

# Incremental encoders

## Incremental encoder, surface mount housing

### 1...120 pulses per revolution

## 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
Pulses per revolution	5...120
Sensing method	Optical
Output frequency	≤10 kHz (1 track) ≤6 kHz (2 tracks)
Output signals	A or A 90° B
Output stage	Push-pull short-circuit proof

### Technical data - mechanical design

Size (flange)	62,5 x 70 mm
Shaft type	ø7 mm solid shaft single / dual shaft
Shaft loading	≤5 N axial ≤10 N radial
Protection DIN EN 60529	IP 30 (with housing connector), IP 52 (with PG cable)
Operating speed	≤6000 rpm
Material	Housing: plastic, glass-fibre reinforced
Operating temperature	0...+60 °C
Relative humidity	95 % non-condensing
Connection	Connector M18, 5-pin Cable 2 m
Weight approx.	130 g

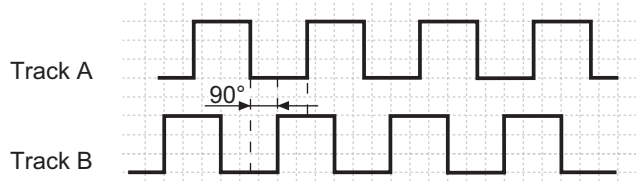
### Output signals

Clockwise rotating direction when looking at flange.

For 1 track



For 2 tracks



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**G 305**

#### Part number

**G 305.**

Pulse number - see table

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

Solid shaft

- 10 Single protruding
- 20 Dual protruding

Pulse tracks

- 0 1 track
- 2 2 tracks

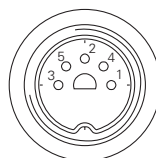
#### Accessories

##### Connectors and cables

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

