



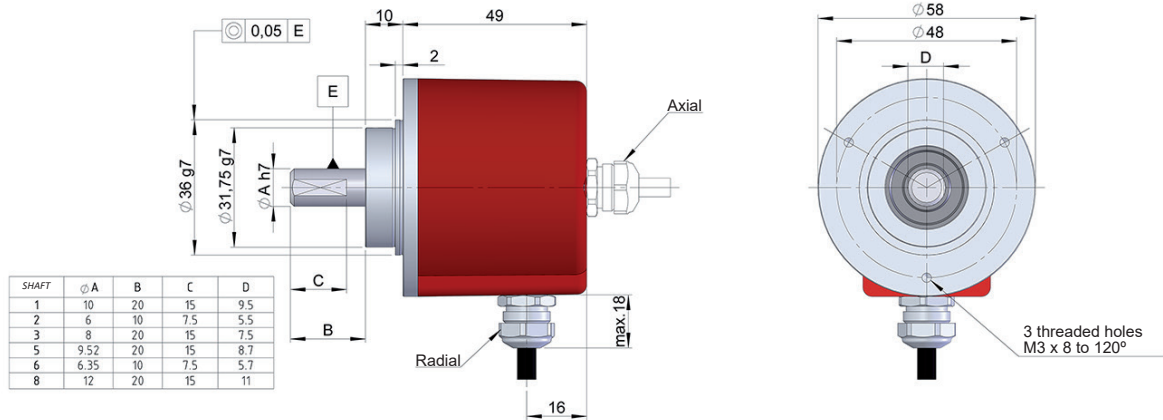
SERIE 10

HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

- Resolution up to 50.000 pulses per turn
- External diameter 58 mm
- Shaft from \varnothing 6 to 12 mm
- Protection class IP67 according to DIN EN 60529
- Highly flexible flanges and different configurations
- Executions mechanical, electronic and special optics forms available on request
- Connection by cable (other cable length available) or industrial connector
- Female connector included



Optical Encoder Incremental Encoder High shaft load capacity Vibration and shock resistant IP67 Temperature range Express Delivery



Drawing shaft type 1, connection type 3/8, without flange

REFERENCE

Reference example: 10-11639-1024

| Serie | Shaft | Flange | Output signals | Connection | Power Supply / Electronic output | Pulses number | Special customer |
|-----------------|-----------------------------|--------------------------|---|--------------------------|---|---|---|
| 10/10A - | <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"/> |
| 10. IP 65 | 1. \varnothing 10x20 mm | 1. None | 1. A | 1. Radial 90.9504 | 0. 11...30 VDC / NPN Open collector 11...30 VDC | (*) | AT00. -40°C |
| 10A. IP 67 (**) | 2. \varnothing 6x10 mm | 2. 90.1002 | 2. A+B | 3. Radial cable | 6. 11...30 VDC / RS422 5 VDC (compatible TTL) | | |
| | 3. \varnothing 8x20 mm | 3. 90.1003 | 3. A+B+ $\tilde{0}$ | 4. Radial 90.9507 | 7. 5 VDC / RS422 5 VDC (compatible TTL) | | |
| | 5. \varnothing 9.52x20 mm | 4. 90.1004 | 5. A \tilde{A} +B \tilde{B} | 5. Radial 90.9512 | 9. 11...30 VDC / Line driver differential Push-Pull 11...30 VDC | | |
| | 6. \varnothing 6.35x10 mm | 5. 90.1005 | 6. A \tilde{A} +B \tilde{B} + $\tilde{0}$ | 6. Axial 90.9504 | | | |
| | 8. \varnothing 12x20 mm | 7. 90.1006 (***) | 9. A+B+ $\tilde{0}$ | 8. Axial cable | | | |
| | | | | 9. Axial 90.9507 | | | |
| | | | | 0. Axial 90.9512 | | | |
| | | | | M. Radial 90.9510 | | | |
| | | | | N. Axial 90.9510 | | | |
| | | | | L. Radial 90.9508 | | | |
| | | | | K. Axial 90.9508 | | | |

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 option 10A is only available with shaft type 1, and cable connection output (3/8) or connection 90.9508 (L/K).

(***) Flange mounting included in delivery of the encoder.



