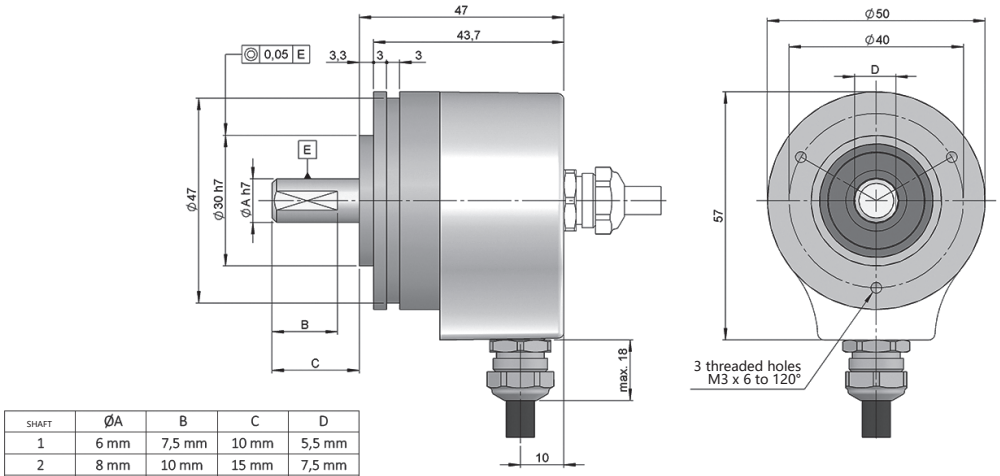
SERIE 50

COMPACT INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

- **Resolution up to 5000 pulses per turn**
- **External diameter 50 mm**
- **Shaft Ø 6, 8 or 10 mm**
- **Protection class IP65 according to DIN EN 60529**
- **Connection by cable (other cable length available) or industrial connector M12 or M23**

Optical Encoder | Incremental Encoder | Compact | High shaft load capacity | Vibration and shock resistant | IP65 | Temperature range | Express Delivery



SHAFT	ØA	B	C	D
1	6 mm	7,5 mm	10 mm	5,5 mm
2	8 mm	10 mm	15 mm	7,5 mm
3	10 mm	15 mm	20 mm	9,5 mm

Drawing shaft type 3, connection type 1/4, without flange

REFERENCE

Reference example: 50-13641-1024

Serie	Solid shaft	Flange	Output signals	Connection	Power Supply / Electronic output	Pulses number	Special customer
50 -	☐	☐	☐	☐	☐ -	☐☐☐☐	.☐☐☐☐
	1. Ø 6x10 mm **2.** Ø 8x15 mm **3.** Ø 10x20 mm	**1.** None	**1.** A **2.** AB **3.** AB, $\overline{Z}$ **5.** AB, $\overline{AB}$ **6.** ABZ, $\overline{ABZ}$ **9.** ABZ	**1.** Axial cable **2.** Axial M12 8p CCW **3.** Axial M23 12p CW **4.** Radial cable **5.** Radial M12 8p CCW **6.** Radial M23 12p CW	**0.** 11...30 VDC / NPN Open collector 11..30 VDC **1.** 11...30 VDC / Line driver differential Push-Pull 11..30 VDC **2.** 5 VDC / RS422 5 VDC (compatible TTL)		**ET00.** -40°C

Order your reference
Step file 3D
info@encoderhohner.com
service available in 24 h

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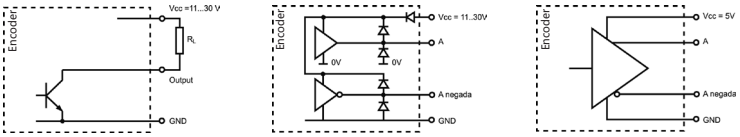
COMPACT INCREMENTAL SOLID SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

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
Rotor inertia moment	30 gcm²
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 ET00
Vibration according to DIN EN 60068-2-6	100 m/s² (10Hz...2000Hz)
Shock according to DIN EN 60068-2-27	2500 m/s² (6ms) [≤ 1024 ppr] 1000 m/s² (6ms) [> 1024 ppr]
Maximum pulses per turn	5000
Axial or radial connection	2 meters cable or industrial connector M12 or M23 (other cable lengths available on order) Female connector not included

