

Image with Expanding coupling 90.1100



# SERIE 64S

## CONIC SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

 SIN/COS

- Resolution 2.048 pulses per turn
- External diameter 58 mm
- Conic shaft 1:10
- Protection class IP54 according to DIN EN 60529
- Anti-rotation system through flexible flange, pin torque support or expanding coupling
- Connection by cable (other cable length available)



Optical Encoder



Incremental Encoder



High shaft load capacity



Vibration and shock resistant



IP54

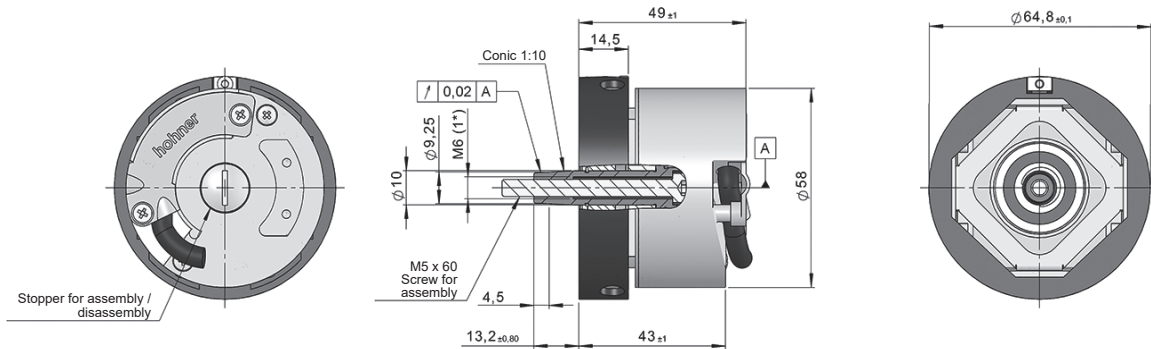


SIN/COS



Express Delivery

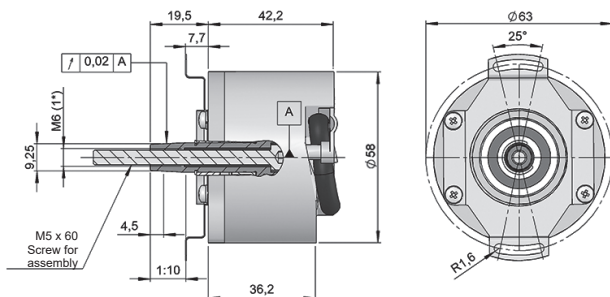
### Expanding coupling (90.1100)



(1\*): Thread M6 for disassembly

Drawing conic shaft 1:10, anti-rotation system type 0, connection type 1

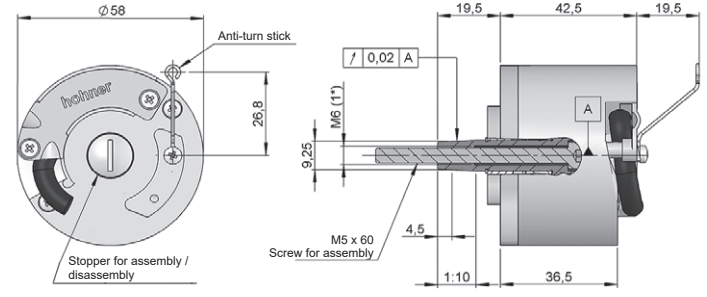
### Flexible flange (90.1027)



(1\*) Thread M6 for disassembly

Drawing conic shaft 1:10, anti-rotation system type 1, connection type 1

### Anti-turn stick (90.1041)



(1\*) Thread M6 for disassembly

Drawing conic shaft 1:10, anti-rotation system type 2, connection type 1



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## CONIC SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

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### REFERENCE

Reference example: 64S-10117-2048

Serie	Shaft	Anti-rotation system	Output signals	Connection	Power Supply / Electronic output	Pulses number	Special customer
64S -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="4"/> <input type="text" value="8"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	1. Conic 1:10	0. Expanding coupling 90.1100 1. Flexible flange 90.1027 2. Anti-turn stick 90.1041 3. None (*)	1. A $\tilde{A}$ +B $\tilde{B}$ +0 $\tilde{O}$ 2. A $\tilde{A}$ +B $\tilde{B}$	1. Helicoidal cable	7. 5 VDC / SIN-COS 1Vpp		

Order your reference  
Step file 3D

info@encoderhohner.com  
service available in 24 h

(\*) Anti-rotation systems type 0 (Expanding coupling 90.1100) and 1 (Flexible flange 90.1027) supplied assembled.

Anti-rotation system type 2 (Anti-turn stick 90.1041) supplied disassembled and includes the screws required for assembly.

Other required anti-rotation systems are not supplied assembled. All systems available in the sections "MOUNTING ACCESSORIES".

