



Model Number

RHI58N-*****1

Features

- Industrial standard housing Ø58 mm
- Up to 50,000 ppr
- Hollow shaft
- 10 V ... 30 V with short-circuit proof push-pull output

Description

High performance are key words for this rotary encoder. Its outstanding feature is the high resolution angle. 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 hollow shaft design with a shaft Ø10 mm, Ø12 mm or Ø15 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. 50000

Functional safety related parameters

MTTF _d	140 a
Mission Time (T _M)	20 a
L ₁₀	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

Cable	Ø6.5 mm, 4 x 2 x 0.14 mm ² , 1 m
-------	---

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/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	-5 ... 80 °C (23 ... 176 °F) , movable cable -20 ... 80 °C (-4 ... 176 °F), fixed cable
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

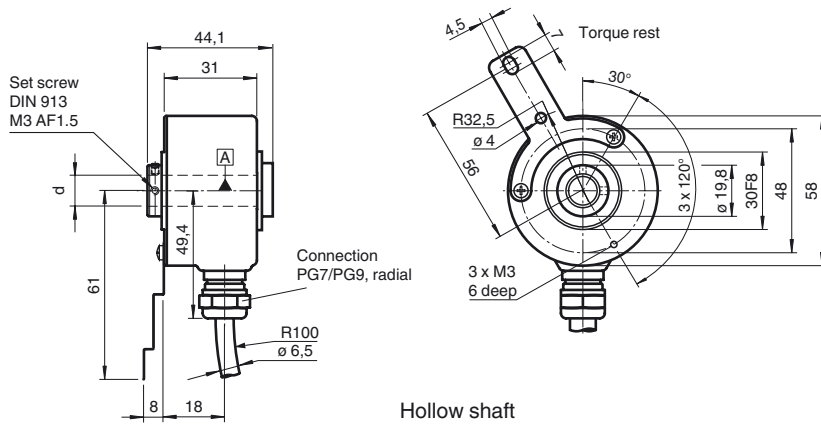
Mechanical specifications

Material	
Housing	powder coated aluminum
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 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
-------------	---

Dimensions

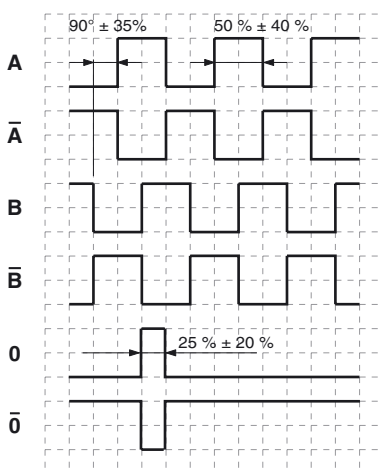


Electrical connection

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

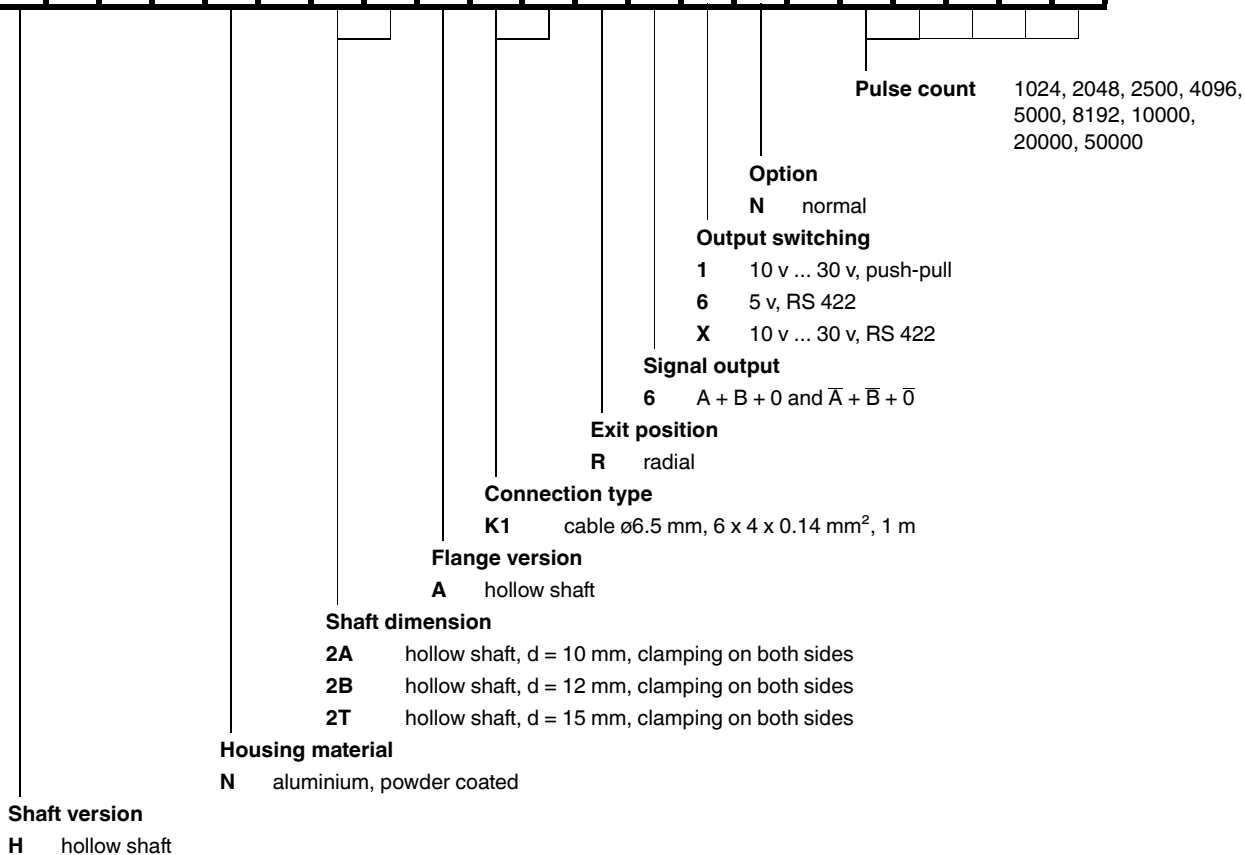


↻ cw - with view onto the shaft clamping ring

Release date: 2020-02-24 11:14 Date of issue: 2020-02-24 t151829_eng.xml

Order code

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



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

Option
N normal

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

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

Exit position
R radial

Connection type
K1 cable \varnothing 6.5 mm, 6 x 4 x 0.14 mm², 1 m

Flange version
A hollow shaft

Shaft dimension
2A hollow shaft, d = 10 mm, clamping on both sides
2B hollow shaft, d = 12 mm, clamping on both sides
2T hollow shaft, d = 15 mm, clamping on both sides

Housing material
N aluminium, powder coated

Shaft version
H hollow shaft

Release date: 2020-02-24 11:14 Date of issue: 2020-02-24 11:14 1151829_eng.xml