



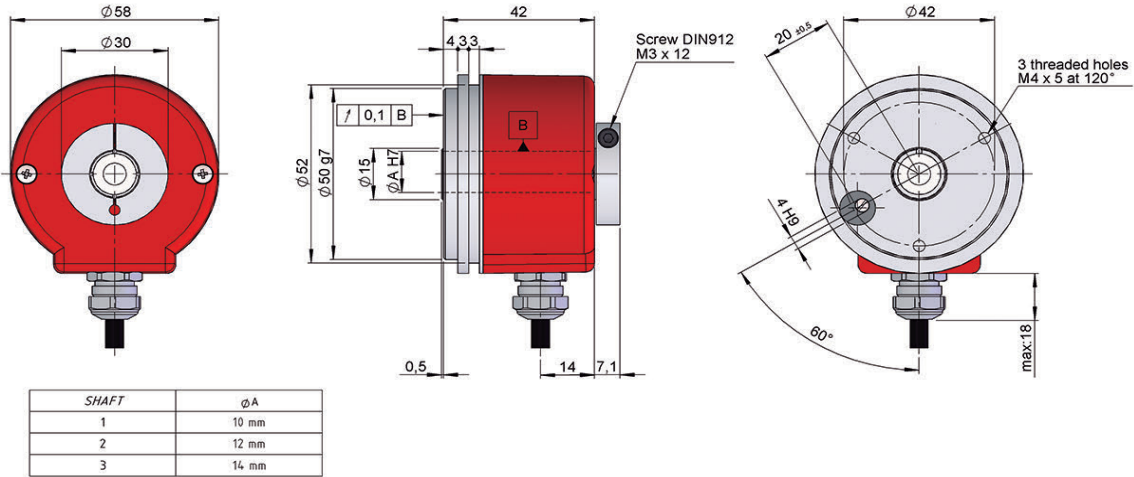
SERIE 59S SIN/COS

HOLLOW SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

- Resolution 2048 pulses per turn
- Fixed to shaft with front or rear clamp
- External diameter 58 mm
- Hollow shaft 10, 12 or 14 mm
- Protection class IP65 according to DIN EN 60529
- Anti-rotation system using elastic flange, centre pin or anti-turn stick
- Cable conection (any cable length available) or industrial connector
- Female connector included

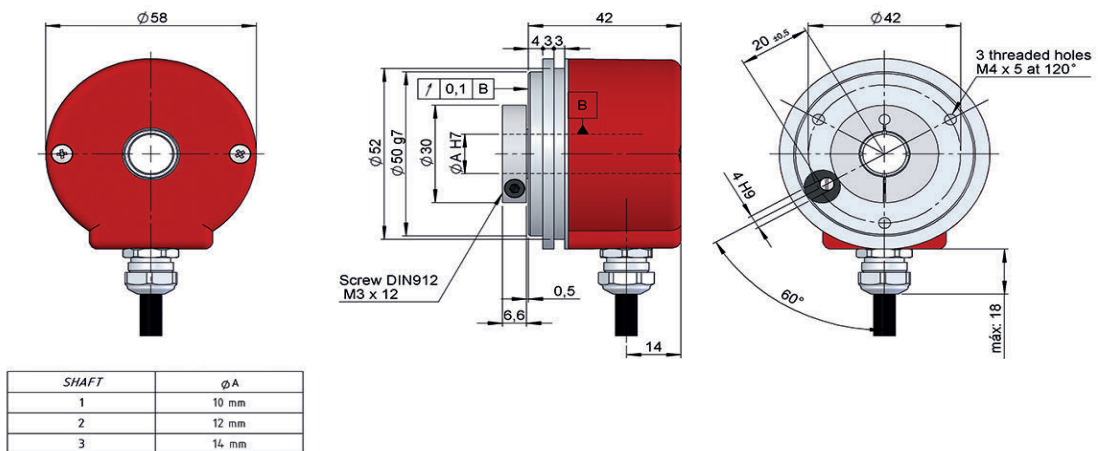


Rear clamp



Drawing fixation type 1, hollow shaft type 2, connection type 1

Frontal clamp



Drawing fixation type 2, hollow shaft type 2, connection type 1



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REFERENCE

Reference example: 59S-21117-2048

Serie	Fixation	Hollow Shaft	Output signals	Connection	Power Supply / Electronic outp.	Pulses number	Special customer
59S -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	2 0 4 8	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	1. Rear clamp 2. Frontal clamp	1. Ø10mm 2. Ø12mm 3. Ø14mm	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. 5V / SIN-COS 1Vpp 5V		

