



Model Number

TSI40N-16ABCT2TN-01024

Features

- **Compact design**
- **4.75 V ... 30 V with short-circuit proof push-pull output**
- **RS 422 functionality at 5 V operation**
- **Tangential cable outlet**

Description

The TVI40 continues the new economical target line of Pepperl+Fuchs with a recessed hollow shaft version. With a small outside diameter of 40 mm, the unit is ideal for use in industrial areas where very little space is available.

The technology of the rotary encoder is adapted to the new requirements of the rotary encoder market. Innovative fast technology with Opto-ASIC forms the central basis of the device. The rotary encoder is available with a pulse count of up to 1024 pulses per revolution.

The rotary encoder provides the ideal combination of non-sensitivity to temperature and high resolution.

The appearance of this rotary encoder is the tangential cable outlet. This ensures a buckling-free, carefully laying of the connection cable in tangential, radial or axial manner.

Technical data

General specifications

Pulse count 1024

Electrical specifications

Operating voltage U_B 4.75 ... 30 V DC
5 V DC for RS-422

No-load supply current I_0 max. 55 mA

Output

Output type push-pull, incremental or RS-422, incremental

Voltage drop U_d ≤ 2.5 V (< 2.5 V)

Load current max. per channel 30 mA, short-circuit protected (max. per channel 20 mA, conditionally short-circuit proof)

Output frequency max. 100 kHz (max. 100 kHz)

Rise time 980 ns (225 ns)

De-energized delay t_{off} 980 ns (225 ns)

Connection

Connector 130 mm fixed cable with 4-pin, M12 x 1 connector

Standard conformity

Degree of protection DIN EN 60529, IP54

Climatic testing DIN EN 60068-2-3, no moisture condensation

Emitted interference EN 61000-6-4:2007/A1:2011

Noise immunity EN 61000-6-2:2005

Shock resistance DIN EN 60068-2-27, 100 g, 6 ms

Vibration resistance DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz

Ambient conditions

Operating temperature -10 ... 70 °C (14 ... 158 °F)

Storage temperature -25 ... 85 °C (-13 ... 185 °F)

Mechanical specifications

Material

Housing Polycarbonate

Flange 3.1645 aluminum

Shaft Stainless steel 1.4305 / AISI 303

Mass approx. 180 g

Rotational speed max. 6000 min⁻¹

Moment of inertia ≤ 4.3 gcm²

Starting torque ≤ 0.2 Ncm

Shaft load

Angle offset 1 °

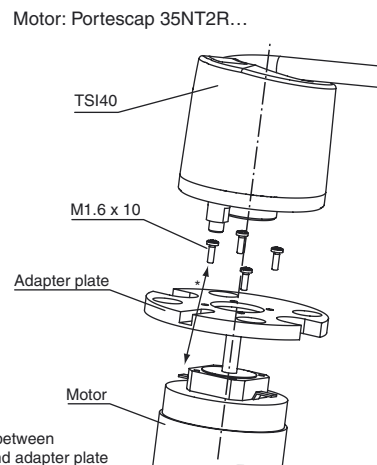
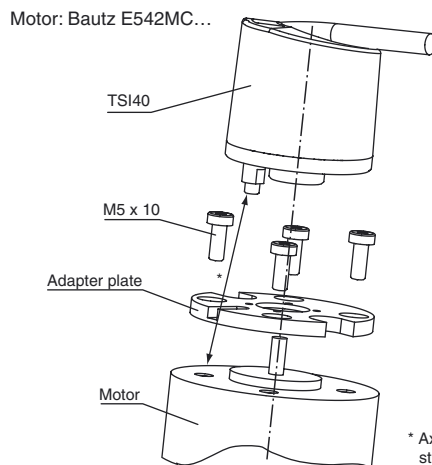
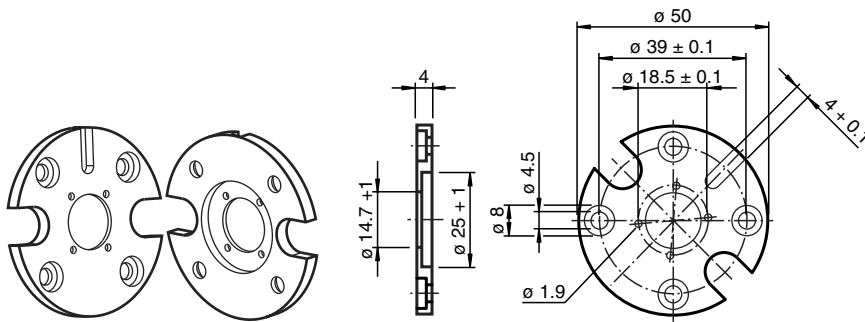
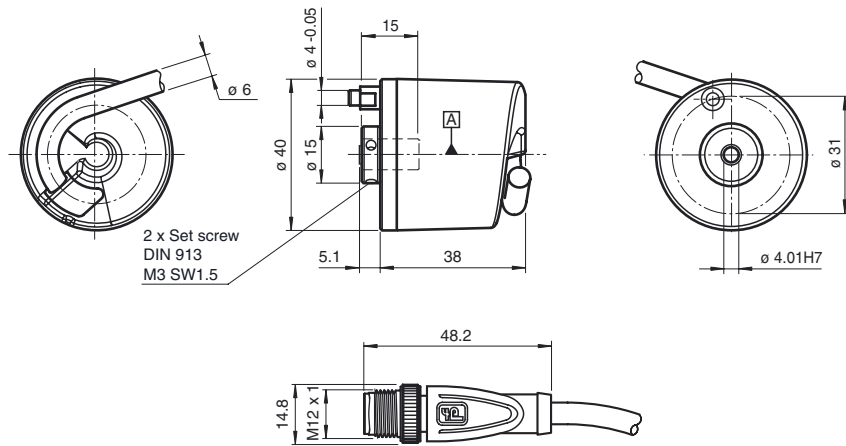
Axial offset max. 1 mm

