

- Compact design
- Up to 1024 ppr
- 4.75 V ... 30 V with short-circuit proof push-pull output
- RS 422 functionality at 5 V operation
- Loadable metal disk
- Tangential cable outlet

Product description

The TVI40 continues the new economical target line of Pepperl+Fuchs. 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 is equipped with a metal disk that can accept a high load. It 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.

TVI40N

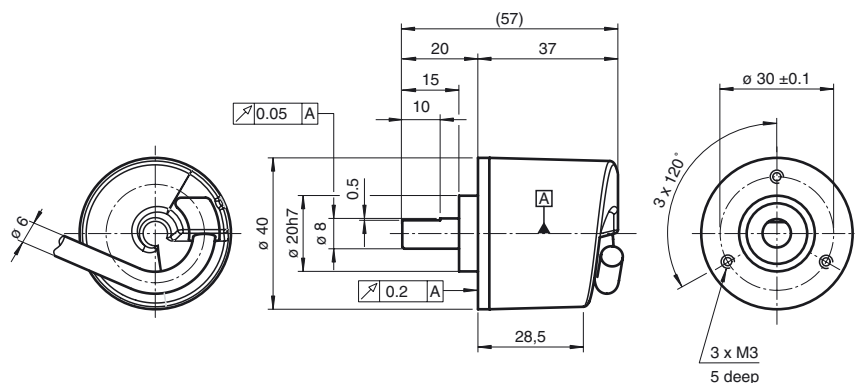


Technical data

General specifications	
Pulse count (ppr)	max. 1024
Electrical specifications	
Operating voltage	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 (RS 422, incremental)
Voltage drop U_d	≤ 2.5 V (< 2.5 V)
Operating current	max. per channel 30 mA, short-circuit proof (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	
Cable	$\varnothing 6$ mm, 8 x 0.128 mm ² , 0.5 m
Standard conformity	
Protection degree	DIN EN 60529, IP54
Climatic testing	DIN EN 60068-2-3, no moisture condensation
Emitted interference	DIN EN 61000-6-4
Interference rejection	DIN EN 61000-6-2
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	
Nickel disk	-10 ... 70 °C (263 ... 343 K)
Storage temperature	
Nickel disk	-25 ... 85 °C (248 ... 358 K)
Mechanical specifications	
Material	
Housing	Polycarbonate
Flange	aluminium 3.1645
Shaft	stainless steel 1.4305
Mass	approx. 180 g
Rotational speed	max. 6000 min ⁻¹
Moment of inertia	≤ 4.3 gcm ²
Starting torque	≤ 0.2 Ncm
Shaft load	
Axial	max. 20 N
Radial	max. 30 N

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

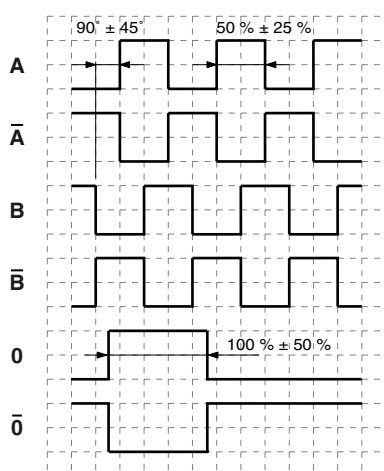
Dimensions



Electrical connection

Signal	Cable Ø6 mm, 8-core
GND	Blue
+U _b	Brown
A	Black
B	White
\bar{A}	Violet
\bar{B}	Grey
0	Orange
$\bar{0}$	Yellow
Screen	-

Signal outputs



↻ cw - with view onto the shaft

Accessories

Accessories	Name/defining feature	Order code
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Date of edition 2007-05-31

