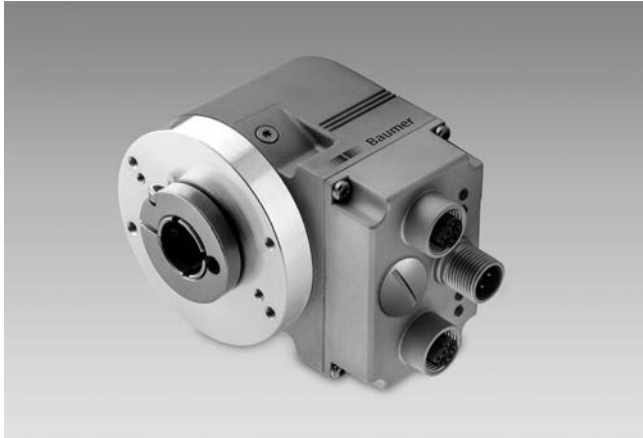


Absolute encoders - bus interfaces

Through hollow shaft

Optical multiturn encoders max. 18 bit ST / 16 bit MT, EtherNet/IP

EAL580-T - EtherNet/IP - OptoTurn®



EAL580-T with through hollow shaft

Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤100 mA (24 VDC)
Interface	EtherNet/IP
Function	Multiturn
Steps per revolution	≤262144 / 18 bit (adjustable)
Number of revolutions	≤65536 / 16 bit (adjustable)
Total resolution	≤31 bit
Absolute accuracy	±0.01 ° (ST 18 bit / MT 13 bit) ±0.025 ° (ST 13 bit / MT 16 bit)
Sensing method	Optical
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Status indicator	4x LED integrated in housing
Approval	UL approval / E63076

Features

- Absolute encoder multiturn
- Optical sensing method
- Max. resolution: singleturn 18 bit, multiturn 16 bit
- Through hollow shaft
- LED status display
- EtherNet/IP
- Maximum resistant against magnetic fields
- Button for Preset/Reset
- Rotary coding switch for IP address

Optional

- B-side clamping

Technical data - mechanical design

Size (flange)	ø58 mm
Shaft type	ø10...14 mm (through hollow shaft)
Protection DIN EN 60529	IP 54, IP 65, IP 67
Operating speed	≤6000 rpm (mechanical) ≤6000 rpm (electric)
Starting acceleration	≤1000 U/s ²
Starting torque	≤0.04 Nm (+25 °C, IP 54)
Rotor moment of inertia	20 gcm ²
Materials	Housing: zinc diecast Flange: aluminium
Operating temperature	-40...+85 °C (see general information)
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration ±0.75 mm - 10-58 Hz 10 g - 58-2000 Hz DIN EN 60068-2-27 Shock 100 g, 2 ms
Weight approx.	500 g
Connection	Flange connector 3 x M12

Absolute encoders - bus interfaces

Through hollow shaft

Optical multiturn encoders max. 18 bit ST / 16 bit MT, EtherNet/IP

EAL580-T - EtherNet/IP - *OptoTurn*[®]

Part number

EAL580- T . W EN . 0. A

Operating temperature

A -40...+85 °C

Resolution

1316 13 bit singleturn / 16 bit multiturn

1813 18 bit singleturn / 13 bit multiturn

Voltage supply

EN 10...30 VDC, EtherNet/IP

Connection

W Flange connector 3 x M12, 4-pin, radial

Protection

4 IP 54

5 IP 65

7 IP 67 (only clamping ring at A-side)

Specification hollow shaft

A ø10 mm, clamping ring at A side

C ø12 mm, clamping ring at A side

G ø12 mm, clamping ring at B side

E ø14 mm, clamping ring at A side

H ø14 mm, clamping ring at B side

Flange

N Without stator coupling

B Torque pin ø4 x 15 mm, radial

Shaft type

T Through hollow shaft

Absolute encoders - bus interfaces

Through hollow shaft

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Accessories

Connectors and cables

11034355	Cable connector M12, 4-pin, on both sides, D-coded, 5 m cable (Z 185.E05)
11174046	Cable connector M12, 4-pin, straight, D-coded, without cable (Z 185.S01)
11174047	Cable connector M12, 4-pin, angled, D-coded, without cable (Z 185.S02)
11034356	Female connector M12, 5-pin, A-coded, 5 m cable (Z 185.P05)
11212237	Female connector M12, 5-pin, A-coded, 10 m cable (Z 185.P10)

