

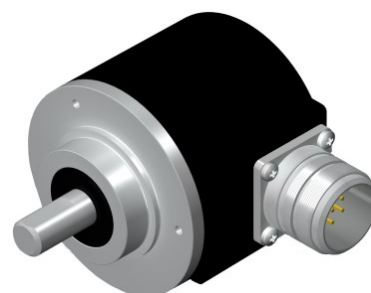
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High-resolution incremental rotary encoder with solid shaft for industrial applications

Features

- Resolution: up to 50,000 pulses per/revolution
- Rotary encoder: Ø58 mm
- Solid shaft from Ø6 up to Ø12 mm
- Great flexibility in flanges and various configurations
- Special mechanical, electronic and optical versions (on request)
- Cable connection (various cable lengths available) or connector
- IP-rating: IP67 according to DIN EN 60529



Technical characteristics

Dimensions	Rotary encoder Solid shaft	Ø58 mm Ø6; Ø6,35; Ø8; Ø9,52; Ø10 or Ø12 mm
Material	Rotary encoder Flange Solid shaft	Aluminium Aluminium Stainless steel
Bearing		Ball bearing
Weight		approx. 500 g
Bearing life		1 x 10 ¹⁰ revolutions
Speed		max. 6.000 rpm
Rotor moment of inertia		30 g cm ²
Starting torque at 20 °C (68 °F)		≤ 0,02 Nm (standard, type WIG110) ≤ 0,03 Nm (optional, type WIG110A)
Permissible shaft load		axial ≤ 40 N radial ≤ 80 N
Operating temperature		-20 °C to +80 °C (standard) -40 °C to +80 °C (special version AT00)
Protection class according to DIN EN 60529		IP65 (standard, type WIG110) IP67 (optional, type WIG110A)
Vibration according to DIN EN 60068-2-6		100 m/s ² (10 Hz...2000 Hz)
Shock according to DIN EN 60068-2-27		1000 m/s ² (6 ms)
Number of pulses per revolution		≤ 50.000
Electrical connection		2-meter cable (standard), open cable end or connector (different cable lengths or antenna connectors on request) Mating connector not included in scope of delivery

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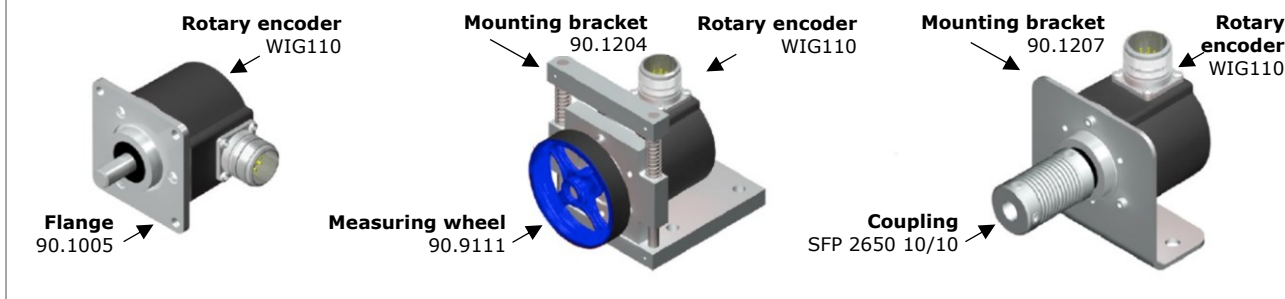
Electrical connection

	Cable 2x2x0,14+1 x0,14 95.0008002	Cable ¹⁾ 3x2x0,14+2 x0,34 95.0008003	Plug DIN 43650 4-pole	Mil-plug 7-pole CW	M12-plug 8-pole CCW	Mil-plug 10-pole CW	M23-plug 12-pole CW
Order code (selection)	3 (radial) 8 (axial)	3 (radial) 8 (axial)	1 (radial) 6 (axial)	4 (radial) 9 (axial)	L (radial) K (axial)	M (radial) N (axial)	5 (radial) 0 (axial)
Function /Signal	Wire colour		PIN				
GND / 0V	yellow	black	1	A	1	A	1
Vcc	white	red	2	B	2	B	2
A	brown	yellow	3	C	3	C	3
B	green	green	4	D	4	D	4
$\overline{A}$		brown		E	5	E	5
$\overline{B}$		blue		F	6	F	6
0 Reference	grey	grey		G	7	G	7
$\overline{0}$	grey	orange		G	8	H	8

