

Model Number

30-***1

Features

- For extreme mechanical loads
- Up to 5000 ppr
- Stainless steel version
- 10 V ... 30 V with short-circuit proof push-pull output

Description

The series 30 incremental rotary encoders have been specially designed for use in areas with a high level of mechanical demand. Therefore, the housing is made of steel.

The shaft is specially equipped with a feather key groove for attaching a belt pulley or similar device. The permissible radial force is 80 N, while the permissible axial force is 60 N.

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 9416 (M23), 12-pin

Cable Ø6 mm, 4 x 2 x 0.14 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

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

Combination 1 housing: stainless steel 1.4301 / AISI 304

flange: aluminum 3.1645

shaft: stainless steel 1.4305 / AISI 303

Combination 2 (Inox)

housing: stainless steel

flange: stainless steel

shaft: stainless steel

Mass

approx. 1250 g (combination 1)

approx. 2200 g (combination 2)

Rotational speed

max. 6000 min⁻¹

Moment of inertia

< 270 gcm²

Starting torque

≤ 5 Ncm

Shaft load

60 N

Radial

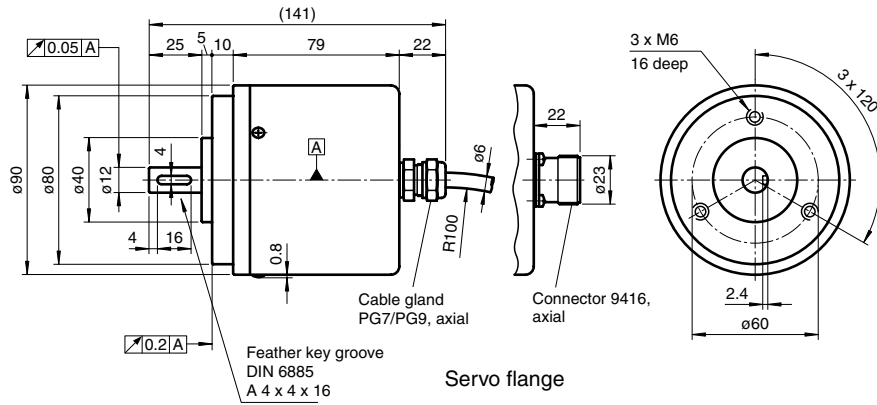
80 N

Approvals and certificates

UL approval

cULus Listed, General Purpose, Class 2 Power Source

Dimensions

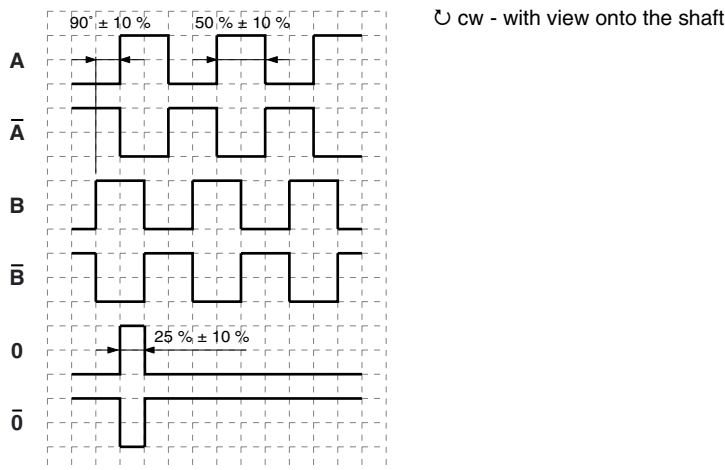


Electrical connection

| Signal | Cable Ø6 mm, 8-core | Connector 9416, 12-pin |
|-----------------|---------------------|------------------------|
| GND | White | 1 |
| +U _b | Brown | 2 |
| A | Green | 3 |
| B | Grey | 4 |
| \bar{A} | Yellow | 5 |
| \bar{B} | Pink | 6 |
| 0 | Blue | 7 |
| $\bar{0}$ | Red | 8 |
| | | |

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Signal outputs



Accessories

| Accessories | Name/defining feature | Order code |
|--------------|------------------------|------------|
| Couplings | D1: Ø12 mm, D2: Ø12 mm | 9401 |
| | D1: Ø12 mm, D2: Ø12 mm | 9404 |
| | D1: Ø12 mm, D2: Ø12 mm | 9409 |
| | D1: Ø12 mm, D2: Ø12 mm | KW |
| Mounting aid | Mounting bracket | 9301 |
| Connector | Cable socket | 9416 |

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

Order code



Pulse count 60, 100, 120, 180, 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

Exit position

A Axial

Material

I INOX

- Aluminium

Output switching

1 10 V ... 30 V, push-pull

6 5 V, RS 422

Connection type (connector only axial)

0 Cable Ø6 mm, 2 x 4 x 0.14 mm², 2 m

4 Plug connector type 9416, 12-pin

Signal output

36 A + B + 0 and \bar{A} + \bar{B} + $\bar{0}$

42 A + B + 0

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