

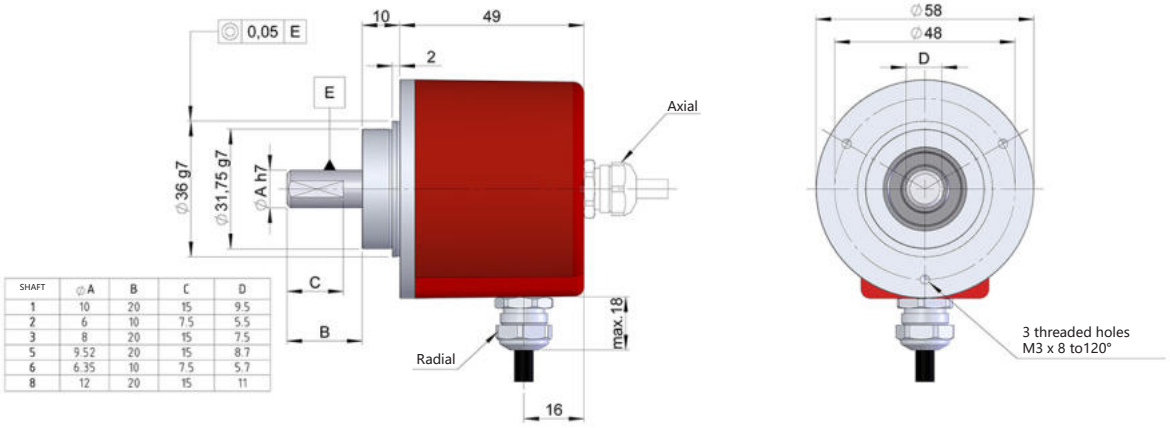
SERIE 10

HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

- Resolution up to 50000 pulses per turn
- External diameter 58 mm
- Shaft from Ø 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 or industrial connector (other cable lengths available)



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



SHAFT	ØA	B	C	D
1	10	20	15	9.5
2	6	10	7.5	5.5
3	8	20	15	7.5
5	9.52	20	15	8.7
6	6.35	10	7.5	5.7
8	12	20	15	11

Drawing connection type 3/8, without flange

REFERENCE

Reference example: 10-11639-1024

Serie	Solid shaft	Flange	Output signals	Connection	Power Supply / Electronic output	Pulses number	Special customer
10/10A -	☐	☐	☐	☐	☐ -	☐☐☐☐☐	. ☐☐☐☐
10. IP 65 **10A.** IP 67 (**)	**1.** Ø 10x20 mm **2.** Ø 6x10 mm **3.** Ø 8x20 mm **5.** Ø 9.52x20 mm **6.** Ø 6.35x10 mm **8.** Ø 12x20 mm	**1.** None **2.** 90.1002 **3.** 90.1003 **4.** 90.1004 **5.** 90.1005 **7.** 90.1006 (***)	**1.** A **2.** AB **3.** AB, $\overline{Z}$ **5.** AB, $\overline{AB}$ **6.** ABZ, $\overline{ABZ}$ **9.** ABZ	**1.** Radial 4p **3.** Radial cable **4.** Radial Mil 7p **5.** Radial M23 12p **6.** Axial 4p **8.** Axial cable **9.** Axial Mil 7p **0.** Axial M23 12p **M.** Radial Mil 10p **N.** Axial Mil 10p **L.** Radial M12 8p **K.** Axial M12 8p	**0.** 11...30 VDC / NPN Open collector 11..30 VDC **6.** 11...30 VDC / RS422 5 VDC (compatible TTL) **7.** 5 VDC / RS422 5 VDC (compatible TTL) **9.** 11...30 VDC / Line driver differential Push-Pull 11..30 VDC	(*)	**AT00.** -40°C

Order your reference Step file 3D

info@encoderhohner.com

service available in 24 h

(*) 10000 to 50000 pulses with interpolation. Available 10000 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 type (L/K).

