



Model Number

RVI58N-*****6

Features

- Up to 5000 ppr
- Industrial standard housing Ø58 mm
- Servo or clamping flange
- 5 V with RS-422 interface

Description

Compatibility says it all for this incremental rotary encoder.

All six output channels are fitted for this incremental rotary encoder. It can thus be used universally in many different applications.

Focussing on the designs that are most often required has allowed us to offer rapid availability at an attractive price.

The pulse disk is designed in plastic up to 1500 pulses. Beyond that, glass is used.

This incremental rotary encoder is available either in clamping flange design with a shaft 10 mm in diameter x 20 mm or in servo flange design with a shaft 6 mm in diameter x 10 mm.

The electrical connection is made by a 8-pin or a 12-pin round plug connector. It is also possible to obtain a version with a cable connector.

Technical data

General specifications

Detection type	photoelectric sampling
Pulse count	max. 5000

Functional safety related parameters

MTTF _d	140 a
Mission Time (T _M)	20 a
L _{10h}	70 E+9 at 6000 rpm
Diagnostic Coverage (DC)	0 %

Electrical specifications

Operating voltage U _B	5 V DC ± 5 %
No-load supply current I ₀	max. 70 mA

Output

Output type	RS 422, incremental
Load current	max. per channel 20 mA , conditionally short-circuit proof
Output frequency	max. 200 kHz
Rise time	100 ns

Connection

Connector	type 9416 (M23), 12-pin, type 9416L (M23), 12-pin or M12 connector, 8-pin
Cable	Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m

Standard conformity

Degree of protection	DIN EN 60529, IP65
Climatic testing	DIN EN 60068-2-78 , 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, 3 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz

Ambient conditions

Operating temperature	
Glass disk	-5 ... 80 °C (23 ... 176 °F) , movable cable -20 ... 80 °C (-4 ... 176 °F) , fixed cable
Plastic disk	-5 ... 60 °C (23 ... 140 °F) , movable cable -20 ... 60 °C (-4 ... 140 °F) , fixed cable
Storage temperature	
Glass disk	-40 ... 85 °C (-40 ... 185 °F)
Plastic disk	-40 ... 70 °C (-40 ... 158 °F)

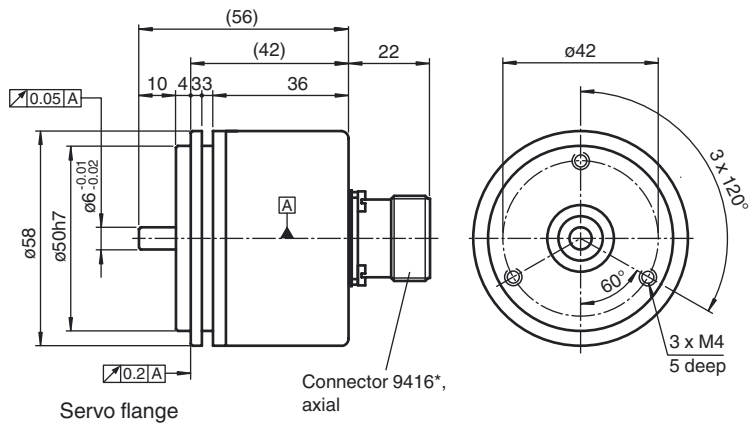
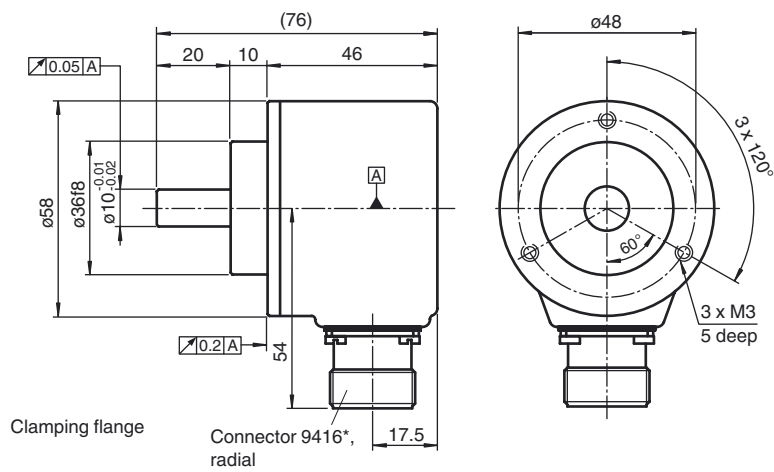
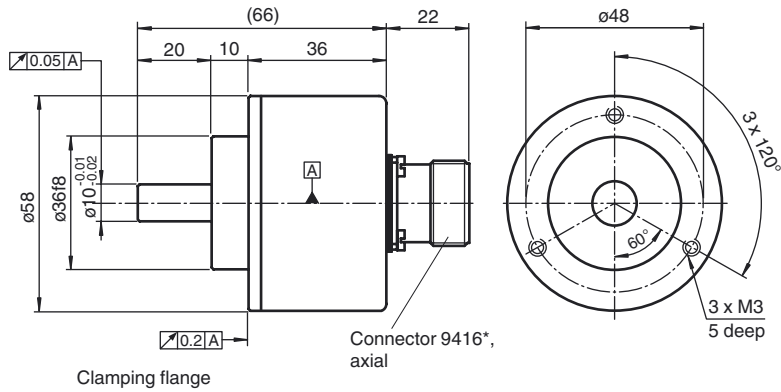
Mechanical specifications

