



Model Number

RH158N-*****6

Features

- Industrial standard housing Ø58 mm
- Up to 5000 ppr
- Hollow shaft
- 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.

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

This incremental rotary encoder is available as hollow shaft design with a shaft Ø10 mm or Ø12 mm. The rotary encoder is held in place by an included torque rest.

The electrical connection is made 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 (not with U _b)
Output frequency	max. 200 kHz
Rise time	100 ns

Connection

Cable	Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m
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Standard conformity

Degree of protection	DIN EN 60529, IP54
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	
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)

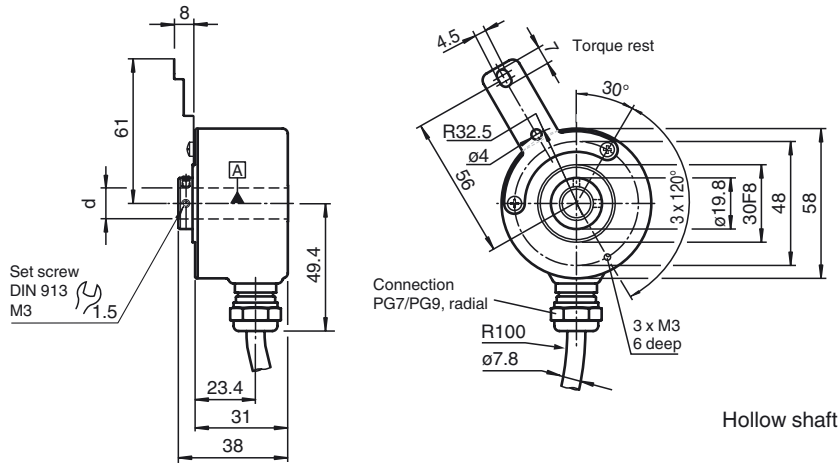
Mechanical specifications

Material	
Housing	powder coated aluminum
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 290 g
Rotational speed	max. 6000 min ⁻¹
Moment of inertia	≤ 40 gcm ²
Starting torque	≤ 1.5 Ncm
Shaft load	
Angle offset	1 °
Axial offset	max. 1 mm

Approvals and certificates

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

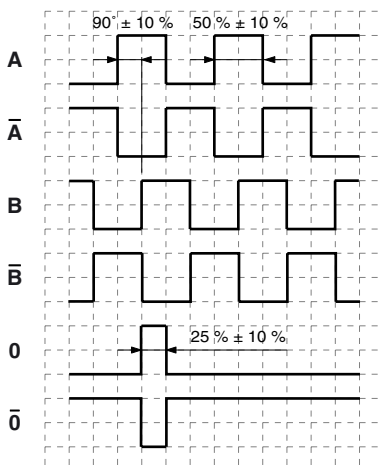


Electrical connection

Signal	Cable
GND	White
U _b	Brown
A	Green
B	Grey
\bar{A}	Yellow
\bar{B}	Pink
0	Blue
$\bar{0}$	Red
U _b Sens ^{*)}	Violet ^{*)}
GND Sens ^{*)}	Black ^{*)}
Screen	-

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

Signal outputs

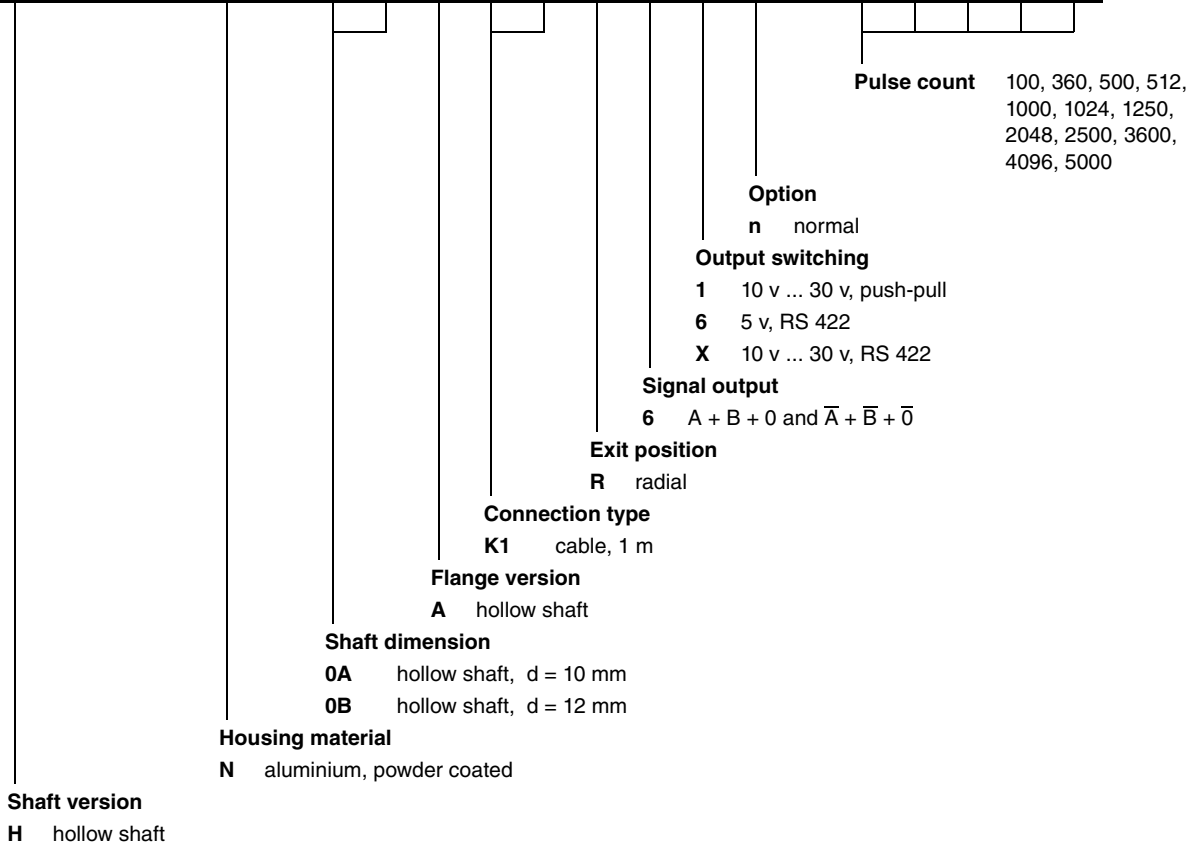


↻ cw - with view onto the shaft clamping ring

Release date: 2014-06-25 08:57 Date of issue: 2014-06-25 t10714_eng.xml

Order code

R H I 5 8 N - A K 1 R 6 N -



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