



SERIE 59S

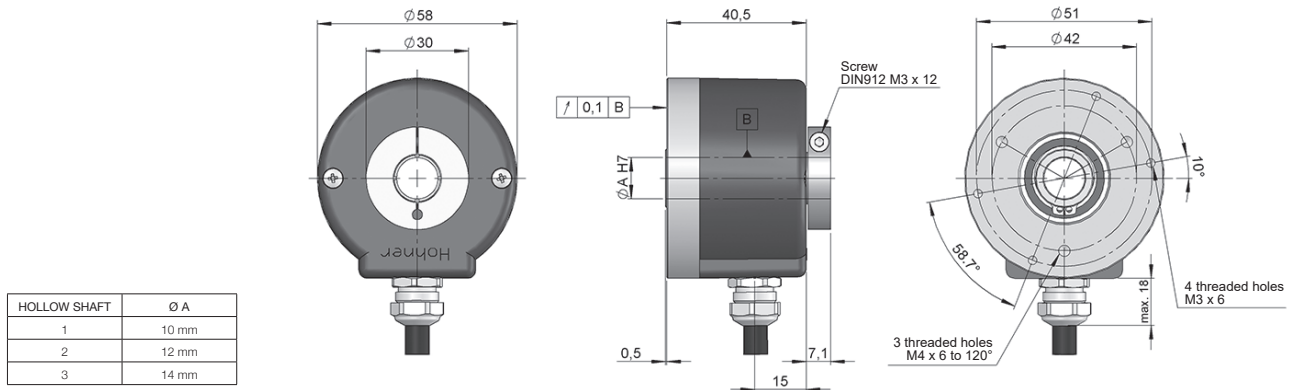
INCREMENTAL HOLLOW SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

SIN/COS

- Resolution 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 or anti-turn stick
- Connection by cable (other cable length available) or industrial connector M12 or M23
- Female connector included

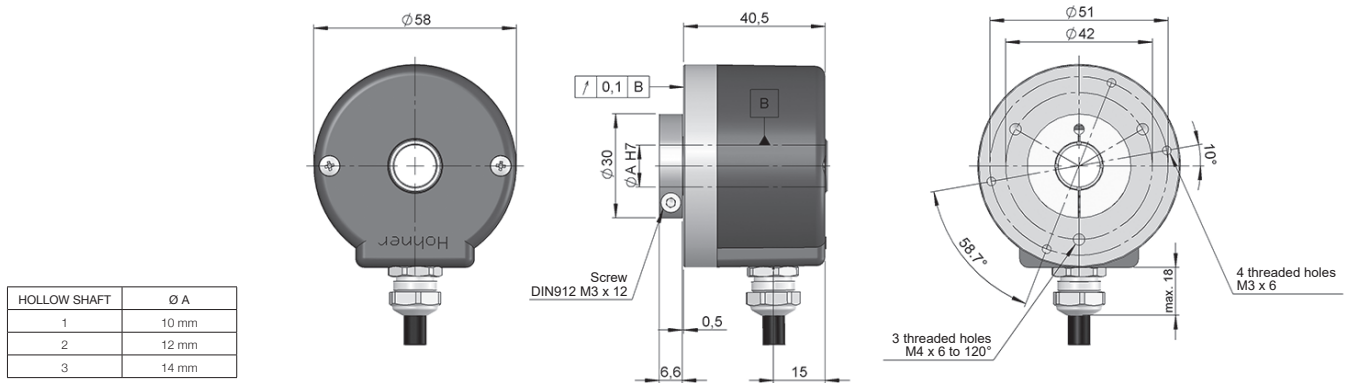


Rear clamp



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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SIN/COS

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"/> - | 2 0 4 8 | <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{O} 2. A \tilde{A} +B \tilde{B} | 1. Radial cable 2. Radial M23 12p CW 3. Radial M12 8p CCW | 7.5 VDC / SIN-COS 1Vpp 5 VDC | | |

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 (order separately). Anti-rotation system is supplied disassembled and includes the screws required for assembly to the encoder. All systems available in the sections "MOUNTING ACCESSORIES".

