



Model Number

RV178

Features

- **Sturdy design**
- **Up to 5000 ppr**
- **10 V ... 30 V with short-circuit proof push-pull output**

Description

One special feature of this incremental rotary encoder is the mechanical versatility of the flange. The rotary encoder has a centering shoulder with a diameter of 42 mm and one with a diameter of 56 mm. In addition to the four M4 holes, the encoder has a servo infeed on the circumference. This allows you to make a slight adjustment to the reference point of the incremental rotary encoder by turning the housing.

The clamping element that grips into the servo infeed ensures that the incremental rotary encoder stays firmly in place without slipping out of adjustment.

The pulse disk is designed in plastic up to 1500 pulses. Beyond that, glass is used.

Technical data

General specifications

Pulse count max. 5000

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. 100 kHz

Rise time 250 ns

De-energized delay t_{off} 250 ns

Connection

Connector type 42306 (M16), 6-pin

Cable Ø6 mm, 5 x 0.38 mm², 2 m

Standard conformity

Degree of protection DIN EN 60529, IP65

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

Glass disk -20 ... 70 °C (-4 ... 158 °F)

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

Storage temperature

Glass disk -40 ... 70 °C (-40 ... 158 °F)

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

Mechanical specifications

Material

Housing powder coated aluminum

Flange 3.1645 aluminum

Shaft Stainless steel 1.4305 / AISI 303

Mass approx. 630 g

Rotational speed max. 6000 min⁻¹

Moment of inertia 100 gcm²

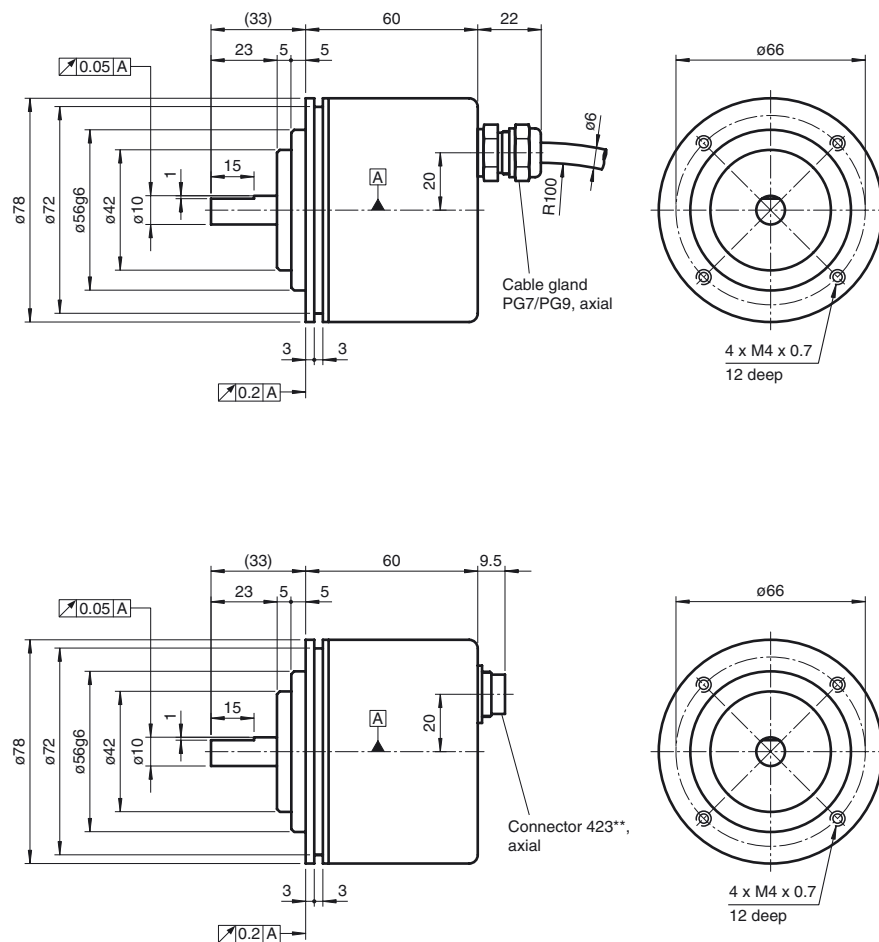
Starting torque ≤ 1.5 Ncm

Shaft load

Axial 50 N

Radial 100 N

Dimensions

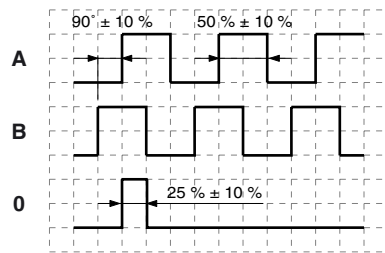


Electrical connection

Signal	Cable Ø6 mm, 5-core	Connector 42306, 6-pin
GND	Black	5
+U _b	Red	4
A	Green	1
B	White	2
0	Yellow	3
Screen	-	Housing



Signal outputs



↻ cw - with view onto the shaft

Order code

R	V	I	7	8	N	-	1	0	C			A	3	1	N	-								
																					Pulse count		60, 100, 120, 200, 250, 256, 300, 314, 360, 400, 500, 512, 600, 720, 900, 1000, 1024, 1200, 1250, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000	
																					Option		N Normal	
																					Output switching		1 10 V ... 30 V, push-pull	
																					Signal output		3 A + B + 0	
																					Cable exit		A Axial	
																					Connection type		AL Connector type 42306, 6-pin K2 Cable Ø6 mm, 5 x 0.38 mm², 2 m	
																					Flange version		C Clamping flange	
																					Shaft dimension		10 Shaft Ø10 mm x 23 mm	
																					Housing material		N Aluminium, powder coated	
																					Shaft version		V Solid shaft	