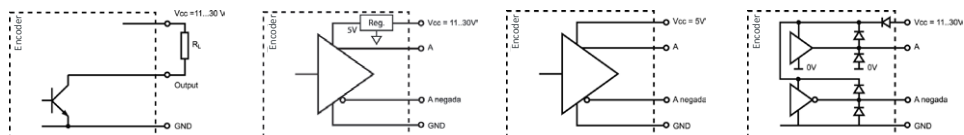
SERIE 10

HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

MECHANICAL SPECIFICATIONS

| | |
|--|---|
| Materials | Cover: Aluminium Housing: Aluminium Shaft: Stainless Steel |
| Bearings | Ballraces |
| Bearings lifetime | 1x10 ¹⁰ rev. |
| Maximum number of revolutions permitted mechanically | 6000 rpm |
| Protection against dust and splashes according to DIN EN 60529 | IP65 - Standard IP67 - Option 10A |
| 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 - Standard -40°C to +80°C - Special Customer AT00 |
| 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 |
| Axial or radial connection | 2 meters cable or industrial connector (different models available, other cable lengths available on order) Female connector included |

OUTPUT SIGNALS



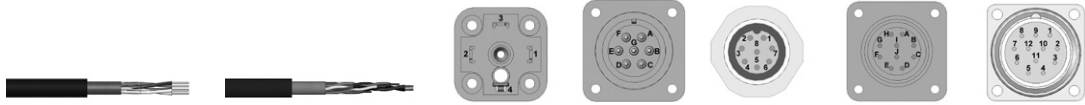
| OUTPUT CIRCUIT | NPN Open Collector | RS422 (TTL compatible) | RS422 (TTL compatible) | Push-Pull Differential |
|--------------------------------|------------------------|-------------------------------|-------------------------------|-------------------------------|
| Reference code | 0 | 6 | 7 | 9 |
| Power supply | 11...30 VDC | 11...30 VDC | 5 VDC ±10% | 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 | Not permanent | Yes |

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

SERIE 10

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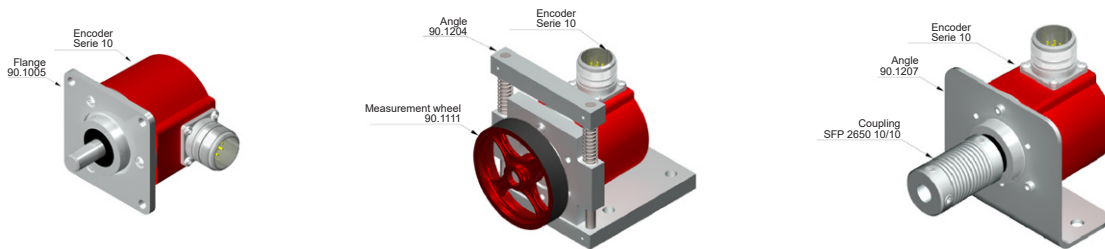
CONNECTION



| | 95.0008002 Cable 2x2x0,14+1x0,14 | 95.0008003 (* Cable 3x2x0,14+2x0,34 | 90.9504 DIN 43650 4p | 90.9507 Mil 7p CW | 90.9508 M12 8p CCW | 90.9510 Mil 10p CW | 90.9512 M23 12p CW |
|---------------|--|---|----------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| GND | Yellow | Black | 1 | A | 1 | A | 1 |
| VCC | White | Red | 2 | B | 2 | B | 2 |
| A | Brown | Yellow | 3 | C | 3 | C | 3 |
| B | Green | Green | 4 | D | 4 | D | 4 |
| \tilde{A} | | Brown | | E | 5 | E | 5 |
| \tilde{B} | | Blue | | F | 6 | F | 6 |
| 0 (reference) | Grey | Grey | | G | 7 | G | 7 |
| $\tilde{0}$ | Grey | Orange | | G | 8 | H | 8 |