MECHANICAL SPECIFICATIONS

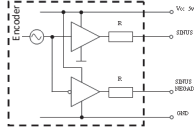
| | |
|--|--|
| Materials | Housing: Aluminium Flange: Aluminium Shaft: Treated aluminium / Stainless Steel |
| Bearings | Ballraces |
| Bearings lifetime | 1x10 ¹⁰ rev. |
| Housing fixing | Flexible flange or Anti-turn stick (not included) |
| Permitted misalignment | ±0.5 mm axial, ±0.3 mm radial (90.1014, 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 | 80 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 |
| Axial or radial connection | 2 meters cable or industrial connector M12 or M23 (other cable lengths available on order) Female connector included |

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SIN/COS

OUTPUT SIGNALS



| | |
|-------------------------------|------------------------------|
| OUTPUT CIRCUIT | Sine-wave |
| Reference code | 7 |
| Power supply | 5 VDC ±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



| | Cable 3x2x0,14+2x0,34 95.0008003 | Connector M12 8p CCW | Connector 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 |
| Shield* | Shield | Housing | Housing |

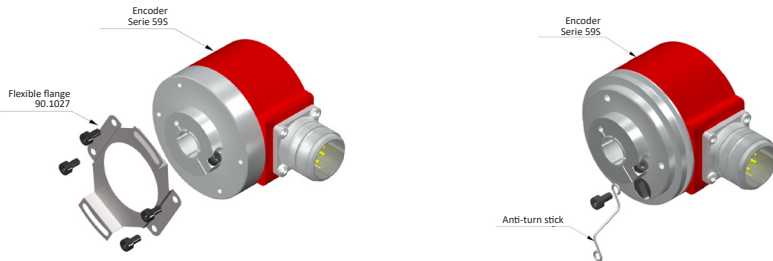
(*) Shield connected to the encoder housing. It is recommended to connect the end of the wire shield to the ground of the equipment where the encoder is connected. \perp