Material	
Housing	powder coated aluminum
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 350 g
Rotational speed	max. 12000 min ⁻¹
Moment of inertia	≤ 25 gcm ²
Starting torque	≤ 1.5 Ncm
Shaft load	
Axial	40 N at max. 6000 min ⁻¹ 10 N at max. 12000 min ⁻¹
Radial	60 N at max. 6000 min ⁻¹ 20 N at max. 12000 min ⁻¹

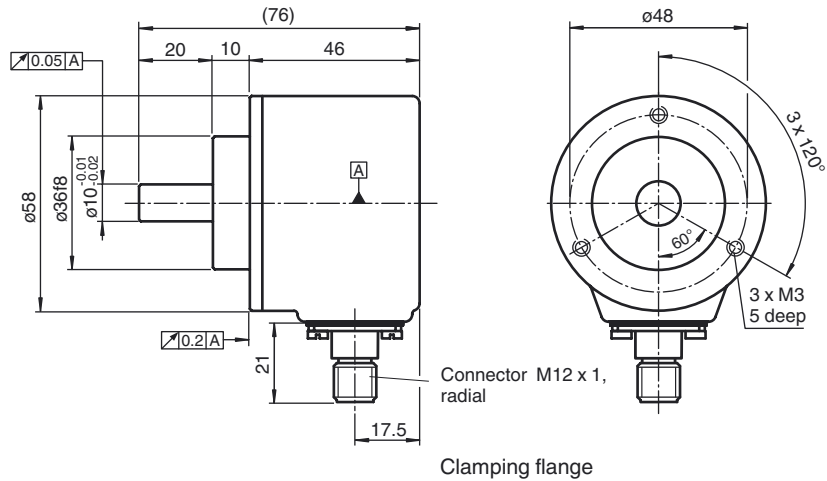
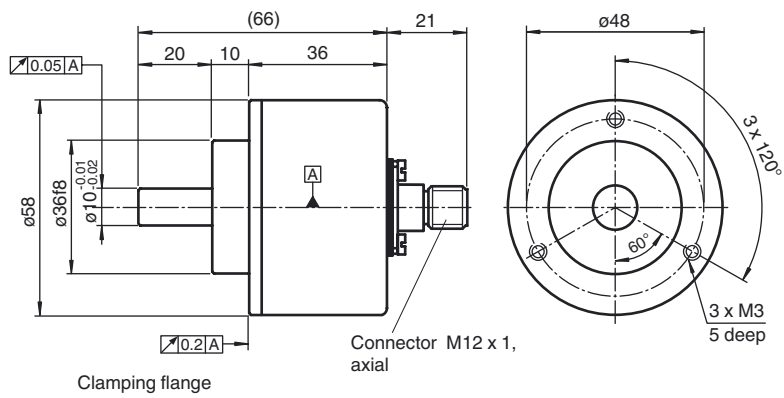
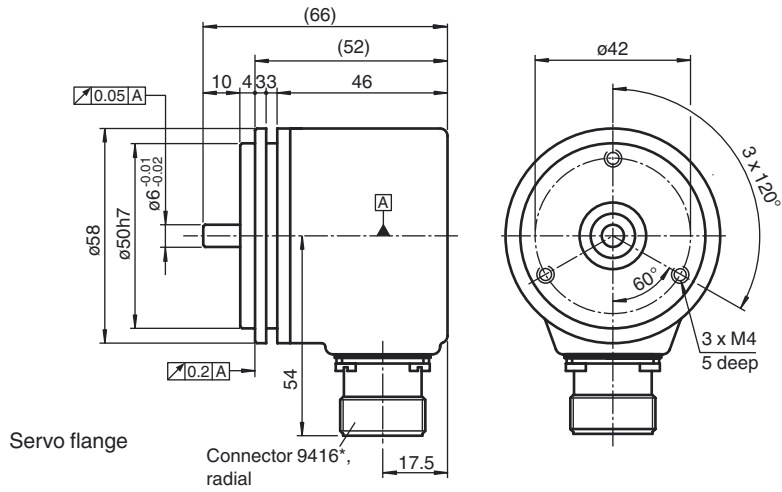
Approvals and certificates