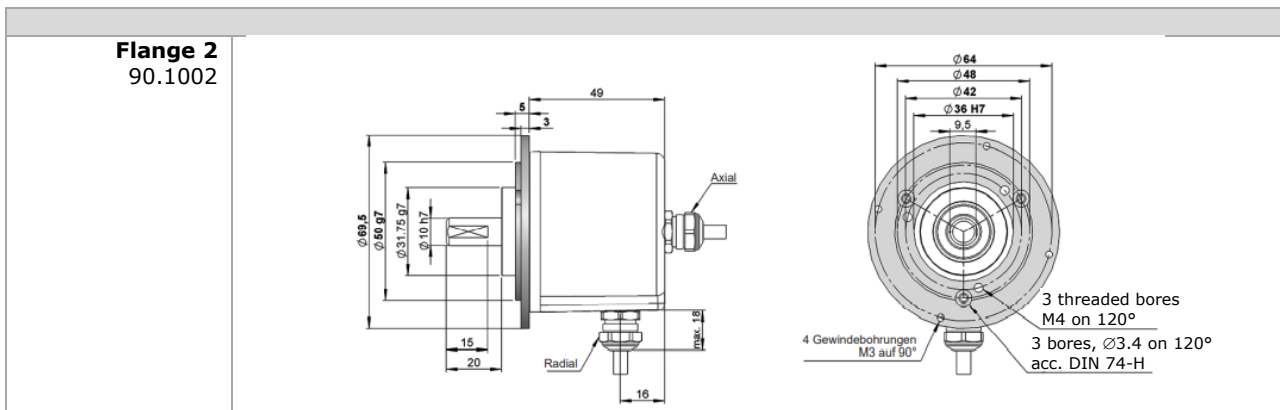
¹⁾ Cable only for rotary encoders with additional signals.

Accessories Examples

WIG110 in combination with flange, mounting bracket and measuring wheel or coupling

