

SERIE 19

HIGH RESOLUTION BLIND HOLLOW SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS



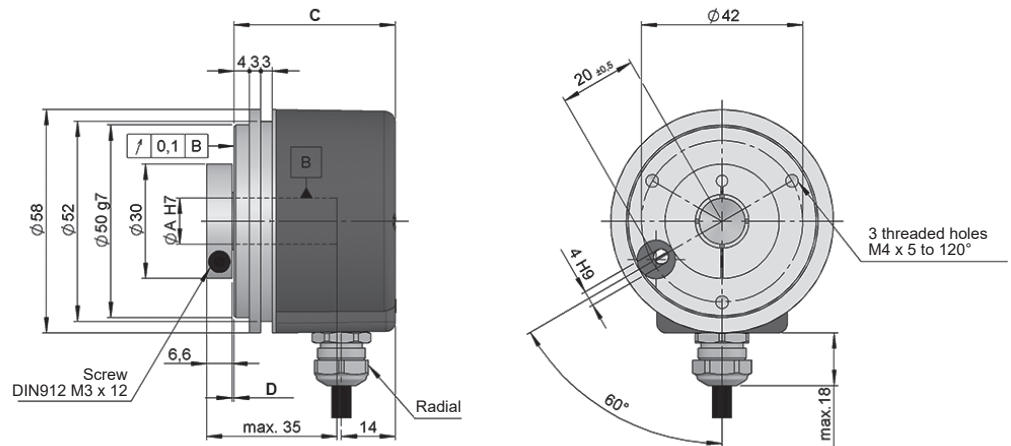
- Resolution up to 50.000 pulses per turn
- External diameter 58 mm
- Blind hollow shaft \varnothing 6, 8, 10, 12, 14 or 15 mm
- Protection class IP67 according to DIN EN 60529
- Shaft fixing through clamp or setscrew
- Anti-rotation system through flexible flange or pin torque support
- Connection by cable (other cable length available) or industrial connector M12, M23



Clamp

| HOLLOW SHAFT | \varnothing A |
|--------------|-----------------|
| 1 | 6 mm |
| 3 | 8 mm |
| 4 | 10 mm |
| 5 | 12 mm |
| 7 | 14 mm |
| 8 | 15 mm |

| SERIE | C | D |
|-------|---------|--------|
| 19 | 42 mm | 0,5 mm |
| 19A | 51,8 mm | 1 mm |

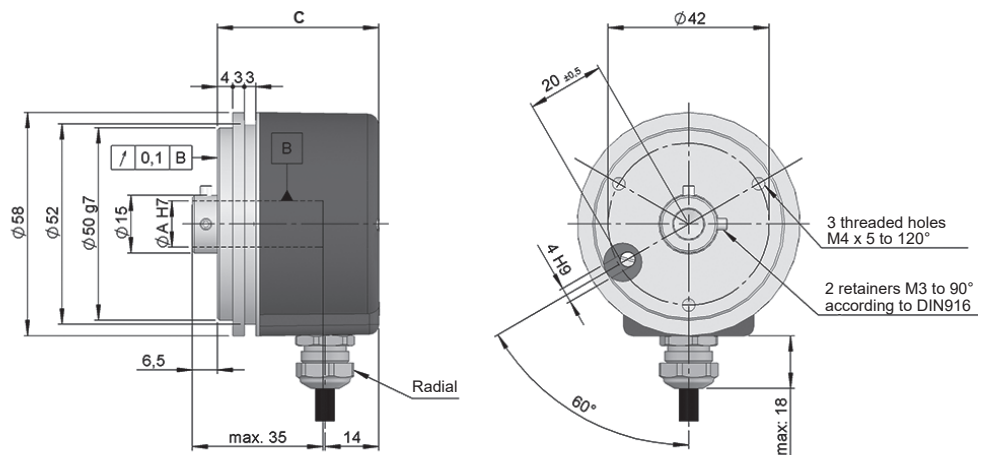


Drawing S19 mechanical option type 1, blind hollow shaft type 5, connection type 3

Setscrew

| HOLLOW SHAFT | \varnothing A |
|--------------|-----------------|
| 1 | 6 mm |
| 3 | 8 mm |
| 4 | 10 mm |
| 5 | 12 mm |
| 7 | 14 mm |
| 8 | 15 mm |

| SERIE | C |
|-------|---------|
| 19 | 42 mm |
| 19A | 51,8 mm |



Drawing S19 mechanical option type 2, blind hollow shaft type 5, connection type 3



