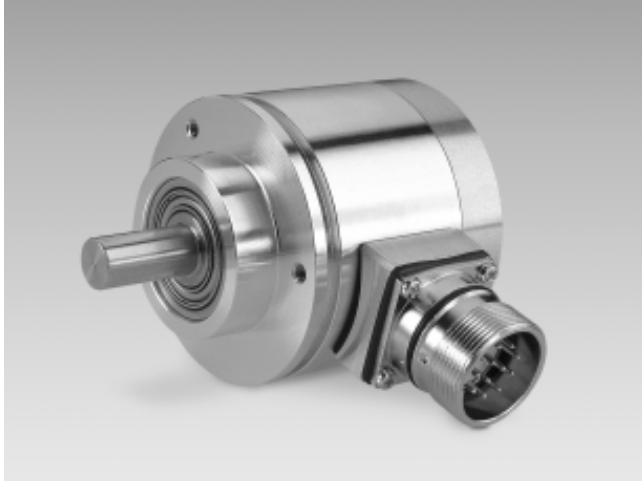


# Optical Absolute Encoder Multiturn, high-resolution, 36 bit with SSI interface



## GDM2W



### Features

- SSI interfaces parameterizable
- Resolution up to 36 bit
- Permanent self-test in encoder
- Freely programmable reference point

### Electrical data

Operating voltage	10...30 VDC with reverse voltage protection
Current consumption	Max. 80 mA (w/o load) at 24 VDC
Max. resolution	
Multiturn	18 bit (262144 revolutions)
Singleturn	18 bit (1 measuring step = 5°)
SSI pulse frequency	62.5 kHz to 1.5 MHz
Monoflop time	20 µs
Pulse pause	Min. 25 µs
Code switching speed	26 MHz
Accuracy	±0.01°
Rotating direction	Parameterizable, standard increasing position values when viewing flange side with clockwise (cw) shaft rotation.

### Mechanical data

Speed	
mechanical	Max. 10000 rpm
electrical	Max. 6000 rpm
Operating torque	Typ. 0.0175 Nm (3000 rpm 20 °C)
Shaft loading	Axial < 20 N (end of shaft) Radial < 10 N
Moment of inertia	18.4 x 10 <sup>-7</sup> kgm <sup>2</sup>
Material	Aluminum
Weight	Approx. 600 g

### Ambient conditions

Operating temperature	-20...+85 °C
Protection type	IP 64
Humidity	Max. relative humidity 95 %, non-condensing
Resistance	
Vibration	DIN EN 60068-2-6 ≤100 m/s <sup>2</sup> , 10-2000 Hz
Shock	DIN EN 60068-2-27 ≤500 m/s <sup>2</sup> , 11 ms
Interference resistance	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

### Inputs

Control signal Zero	
Level High	> 0.7 UB
Level Low	< 0.3 UB

Connection: zeroing input with 10 kohms against GND.  
SSI pulse RS422

### Accessories

Order No.	
Z 119.006	Eccentric mounting
Z 119.013	Adapter plate for clamping flange
Z 119.017	Angular mounting for clamping flange
Z 119.025	Adapter plate for clamping flange
Z 119.033	Adapter plate, ø65 mm for clamping flange

	Extension cord with connector on one end
Z 130.001	Connector without cable
Z 130.003	Connector with 2 m cable
Z 130.005	Connector with 5 m cable
Z 130.007	Connector with 10 m cable

NA214 Suitable position display

Additional accessories (couplings, measuring wheels, cable pulls or protective housings) from page 164.

### Outputs

SSI data	RS422
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# GDM2W

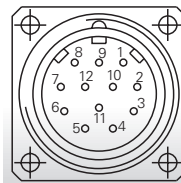
## Order designation

Order No.	Flange/Shaft
0	Clamping flange / 10 mm IP 64
	Resolution / Coding
20	18 bit x 18 bit / Gray, 10...30 V
22	18 bit x 18 bit / Binary, 10...30 V
	Connection
A0	C housing plug, 12-pin, axial
A1	C housing plug, 12-pin, radial
31	Cable 9-wire, axial
41	Cable 9-wire, radial

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## Connection assignment, 12-pin plug

Plug	Extension Cable color Z 130	Assignment
1	brown	UB
2	black	GND
3	blue	Pulse +
4	beige	Data +
5	green	ZERO
6	yellow	Data -
7	violet	Pulse -
8	brown/yellow	-
9	pink	-
10	black/yellow	-
11	-	-
12	-	-



Please use leads twisted in pairs for extension cables.

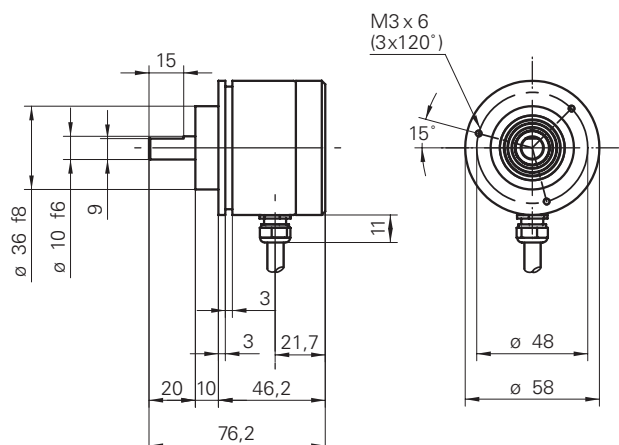
## Connection assignment, cable

Cable color	Assignment
brown	UB
green	Pulse +
yellow	Pulse -
pink	Data +
gray	Data -
white	GND
red	n.c.
black	Zero
blue	n.c.

Cable 9 x 0.14 mm<sup>2</sup>, PVC, shielded, 2 m

## Dimensions

### GDM2W with cable



### GDM2W with C plug