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SIN/COS

ACCESSORIES EXAMPLES



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

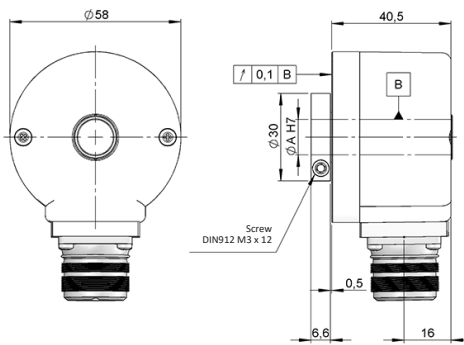
CONNECTION DIMENSIONS

Female connector included

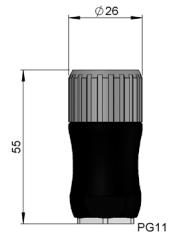
Connection 2
Radial

Fixation 2
Frontal clamp

*M23 12p
male panel
clockwise*



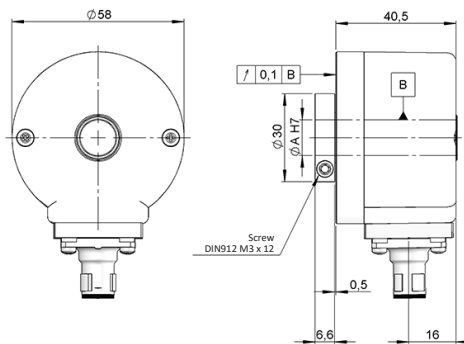
Female connector
95.0007131



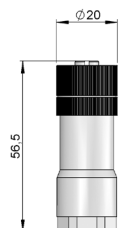
Connection 3
Radial

Fixation 2
Frontal clamp

*M12 8p
male panel
counter clockwise*



Female connector
95.0007152



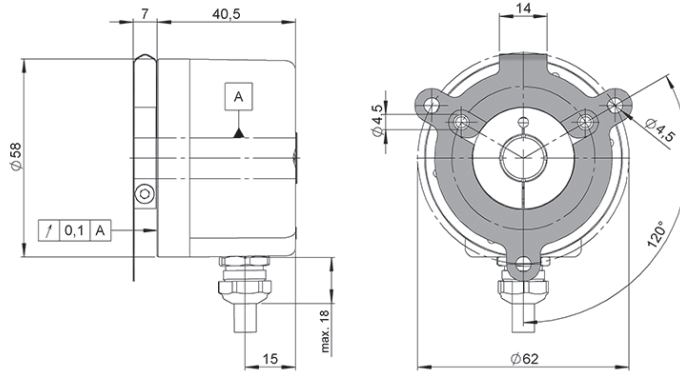
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SIN/COS

