



Model Number

RHS90N-*****Z

Features

- Incremental encoder with sin/cos interface
- 1024 or 2048 signal periods
- Hollow shaft up to max. 45 mm (many reducers on request)
- Temperature compensated, interpolateable voltage signals
- Application: motor feedback/ drive engineering

Description

The RHS90 provides the user with sine/cosine signals with a resolution of up to 2048 signal periods per revolution.

Typical applications for these rotary encoders are found in drive technology (motor feedback in assembly applications). Thanks to the 1 V_{SS} sine/cosine interface the RHS90 is compatible with the current drive converters available on the market, as are required for the fine positioning of drives and servo-drive systems in industrial applications.

A clear increase in precision and improved drive running characteristics at an attractive price are the strengths of this series of rotary encoders.

Technical data

General specifications

Detection type	photoelectric sampling
Pulse count	max. 2048

Electrical specifications

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

Output

Output type	sine / cosine
Amplitude	1 V _{SS} ± 10 %
Load current	max. per channel 10 mA , short-circuit protected, reverse polarity protected
Output frequency	max. 200 kHz (3 dB limit)

Connection

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

Degree of protection	DIN EN 60529, IP65
Climatic testing	DIN EN 60068-2-78
Emitted interference	EN 61000-6-4:2007/A1:2011
Noise immunity	DIN EN 61000-6-2
Shock resistance	DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz

Ambient conditions

Operating temperature	-5 ... 70 °C (23 ... 158 °F) , movable cable
	-20 ... 70 °C (-4 ... 158 °F), fixed cable
Storage temperature	-40 ... 80 °C (-40 ... 176 °F)

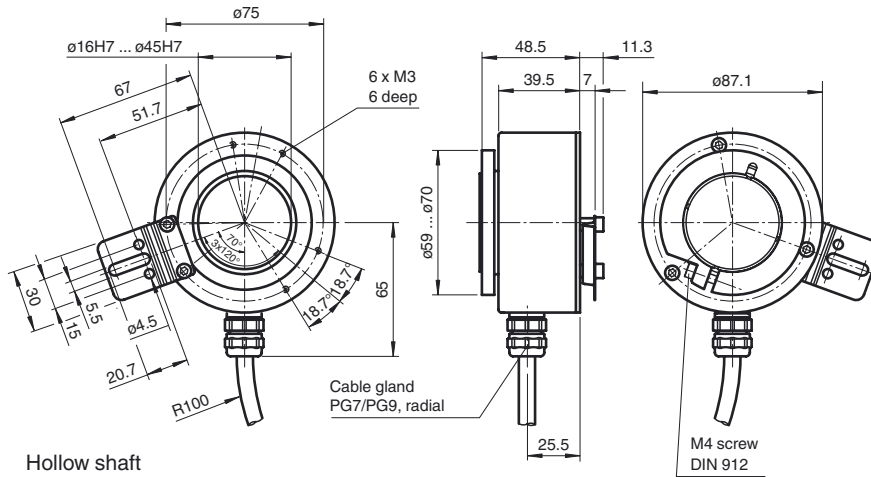
Mechanical specifications

Material	
Housing	aluminum, blank
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 900 g
Rotational speed	max. 3500 min ⁻¹
Starting torque	≤ 6 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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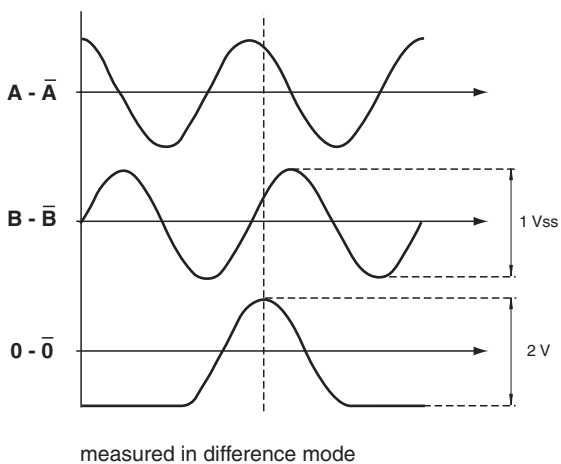
Dimensions



Electrical connection

Signal	Cable Ø6.5 mm, 8-core
GND	White
U_b	Brown
A / cos	Green
B / sin	Grey
\bar{A} / $\overline{\text{cos}}$	Yellow
\bar{B} / $\overline{\text{sin}}$	Pink
0	Blue
$\bar{0}$	Red
Screen	-

Signal outputs



↻ cw - view towards clamping ring

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