

# Absolute encoders - bus interfaces

Solid shaft with clamping or synchro flange

Optical multiturn encoders max. 18 bit ST / 16 bit MT, PROFINET IRT

## EAL580 - solid shaft - *OptoTurn*<sup>®</sup>



EAL580 with clamping or synchro flange

### Features

- Absolute encoder multiturn
- Optical sensing method
- Max. resolution: singleturn 18 bit, multiturn 16 bit
- Clamping or synchro flange
- LED status indicator
- PROFINET IRT
- Maximum resistant against magnetic fields

### Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Interface	PROFINET IRT
Function	Multiturn
Steps per turn	≤262144 / 18 bit (adjustable)
Number of turns	≤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

### Technical data - mechanical design

Size (flange)	ø58 mm
Protection DIN EN 60529	IP 54 (optional), IP 65, IP 67 (optional)
Operating speed	≤10000 rpm (mechanical) ≤6000 rpm (electric)
Starting acceleration	≤1000 U/s <sup>2</sup>
Starting torque	≤0.03 Nm (+25 °C, IP 65/IP 67) ≤0.015 Nm (+25 °C, IP 54)
Rotor moment of inertia	20 gcm <sup>2</sup>
Admitted shaft load	≤20 N axial ≤40 N radial
Materials	Housing: zinc diecast Flange: aluminium
Operating temperature	-40...+85 °C
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 16-2000 Hz DIN EN 60068-2-27 Shock 200 g, 3 ms
Weight approx.	500 g
Connection	Flange connector 3 x M12

### EAL580-SC

Shaft type ø10 x 20 mm, solid shaft with flat

Flange Clamping flange

### EAL580-SY

Shaft type ø6 x 10 mm, solid shaft with flat

Flange Synchro flange

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**Part number**

**Clamping flange**

EAL580-S 

C	0	.		W	PT	.		0.	A
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										<p><u>Operating temperature</u> A -40...+85 °C</p> <p><u>Resolution</u> 1316 13 bit singleturn / 16 bit multiturn 1813 18 bit singleturn / 13 bit multiturn</p> <p><u>Voltage supply</u> PT 10...30 VDC, PROFINET IRT</p> <p><u>Connection</u> W Flange connector 3 x M12, 4-pin, radial</p> <p><u>Protection</u> 4 IP 54 (optional) 5 IP 65 7 IP 67 (optional)</p> <p><u>Specification solid shaft</u> 0 ø10 x 20 mm, with flat</p> <p><u>Flange</u> C Clamping flange</p>

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### Part number

### Synchro flange

EAL580-S 

Y	6	.		W	PT	.		0.	A
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										<u>Operating temperature</u>
									A	-40...+85 °C
										<u>Resolution</u>
							1316			13 bit singleturn / 16 bit multiturn
							1813			18 bit singleturn / 13 bit multiturn
										<u>Voltage supply</u>
						PT				10...30 VDC, PROFINET IRT
										<u>Connection</u>
						W				Flange connector 3 x M12, 4-pin, radial
										<u>Protection</u>
						4				IP 54 (optional)
						5				IP 65
						7				IP 67 (optional)
										<u>Specification solid shaft</u>
						6				ø6 x 10 mm, with flat
										<u>Flange</u>
Y										Synchro flange

# Absolute encoders - bus interfaces

## Solid shaft with clamping or synchro flange

### Optical multiturn encoders max. 18 bit ST / 16 bit MT, PROFINET IRT

#### EAL580 - solid shaft - *OptoTurn®*

#### Accessories

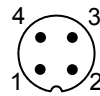
##### Mounting accessories

Z 119.006	Eccentric fixing, single
Z 119.015	Mounting adaptor for synchro flange
Z 119.035	Bearing flange for encoders with synchro flange

#### Terminal assignment

##### Voltage supply

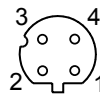
Terminal	Assigned	Significance
Pin 1	UB	Voltage supply
Pin 2	d.u.	Do not connect
Pin 3	GND	Ground
Pin 4	d.u.	Do not connect



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

##### PROFINET (data line)

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



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

# Absolute encoders - bus interfaces

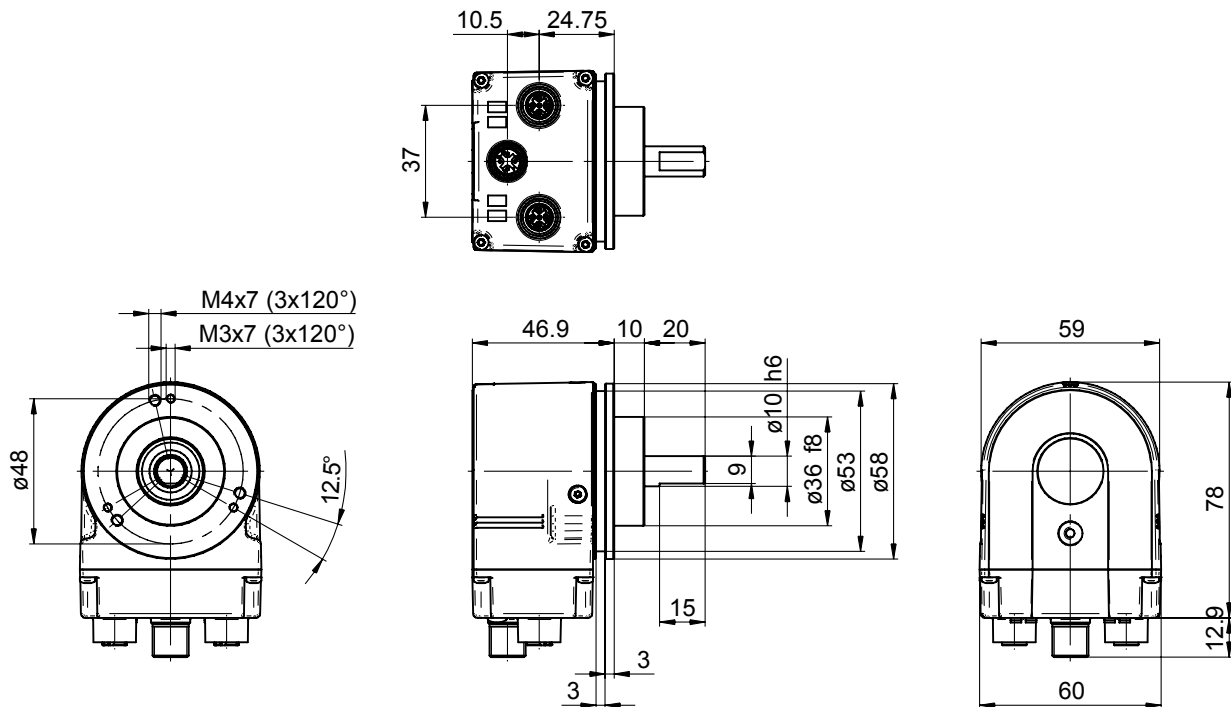
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### Dimensions

#### Clamping flange



#### Synchro flange

