



SERIE 59

HIGH RESOLUTION HOLLOW SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

- Resolution up to 50.000 pulses per turn
- External diameter 58 mm
- Hollow shaft from \varnothing 9.52 to 14 mm
- Protection class IP65 according to DIN EN 60529
- Shaft fixing through front or rear clamp
- Anti-rotation system through flexible flange, pin torque support or anti-turn stick
- Connection by cable (other cable length available) or industrial connector M12, M23
- Female connector included



Optical Encoder



Incremental Encoder



High shaft load capacity



Vibration and shock resistant



IP 65

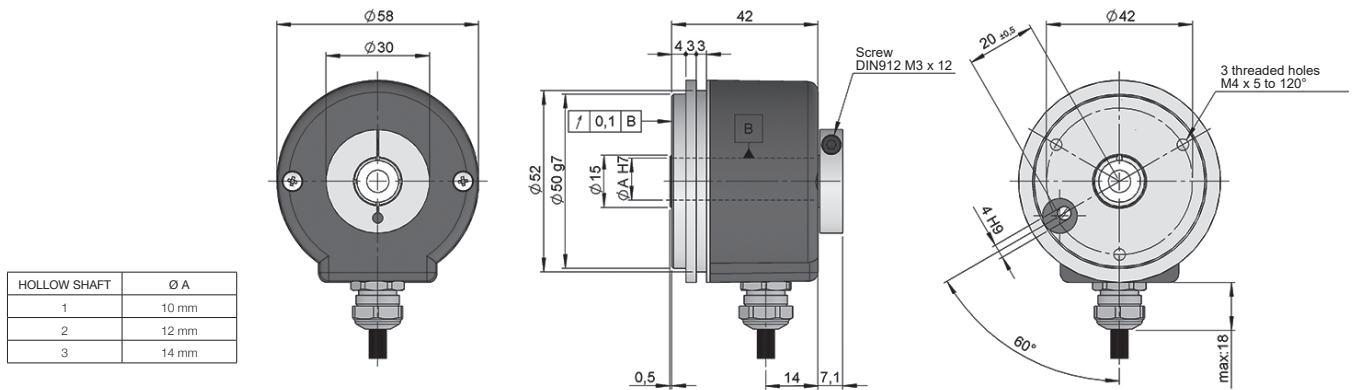


Temperature range -40°C



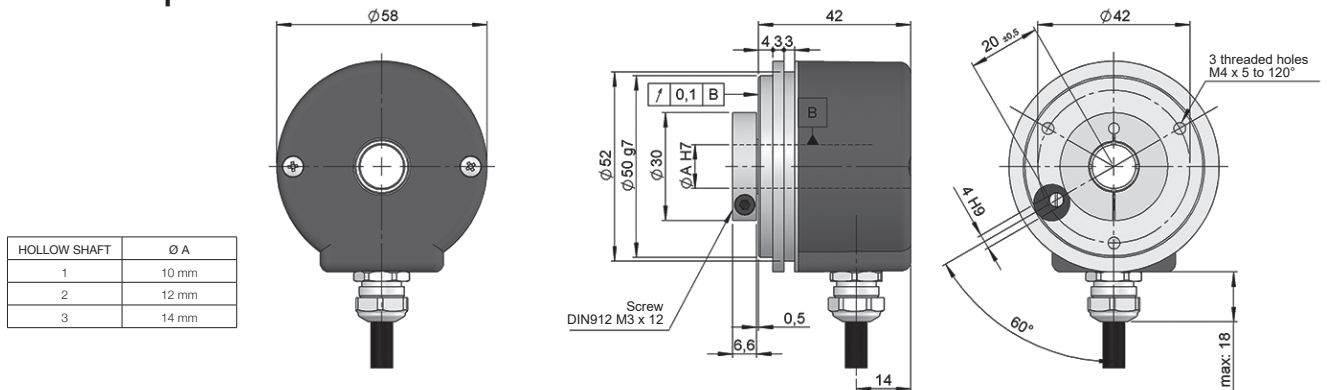
Express Delivery

Rear clamp



Drawing mechanical option type 1, hollow shaft type 2, connection type 1

Frontal clamp



Drawing mechanical option type 2, hollow shaft type 2, connection type 1



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REFERENCE								Reference example: 59-21111-1024
Serie	Mechanical option	Hollow shaft	Output signals	Connection	Power Supply / Electronic output	Pulses number	Special customer	
59 -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	1. Rear clamp 2. Frontal clamp	1. Ø 10 mm 2. Ø 12 mm 3. Ø 14 mm	1. $A\tilde{A}+B\tilde{B}+0\tilde{0}$ 2. $A\tilde{A}+B\tilde{B}$	1. Radial cable 2. Radial 90.9512 M23 12p CW 3. Radial 90.9508 M12 8p CCW	0. 11...30 VDC / NPN Open collector 11..30 VDC 1. 11..30 VDC / Line driver differential Push-Pull 11..30 VDC 2. 5 VDC / RS422 5 VDC (compatible TTL) 6. 11...30 VDC / RS422 5 VDC (compatible TTL)	(*)	GT00. -40°C	

Order your reference
Step file 3D

info@encoderhohner.com
service available in 24 h

(*) 10.000 to 50.000 pulses with interpolation. Available 10.000 direct optical pulses without interpolating upon request.

The required anti-rotation system is not included in the reference. All systems available in the sections "MOUNTING ACCESSORIES".

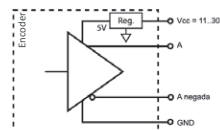
