



SERIE 59S

INCREMENTAL HOLLOW SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

 SIN/COS

- Resolution up to 2.048 pulses per turn
- Shaft fixing through front or rear clamp
- External diameter 58 mm
- Hollow shaft \varnothing 10, 12 or 14 mm
- Protection class IP65 according to DIN EN 60529
- 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



IP65

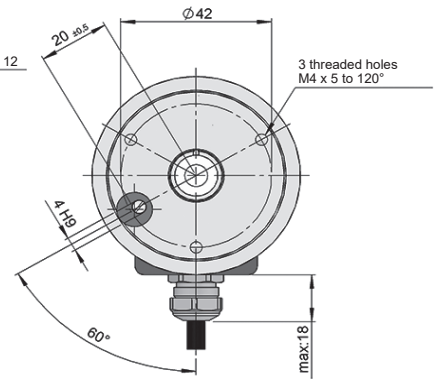
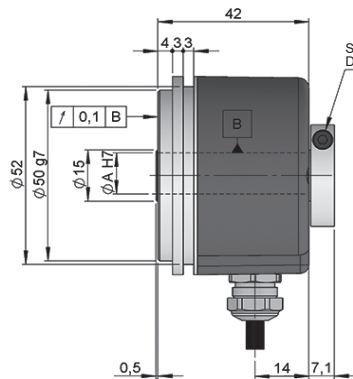
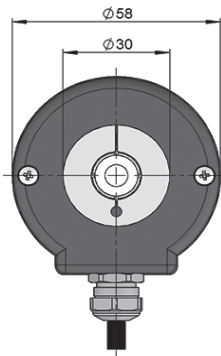


SIN/COS



Express Delivery

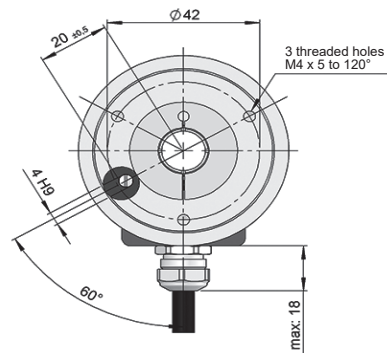
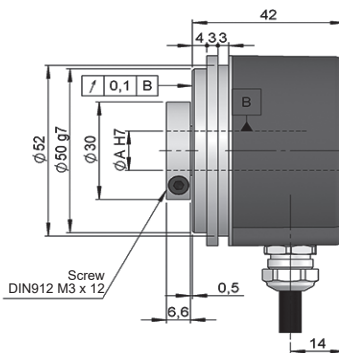
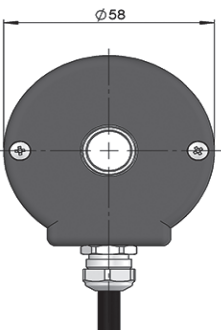
Rear clamp



HOLLOW SHAFT	$\varnothing A$
1	10 mm
2	12 mm
3	14 mm

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

Frontal clamp



HOLLOW SHAFT	$\varnothing A$
1	10 mm
2	12 mm
3	14 mm

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



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REFERENCE

Reference example: 59S-21117-2048

Serie	Mechanical option	Hollow shaft	Output signals	Connection	Power Supply / Electronic output	Pulses number	Special customer
59S -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	<input type="checkbox"/> 2 <input type="checkbox"/> 0 <input type="checkbox"/> 4 <input type="checkbox"/> 8	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	1. Rear clamp 2. Frontal clamp	1. ∅ 10 mm 2. ∅ 12 mm 3. ∅ 14 mm	1. A \tilde{A} +B \tilde{B} +0 \tilde{O} 2. A \tilde{A} +B \tilde{B}	1. Radial cable 2. Radial 90.9512 3. Radial 90.9508	7. 5VDC / SIN-COS 1Vpp 5VDC		

