

# EAL580-TNC.5WPT.18130.A

Through hollow shaft, optical multiturn encoders 18 bit ST / 13 bit MT, PROFINET IO

Article number: 11258101

## Overview

- Absolute encoder multiturn
- Optical sensing method
- Resolution: singleturn 18 bit, multiturn 13 bit
- Through hollow shaft
- LED status display
- PROFINET IO
- Maximum resistant against magnetic fields



## Technical data

### Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤100 mA (24 VDC)
Interface	PROFINET IO
Function	Multiturn
Steps per revolution	262144 / 18 bit
Number of revolutions	8192 / 13 bit
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	EN 61000-6-2
Emitted interference	EN 61000-6-4
Status indicator	4x LED integrated in housing
Approval	UL approval / E63076

### Technical data - mechanical design

Size (flange)	ø58 mm
---------------	--------

### Technical data - mechanical design

Shaft type	ø12 mm (through hollow shaft)
Protection EN 60529	IP 65
Operating speed	≤6000 rpm (mechanical) ≤6000 rpm (electric)
Angular acceleration	≤2500 rad/s <sup>2</sup> (UB = 0 VDC) ≤500000 rad/s <sup>2</sup> (UB = 10...30 VDC)
Starting torque	≤0.06 Nm (+25 °C, IP 65)
Rotor moment of inertia	20 gcm <sup>2</sup>
Material	Housing: zinc diecast Flange: aluminium
Operating temperature	-40...+85 °C (see general information)
Relative humidity	95 % non-condensing
Resistance	EN 60068-2-6 Vibration ±0.75 mm - 10-58 Hz, 10 g - 58-2000 Hz EN 60068-2-27 Shock 100 g, 2 ms
Weight approx.	500 g
Connection	Flange connector 3xM12

# EAL580-TNC.5WPT.18130.A

Through hollow shaft, optical multturn encoders 18 bit ST / 13 bit MT, PROFINET IO

Article number: 11258101

## 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.

## 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



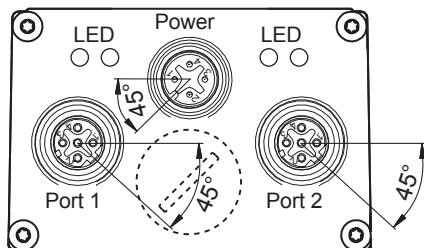
1 x flange connector M12 (male), A-coded

### PROFINET (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



## PROFINET features

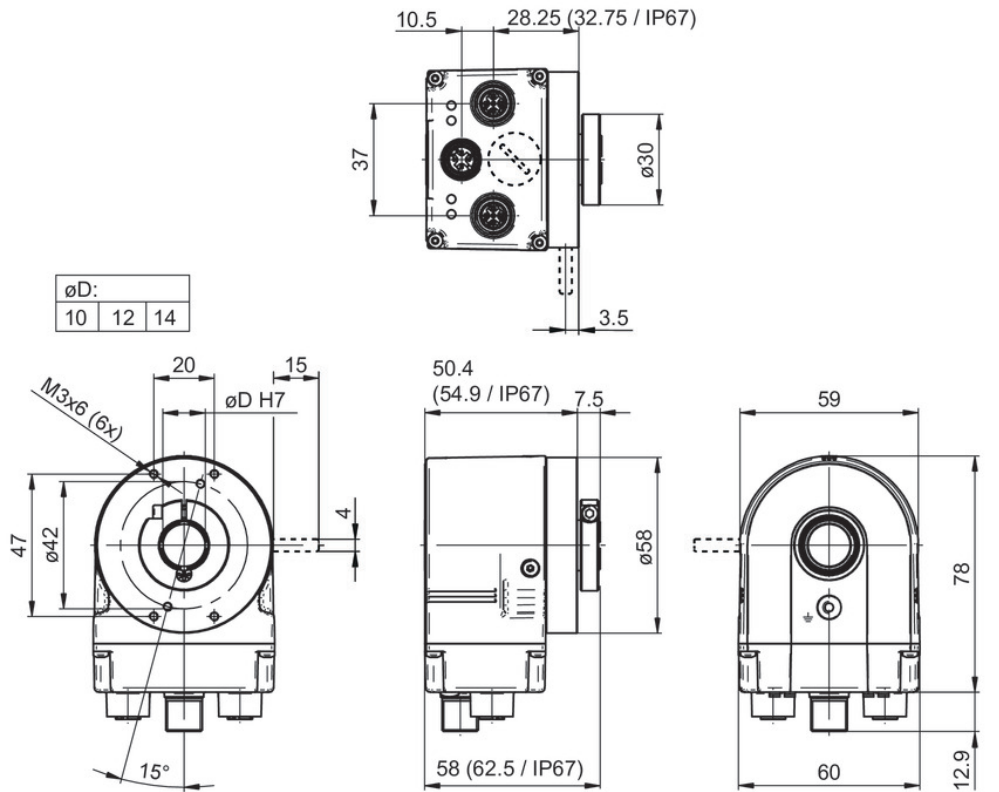
Bus protocol	PROFINET IO
Device profile	Encoder Profil PNO 3.162 V4.1 und V3.1 PROFIdrive Profil PNO 3.172 V4.1
Real time classes	Realtime (RT) Class 1, IRT Class 3
Send clock	RT: 1 ms, 2 ms, 4 ms IRT: 250 µs, 500 µs, 1 ms, 2 ms, 4 ms
Update time	Min. 500 µs
Features	- 100 MBaud Fast Ethernet - Device replacement without interchangeable media - Media redundancy MRP - Gear factor / Round axis
Process data	- Position value 32 bit input data with/without rotation speed 16 or 32 bit - Telegrams 81-83 of PROFIdrive profile
LED status indicator	Link/Activity, Status, Error

