

# Special Encoders & Sensors

## 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
E-connection	Connector or cable

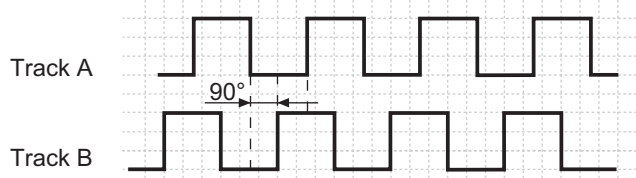
#### Output signals

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

E- 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

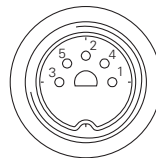
#### Accessories

##### Connectors and cables (page %S)

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)	A1 (5)	A3 (50)
11 (10)	03 (50)	20 (90)	A7 (25)	A4 (60)
01 (20)	04 (60)	06 (100)	A8 (30)	B1 (64)
12 (25)	18 (64)	07 (120)	A9 (40)	
02 (30)				

##### 2 impulse tracks

More impulse numbers upon request.

#### Dimensions