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

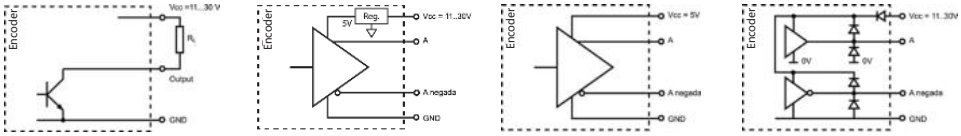
SERIE 10

HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

MECHANICAL SPECIFICATIONS

Materials	Cover: Zamac Housing: Aluminium Shaft: Stainless Steel
Bearings	Ballraces
Bearings lifetime	$1x10^{10}$ rev.
Shaft diameter	6, 6.35, 8, 9.52, 10 or 12 mm
Maximum number of revolutions permitted mechanically	≤ 6 000 rpm
Protection against dust and splashes according to DIN EN 60529	IP65 - Standard IP67 - Option 10A
Rotor inertia moment	30 gcm²
Starting torque at 20°C (68°F)	≤ 0.02 Nm - Standard ≤ 0.03 Nm - Option 10A
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/s² (10Hz...2 000Hz)
Shock according to DIN EN 60068-2-27	1000 m/s² (6ms)
Maximum pulses per turn	≤ 50000
Axial or radial connection	2 meters cable or industrial connector (different models available, other cable lengths available on order) Female connector not 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	Tipical: 80 mA Max: 160 mA	Tipical: 70 mA Max: 150 mA	Tipical: 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

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HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

CONNECTION





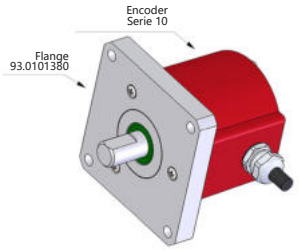


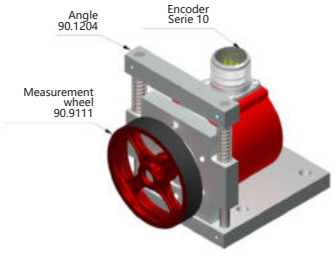


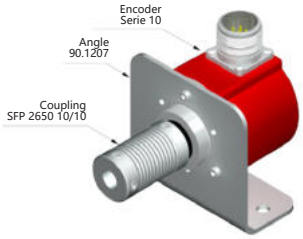
	Cable 2x2x0.14+1x0.14 95.0008002	**Cable** 3x2x0.14+2x0.34 95.0008003 (*)	**Connector** DIN 43650 4p	**Connector** Mil 7p CW	**Connector** M12 8p CCW	**Connector** Mil 10p CW	**Connector** M23 12p CW
GND	Yellow (YE)	Black (BK)	1	A	1	A	1
+UB	White (WH)	Red (RD)	2	B	2	B	2
A	Brown (BN)	Yellow (YE)	3	C	3	C	3
B	Green (GN)	Green (GN)	4	D	4	D	4
$\overline{A}$	-	Brown (BN)	-	E	5	E	5
$\overline{B}$	-	Blue (BU)	-	F	6	F	6
Z	Grey (GY)	Grey (GY)	-	G	7	G	7
$\overline{Z}$	Grey (GY)	Orange (OG)	-	G	8	H	8
Case	Shield	Shield	-	Case	Case	Case	Case

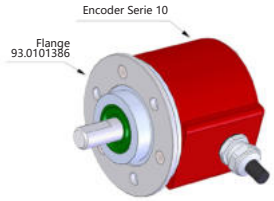
(*) Cable 3x2x0.14+2x0.34 only for encoders with inverted signals.

ACCESSORIES EXAMPLES









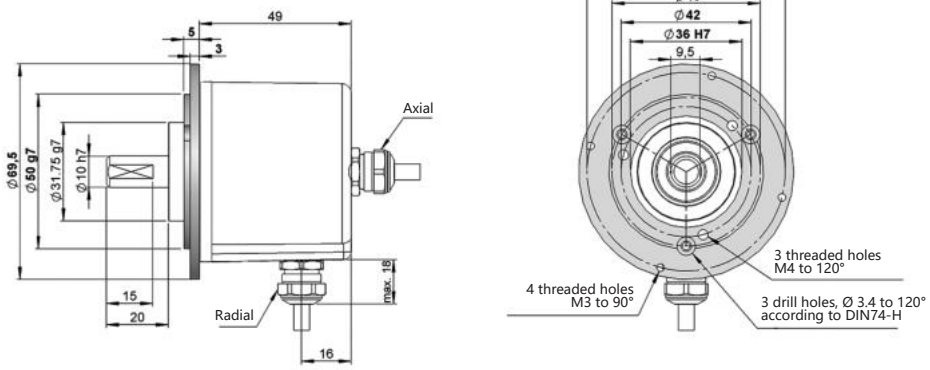
This flange requires a special customer code in the reference AB09