### MECHANICAL SPECIFICATIONS

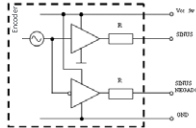
Materials	Cover: Aluminium Housing: Aluminium Shaft: Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 <sup>10</sup> rev.
Housing fixing	Expanding coupling 90.1100 (assembled) Flexible flange 90.1027 (assembled) Anti-turn stick 90.1041 (self-assembly kit included)
Permitted misalignment	±0.5 mm axial (90.1100) ±0.5 mm axial, ±0.3 mm radial (90.1027, 90.1041)
Maximum number of revolutions permitted mechanically	6000 rpm
Protection against dust and splashes according to DIN EN 60529	IP54
Rotor inertia moment	≤ 3x10 <sup>-6</sup> Kgm <sup>2</sup>
Starting torque at 20°C (68°F)	≤ 0,02 Nm
Maximum load permitted on axial shaft	40 N
Maximum load permitted on radial shaft	60 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 <sup>2</sup> (10Hz...2000Hz)
Shock according to DIN EN 60068-2-27	1000 m/s <sup>2</sup> (6ms)
Number of pulses per turn	2.048
Helicoidal connection	2 meters cable (other cable lengths available or connector mounted at the end of the cable, upon request)

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CONIC SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

SIN/COS

## OUTPUT SIGNALS



<b>OUTPUT CIRCUIT</b>	<b>Sine-wave</b>
Reference code	7
Power supply	5 VDC $\pm 10\%$
Output voltage	5 VDC
Consumption	Typical: 40 mA Max: 90 mA
Length of cable allowed	10 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
Max. frequency (a -3dB)	200 kHz
Protection polarity inversion	Not permanent

Cosine leads (90° electric) Sine, view from the shaft, shaft rotating clockwise

## CONNECTION



	<b>95.0008003</b> (* ) Cable 3x2x0,14+2x0,34
GND	Black
VCC	Red
COS	Yellow
SIN	Green
$\overline{\text{COS}}$	Brown
$\overline{\text{SIN}}$	Blue
0 (reference)	Grey
$\tilde{0}$	Orange

(\* ) For lengths over 10 meters, we recommend the use of shielded cable 3x(2x0,14)+2x(2x0,14)+2x0,34.