# EAL580-TNC.5WPT.18130.A

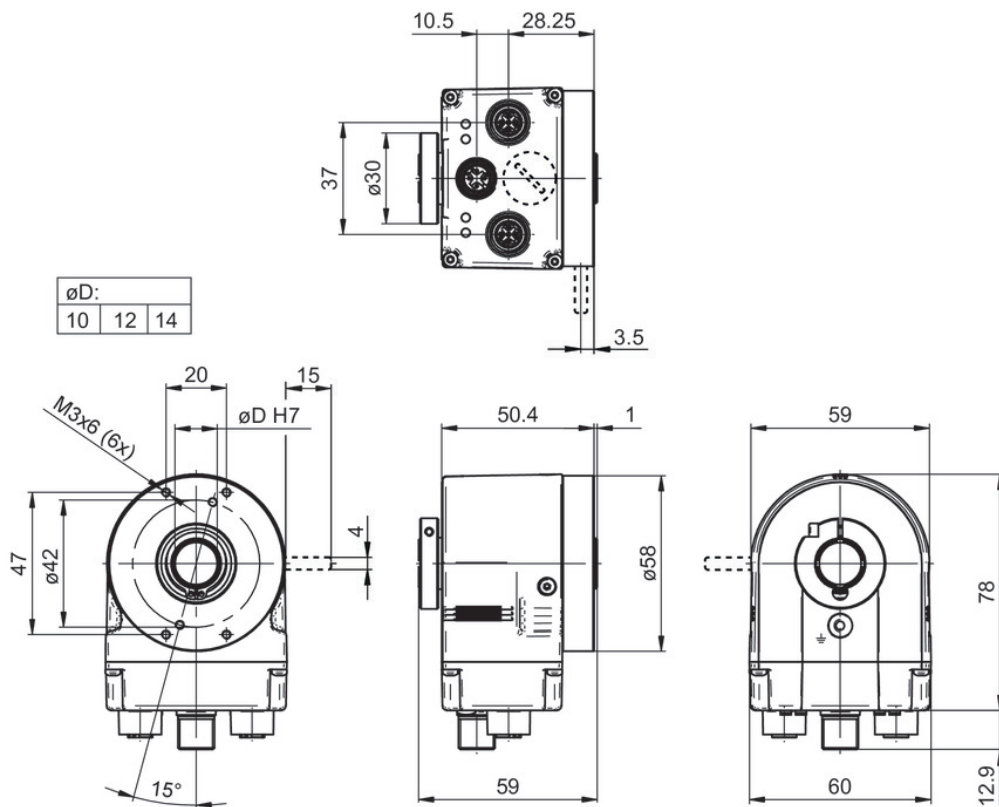
Through hollow shaft, optical multturn encoders 18 bit ST / 13 bit MT, PROFINET IO

Article number: 11258101

## Dimensions



Through hollow shaft, clamping ring at A side



Through hollow shaft, clamping ring at B side