

Incremental encoders

Incremental encoder, surface mount housing

Resolution 1...120 pulses

G 305



G 305 with single shaft

Features

- Low-cost encoder
- Optical sensing
- Up to 120 pulses with 1 or 2 pulse tracks
- Surface mount housing (for measuring wheel)
- Shaft at one or both ends
- Versatile mounting options

Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption w/o load	≤40 mA
Resolution (steps/turn)	5...120
Sensing method	Optical
Output frequency	≤10 kHz (1 track) ≤6 kHz (2 tracks)
Output signals	A or A 90° B
Output circuit	Push-pull short-circuit proof

Technical data - mechanical design

Housing	62.5 x 70 mm
Shaft	∅7 mm single / dual shaft
Protection DIN EN 60529	IP 30 with housing connector IP 52 with PG cable
Operating speed	≤6000 rpm
Admitted shaft load	≤5 N axial ≤10 N radial
Material	Housing: plastic, glass-fibre reinforced
Operating temperature	0...+60 °C
Relative humidity	95 % non-condensing
Weight approx.	130 g
Connection	Connector or cable

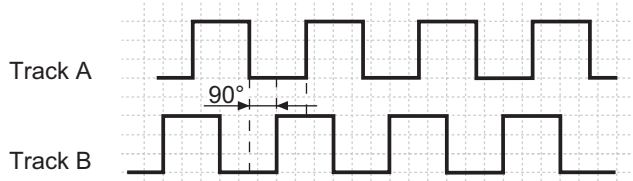
Output signals

Clockwise rotating direction when looking at flange.

For 1 track



For 2 tracks



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Part number

G 305.

See part number (pulses)

Voltage supply / signals

- 1 10...30 VDC / 1 track connector output
- 4 10...30 VDC / 1 track cable gland
- A 10...30 VDC / 2 tracks connector output
- D 10...30 VDC / 2 tracks cable gland

Connection / impulse track

- 0 Housing connector / 1 track
- 1 Housing connector / 2 tracks
- M Cable gland / 2 m cable / 1 track
- T Cable gland / 2 m cable / 2 tracks

Shaft

- 10 Single protruding
- 20 Dual protruding

Pulse tracks

- 0 1 track
- 2 2 tracks

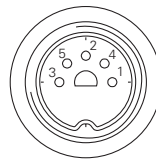
Accessories

Connectors and cables

Z 127.001	Mating connector M18, 5-pin, less cable
Z 127.002	Mating connector M18, 5-pin, 2 m cable
Z 127.004	Mating connector M18, 5-pin, 5 m cable
Z 127.006	Mating connector M18, 5-pin, 10 m cable

Terminal assignment

Connector	Cable colour	Assignment
Pin 1	brown	UB
Pin 2	blue	GND
Pin 3	black	Track A
Pin 4	beige	Track B (2 pulse tracks) (n.c. 1 pulse track)



Part number (pulses)

1 impulse track

08 (5)	10 (40)	13 (80)
11 (10)	03 (50)	20 (90)
01 (20)	04 (60)	06 (100)
12 (25)	18 (64)	07 (120)
02 (30)		

2 impulse tracks

A1 (5)	A3 (50)
A7 (25)	A4 (60)
A8 (30)	B1 (64)
A9 (40)	

More impulse numbers upon request.

Dimensions

