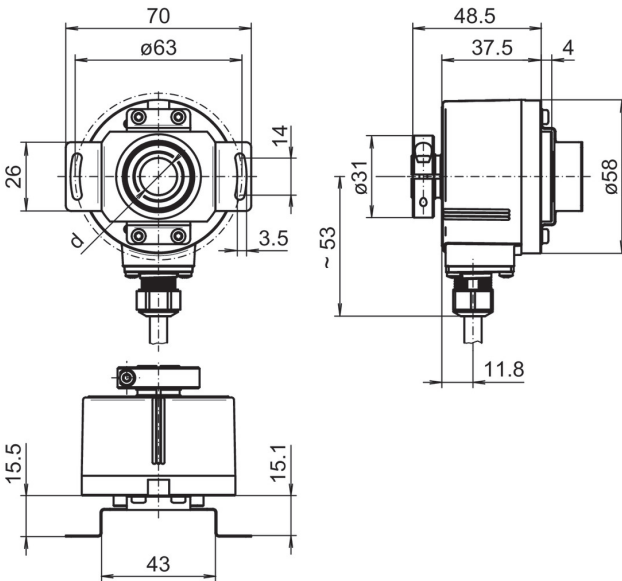
d H7:  $\varnothing 10$ ,  $\varnothing 12$ ,  $\varnothing 14$   
d G7:  $\varnothing 3/8''$  ( $\varnothing 9.52$ ),  $\varnothing 1/2''$  ( $\varnothing 12.7$ )

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



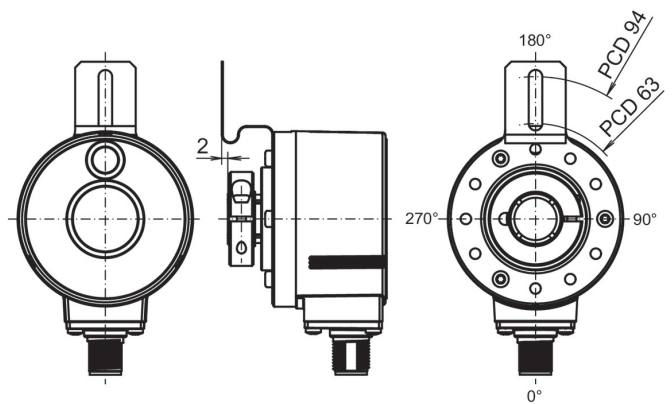
d H7:  $\varnothing 10$ ,  $\varnothing 12$ ,  $\varnothing 14$   
d G7:  $\varnothing 3/8''$  ( $\varnothing 9.52$ ),  $\varnothing 1/2''$  ( $\varnothing 12.7$ )

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



d H7:  $\varnothing 10$ ,  $\varnothing 12$ ,  $\varnothing 14$   
d G7:  $\varnothing 3/8''$  ( $\varnothing 9.52$ ),  $\varnothing 1/2''$  ( $\varnothing 12.7$ )

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

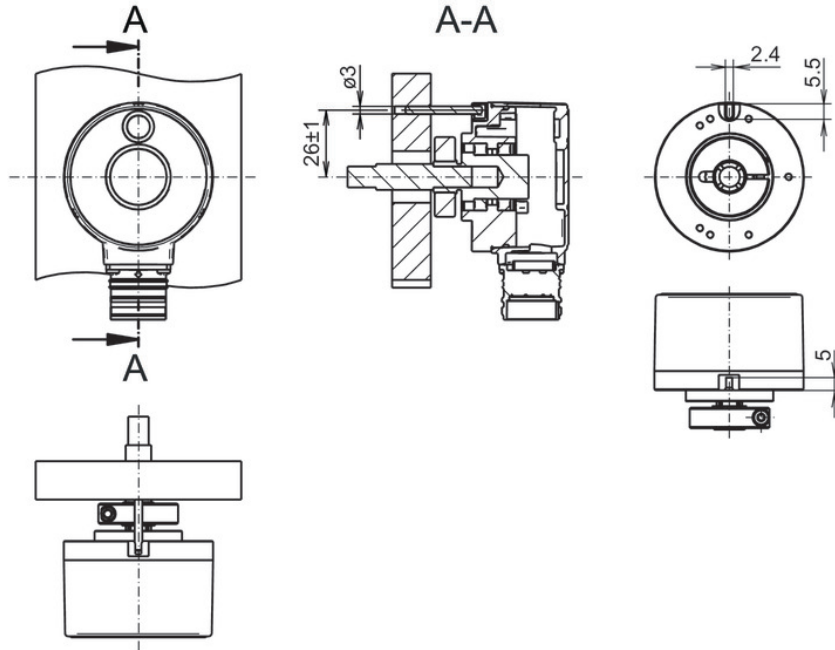


Flange version M: Mounting position torque support

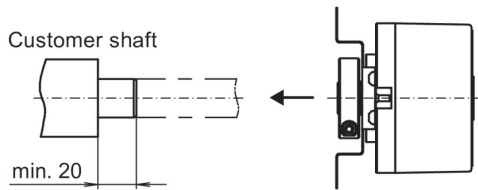
# EIL580-T

With through hollow shaft  
100...5000 pulses per revolution

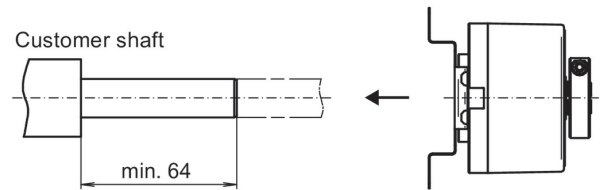
## Dimensions



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

# EIL580-T

 With through hollow shaft  
 100...5000 pulses per revolution

**Ordering reference**

	EIL580	-	T	#	##	.	#	##	#	.	####	.	A
<b>Product</b>	EIL580												
<b>Shaft type</b>													
Through hollow shaft			T										
<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>Through hollow shaft</b>													
ø8 mm, clamping ring, A-side													O8
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
<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 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

# EIL580-T

With through hollow shaft  
 100...5000 pulses per revolution

**Ordering reference**

	EIL580	-	T	#	##	.	#	##	#	.	####	.	A
<b>Pulse number</b>													
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

2020-06-29 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

### 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
11123483	Clamping ring 16/31/ 8 M3 8.8 for EIL580 hollow shaft $\varnothing$ 12...14 mm for clamping at B 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