ANTI-ROTATION SYSTEMS DIMENSIONS

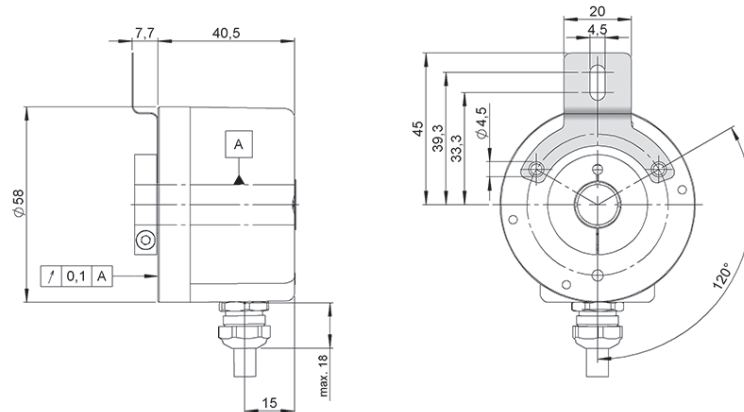
Flexible flange
90.1014



90.1014



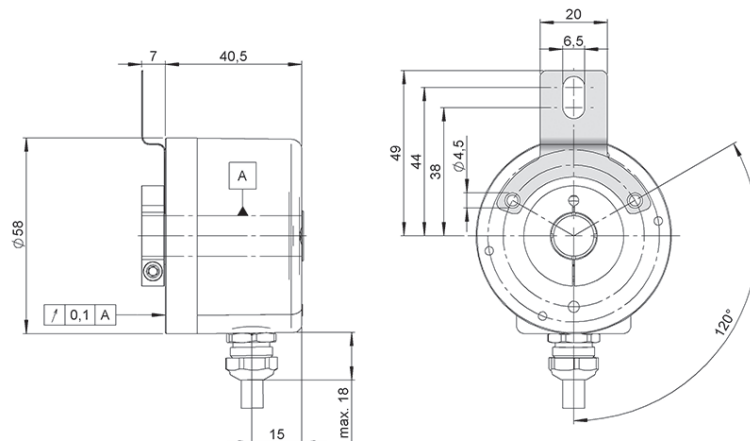
Flexible flange
90.1018



90.1018



Flexible flange
90.1020



90.1020

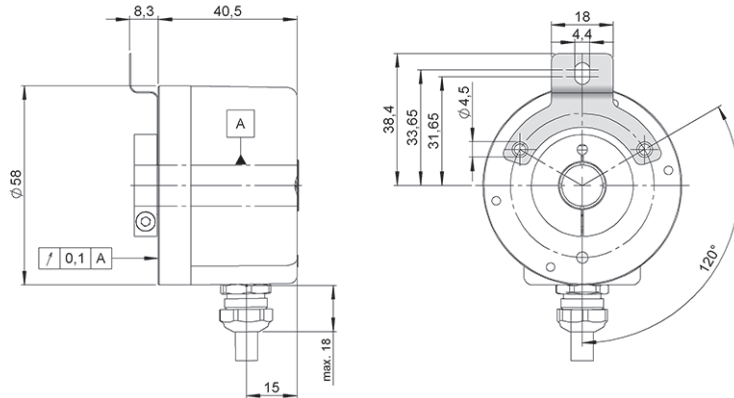


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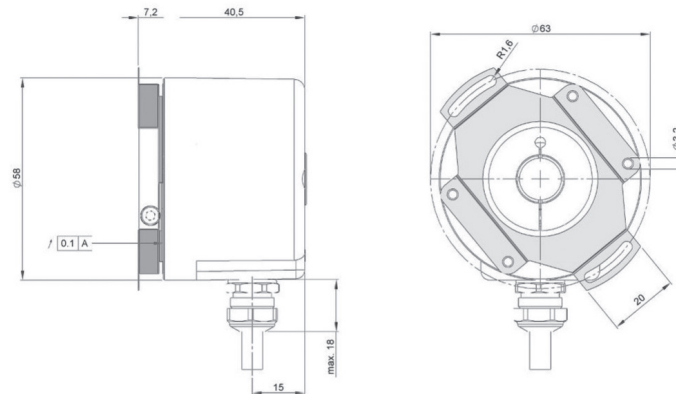
Flexible flange
90.1024



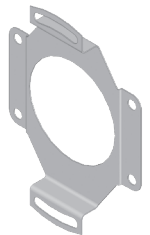
90.1024



Flexible flange
90.1027

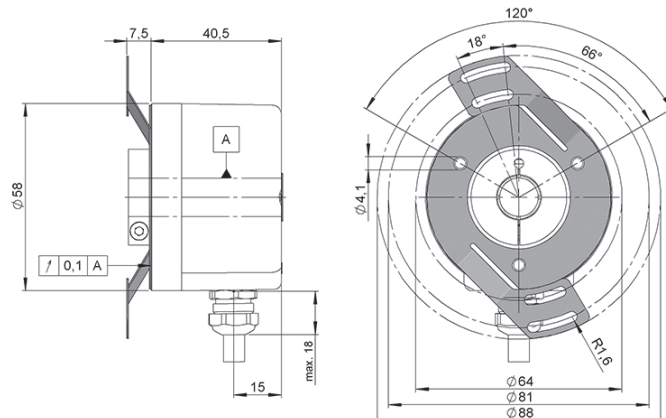


90.1027



This flexible flange requires a special customer code in the reference 59S-XXXXX-XXXX.GG02

Flexible flange
90.1075



90.1075

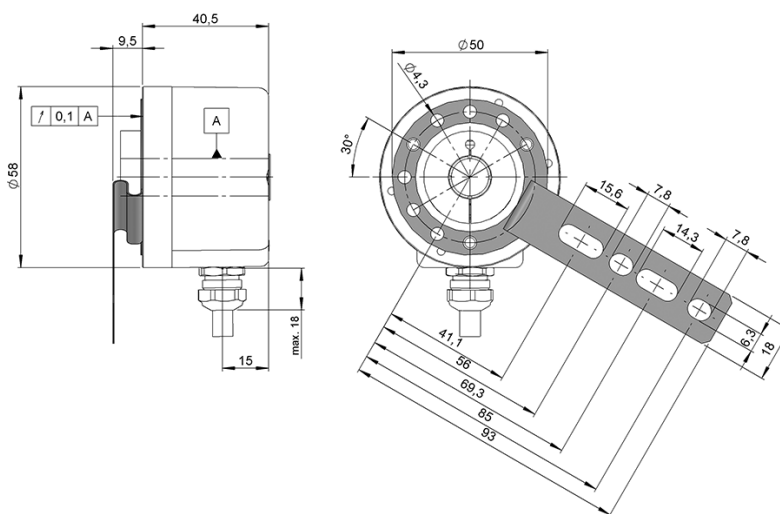


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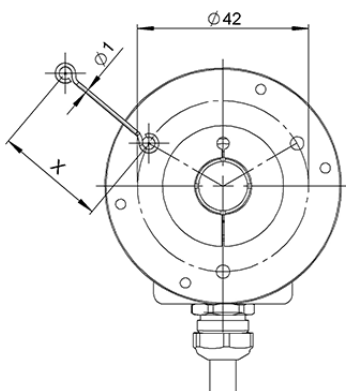
SIN/COS

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 length available on order

