Model Number

TVI58N

Features

- **Sturdy and compact design**
- **Up to 1500 ppr**
- **4.75 V ... 30 V with short-circuit proof push-pull output**
- **RS 422 functionality at 5 V operation**

Description

The TVI58 extends the economical target line of Pepperl+Fuchs. With its outside diameter of 58 mm, the device is fully mechanical compatible to the usual industry standard.

The technology of the rotary encoder is optimally adapted to the 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 1500 pulses per revolution.

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

Technical data

General specifications	
Detection type	photoelectric sampling
Pulse count	max. 1500
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	
Cable	Ø6 mm, 8 x 0.14 mm^2, 0.5 m, UL-Style 2571
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	-40 ... 80 °C (-40 ... 176 °F)
Mechanical specifications	
Material	
Housing	aluminum, blank
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 220 g
Rotational speed	max. 6000 min^{-1}
Moment of inertia	≤ 20 gcm^2
Starting torque	≤ 0.5 Ncm
Shaft load	
Axial	20 N
Radial	40 N

Approvals and certificates	
UL approval	cULus Listed, General Purpose, Class 2 Power Source
Maximum permissible ambient temperature	≤ 60 °C (≤ 140 °F)

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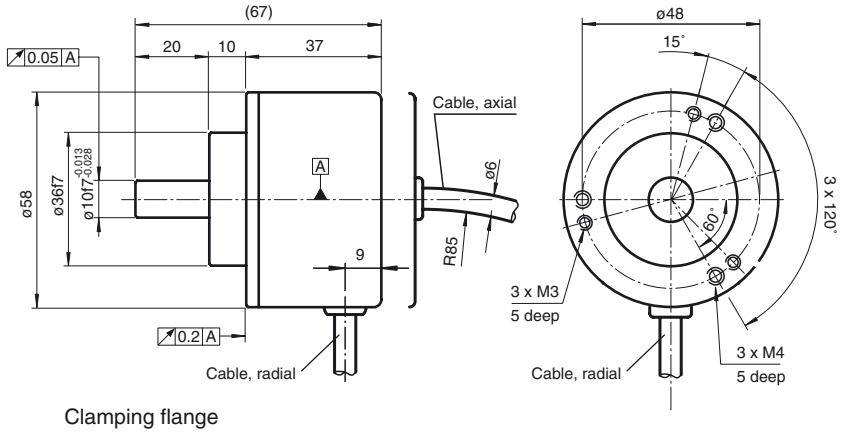
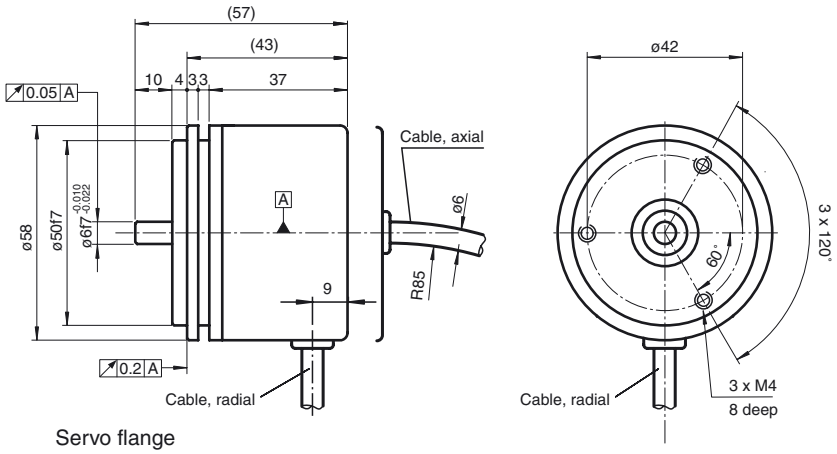
Dimensions



Clamping flange



Servo flange

Electrical connection

Signal	Cable Ø6 mm, 8-core
GND	White
$+U_b$	Brown
A	Green
B	Grey
$\overline{A}$	Yellow
$\overline{B}$	Pink
0	Blue
$\overline{0}$	Red
Screen	-

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Refer to “General Notes Relating to Pepperl+Fuchs Product Information”.
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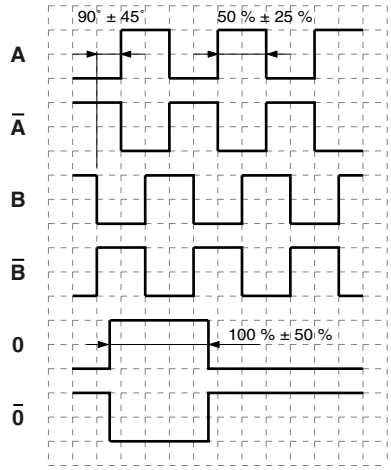
Signal outputs



↻ cw - with view onto the shaft

Order code

T	V	I	5	8	N	–				K			6	T	N	–					

Pulse count 100, 125, 250, 360, 500, 512, 600, 1000, 1024, 1500

Option
N Normal

Output switching
T 4.75 V ... 30 V, push-pull

Signal output
6 A + B + 0 and $\overline{A}$ + $\overline{B}$ + $\overline{0}$

Exit position
A Axial
R Radial

Connection type
K0 Cable Ø6 mm, 8 x 0.14 mm^2, 0.5 m, UL style 2571
K2 Cable Ø6 mm, 8 x 0.14 mm^2, 2 m, UL style 2571

Shaft dimension/Flange version
01N Shaft Ø10 mm x 20 mm, clamping flange, 3 x M3 and 3 x M4
032 Shaft Ø6 mm x 10 mm, servo flange

Housing material/protection degree
N Aluminium, IP54

Shaft version
V Solid shaft

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