**Order your reference
Step file 3D**

info@encoderhohner.com
service available in 24 h

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

MECHANICAL SPECIFICATIONS

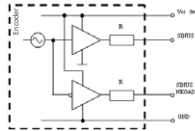
Materials	Cover: Aluminium Housing: Aluminium Shaft: Treated aluminium / Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 ¹⁰ rev.
Housing fixing	Anti-rotation pin, flexible flange or anti-turn stick
Permitted misalignment	±0.5 mm axial, ±0.3 mm radial (90.1014, 90.1024)
Shaft fixing	Front or 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
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)
Number of pulses per turn	2.048
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	Sine-wave
Reference code	7
Power supply	5 VDC $\pm 10\%$
Output voltage	5 VDC
Consumption	Typical: 40 mA Max: 90 mA
Length of cable allowed	50 m
Signal type	SIN/COS, 1Vpp
Output signal level	0.6 to 1.2 Vpp
Signal offset	2.5 VDC
Reference	0.2 to 1 VDC
Frequency	200 kHz
Protection polarity inversion	Not permanent

Cosine leads (90° electric) Sine, view from the shaft, shaft rotating clockwise

CONNECTION



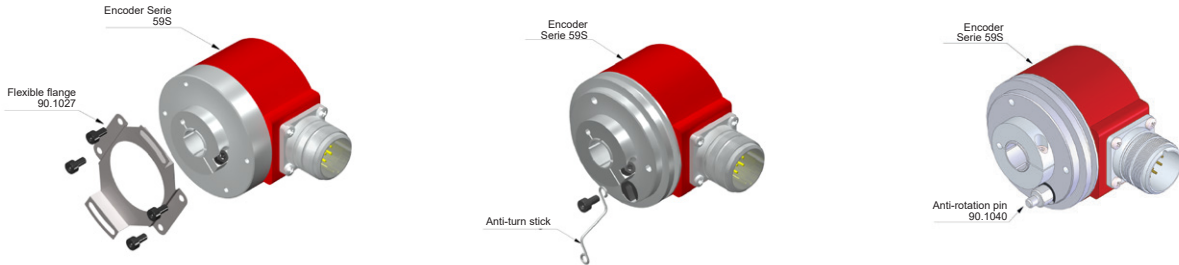
	95.0008003 Cable 3x2x0,14+2x0,34	90.9508 M12 8p CCW	90.9512 M23 12p CW
GND	Black	1	1
VCC	Red	2	2
COS	Yellow	3	3
SIN	Green	4	4
$\overline{\text{COS}}$	Brown	5	5
$\overline{\text{SIN}}$	Blue	6	6
0 (reference)	Grey	7	7
$\tilde{0}$	Orange	8	8