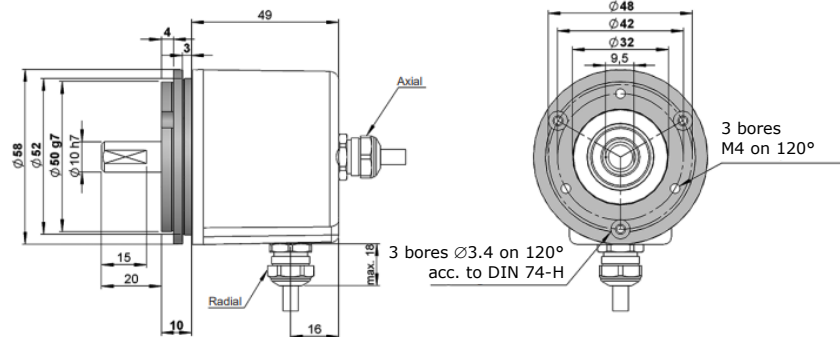


Dimensions and mounting type Rotary encoder is supplied with flange mounted

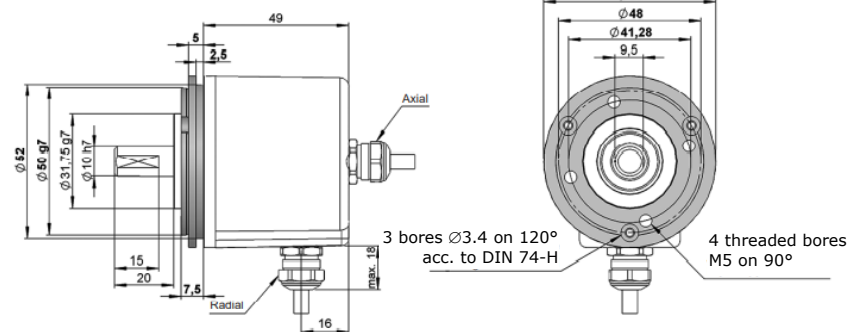


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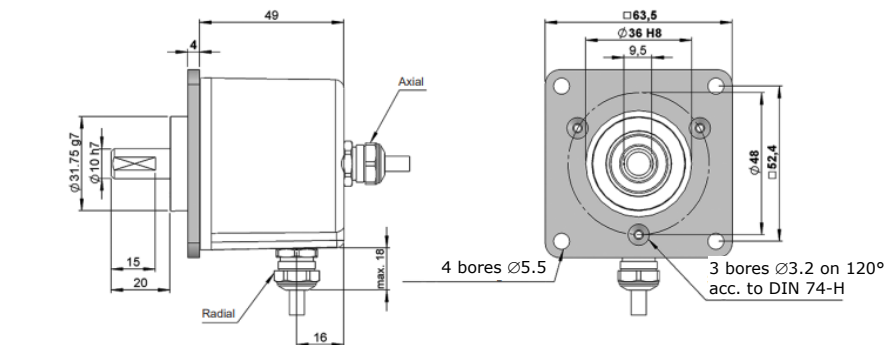
Flange 3
90.1003



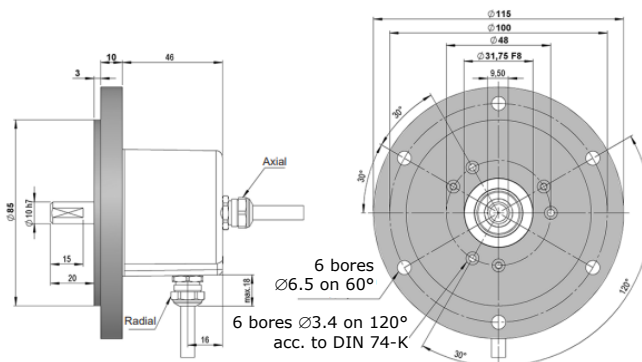
Flange 4
90.1004



Flange 5
90.1005



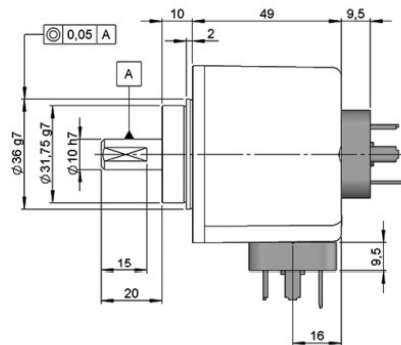
Flange 7
90.1007



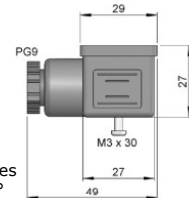
Electrical connections Mating connector not included in scope of delivery

Connections 1

Radial
DIN EN 43650
4-pole
Connector (plug)

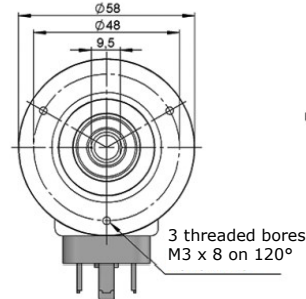


Connector (socket)
95.0007011

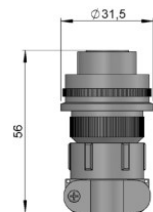


Connections 6

Axial
DIN EN 43650
4-pole
Connector (plug)

