

# EAM580R-BA\$.7NC8.14180.A

Blind hollow shaft, magnetic multiturn encoder 14 bit ST / 18 bit MT

Article number: 11723654

## Overview

- Encoder multiturn / CANopen®
- E1 compliant design
- High protection IP 67
- High resistance to shock and vibrations
- Protection against corrosion CX (C5-M)
- Wire cross section 0.5 mm<sup>2</sup>
- Electronic gear function
- Applicable up to PLd (ISO 13849)
- Option: Shaft for form fit (2004)
- Option: CANopen settings



## Technical data

### Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption typ.	35 mA (24 VDC, w/o load)
Initializing time	≤ 1 s after power on
Interface	CANopen®
Function	Multiturn
Profile conformity	CANopen® CiA communication profile DS 301, LSS profile DSP 305, device profile DS 406
Steps per revolution	≤16384 / 14 bit
Number of revolutions	≤262144 / 18 bit
Absolute accuracy	±0.15 ° (+20 ±15 °C) ±0.25 ° (-40...+85 °C)
Sensing method	Magnetic
Code sequence	CW: ascending values with clockwise sense of rotation; looking at flange
Output stages	CAN-Bus, LV (3.3 V) compatible ISO 11898
Interference immunity	EN 61000-6-2 ISO 11452-2:2004* / -5:2002* ISO 7637-2:2004* ISO 10605:2008 + Amd 1:2014 (CD ±8 kV / AD ±15 kV) * Severity level according to ECE R10 (Rev. 4)
Emitted interference	EN 61000-6-4 CISPR 25:2008 (30...1000 MHz) ISO 7637-2:2004* * Severity level according to ECE R10 (Rev. 4)

### Technical data - electrical ratings

MTTF <sub>d</sub> (ISO 13849)	High (>100 years) Use in safety functions exclusively based on Application Note and MTTF <sub>d</sub> reliability prediction (request separately).
Approval	UL approval / E217823

### Technical data - mechanical design

Size (flange)	ø58 mm
Shaft type	ø12 mm (blind hollow shaft)
Protection EN 60529	IP 67 (with shaft seal)
Operating speed	≤6000 rpm
Starting torque	≤2.5 Ncm (+20 °C, IP 67)
Moment of inertia	46.75 gcm <sup>2</sup>
Material	Housing: steel, powder-coated Flange: aluminium Hollow shaft: stainless steel
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions CX (C5-M) according to ISO 12944-2
Operating temperature	-40...+85 °C (see general information)
Relative humidity	95 %
Resistance	EN 60068-2-6 Vibration 30 g, 10-2000 Hz EN 60068-2-27 Shock 500 g, 1 ms
Weight approx.	250 g
Connection	Flange connector M12, 5-pin

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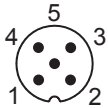
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## General information

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 6 K (IP 65 protection) respectively 12 K (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

Pin	Signals
1	CAN_GND
2	+Vs
3	0 V
4	CAN_H
5	CAN_L



## CANopen® features

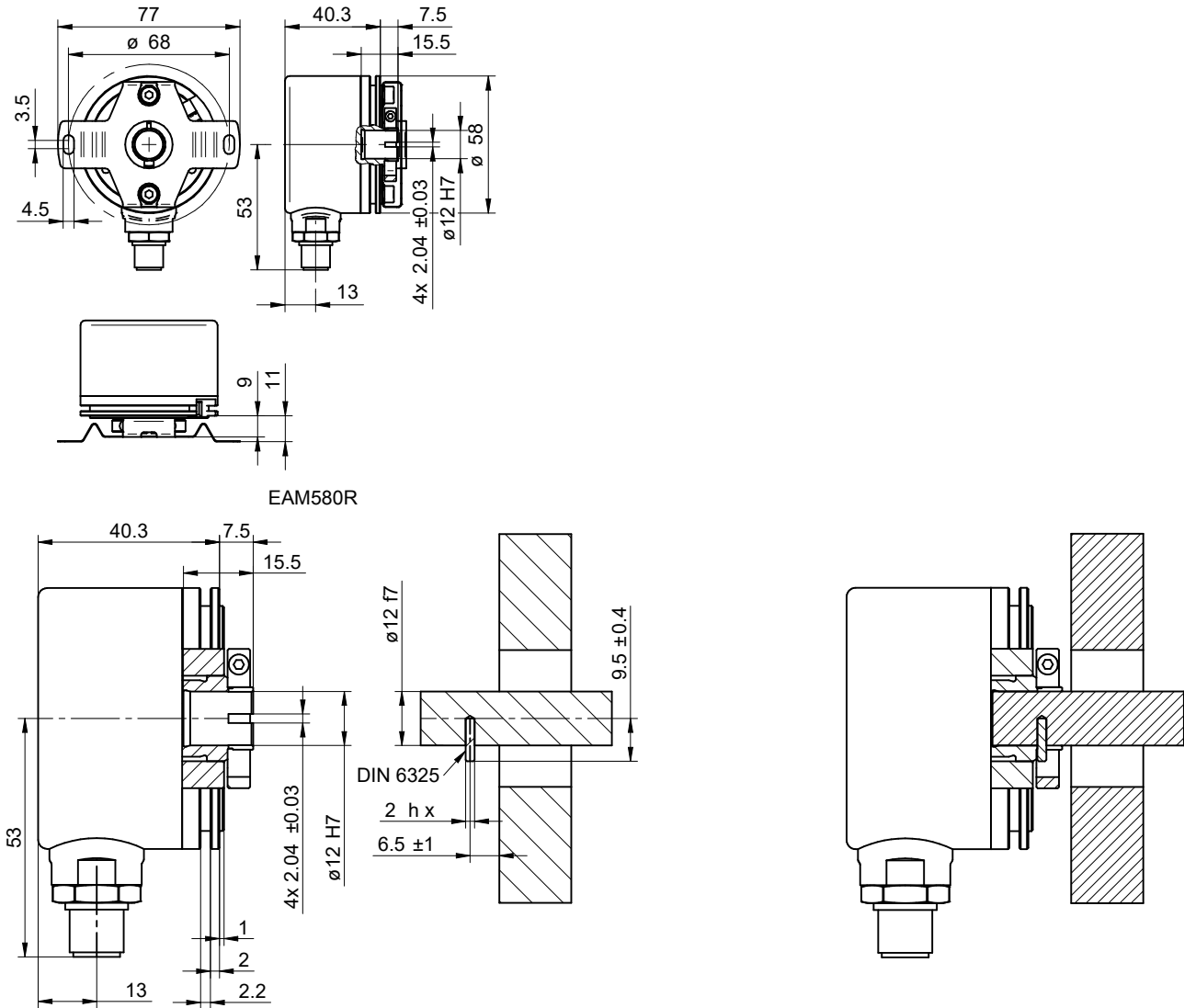
Operating modes	Timer-driven (Event-Time) Synchronously triggered (Sync)
Node Monitoring	Heartbeat Node guarding
Programmable parameters	Operating modes Total resolution Scaling Electronic gear function
Diagnosis	Multiturn sensing Position error Temperature exceeding Speed exceeding
Default	Channel A: Node ID 9 Channel B: Node ID 11 Baud rate 250 kbit/s

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## Dimensions



EAM580R

Option: Shaft (2004) with slots 4x 2.04  $\pm 0.03$  mm for form fit