Mounting accessories

10139345	Torque support by rubber buffer for encoders with 15 mm pin (Z 119.041)
10147837	Spring coupling for one-side attachment, length 35 mm (Z 119.050)
10165157	Spring coupling for encoders with $\varnothing 58$ mm housing, hole distance 73 mm (Z 119.072)
11034121	Spring coupling for encoders with $\varnothing 58$ mm housing, hole distance 68 mm (Z 119.073)
11034123	Spring coupling for one-side attachment, length 115 mm (Z 119.076)
11003562	Spring coupling for encoders with $\varnothing 58$ mm housing, hole distance 63 mm (Z 119.082)
11177167	Self-tapping grounding screw (Z 119.100)

EtherNet/IP features

Bus protocol	EtherNet/IP
Device profile	CIP Nov 2016, 22 _{hex} Encoder
Cycle time	1 ms
Features	<ul style="list-style-type: none"> - Gear factor (round shaft) and endless loop mode - Plausibility check of the adjustable parameters - Comprehensive diagnostic functions - Address Conflict Detection - Device Level Ring - Multiple simultaneous IO connections
LED status indicator	2x Link/Activity, Module Status, Network Status

Terminal assignment

Voltage supply

Pin	Assigned	Significance
1	UB	Voltage supply
2	d.u.	Do not connect
3	GND	Ground
4	d.u.	Do not connect



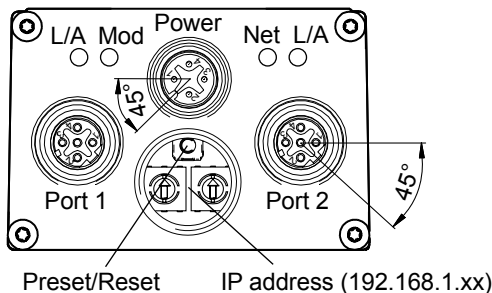
1 x flange connector M12 (male), A-coded

EtherNet/IP (data line)

Pin	Assigned	Significance
1	TxD+	Transmission data+
2	RxD+	Receiving data+
3	TxD-	Transmission data-
4	RxD-	Receiving data-



2 x flange connector M12 (female), D-coded



General information

Self-heating interrelated to speed, protection, attachment method and ambient conditions as well electronics and supply voltage must be considered for precise thermal dimensioning. Self-heating is supposed to approximate 7 K (IP 54 protection) respectively 8 K (IP 65 / IP 67 protection) per 1000 rpm. Operating the encoder close to the maximum limits requires measuring the real prevailing temperature at the encoder flange.

Absolute encoders - bus interfaces

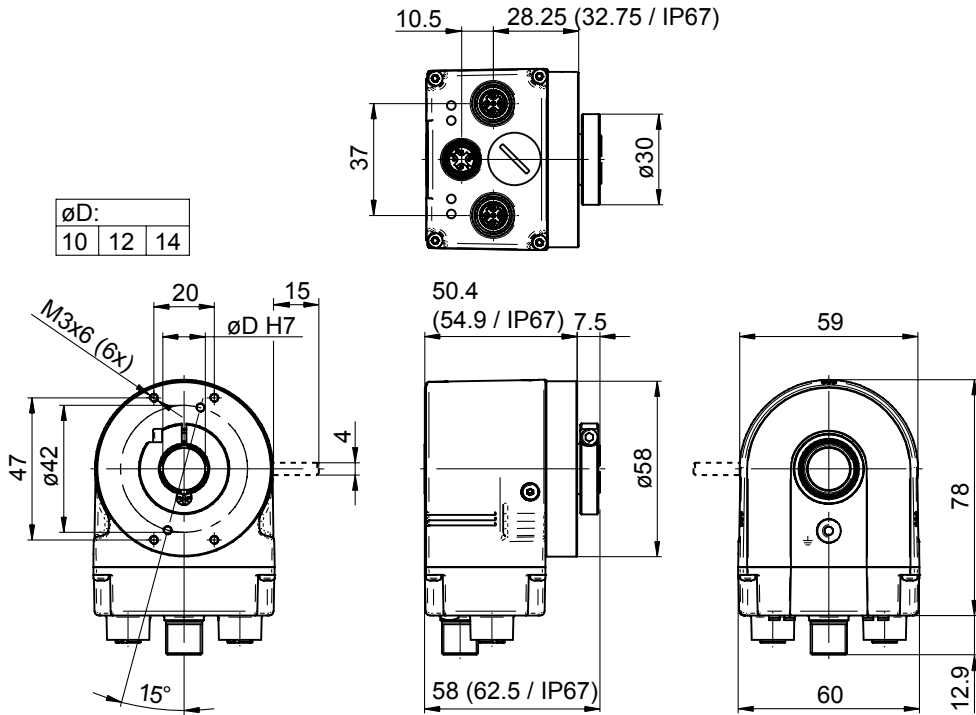
Through hollow shaft

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EAL580-T - EtherNet/IP - *OptoTurn*[®]

Dimensions

Through hollow shaft, clamping ring at A side



Through hollow shaft, clamping ring at B side