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

ACCESSORIES EXAMPLES

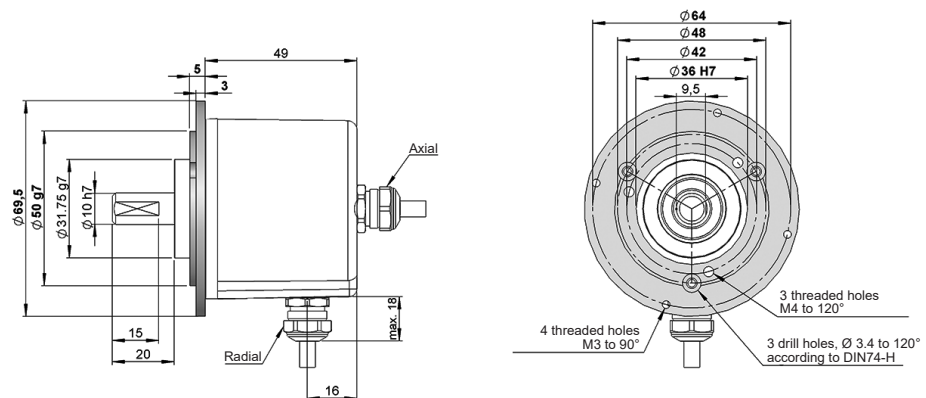


All the accessories available in the section "MOUNTING ACCESSORIES".

FLANGE DIMENSIONS

Flange mounting included

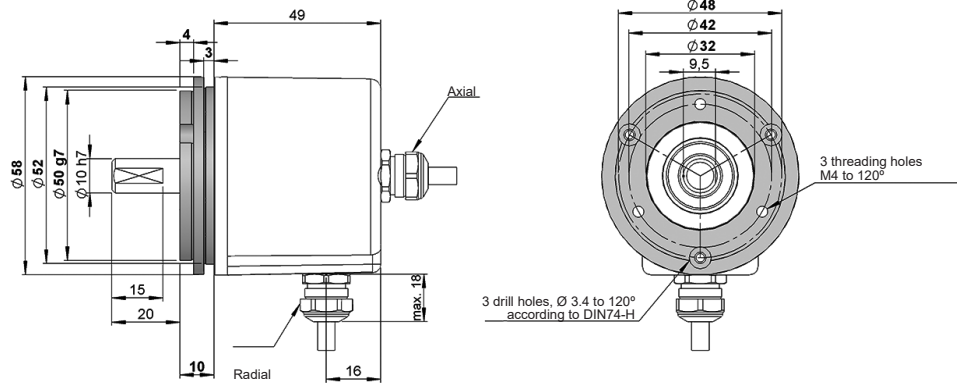
Flange 2
90.1002



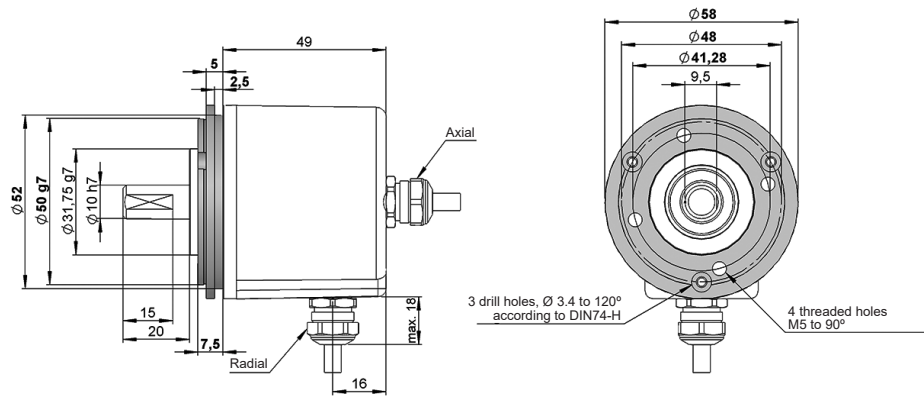
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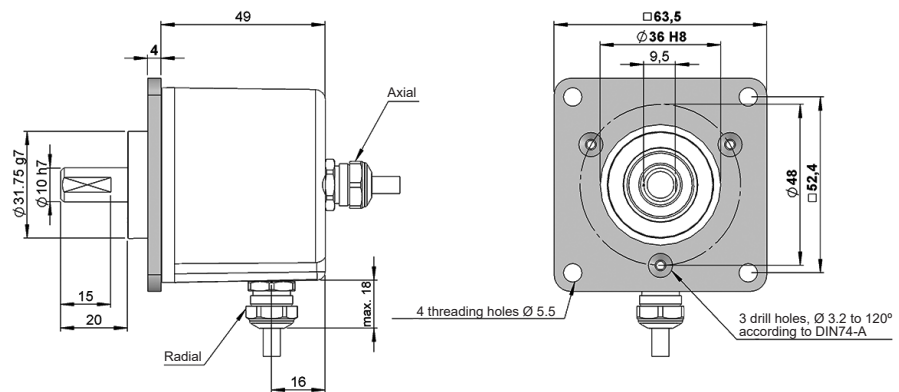
Flange 3
90.1003



