

# Incremental rotary encoder TH140P-1CAK2R6TN-01024

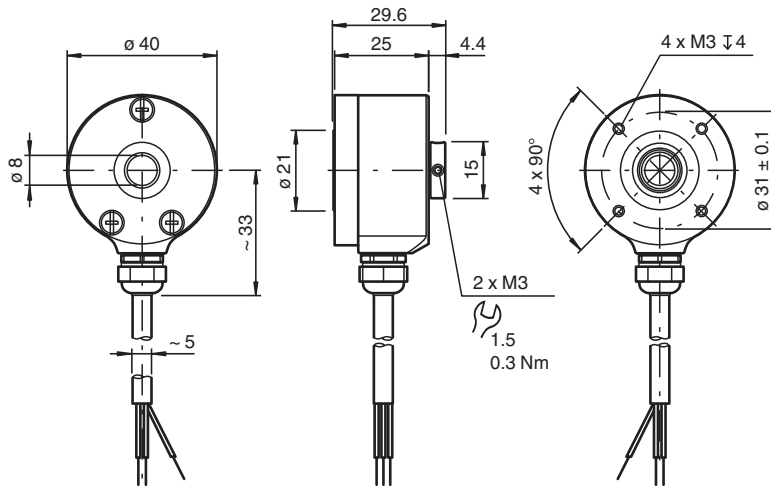
- Compact design
- 1024 ppr
- 4.75 V ... 30 V with short-circuit proof push-pull output
- Degree of protection IP65



## Function

The TH140 continues the new economical target line of Pepperl+Fuchs. With a small outside diameter of 40 mm, the unit is ideal for use in industrial areas where very little space is available. The technology of the rotary encoder is adapted to the new requirements of the rotary encoder market. Innovative fast technology with Opto-ASIC forms the central basis of the device.

## Dimensions



## Technical Data

### General specifications

Detection type	photoelectric sampling
Pulse count	1024

### Electrical specifications

Operating voltage	$U_B$	4.75 ... 30 V DC
No-load supply current	$I_0$	max. 55 mA

### Output

Output type	push-pull, incremental
Voltage drop	$U_d$ ≤ 2.5 V
Load current	max. per channel 30 mA , short-circuit protected
Output frequency	max. 100 kHz
Rise time	980 ns

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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## Technical Data

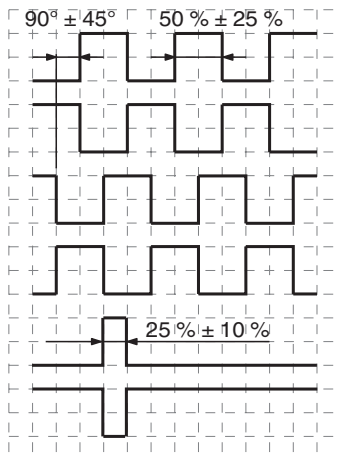
De-energized delay	$t_{\text{off}}$	980 ns
<b>Connection</b>		
Cable		Ø5 mm, 8 x 0.08 mm <sup>2</sup> , 2 m
<b>Standard conformity</b>		
Degree of protection		DIN EN 60529, IP65
Climatic testing		DIN EN 60068-2-3, no moisture condensation
Emitted interference		EN 61000-6-4:2007/A1:2011
Noise immunity		EN 61000-6-2:2005
Shock resistance		DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance		DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
Maximum permissible ambient temperature		max. 60 °C (max. 140 °F)
<b>Ambient conditions</b>		
Operating temperature		-10 ... 60 °C (14 ... 140 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
<b>Mechanical specifications</b>		
Material		
Housing		Aluminum
Flange		Aluminum
Shaft		Stainless steel
Mass		approx. 160 g
Rotational speed		max. 6000 min <sup>-1</sup>
Moment of inertia		≤ 5 gcm <sup>2</sup>
Starting torque		≤ 1 Ncm

**Connection**

Signal	Cable, 8-core
GND	White
+U <sub>b</sub>	Brown
A	Green
B	Grey
$\bar{A}$	Yellow
$\bar{B}$	Pink
0	Blue
$\bar{0}$	Red
Screen	-