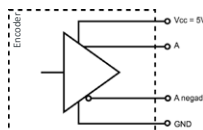
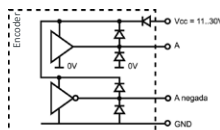
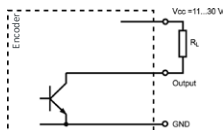
MECHANICAL SPECIFICATIONS

Materials	Cover: Aluminium Housing: Aluminium Shaft: Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 ¹⁰ rev.
Housing fixing	Anti-rotation pin, flexible flange or anti-turn stick
Permitted misalignment	±0.5 mm axial, ±0.3 mm radial (90.1014, 90.1024)
Shaft fixing	Front or Rear clamp
Hollow shaft diameter	10, 12 or 14 mm
Maximum number of revolutions permitted mechanically	6000 rpm
Protection against dust and splashes according to DIN EN 60529	IP65
Rotor inertia moment	30 gcm ²
Starting torque at 20°C (68°F)	≤ 0,02 Nm
Maximum load permitted on axial shaft	40 N
Maximum load permitted on radial shaft	60 N
Weight aprox.	0,5 Kg
Operating temperature range	-20°C to +80°C - Standard -40°C to +80°C - Special Customer GT00
Vibration according to DIN EN 60068-2-6	100 m/s ² (10Hz...2000Hz)
Shock according to DIN EN 60068-2-27	1000 m/s ² (6ms)
Maximum pulses per turn	50.000
Radial connection	2 meters cable or industrial connector M12, M23 (other cable lengths available on order) Female connector included

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OUTPUT SIGNALS



OUTPUT CIRCUIT	NPN Open Collector	Push-Pull Differential	RS422 (TTL compatible)	RS422 (TTL compatible)
Reference code	0	1	2	6
Power supply	11...30 VDC	11...30 VDC	5 VDC ±5%	11...30 VDC
Output voltage	11...30 VDC	11...30 VDC	5 VDC	5 VDC
Consumption	40 mA	Typical: 45 mA Max: 150 mA	Typical: 70 mA Max: 150 mA	Typical: 80 mA Max: 160 mA
Max. load capability / channel	40 mA	±30 mA	±20 mA	±20 mA
Lenght of cable allowed	50 m (24 VDC)	100 m	1200 m	1200 m
"Low" signal level	VOL < 0.4 VDC (24 VDC)	VOL < 2.5 VDC	VOL < 0.5 VDC	VOL < 0.5 VDC
"High" signal level	VOH > 22 VDC (24 VDC)	VOH > VCC – 3 VDC	VOH > 2.5 VDC	VOH > 2.5 VDC
Frequency	100 kHz	200 kHz	300 kHz	300 kHz
Short circuit protection	Not permanent	Yes	Yes	Yes
Protection polarity inversion	Yes	Yes	No	Yes