Flange 4
90.1004



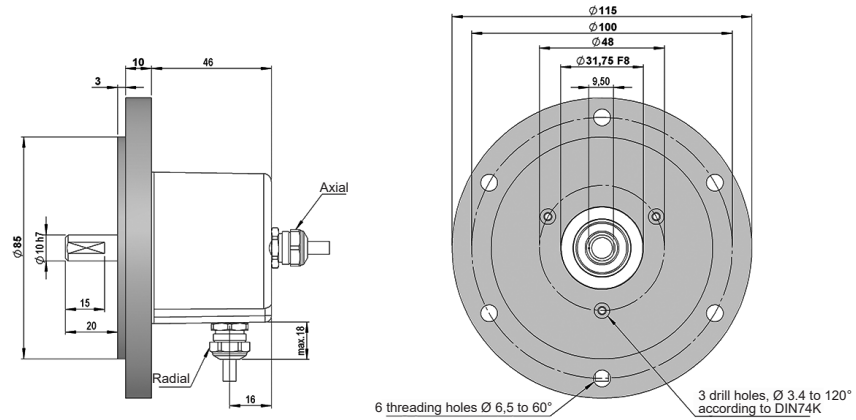
Flange 5
90.1005



SERIE 10

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Flange 7
90.1006



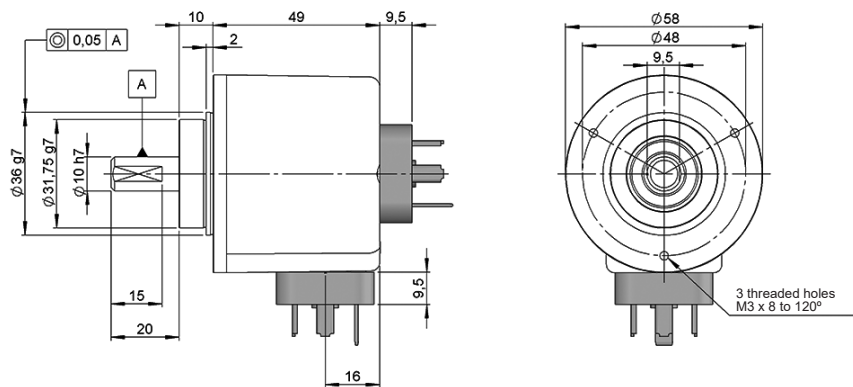
CONNECTION DIMENSIONS

Female connector included

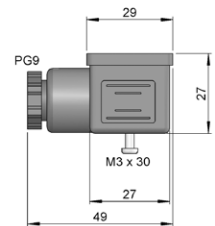
Connection 1
Radial 90.9504

Connection 6
Axial 90.9504

90.9504
DIN 43650 4p
male panel



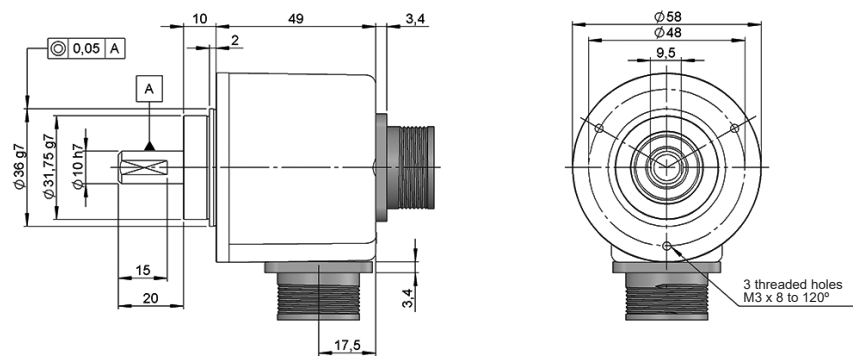
90.9504



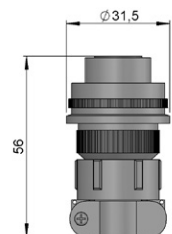
Connection 4
Radial 90.9507

Connection 9
Axial 90.9507

90.9507
Mil 7p
male panel
clockwise



90.9507



SERIE 10

HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