SERIE 19

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| REFERENCE | | | | | | | | Reference example: 19-15639-1024 |
|-----------|--------------------------|--------------------------|--|--------------------------|---|---|--|----------------------------------|
| Serie | Mechanical option | Blind-Hollow shaft | Output signals | Connection | Power Supply / Electronic output | Pulses number | Special customer | |
| 19/19A - | <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"/> <input type="checkbox"/> | |
| 19. IP65 | 1. Clamp | 1. Ø 6x26 mm | 1. A | 3. Radial cable | 0. 11...30 VDC / NPN Open collector 11...30 VDC | (*) | HT00. -40°C | |
| 19A. IP67 | 2. Setscrew | 3. Ø 8x26 mm | 2. A+B | 5. Radial | 6. 11...30 VDC / RS422 5 VDC (compatible TTL) | | | |
| | | 4. Ø 10x26 mm | 3. A+B+ $\tilde{0}$ | M23 12p | 7. 5 VDC / RS422 5 VDC (compatible TTL) | | | |
| | | 5. Ø 12x26 mm | 5. A \tilde{A} +B \tilde{B} | CW | 9. 11...30 VDC / Line driver differential Push-Pull 11...30 VDC | | | |
| | | 7. Ø 14x26 mm | 6. A \tilde{A} +B \tilde{B} +0 $\tilde{0}$ | L. Radial | | | | |
| | | 8. Ø 15x26 mm | 9. A+B+0 | M12 8p | | | | |
| | | | | CCW | | | | |
| | | | | (**) | | | | |

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.

(**) Special customer for connection options with axial outputs, upon request.

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".

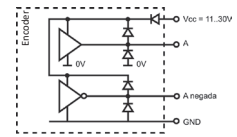
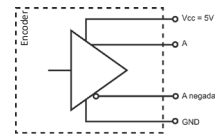
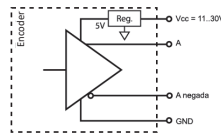
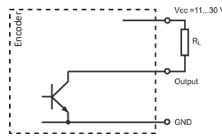
MECHANICAL SPECIFICATIONS

| | |
|--|--|
| Materials | Housing: Aluminium Flange: Aluminium Shaft: Stainless Steel |
| Bearings | Ballraces |
| Bearings lifetime | 1x10 ¹⁰ rev. |
| Housing fixing | Anti-rotation pin or flexible flange |
| Permitted misalignment | ±0.5 mm axial, ±0.3 mm radial (90.1014, 90.1024) |
| Shaft fixing | Clamp or setscrew |
| Blind hollow shaft diameter | 6, 8, 10, 12, 14 or 15 mm |
| Maximum number of revolutions permitted mechanically | 6000 rpm |
| Protection against dust and splashes according to DIN EN 60529 | IP65 - Standard IP67 - Option 19A |
| Rotor inertia moment | 30 gcm ² (19) 50 gcm ² (19A) |
| Starting torque at 20°C (68°F) | ≤ 0,02 Nm (19) ≤ 0,04 Nm (19A) |
| 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 - Standard -40°C to +80°C - Special Customer HT00 |
| 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 not included |

SERIE 19

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OUTPUT SIGNALS



| OUTPUT CIRCUIT | NPN Open Collector | RS422 (TTL compatible) | RS422 (TTL compatible) | Push-Pull Differential |
|--------------------------------|------------------------|-------------------------------|-------------------------------|-------------------------------|
| Reference code | 0 | 6 | 7 | 9 |
| Power supply | 11...30 VDC | 11...30 VDC | 5 VDC ±5% | 11...30 VDC |
| Output voltage | 11...30 VDC | 5 VDC | 5 VDC | 11...30 VDC |
| Consumption | 40 mA | Typical: 80 mA Max: 160 mA | Typical: 70 mA Max: 150 mA | Typical: 45 mA Max: 150 mA |
| Max. load capability / channel | 40 mA | ±20 mA | ±20 mA | ±30 mA |
| Length of cable allowed | 50 m (24 VDC) | 1200 m | 1200 m | 100 m |
| "Low" signal level | VOL < 0.4 VDC (24 VDC) | VOL < 0.5 VDC | VOL < 0.5 VDC | VOL < 2.5 VDC |
| "High" signal level | VOH > 22 VDC (24 VDC) | VOH > 2.5 VDC | VOH > 2.5 VDC | VOH > VCC – 3 VDC |
| Frequency | 100 kHz | 300 kHz | 300 kHz | 200 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