Channel B leads (90° electric) channel A, view from the shaft, shaft rotating clockwise

CONNECTION

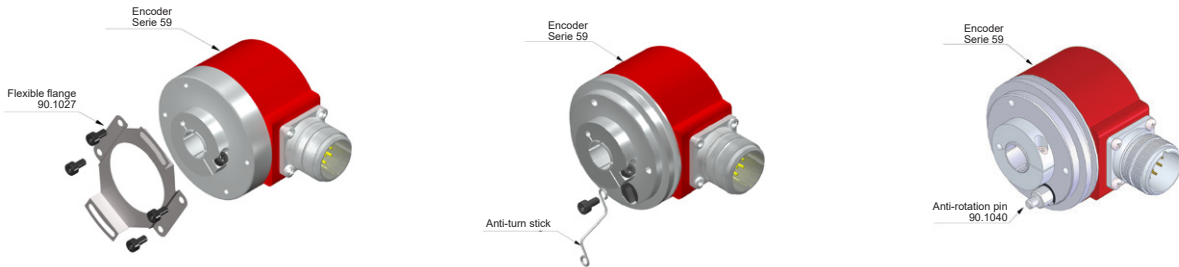


	95.0008003 Cable 3x2x0,14+2x0,34	90.9512 M23 12p CW	90.9508 M12 8p CCW
GND	Black	1	1
VCC	Red	2	2
A	Yellow	3	3
B	Green	4	4
~A	Brown	5	5
~B	Blue	6	6
0 (reference)	Grey	7	7
~0	Orange	8	8

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ACCESSORIES EXAMPLES



All the accessories available in the section "MOUNTING ACCESSORIES".