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

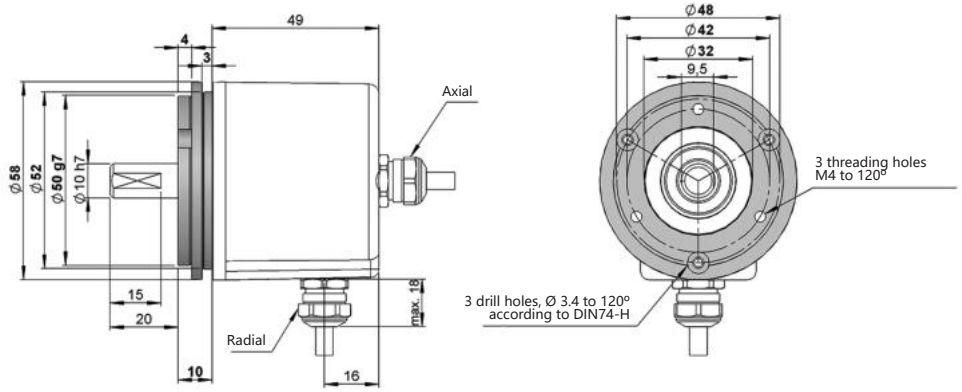
FLANGE DIMENSIONS

Flange mounting included

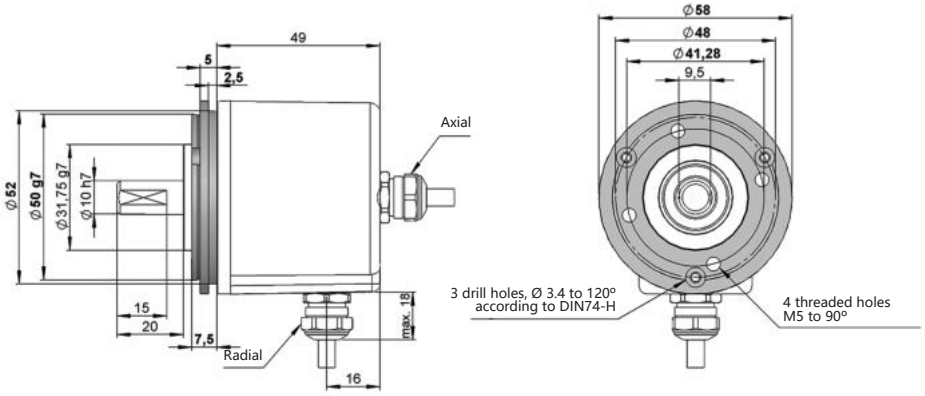
Flange 2
90.1002



Flange 3
90.1003



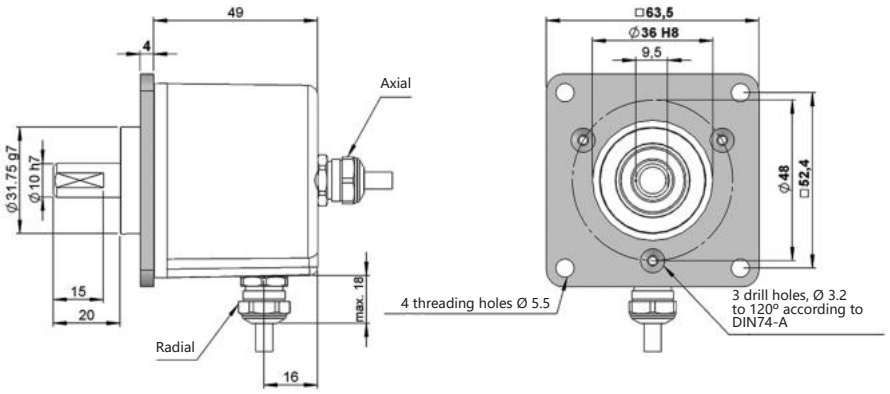
Flange 4
90.1004



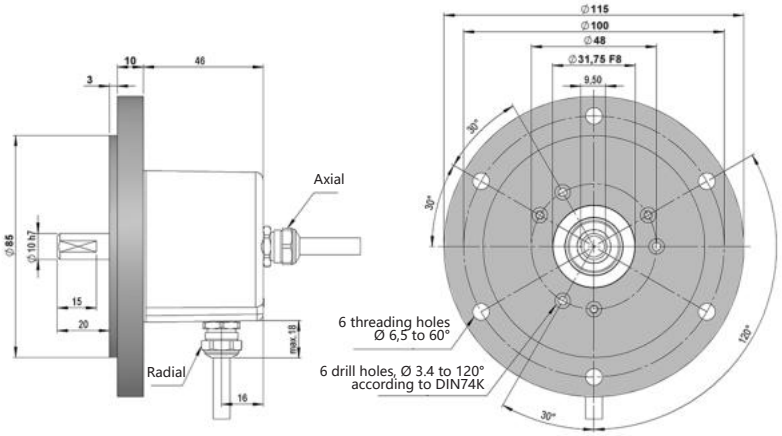
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HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

Flange 5
90.1005



Flange 7
90.1006