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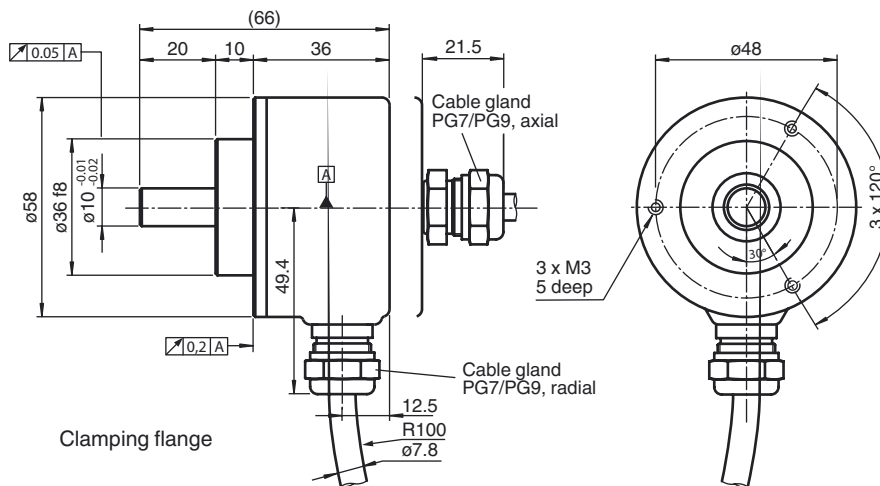
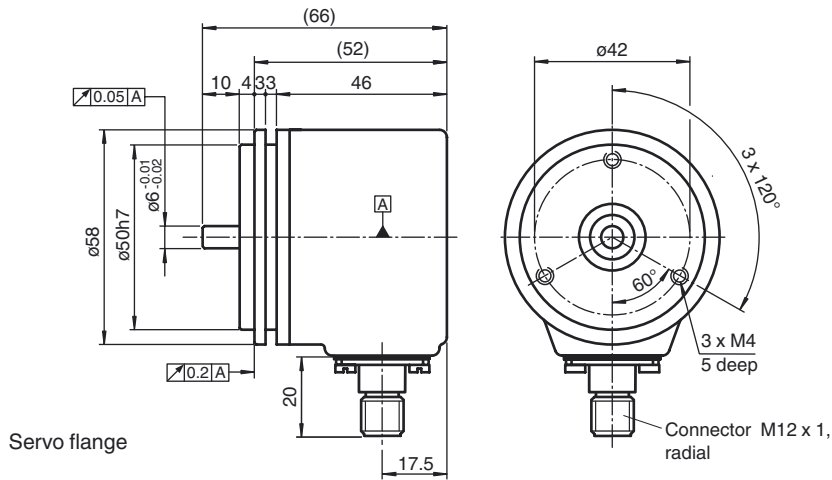
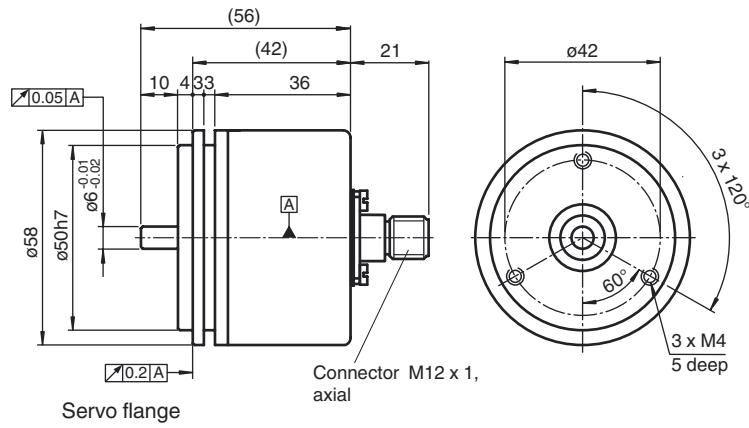
Dimensions



