



Model Number

RVI58N-*****1

Features

- Up to 50,000 ppr
- Extended temperature range
- Industrial standard housing Ø58 mm
- Servo or clamping flange
- 10 V ... 30 V with short-circuit proof push-pull output

Description

High performance are key words for this rotary encoder. The outstanding features of this encoder include a high angle resolution and an optional extended temperature range.

Usually all six output channels of this incremental rotary encoder are assigned to ensure flexible use of the encoder in a wide range of applications.

This incremental rotary encoder is available as a clamping flange version with a Ø10 mm x 20 mm shaft or a servo flange version with a Ø6 mm x 10 mm shaft.

The electrical connection is made via a 12-pin round connector. A version with a cable connection is also available.

Technical data

General specifications

Detection type	photoelectric sampling
Pulse count	max. 50000

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	10 ... 30 V DC
No-load supply current I ₀	max. 60 mA

Output

Output type	push-pull, incremental
Voltage drop U _d	< 3 V
Load current	max. per channel 40 mA , short-circuit protected, reverse polarity protected
Output frequency	max. 200 kHz
Rise time	400 ns

Connection

Connector	type 9416, 12-pin, type 9416L, 12-pin
Cable	Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m

Standard conformity

Protection degree	DIN EN 60529, IP65
Climatic testing	DIN EN 60068-2-78 , no moisture condensation
Emitted interference	EN 61000-6-4:2007
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	-5 ... 80 °C (23 ... 176 °F) , movable cable -20 ... 80 °C (-4 ... 176 °F) , fixed cable -40 ... 80 °C (-40 ... 176 °F) with Option T , fixed cable
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

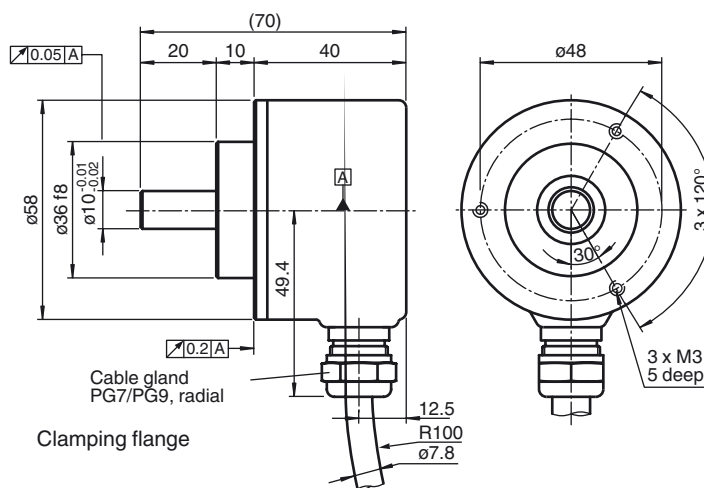
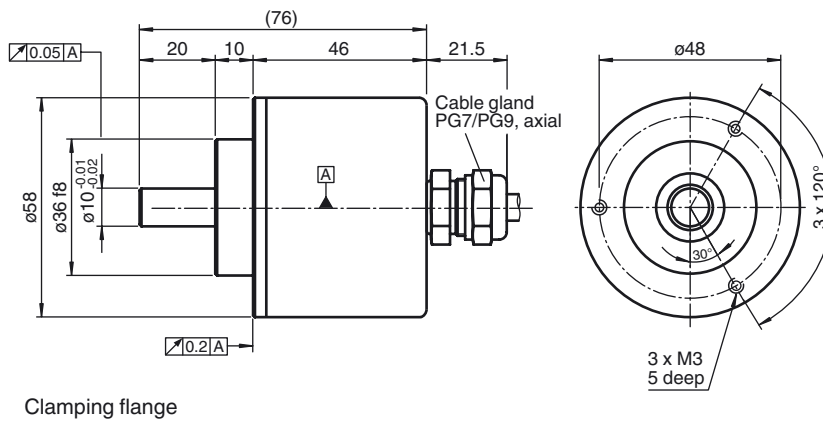
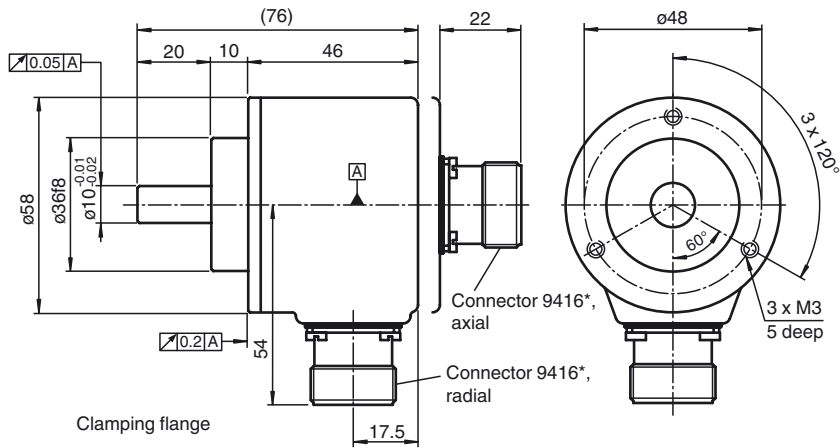
Mechanical specifications