| | Cable 2x2x0,14+1x0,14 95.0008002 | Cable 3x2x0,14+2x0,34 95.0008003 (*) | Connector M12 8p CCW | Connector M23 12p CW |
|---------------|--|--|----------------------------|----------------------------|
| GND | Yellow | Black | 1 | 1 |
| VCC | White | Red | 2 | 2 |
| A | Brown | Yellow | 3 | 3 |
| B | Green | Green | 4 | 4 |
| ~A | | Brown | 5 | 5 |
| ~B | | Blue | 6 | 6 |
| 0 (reference) | Grey | Grey | 7 | 7 |
| ~0 | Grey | Orange | 8 | 8 |
| Shield** | Shield | Shield | Housing | Housing |

(*) Cable 3x2x0,14+2x0,34 only for encoders with inverted signals.

(**) 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.

SERIE 19

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ACCESSORIES EXAMPLES



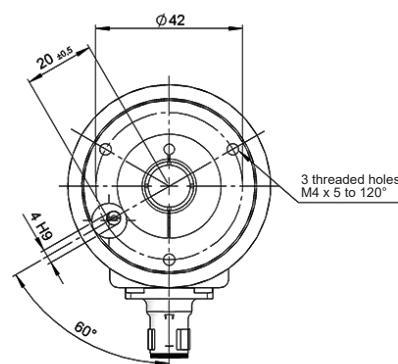
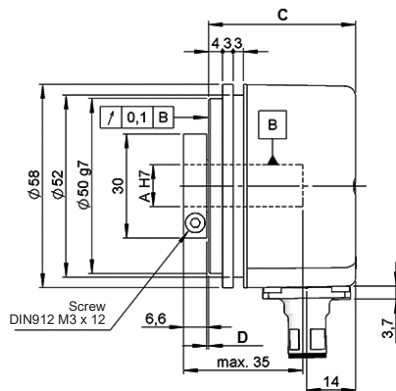
All the accessories available in the section "MOUNTING ACCESSORIES".

CONNECTION DIMENSIONS

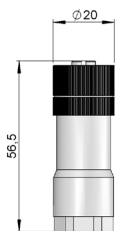
Female connector not included

Connection L

Radial
M12 8p
male panel
counter clockwise

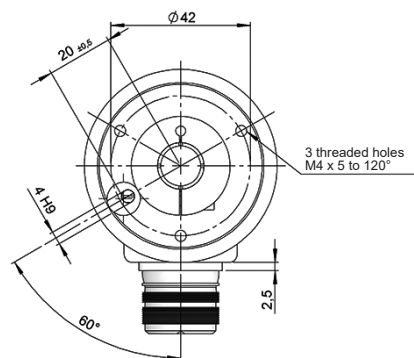
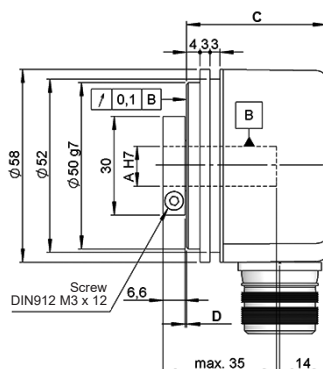


Female connector
95.0007152

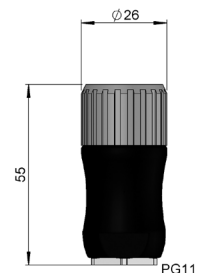


Connection 5

Radial
M23 12p
male panel
clockwise



Female connector
95.0007131

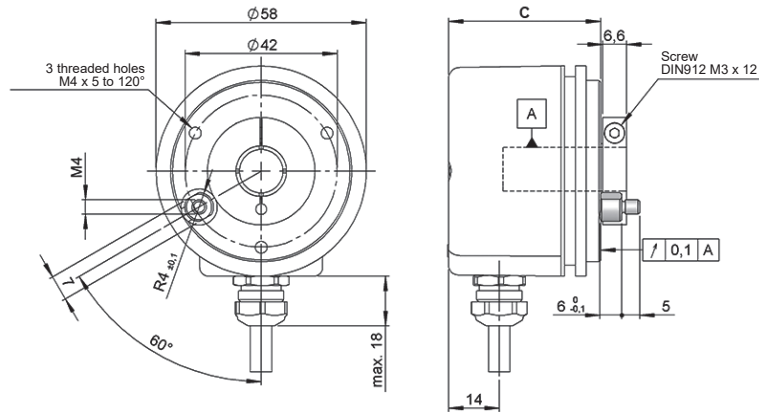


SERIE 19

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ANTI-ROTATION SYSTEMS DIMENSIONS

