



Incremental rotary encoder

TVI58N

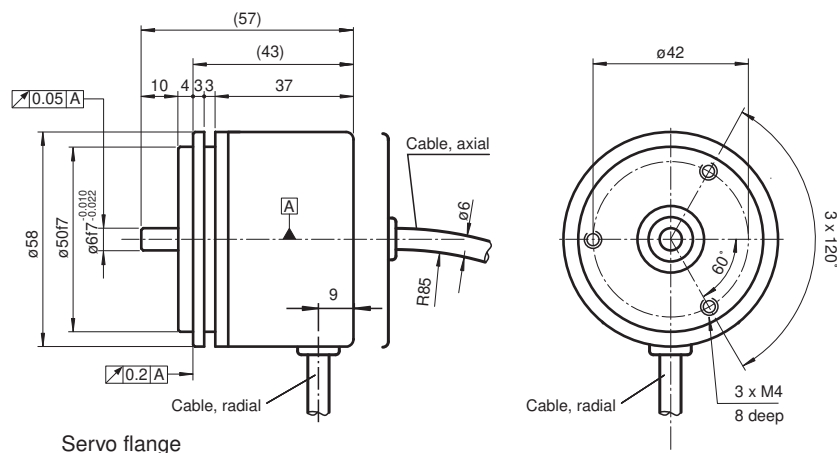
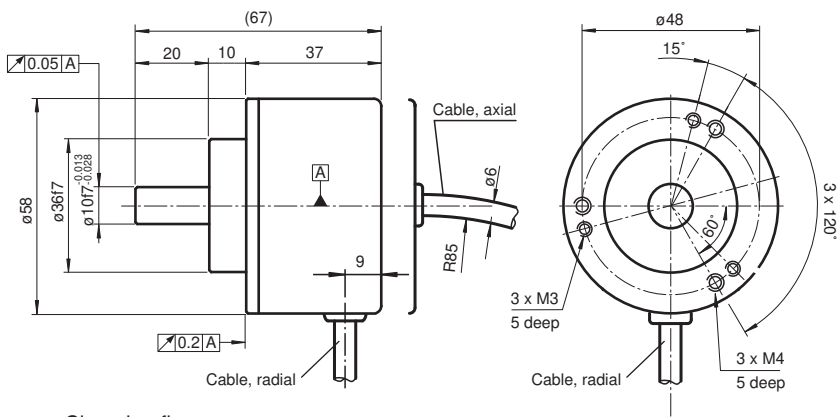
- Sturdy and compact design
- Up to 1500 ppr
- 4.75 V ... 30 V with short-circuit proof push-pull output
- RS 422 functionality at 5 V operation



Function

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.

Dimensions



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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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PF PEPPERL+FUCHS

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		$\varnothing 6$ 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
Approvals and certificates		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
Maximum permissible ambient temperature		max. 60 °C (max. 140 °F)
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

Accessories





	9203	Angled flange
	9300	Mounting bracket for servo flange
	9108, 6	Measuring wheel

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Accessories

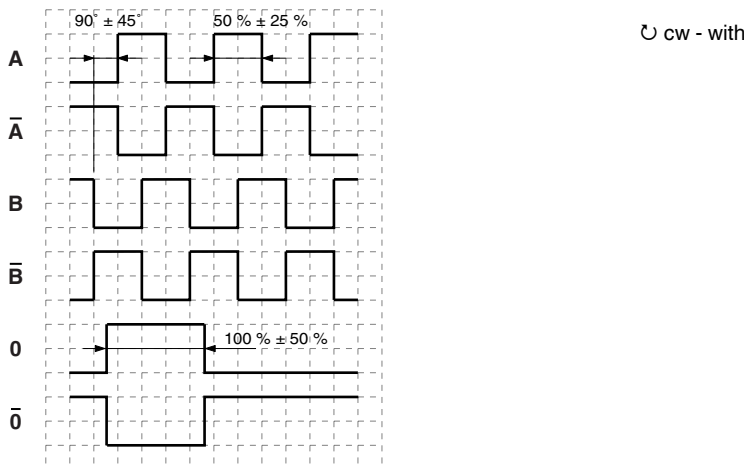
	9109, 6	Measuring wheel for shaft diameter 6 mm
	9110, 6	Measuring wheel for shaft diameter 6 mm
	9113, 6	Measuring wheel for shaft diameter 6 mm
	MBT-36ALS	Spring-loaded mounting bracket with a diameter of 36 mm

Connection

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

Operation

Signal outputs



Type Code

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 \bar{A} + \bar{B} + $\bar{0}$

Exit position
A Axial
R Radial

Connection type
K0 Cable Ø6 mm, 8 x 0.14 mm², 0.5 m, UL style 2571
K2 Cable Ø6 mm, 8 x 0.14 mm², 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

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Order code

T	V	I	5	8	N	-				K			6	T	N	-				
---	---	---	---	---	---	---	--	--	--	---	--	--	---	---	---	---	--	--	--	--

Shaft version
V Solid shaft

Housing material/protection degree
N Aluminium, IP54

032 Shaft Ø6 mm x 10 mm, servo flange

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

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