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

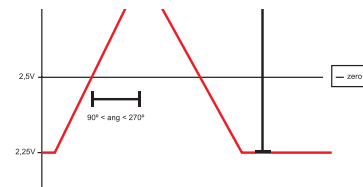
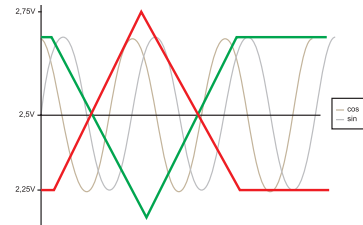
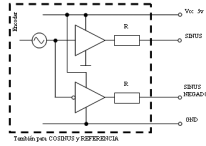
MECHANICAL SPECIFICATIONS

Materials	Cover: Aluminium Housing: Aluminium Shaft: Treated aluminium / Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 ¹⁰ rev.
Housing fixation	Elastic flange
Shaft fixation	Front or Rear clamp
Hollow shaft diameter	10, 12 o 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)	Max. 2,0 Ncm
Maximum load permitted on axial shaft	40 N
Maximum load permitted on radial shaft	60 N
Permitted misalignment: Flexible clamp 90.1014/90.1024	±0.5 mm axial, ±0.3 mm radial
Weight aprox.	0,5 Kg
Operating temperature range	-20°C a +80°C
Vibration	100 m/s ² (10Hz...2000Hz)
Shock	1000 m/s ² (6ms)
Number of pulses per turn	2048
Radial connection	Cable 2 metres or industrial connector (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 V \pm 5%
Output voltage	5 V
Consumption	Typical: 80 mA Max: 150 mA
Max. signal delay	90° Eléctricos
Length of cable allowed	50 m
Signal type	Sin/Cos
Output signal level	0.6 a 1.2 Vpp
Reference	0.2 a 1 V
Frequency	200 kHz
Protection against polarity inversion	No

Sine leads (90° electric) Cosine

CONNECTION

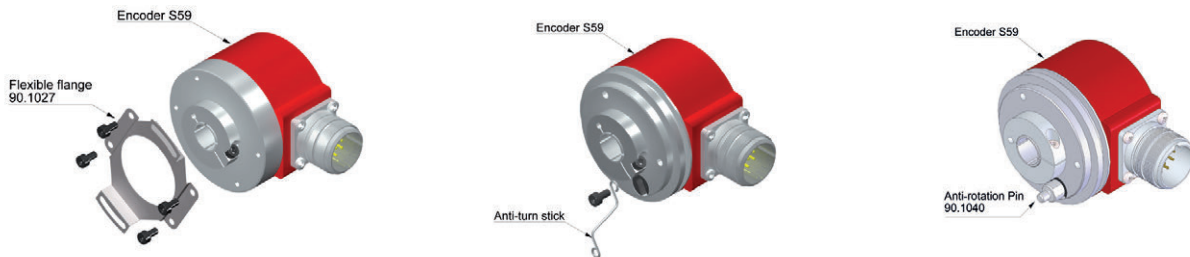


	Cable 3x2x0,14+2x0,34	90.9508 M12 8p ccw	90.9512 M23 12p cw
GND	Black	1	1
Vcc	Red	2	2
COS	Yellow	3	3
SIN	Green	4	4
COS inverted	Brown	5	5
SIN inverted	Blue	6	6
0 (reference)	Grey	7	7
0 inverted	Orange	8	8

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ACCESSORIES EXAMPLES



All the accessories available in the sections "ELECTRONIC MODULES AND COUNTERS" and "MOUNTING ACCESSORIES".

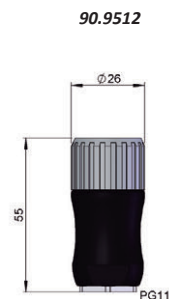
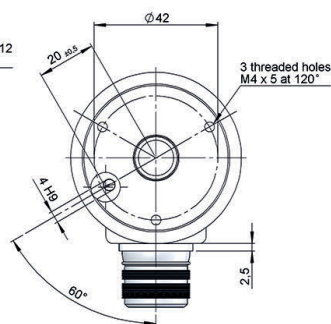
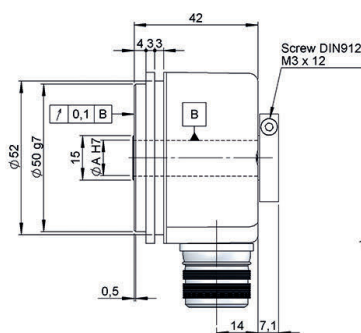
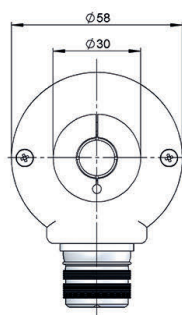
CONNECTION DIMENSIONS