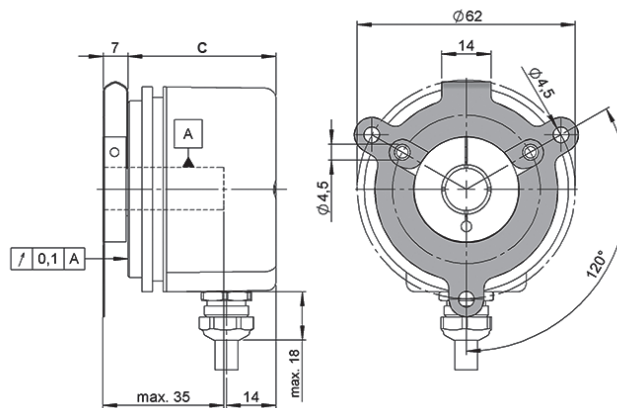
Anti-rotation pin
90.1040



90.1040



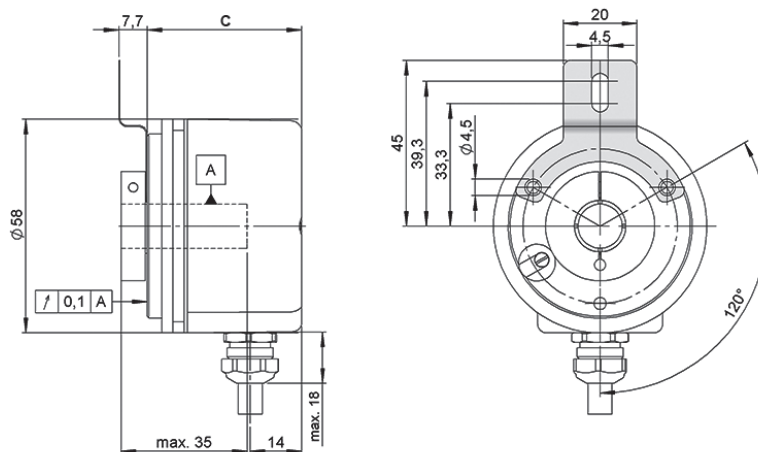
Flexible flange
90.1014



90.1014



Flexible flange
90.1018



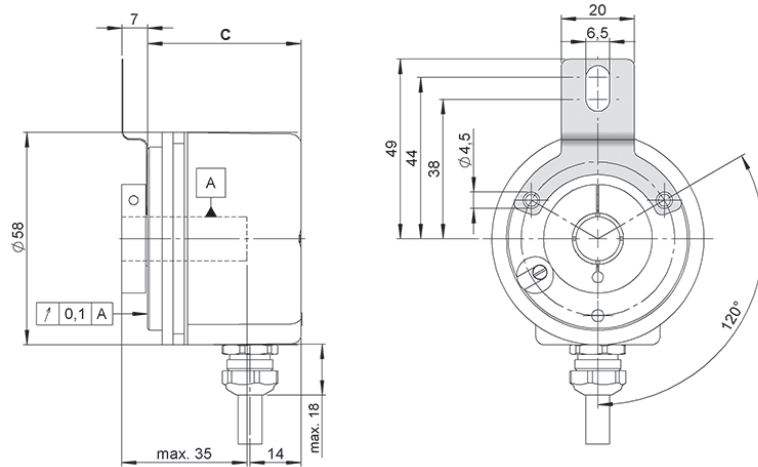
90.1018



SERIE 19

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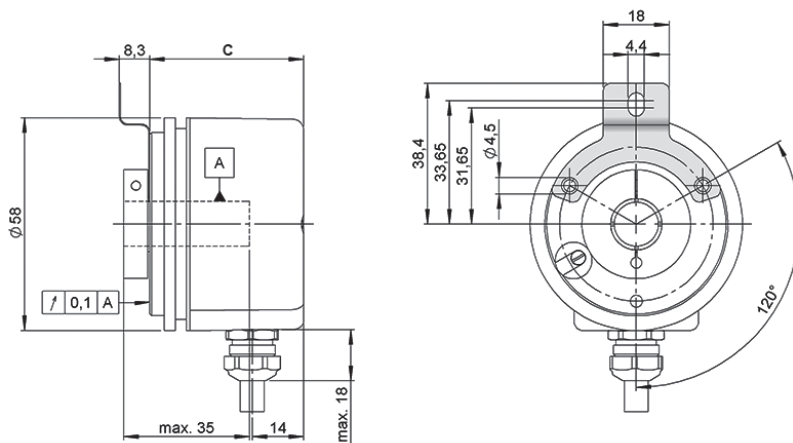
Flexible flange
90.1020



90.1020



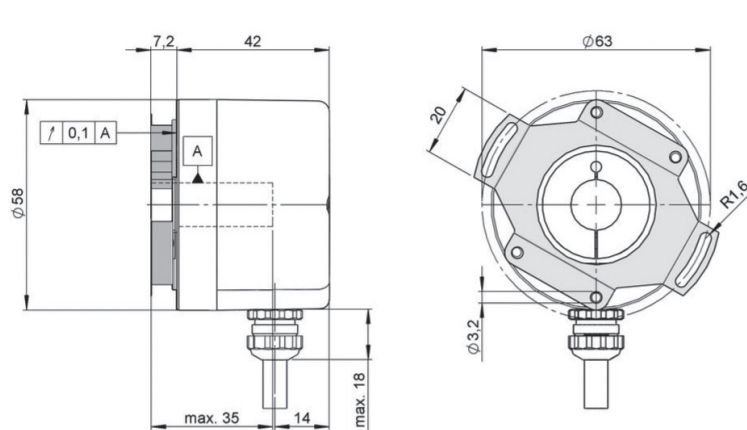