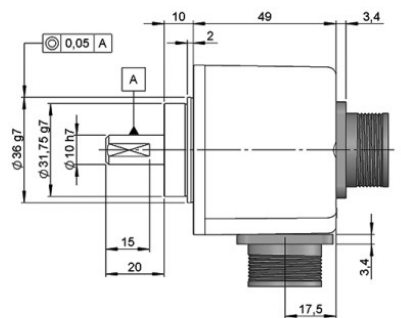


Connector (socket)
90.9507H

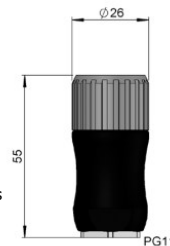


Connections 4

Radial
Mil
7-pole
Connector (plug)
CW

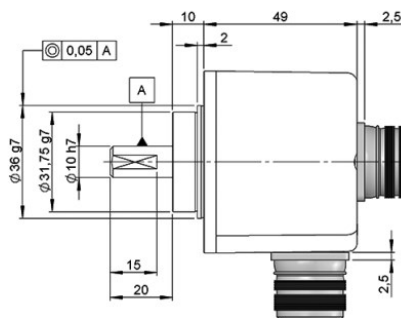


Connector (socket)
95.0007131



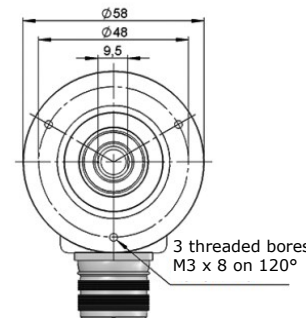
Connections 5

Radial
M23
12-pole
Connector (plug)
CW



Connections 0

Axial
M23
12-pole
Connector (plug)
CW



Connections M		Connector (socket) 90.9510H
Radial Mil 10-pole Connector (plug) CW		
Connections N		3 threaded bores M3 x 8 on 120°
Axial Mil 10-pole Connector (plug) CW		

Connections L		Connector (socket) 95.0007152
Radial M12 8-pole Connector (plug) CCW		
Connections K		3 threaded bores M3 x 8 on 120°
Axial M12 8-pole Connector (plug) CCW		

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Ordering example

Type **WIG110** - **1** - **2** - **3** - **3** - **6** - **XXXXX** -

WIG110 = IP65 (standard)

WIG110A = IP67 ¹⁾ (optional)

Shaft

1 = Ø10 x 20 mm

2 = Ø6 x 10 mm

3 = Ø8 x 20 mm

5 = Ø9,52 x 20 mm

6 = Ø6,35 x 10 mm

8 = Ø12 x 20 mm

Mounting type ²⁾

1 = without flange

2 = flange 90.1002

3 = flange 90.1003

4 = flange 90.1004

5 = flange 90.1005

7 = flange 90.1006

Output signal

1 = A

2 = A + B

3 = A + B + $\bar{0}$

5 = $A\bar{A} + B\bar{B}$

6 = $A\bar{A} + B\bar{B} + 0\bar{0}$

9 = A + B + 0

Electrical connection

1 = radial DIN 43650, 4-pole

3 = radial cable, open cable end

4 = radial Mil-plug, 7-pole

5 = radial M23-plug; 12-pole

6 = axial DIN 43650, 4-pole

8 = axial cable, open cable end

9 = axial Mil-plug, 7-pole

0 = axial M23-plug; 12-pole

M = radial Mil-plug; 10-pole

N = axial Mil-plug, 10-pole

L = radial M12-plug, 8-pole

K = axial M12-plug, 8-pole

Supply voltage / output stage

0 = 11...30 VDC / NPN Open Collector 11...30 VDC

6 = 11...30 VDC / RS422 5 VDC (TTL- compatible)

7 = 5 VDC / RS422 5 VDC (TTL- compatible)

9 = 11...30 VDC Line Driver / Differential Push-Pull 11...30 VDC

Number of pulses ³⁾

≤ 50.000 pulses/revolution

Special version

AT00 = -40 °C (min. operating temperature)



¹⁾ Option type WIG110A is only available with shaft 1, and with connection cable (3/8) or with connection (L/K) M12-Plug, 8-pole.

²⁾ Rotary encoder is supplied with flange mounted.

³⁾ The number of pulses from 10.000 to 50.000 is generated by interpolation. Up to 10.000 pulses/revolution without interpolation.