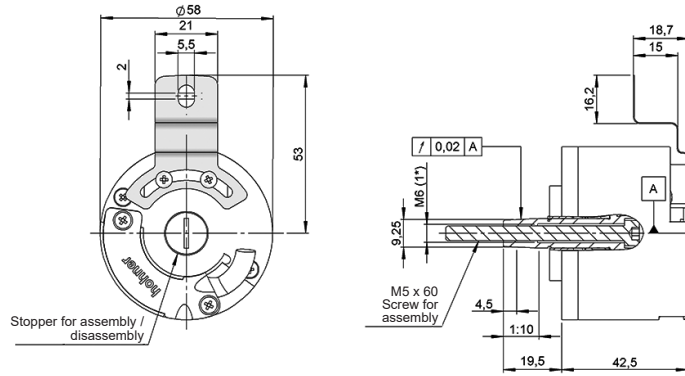
# SERIE 64S

CONIC SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

SIN/COS

## ANTI-ROTATION SYSTEMS DIMENSIONS

Flexible flange  
90.1046

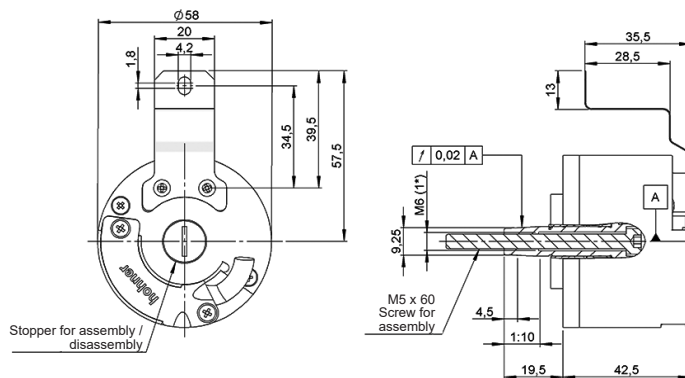


(1\*) Thread M6 for disassembly

90.1046

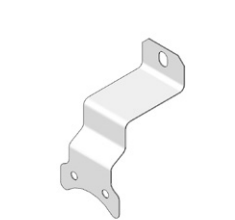


Flexible flange  
90.1082



(1\*) Thread M6 for disassembly

90.1082



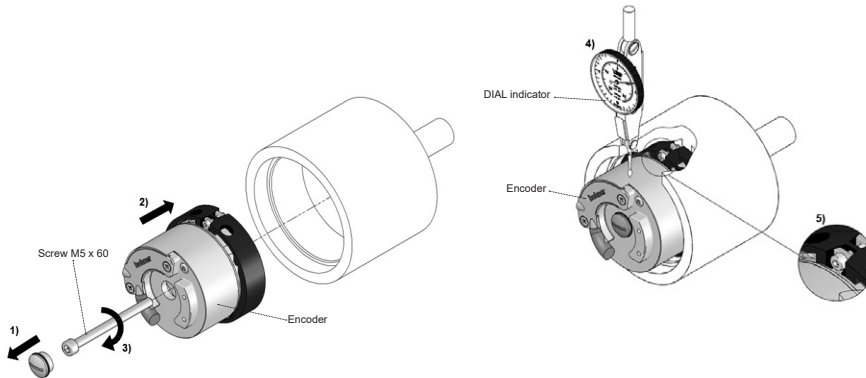
# SERIE 64S

## CONIC SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

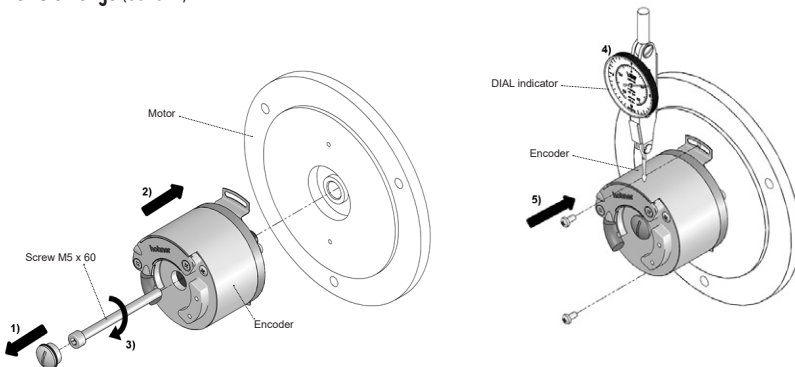
SIN/COS

### ASSEMBLY INSTRUCTIONS

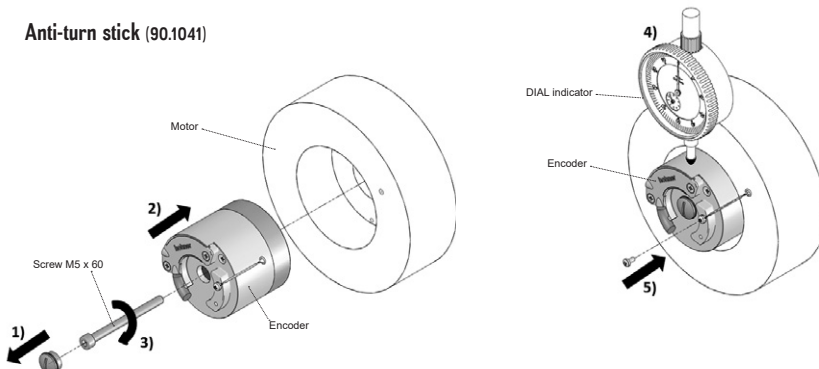
#### Expanding coupling (90.1100)



#### Flexible flange (90.1027)



#### Anti-turn stick (90.1041)

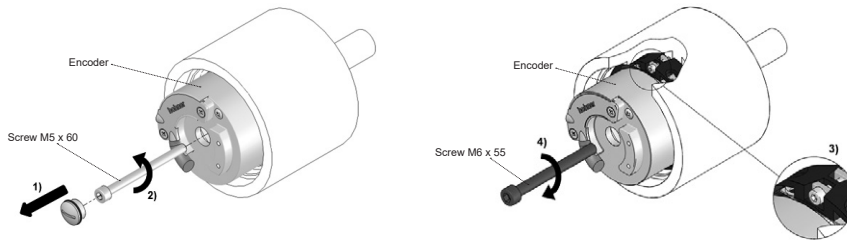


### ASSEMBLY

- 1) Extract stopper.
- 2) Put the encoder in the motor.
- 3) Thread M5 x 60 screw to fix the encoder shaft with the motor shaft ( $\leq 5$  Nm).
- 4) Check maximum misalignment with a dial indicator ( $\leq 0,2$  mm)
- 5) Thread screws for antirotation system  
Check position of the antirotation system (not forced).

### DISSASSEMBLY INSTRUCTIONS

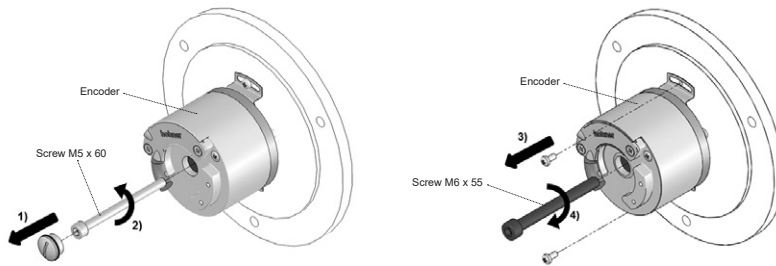
#### Expanding coupling (90.1100)



#### DISSASSEMBLY

- 1) Extract stopper.
- 2) Extract M5 x 60 screw.
- 3) Extract antirotation system.
- 4) Thread M6 screw for disassembly by pressure.

#### Flexible flange (90.1027)



#### Anti-turn stick (90.1041)