Flexible flange
90.1024



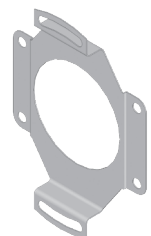
90.1024



Flexible flange
90.1027



90.1027

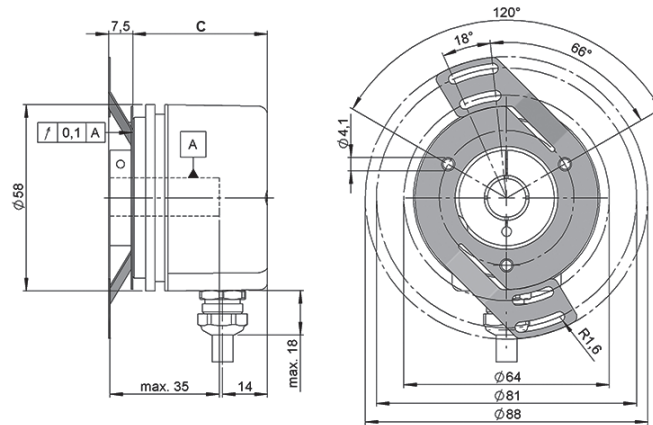


This flexible flange requires a special customer code in the reference:
19-XXXXX-XXXXX.HG01

SERIE 19

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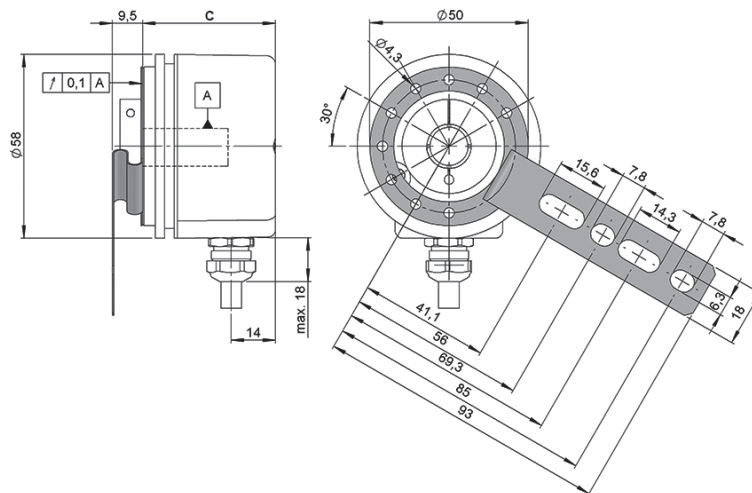
Flexible flange
90.1075



90.1075



Flexible flange
90.1095



90.1095