OUTPUT SIGNALS



OUTPUT CIRCUIT	**NPN Open Collector**	**Push-Pull Differential**	**RS422 (TTL compatible)**
Reference code	0	1	2
Power supply	11...30 VDC	11...30 VDC	5 VDC ±5%
Output voltage	11...30 VDC	11...30 VDC	5 VDC
Consumption	40 mA	Tipical: 45 mA Max: 150 mA	Tipical: 70 mA Max: 150 mA
Max. load capability / channel	40 mA	±30 mA	±20 mA
Length of cable allowed	50 m (24 VDC)	100 m	1200 m
´´Low´´ signal level	VOL < 0.4 VDC (24 VDC)	VOL < 2.5 VDC	VOL < 0.5 VDC
´´High´´ signal level	VOH > 22 VDC (24 VDC)	VOH > VCC – 3 VDC	VOH > 2.5 VDC
Frequency	100 kHz	200 kHz	300 kHz
Short circuit protection	Not permanent	Yes	Yes
Protection polarity inversion	Yes	Yes	No

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

CONNECTION




	Cable 5x0.14 95.0008051 (*)	Cable 8x0.14 95.0008052 (*)	Connector M12 8p CCW	Connector M23 12p CW
GND	White (WH)	White (WH)	1	1
+UB	Brown (BN)	Brown (BN)	2	2
A	Green (GN)	Green (GN)	3	3
B	Yellow (YE)	Grey (GY)	4	4
$\overline{A}$	-	Yellow (YE)	5	5
$\overline{B}$	-	Pink (PK)	6	6
Z	Grey (GY)	Blue (BU)	7	7
$\overline{Z}$	-	Red (RD)	8	8
Case	Shield	Shield	Case	Case

(*) For lengths over 2 meters standard cable, we recommend the use of twisted pair cable 2x2x0.14+1x0.14 (95.0008002) or 3x2x0.14+2x0.34 (95.0008003). Request the final cable length required to avoid junctions.

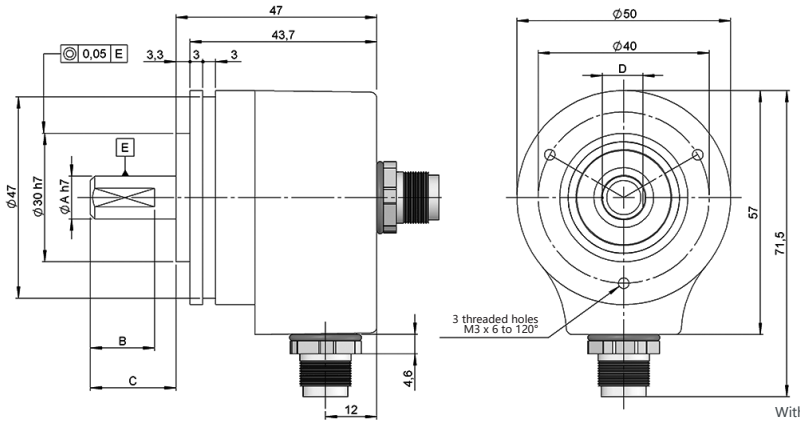
CONNECTION DIMENSIONS

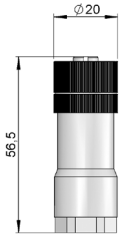
Female connector not included

Connection 2
Axial

Connection 5
Radial

M12 8p
male panel
counter clockwise





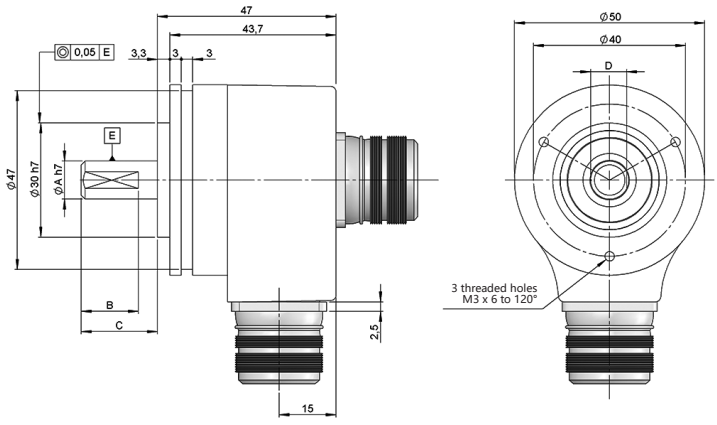
Female connector
95.0007152

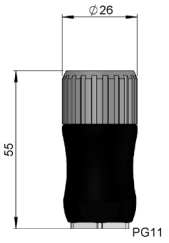
Pre-assembled cable
Without inverted signals: 89.003.01.000.XX
With inverted signals: 89.003.02.000.XX
Length in meters

Connection 3
Axial

Connection 6
Radial

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