CONNECTION DIMENSIONS

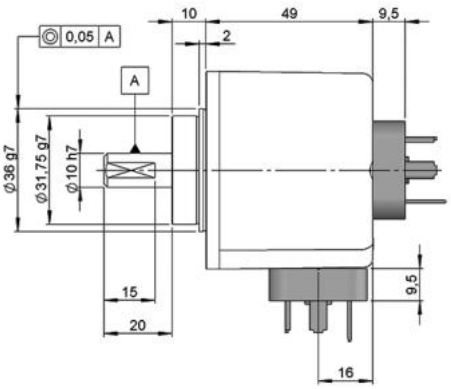
Female connector not included

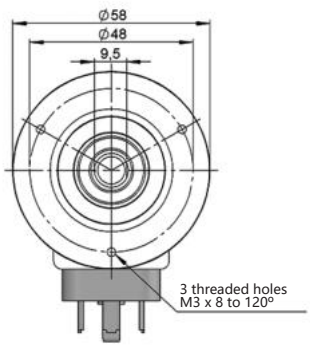
Connection 1

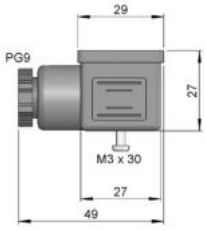
Radial
DIN 43650 4p
male panel

Connection 6

Axial
DIN 43650 4p
male panel







Female connector
95.0007011



Pre-assembled cable
89.001.01.000.XX
Length in meters

SERIE 10

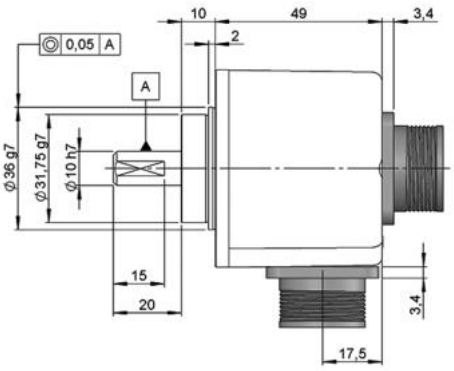
HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