Female connector included

Connection 2
Radial 90.9512

Fixation 1
Rear clamp

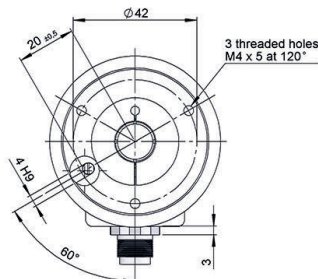
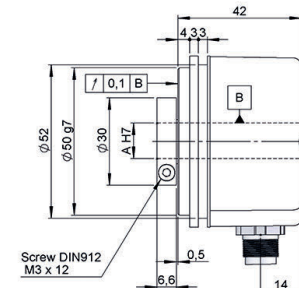
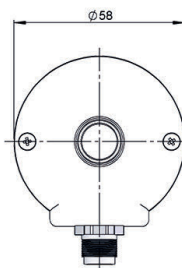
90.9512
M23 12p
male panel
clockwise



Connection 3
Radial 90.9508

Fixation 2
Frontal clamp

90.9508
M12 8p
male panel
counter clockwise

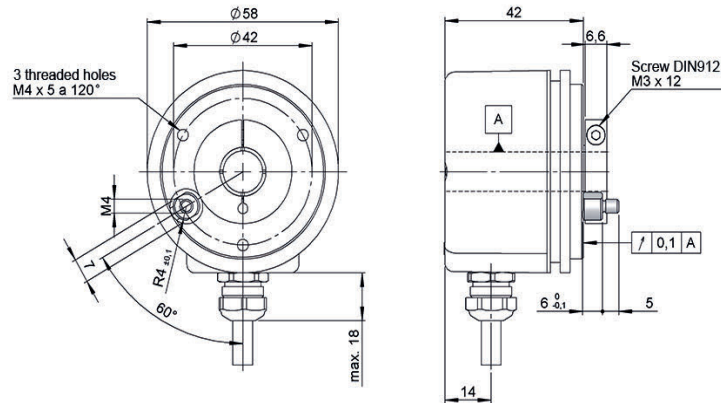


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ANTI-ROTATION SYSTEMS DIMENSIONS