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

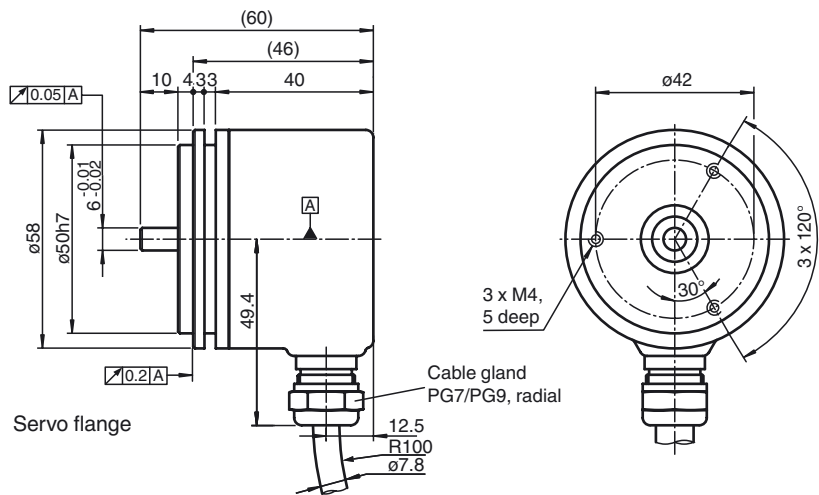
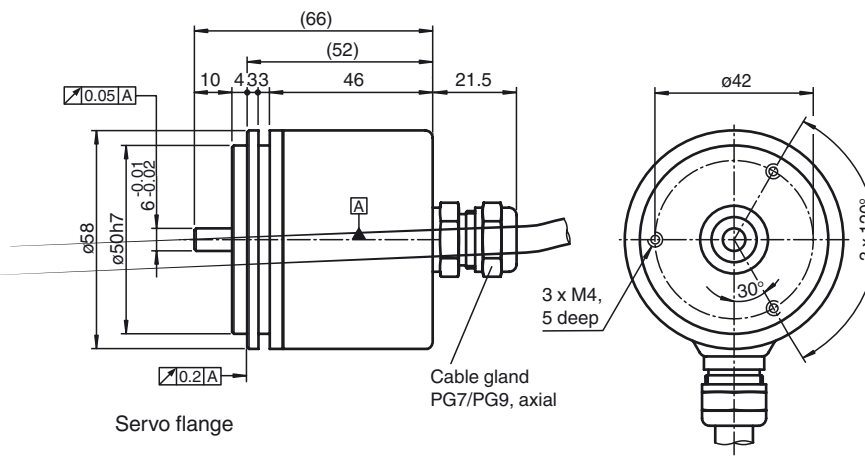
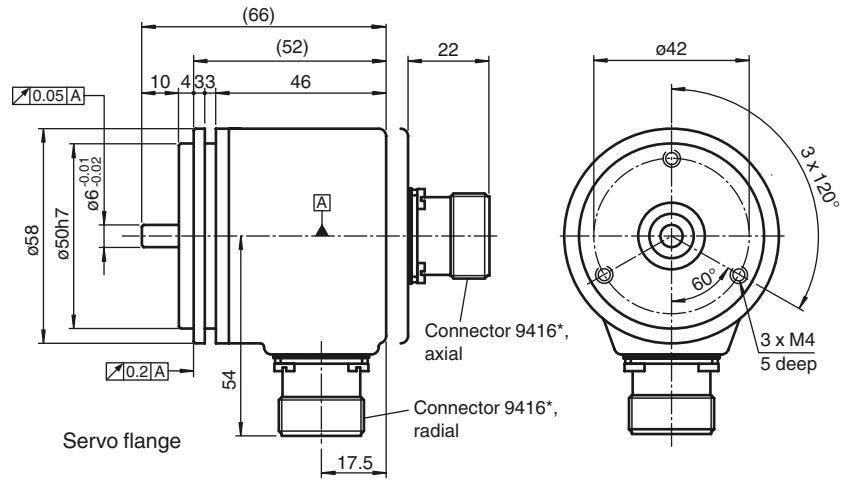
Approvals and certificates