Connection 5

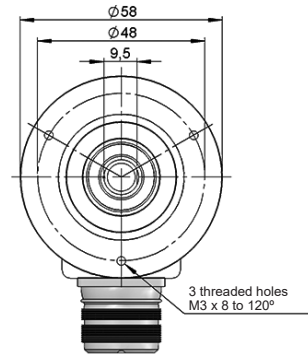
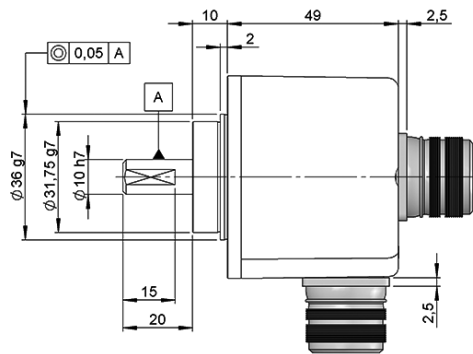
Radial 90.9512

Connection 0

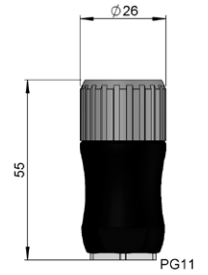
Axial 90.9512

90.9512

M23 12p
male panel
clockwise



90.9512



Connection M

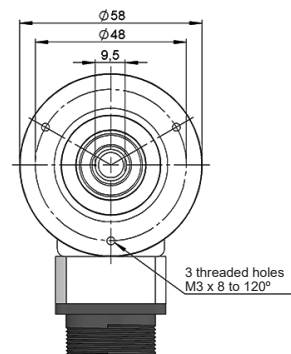
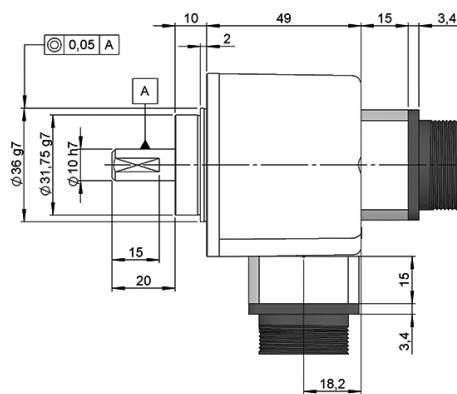
Radial 90.9510

Connection N

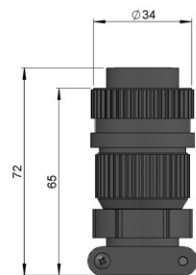
Axial 90.9510

90.9510

Mil 10p
male panel
clockwise



90.9510



Connection L

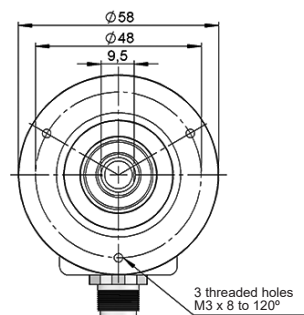
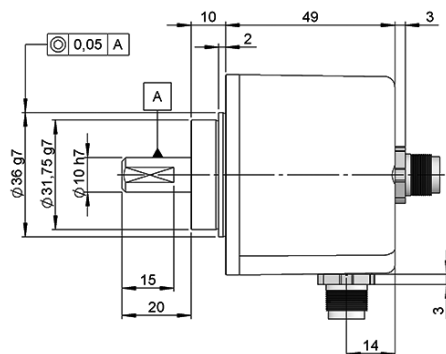
Radial 90.9508

Connection K

Axial 90.9508

90.9508

M12 8p
male panel
counter clockwise



90.9508