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ACCESSORIES EXAMPLES



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

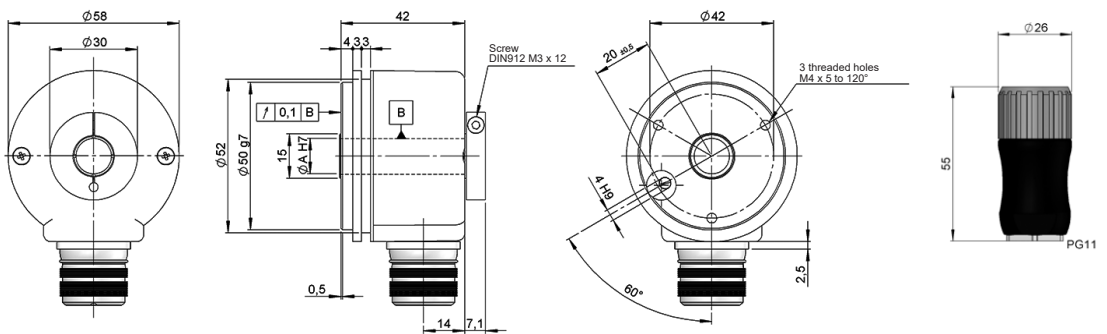
CONNECTION DIMENSIONS

Female connector included

Connection 2
Radial 90.9512

Fixation 1
Rear clamp

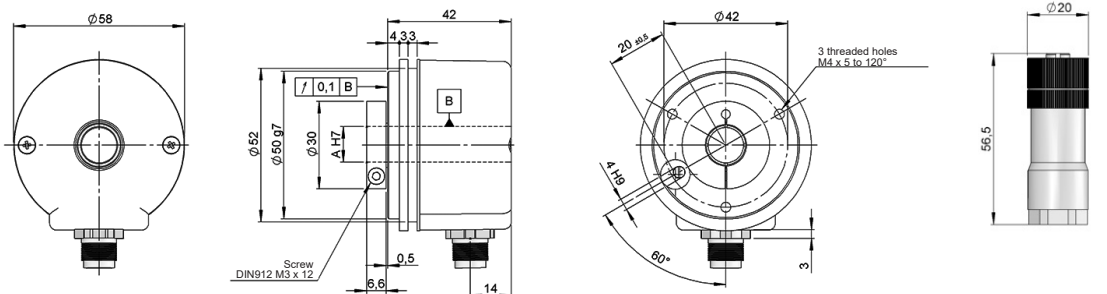
90.9512
M23 12p
male panel
clockwise



Connection 3
Radial 90.9508

Fixation 2
Frontal clamp

90.9508
M12 8p
male panel
counter clockwise



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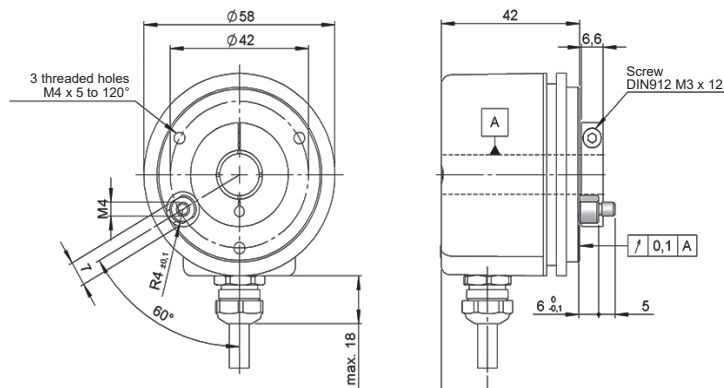
INCREMENTAL HOLLOW SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