Life span $\geq 2 \times 10^9$ revolutions (max. shaft loading)

Approvals and certificates

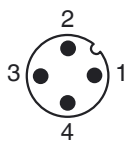
UL approval cULus Listed, General Purpose, Class 2 Power Source

Dimensions



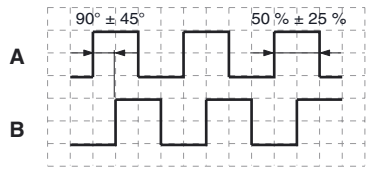
* Axial level between stud bolt and adapter plate min. 0.5 - max. 1

Electrical connection



GND	4
+V _s	2
A	3
B	1

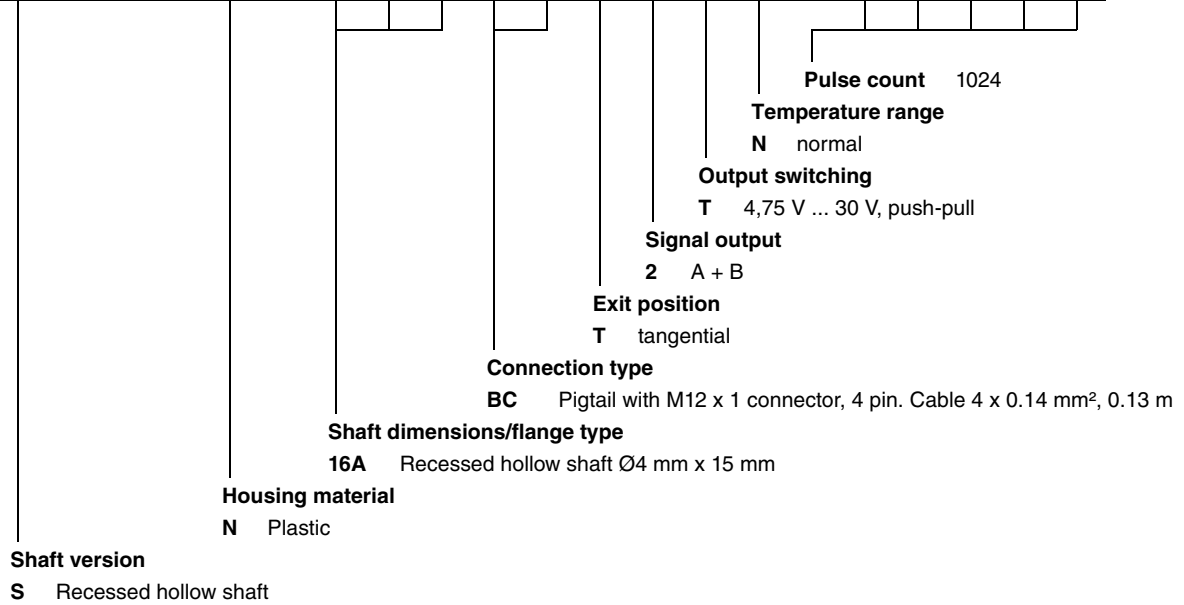
Signal outputs



↻ cw - with view onto the shaft

Order code

T	S	I	4	0	N	-	1	6	A	B	C	T	2	T	N	-	0	1	0	2	4
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