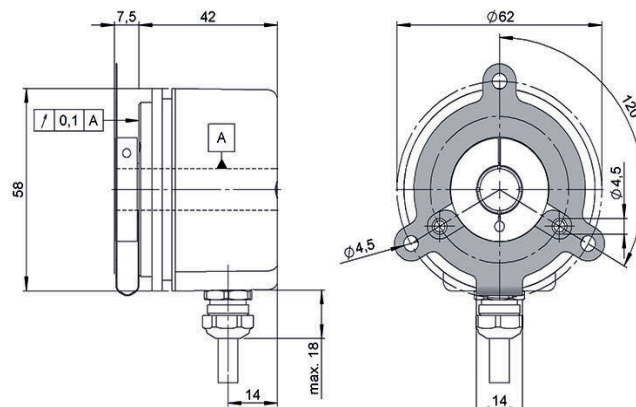
Anti-rotation pin
90.1040



90.1040



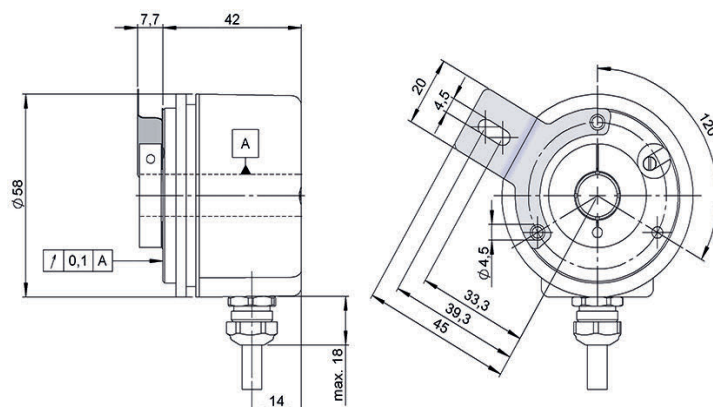
Flexible flange
90.1014



90.1014



Flexible flange
90.1018



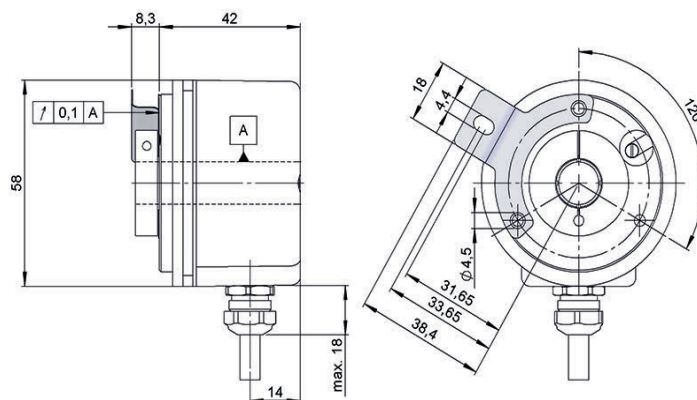
90.1018



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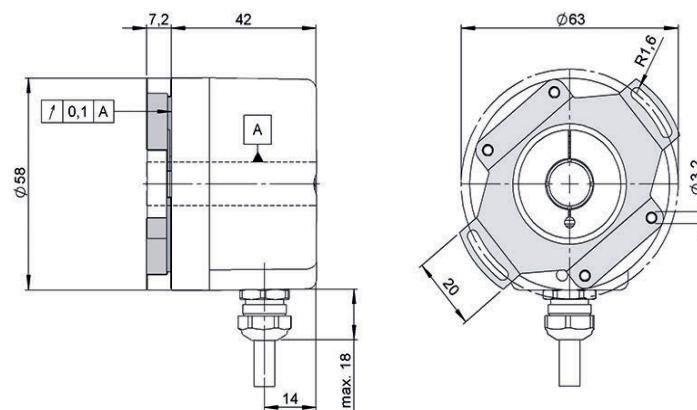
Flexible flange
90.1024



90.1024



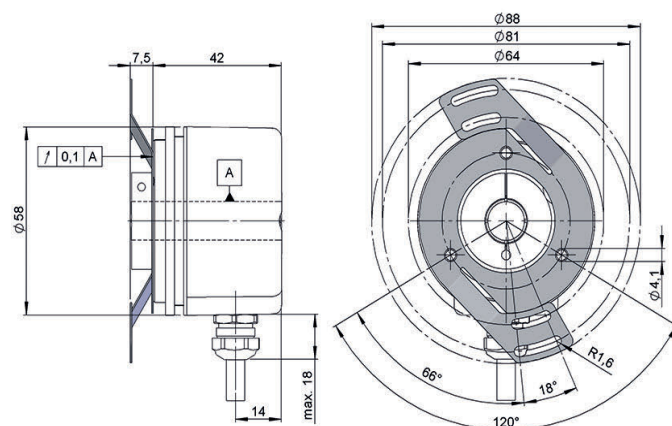
Flexible flange
90.1027



90.1027



Flexible flange
90.1075



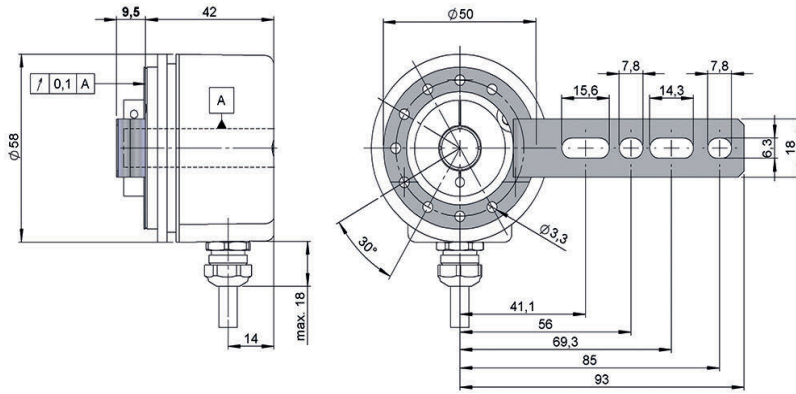
90.1075



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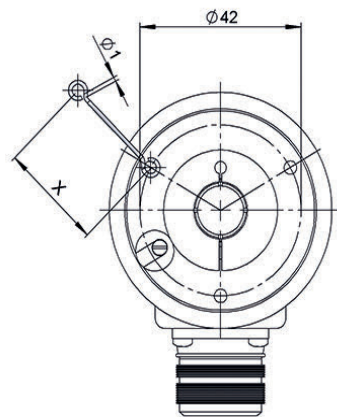
Flexible flange
90.1095



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