



### Model Number

20-2951

### Features

- **Sturdy and compact design**
- **Up to 2500 ppr**
- **Rectangular design**
- **10 V ... 30 V with short-circuit proof push-pull output**

### Description

The cuboid housing of this incremental rotary encoder is suitable for easy fastening onto mounting profiles or comparable types of construction. Four through holes and two grooves in the housing allow a wide range of installation possibilities. The die-cast zinc housing gives the incremental rotary encoder the sturdiness it needs.

The pulse disk is designed in plastic up to 600 pulses. Beyond that, glass is used.

## Technical data

### General specifications

Pulse count max. 2500

### Electrical specifications

Operating voltage  $U_B$  10 ... 30 V DC

No-load supply current  $I_0$  max. 80 mA

### Output

Output type push-pull, incremental

Voltage drop  $U_d$  < 4 V

Load current max. per channel 40 mA, short-circuit protected, reverse polarity protected

Output frequency max. 160 kHz

Rise time 250 ns

De-energized delay  $t_{off}$  250 ns

### Connection

Connector type 9414 (M16), 5-pin

### Standard conformity

Degree of protection DIN EN 60529, IP40

Emitted interference EN 61000-6-4:2007/A1:2011

Noise immunity EN 61000-6-2:2005

### Ambient conditions

Operating temperature

Plastic disk -20 ... 60 °C (-4 ... 140 °F)

Storage temperature

Plastic disk -40 ... 60 °C (-40 ... 140 °F)

### Mechanical specifications

Material

Housing powder coated diecast zinc

Flange powder coated diecast zinc

Shaft Stainless steel 1.4305 / AISI 303

Mass approx. 480 g

Rotational speed max. 3000 min<sup>-1</sup>

Moment of inertia ≤ 5 gcm<sup>2</sup>

Starting torque < 0.5 Ncm

Shaft load

Axial 10 N

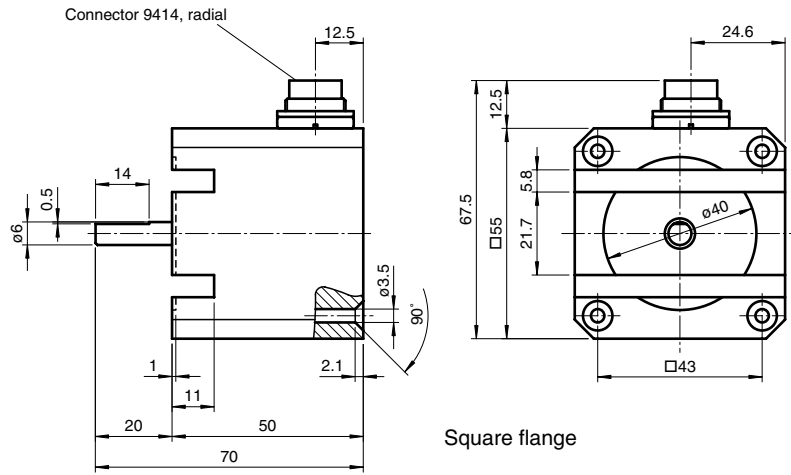
Radial 10 N

### Approvals and certificates

UL approval

cULus Listed, General Purpose, Class 2 Power Source

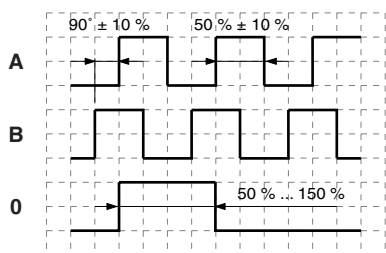
**Dimensions**



**Electrical connection**

Signal	Connector 9414, 5-pin
GND	1
+U <sub>b</sub>	2
A	3
B	4
0	5

## Signal outputs



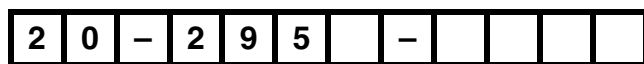
↻ cw - with view onto the shaft

## Accessories

Accessories	Name/defining feature	Order code
Couplings	D1: Ø6 mm, D2: Ø6 mm	9401
	D1: Ø6 mm, D2: Ø6 mm	9402
	D1: Ø6 mm, D2: Ø6 mm	9404
	D1: Ø6 mm, D2: Ø6 mm	9409
	D1: Ø6 mm, D2: Ø6 mm	KW
Connector	Cable socket	9414

For additional information on the accessories, please see the "Accessories" section.

## Order code



**Pulse count** 30, 60, 90, 100, 180, 200, 250, 300, 314, 360, 400, 500, 600, 720, 900, 1000, 1024, 1200, 1250, 1500, 1800, 2000, 2048, 2400, 2500

**Output switching**

- 1 10 V ... 30 V, push-pull
- 2 5 V, RS 422