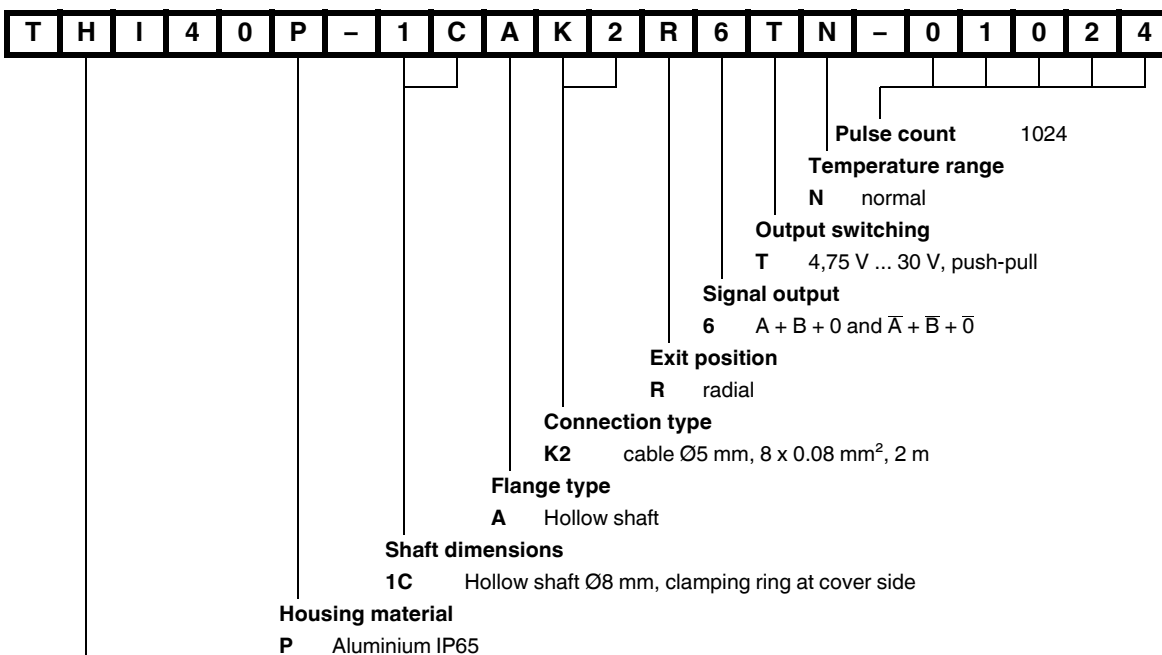
**Operation**

**Signal outputs**



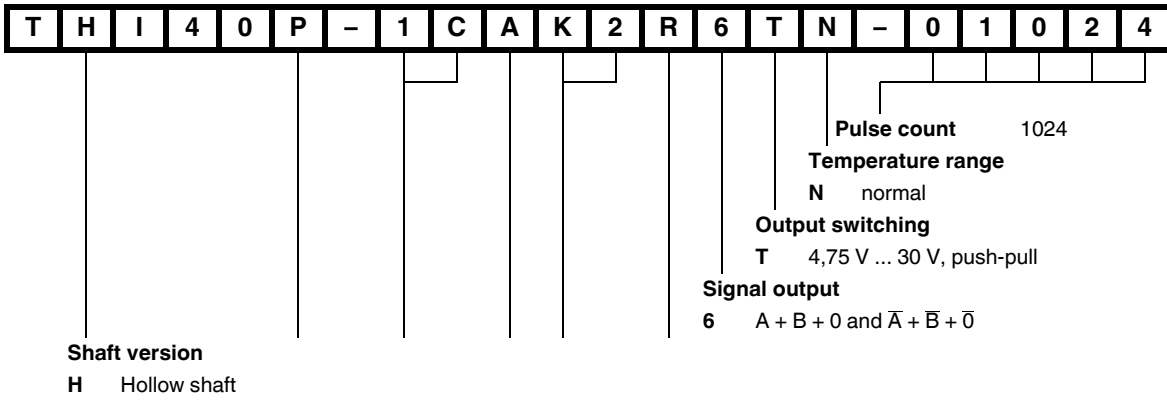
↻ cw - with view onto the shaft

**Type Code**



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