SIN/COS

ANTI-ROTATION SYSTEMS DIMENSIONS

Anti-rotation Pin

90.1040

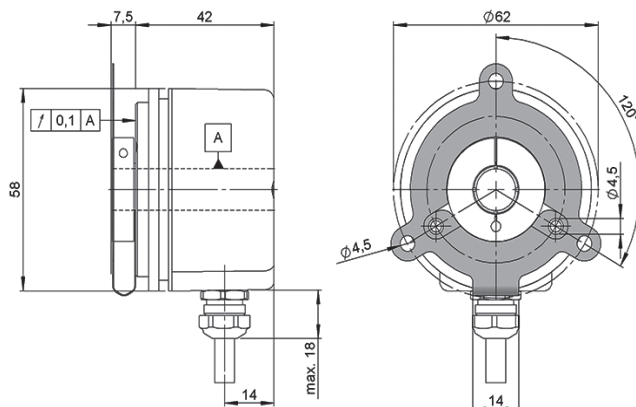


90.1040



Flexible flange

90.1014

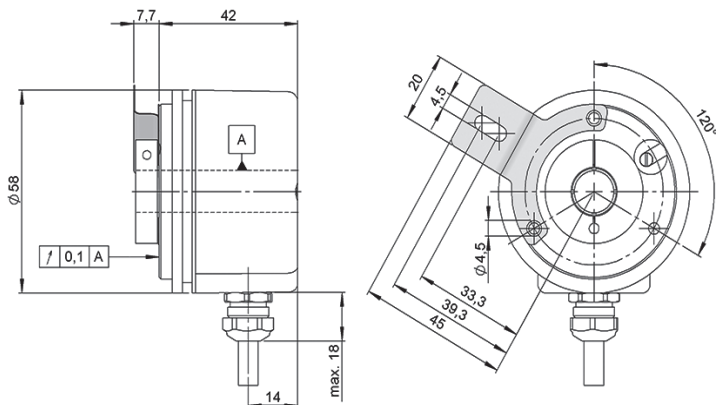


90.1014



Flexible flange

90.1018



90.1018

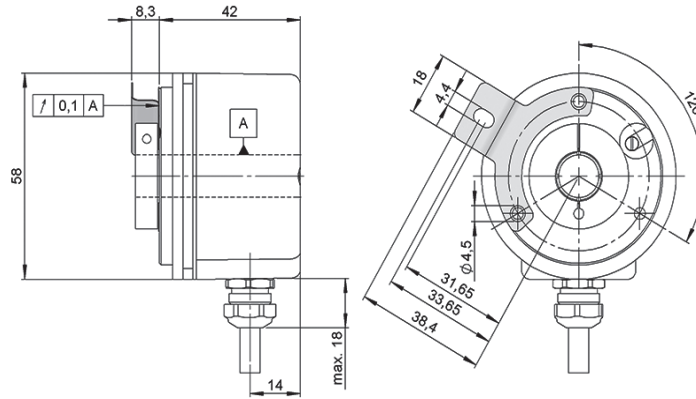


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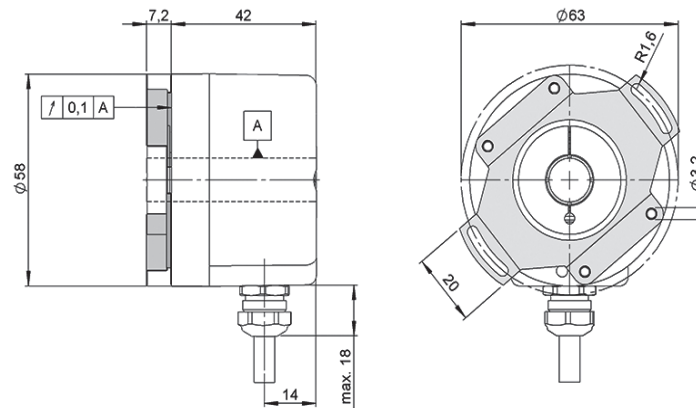
Flexible flange
90.1024



90.1024



Flexible flange
90.1027

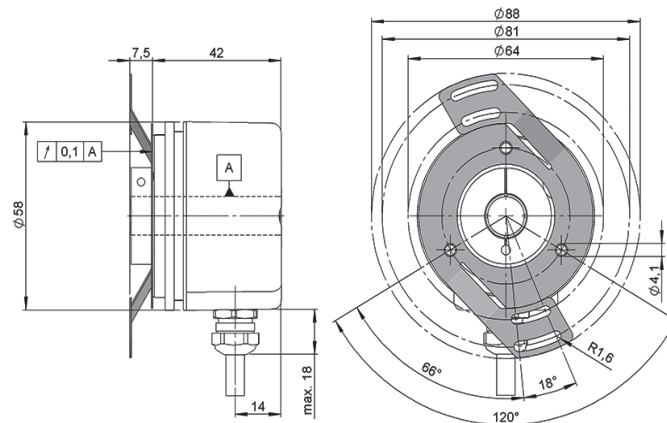


90.1027



The flexible flange
requires special customer
GG02

Flexible flange
90.1075



90.1075

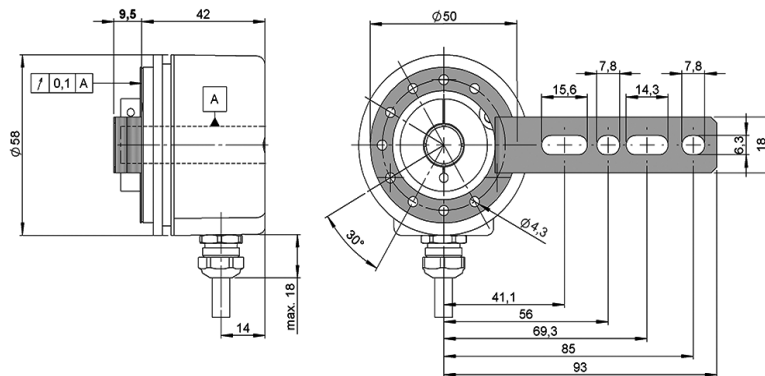


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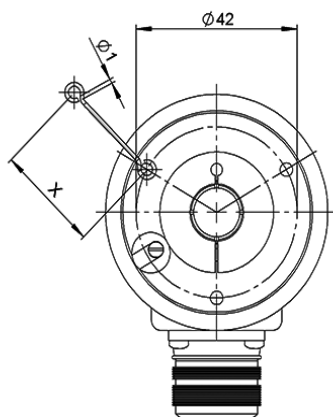
Flexible flange
90.1095



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

