



Model Number

THI90

Features

- Compact design housing Ø90 mm
- 25 mm and 45 mm hollow shaft
- Cost-effective
- Short delivery times
- Shaft mounting with threaded pins

Description

The THI90 hollow shaft encoder is a product that has been specially developed for use in drive and elevator technology. It combines the advantages of modern technology with a cost-effective design.

The hollow shaft encoder can be supplied with shaft diameters of Ø25 mm and Ø45 mm. Its relatively small external diameter means it can be used in places where there is limited mounting space.

Due to the reduced number of variants and the focus on standard market requirements, its most appealing features are its low price and very short delivery times.

Technical data

General specifications

Detection type	photoelectric sampling
Pulse count	512 , 600 , 1024 , 2048

Functional safety related parameters

MTTF _d	140 a
Mission Time (T _M)	20 a
L _{10h}	50 E+9 at 1750 rpm
Diagnostic Coverage (DC)	0 %

Electrical specifications

Operating voltage U _B	10 ... 30 V DC or 5 V DC ± 5 % (see "Output circuit" in the ordering information)
No-load supply current I ₀	max. 70 mA

Output

Output type	push-pull, incremental or RS 422, incremental (see "Output circuit" in the ordering information)
Voltage drop U _d	< 2.5 V (push-pull, incremental)
Load current	max. per channel 40 mA , short-circuit protected, reverse polarity protected (push-pull, incremental) max. per channel 20 mA , short-circuit protected, reverse polarity protected (RS 422, incremental)
Output frequency	max. 200 kHz
Rise time	600 ns
De-energized delay t _{off}	600 ns

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, IP54
Climatic testing	DIN EN 60068-2-78
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, 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)

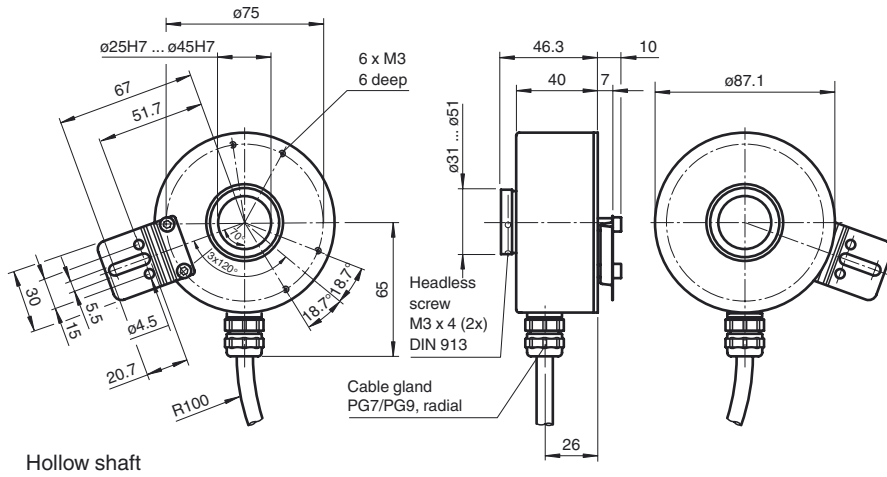
Mechanical specifications

Material	
Housing	aluminum
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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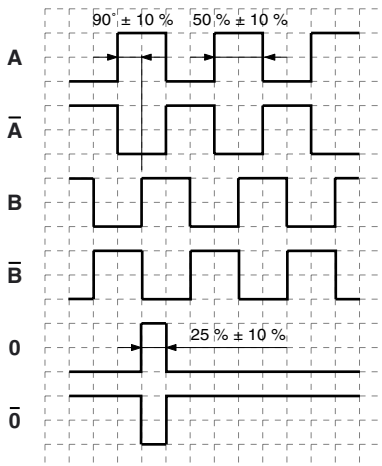
Dimensions



Electrical connection

Signal	Cable
GND	White
U _b	Brown
A	Green
B	Grey
\bar{A}	Yellow
\bar{B}	Pink
0	Blue
$\bar{0}$	Red

Signal outputs

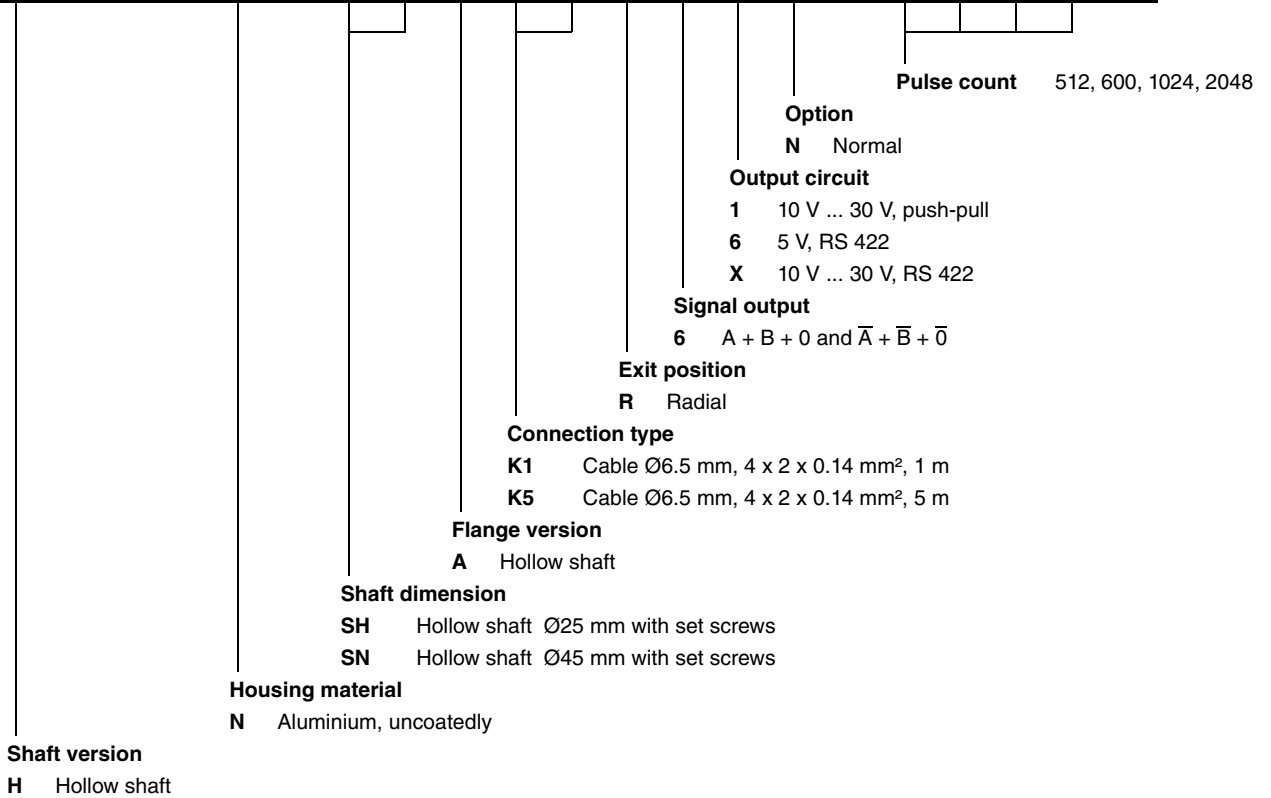


↻ cw - with view onto the shaft clamping ring

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Ordering information

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