

# Incremental encoders

Solid shaft with clamping or synchro flange, PTB approved

50 or 500 pulses per revolution

## GPI0W



GPI0W with clamping flange

### Features

- Encoder with solid shaft  $\varnothing 10$  mm or  $\varnothing 6$  mm
- PTB approved
- Clamping or synchro flange
- High rotation speed up to 10000 rpm
- Compact design
- High resistance to shock and vibrations

### Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 30$ mA (24 VDC)
Pulses per revolution	50...500
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	$\leq 150$ kHz
Output signals	A 90° B, N
Output stages	Push-pull short-circuit proof
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	UL approval / E63076

### Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 6$ mm solid shaft (synchro flange) $\varnothing 10$ mm solid shaft (clamping flange)
Admitted shaft load	$\leq 20$ N axial $\leq 40$ N radial
Flange	Clamping or synchro flange
Protection DIN EN 60529	IP 54
Operating speed	$\leq 10000$ rpm
Starting torque	$\leq 0.015$ Nm (+25 °C, IP 54)
Rotor moment of inertia	14.5 gcm <sup>2</sup>
Materials	Housing: aluminium Flange: aluminium
Operating temperature	-25...+85 °C
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 16-2000 Hz DIN EN 60068-2-27 Shock 200 g, 6 ms
Connection	Cable 2 m Cable 5 m Cable 10 m
Weight approx.	250 g

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#### Part number

#### Clamping flange and synchro flange

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Pulse number - see table

Connection

- 12 Cable 2 m, axial
- 14 Cable 5 m, axial
- 16 Cable 10 m, axial
- 22 Cable 2 m, radial
- 24 Cable 5 m, radial
- 26 Cable 10 m, radial

Voltage supply / signals

- 10 10...30 VDC / push-pull

Flange / Solid shaft

- 0 Clamping flange, mounting M3 /  $\varnothing$ 10 mm
- 1 Clamping flange, mounting M4 /  $\varnothing$ 10 mm
- 5 Synchro flange, mounting M4 /  $\varnothing$ 6 mm

#### Accessories

#### Mounting accessories

10117669	Eccentric fixing, single (Z 119.006)
10141255	Adaptor plate for clamping flange for modification into synchro flange (Z 119.013)
10117667	Mounting adaptor for encoders with synchro flange (Z 119.015)
10125051	Mounting adaptor for encoders with clamping flange (M3) (Z 119.017)
11034088	Adaptor plate for clamping flange, mounting by eccentric fixings (order separately) (Z 119.025)
10158124	Bearing flange for encoders with synchro flange (Z 119.035)
10141131	Spring washer coupling D1=6 / D2=6 (Z 121.C02)
10141132	Spring washer coupling D1=6 / D2=10 (Z 121.C01)
10141133	Spring washer coupling D1=10 / D2=10 (Z 121.C03)

#### Part number (pulse number)

39 (50) | 15 (500)

Example: part number 15 = 500 pulses.

# Incremental encoders

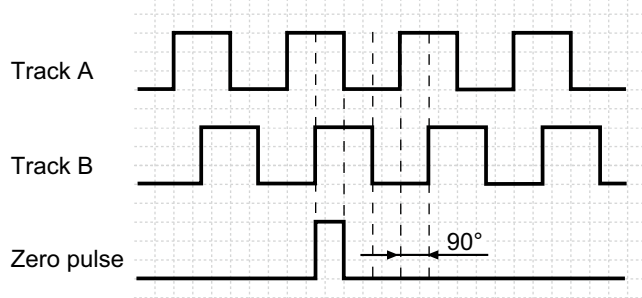
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### Output signals

Clockwise rotating direction when looking at flange.



### Terminal assignment

Core colour	Assignment
green	Track N (zero pulse)
blue	Track A
beige	Track B
black	GND (0 V)
brown	UB

### Trigger level

Outputs	Push-pull circuit-proof
Output level High	>UB -3 V (I = -20 mA)
Output level Low	<0.5 V (I = 20 mA)
Load High	<20 mA
Load Low	<20 mA

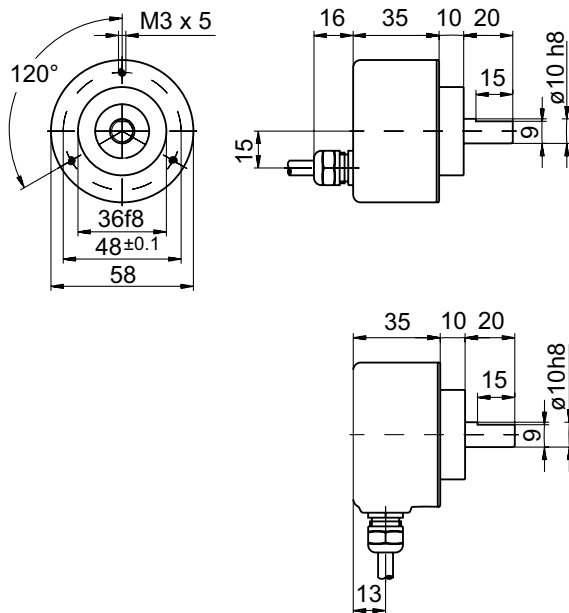
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## Dimensions

### Clamping flange



### Synchro flange