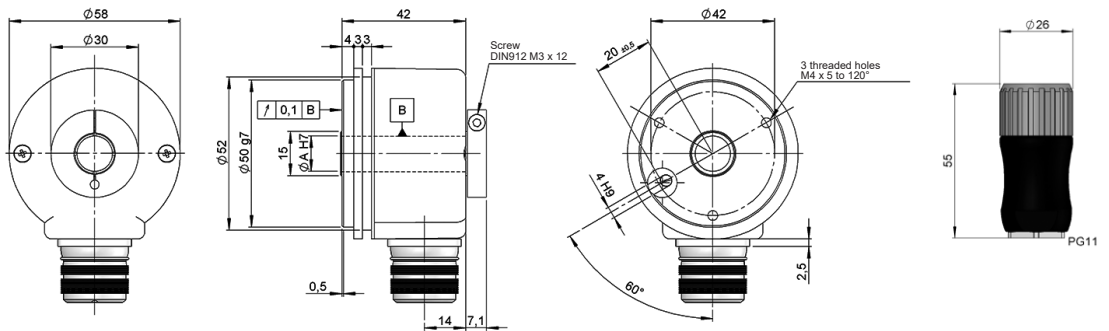
CONNECTION DIMENSIONS

Female connector included

Connection 2
Radial 90.9512

Fixation 1
Rear clamp

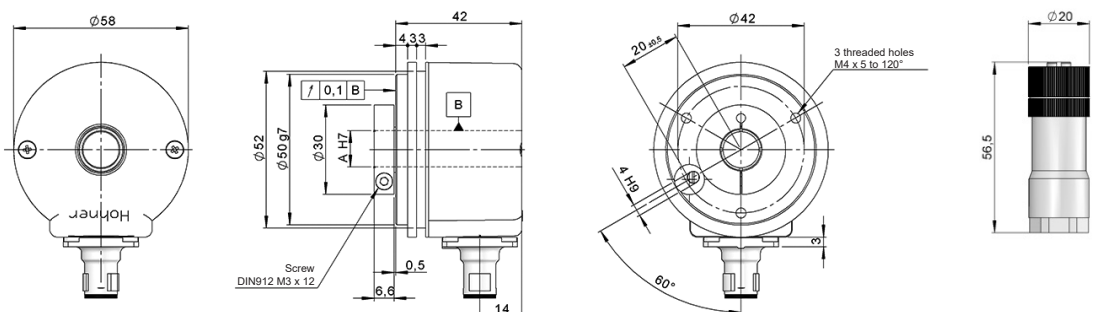
90.9512
M23 12p
male panel
clockwise



Connection 3
Radial 90.9508

Fixation 2
Frontal clamp

90.9508
M12 8p
male panel
counter clockwise

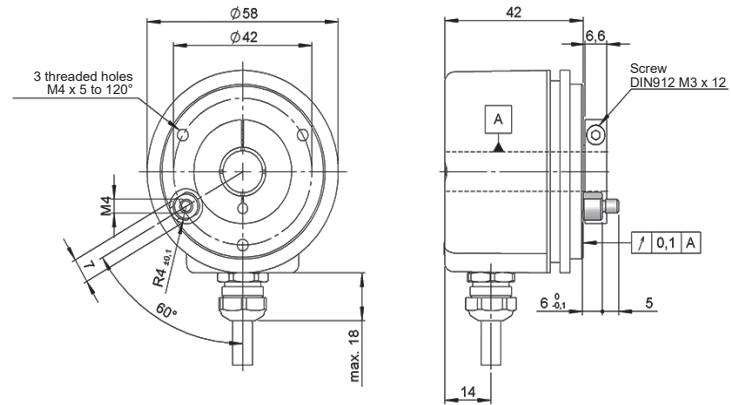


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ANTI-ROTATION SYSTEMS DIMENSIONS