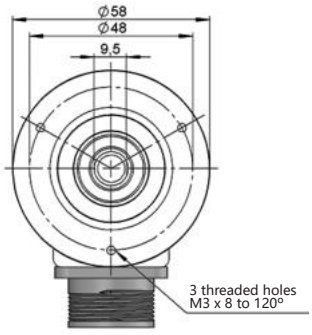
Connection 4

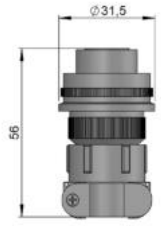
Radial
Mil 7p
male panel
clockwise

Connection 9

Axial
Mil 7p
male panel
clockwise







Female connector
90.9507H



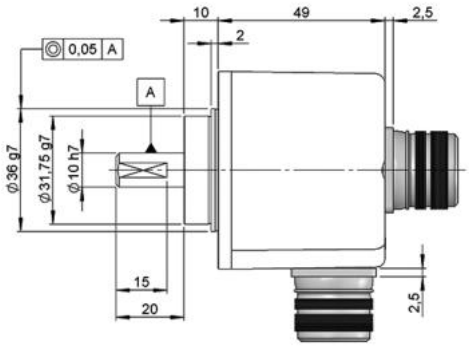
Pre-assembled cable
Without inverted signals: 89.002.01.019.XX
With inverted signals: 89.002.02.000.XX
Length in meters

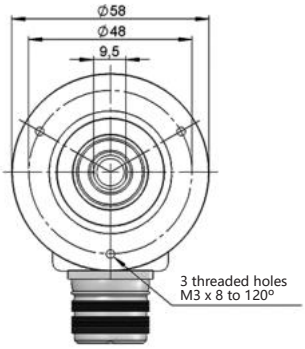
Connection 5

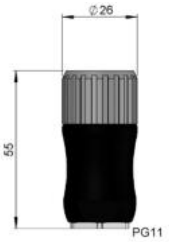
Radial
M23 12p
male panel
clockwise

Connection 0

Axial
M23 12p
male panel
clockwise







Female connector
95.0007131



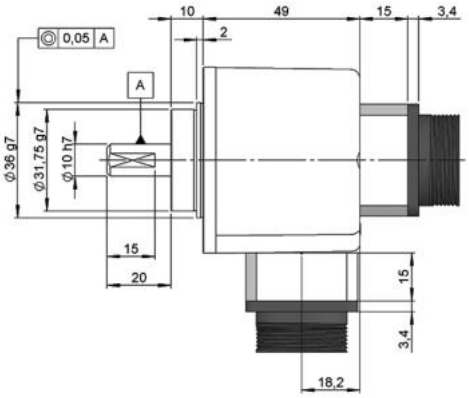
Pre-assembled cable
Without inverted signals: 89.005.01.019.XX
With inverted signals: 89.005.02.000.XX
Length in meters

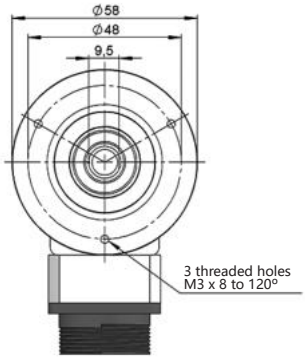
Connection M

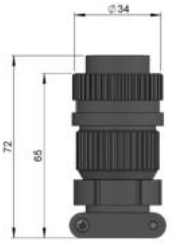
Radial
Mil 10p
male panel
clockwise

Connection N

Axial
Mil 10p
male panel
clockwise







Female connector
90.9510H



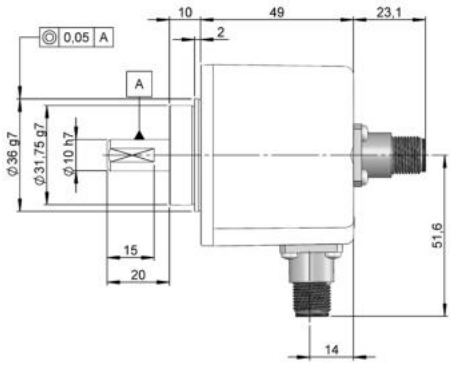
Pre-assembled cable
Without inverted signals: 89.004.01.000.XX
With inverted signals: 89.004.02.000.XX
Length in meters

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HIGH RESOLUTION INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

Connection L

Radial
M12 8p
male panel
counter clockwise

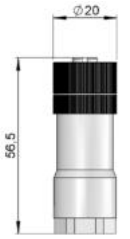




3 threaded holes
M3 x 8 to 120°

Connection K

Axial
M12 8p
male panel
counter clockwise



Female connector
95.0007152



Pre-assembled cable
Without inverted signals: 89.003.01.000.XX
With inverted signals: 89.003.02.000.XX
Length in meters

S10_EN_01 06/25 Subject to errors and changes.
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