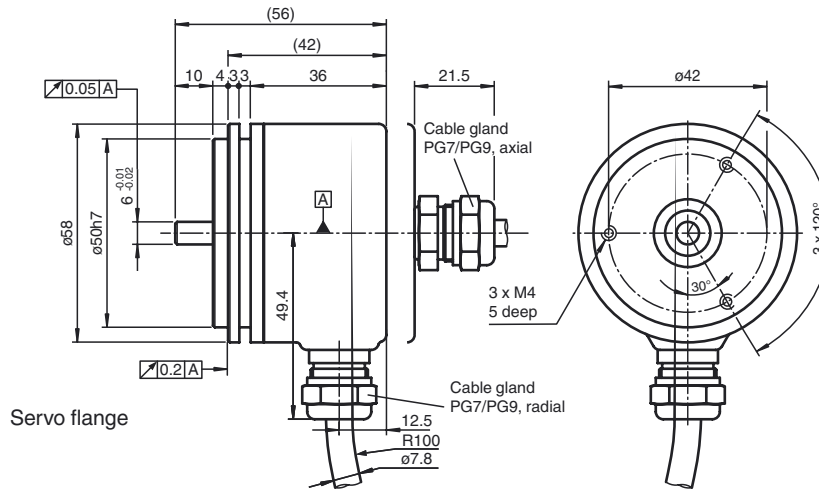
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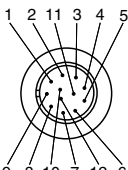
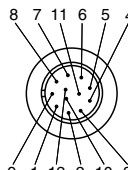
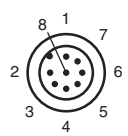
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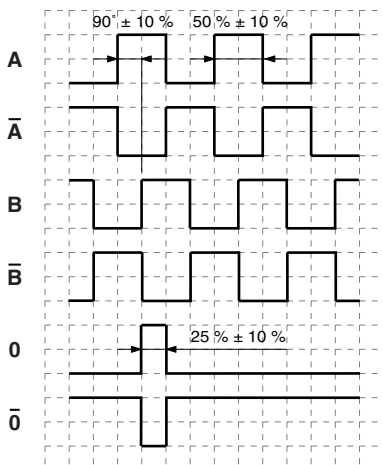
Electrical connection

Signal	Cable	Connector 9416	Connector 9416L	Connector M12 x 1
GND	White	10	10	1
U _b	Brown	12	12	2
A	Green	5	5	3
B	Grey	8	8	5
\bar{A}	Yellow	6	6	4
\bar{B}	Pink	1	1	6
0	Blue	3	3	7
$\bar{0}$	Red	4	4	8
U _b Sens ^{*)}	Violet	2	2	-
NC	Grey/Pink	7	7	-
Screen	-	Housing	Housing	Housing
NC	-	9	9	-
GND Sens ^{*)}	Black	11	11	-
				

^{*)} only for devices with 5 V supply and RS 422 interface (output circuit 6)

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Signal outputs



↻ cw - with view onto the shaft

Order code

R	V	I	5	8	N	-											6		N	-								
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Shaft version
V Solid shaft

Housing material
N Aluminium, powder coated

Shaft dimension/flange version
011 Shaft Ø10 mm x 20 mm with clamping flange
032 Shaft Ø6 mm x 10 mm with servo flange
044 Shaft Ø10 mm x 20 mm (flat 1 mm x 20 mm) with clamping flange

Connection type
AA Plug connector type 9416, 12-pin
AB Plug connector type 9416L, 12-pin
BE Plug connector M12 x 1, 8-pin
K1 Cable Ø7.8 mm, 6 x 2 x 0.14 mm², 1 m

Exit position
A Axial
R Radial

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

Output switching
1 10 V ... 30 V, push-pull
6 5 V, RS 422
X 10 V ... 30 V, RS 422

Option
N Normal

Pulse count 100, 360, 500, 512, 1000, 1024, 1250, 2048, 2500, 3600, 4096, 5000