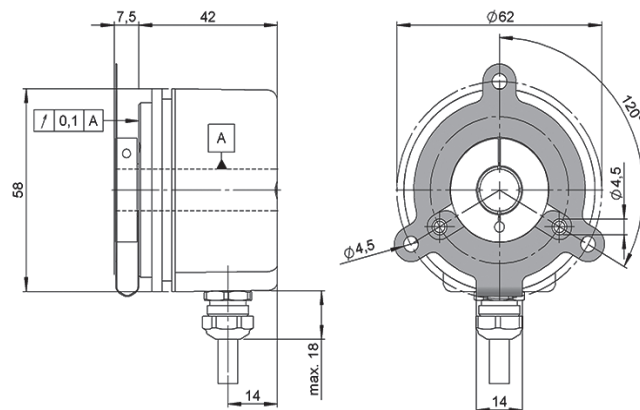
Anti-rotation Pin
90.1040



90.1040



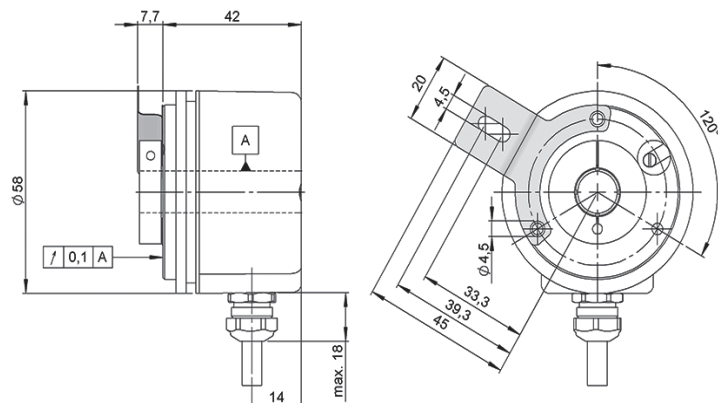
Flexible flange
90.1014



90.1014



Flexible flange
90.1018



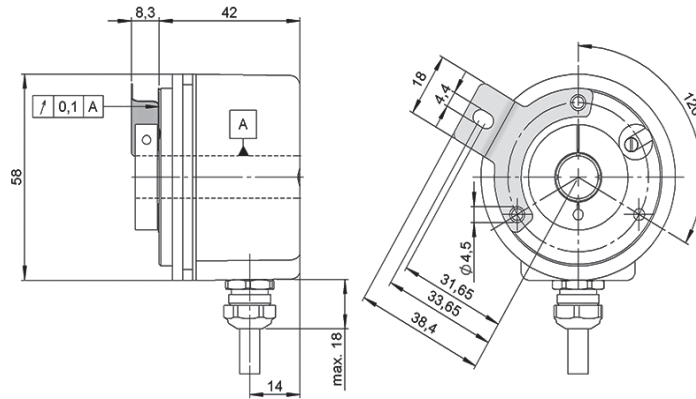
90.1018



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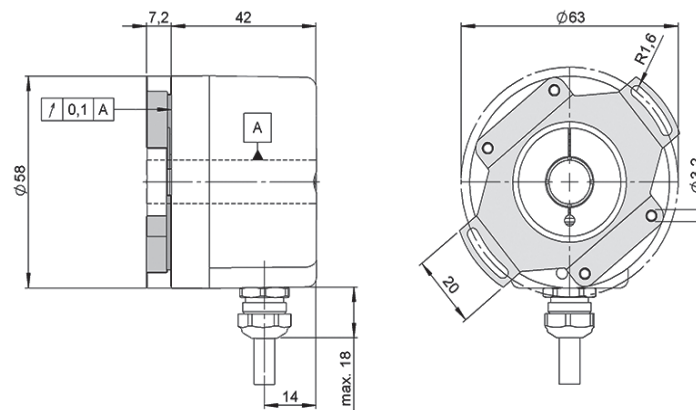
Flexible flange
90.1024



90.1024



Flexible flange
90.1027

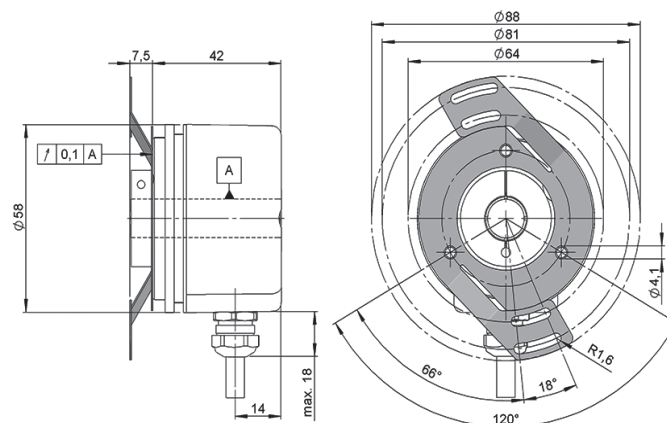


90.1027



The flexible flange
requires special customer
GG02

Flexible flange
90.1075



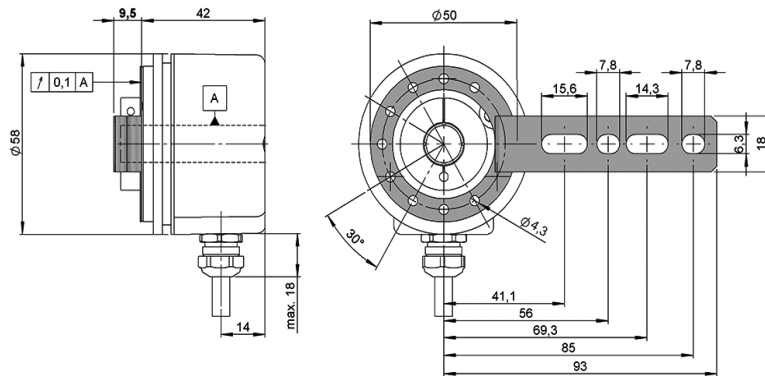
90.1075



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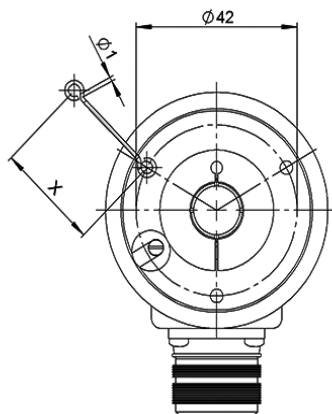
Flexible flange
90.1095



90.1095



Anti-turn stick



90.1033	X= 33 mm
90.1044	X= 83 mm
90.1043	X= 132 mm

(*) other lenght available on order

