

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*[®]



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 ²
Starting torque	≤0.03 Nm (+25 °C, IP 65/IP 67) ≤0.015 Nm (+25 °C, IP 54)
Rotor moment of inertia	20 gcm ²
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

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*[®]

Part number

Clamping flange

EAL580-S

C	0	.		W	PT	.		0.	A
---	---	---	--	---	----	---	--	----	---

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

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*[®]

Part number

Synchro flange

EAL580-S

Y	6	.		W	PT	.		0.	A
---	---	---	--	---	----	---	--	----	---

									<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

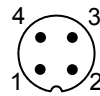
Mounting accessories

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

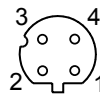
Terminal	Assigned	Significance
Pin 1	UB	Voltage supply
Pin 2	d.u.	Do not connect
Pin 3	GND	Ground
Pin 4	d.u.	Do not connect



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

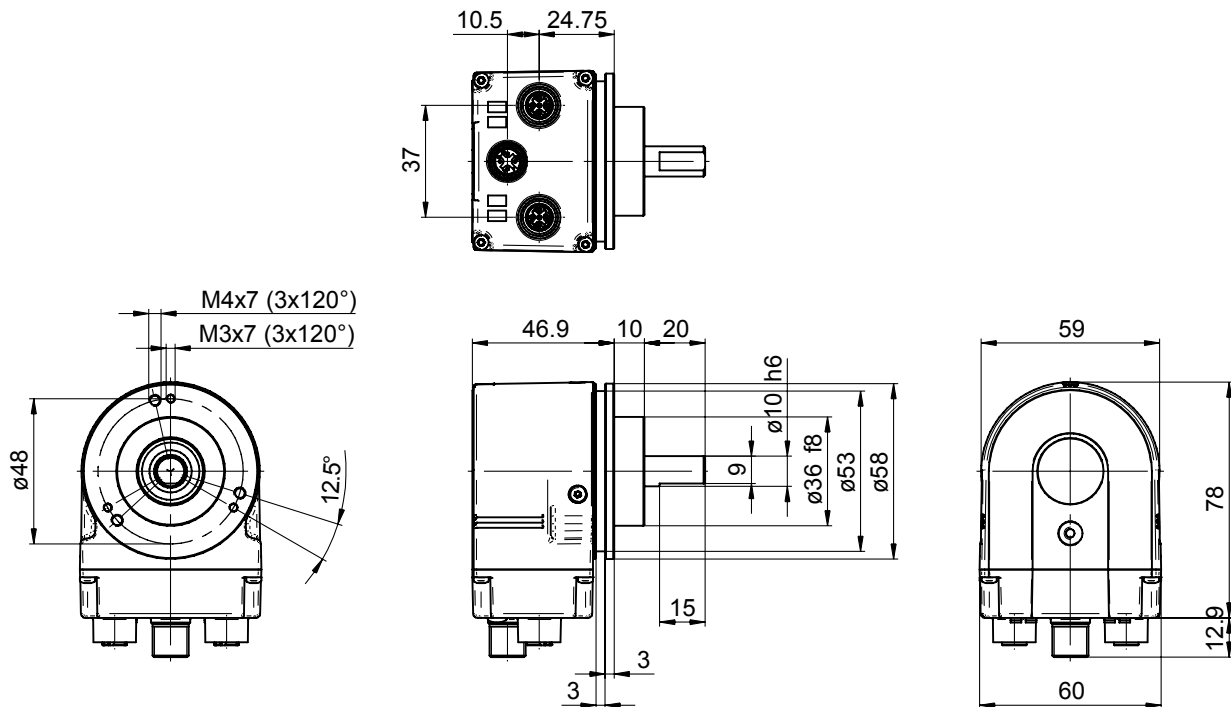
Solid shaft with clamping or synchro flange

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

EAL580 - solid shaft - *OptoTurn*[®]

Dimensions

Clamping flange



Synchro flange