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



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Accessories**9203**

Angled flange

9213

Mounting bracket, spring-loaded for clamping flange

9310-3

Synchro clamping element

9416

Cable connector

9416L

Cable connector

9300

Mounting bracket for servo flange

KW-10/10

Helical coupling

KW-6/10

Helical coupling

KW-6/6

Helical coupling

KW-6/8

Helical coupling

9401 10*10

Spring steel coupling

9401 10*12

Spring steel coupling

Accessories**9401 6*10**

Spring steel coupling

9401 6*6

Spring steel coupling

9402 6*6

Spring steel coupling

9404 10*10

Spring disk coupling

9404 6*6

Spring disk coupling

9409 10*10

Bellows coupling

9409 6*10

Bellows coupling

9409 6*6

Bellows coupling

9409 6*8

Bellows coupling

9410 10*10

Precision coupling

9410 10*12

Precision coupling

9460 6*6

Stainless steel bellows coupling

9410 6*6

Precision coupling

9460 10*10

Stainless steel bellows coupling

9102, 10

Measurement wheel

9103, 10

Measurement wheel

9108, 10

Measurement wheel

9109, 10

Measurement wheel

9110, 10

Measurement wheel

9112, 10

Measurement wheel

9113, 10

Measurement wheel

9108, 6

Measurement wheel

9109, 6

Measurement wheel

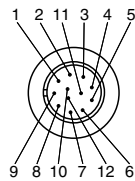
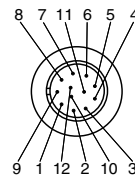
9110, 6

Measurement wheel

9113, 6

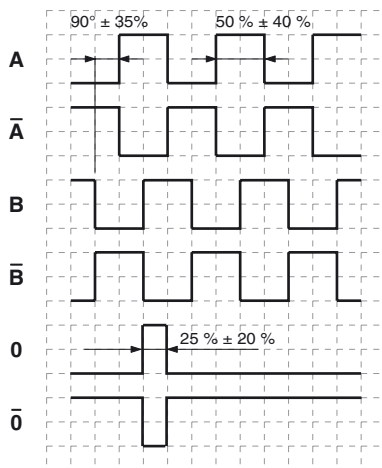
Measurement wheel

Electrical connection

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

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

Signal outputs



↻ cw - with view onto the shaft clamping ring

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Order code

R	V	I	5	8	N	-						6	1	-					
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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
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

Option
N Normal
T Extended temperature range, -40 °C

Pulse count 1024, 2048, 2500, 4096, 5000, 8192, 10000, 20000, 50000

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