

Image with Expanding coupling 90.1101



# SERIE SMRS 64S

## SINGLETURN ABSOLUTE AND INCREMENTAL CONIC SHAFT ENCODER

 SIN/COS + SIN/COS

- Absolute resolution 1 SIN/COS per turn
- Incremental resolution 2048 SIN/COS per turn
- External diameter 58 mm
- Conic shaft 1:10
- Protection class IP54 according to DIN EN 60529
- Anti-rotation system through flexible flange or expanding coupling
- Connection by cable (other cable length available)



Optical Encoder



Absolute and incremental encoder



SIN/COS



Vibration and shock resistant

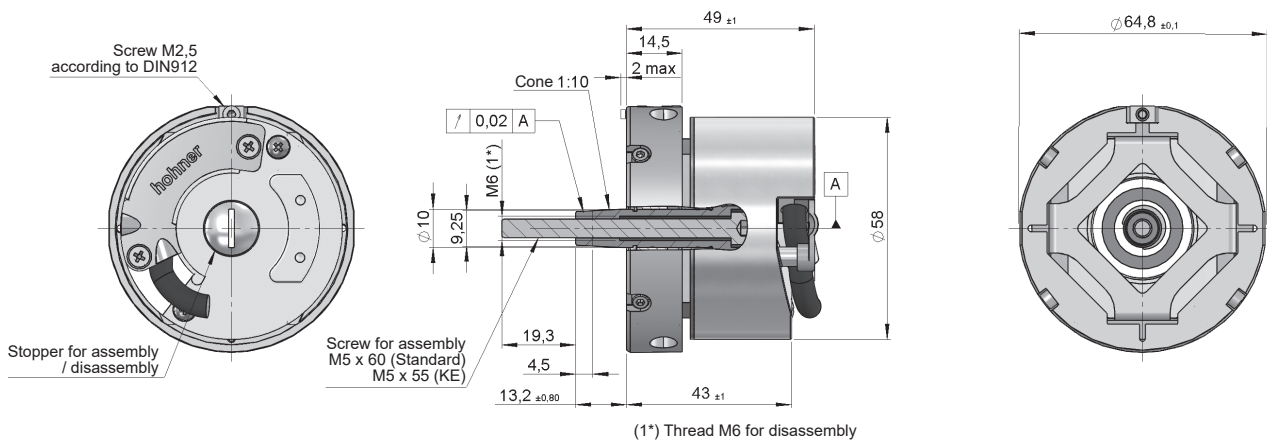


IP54



Express Delivery

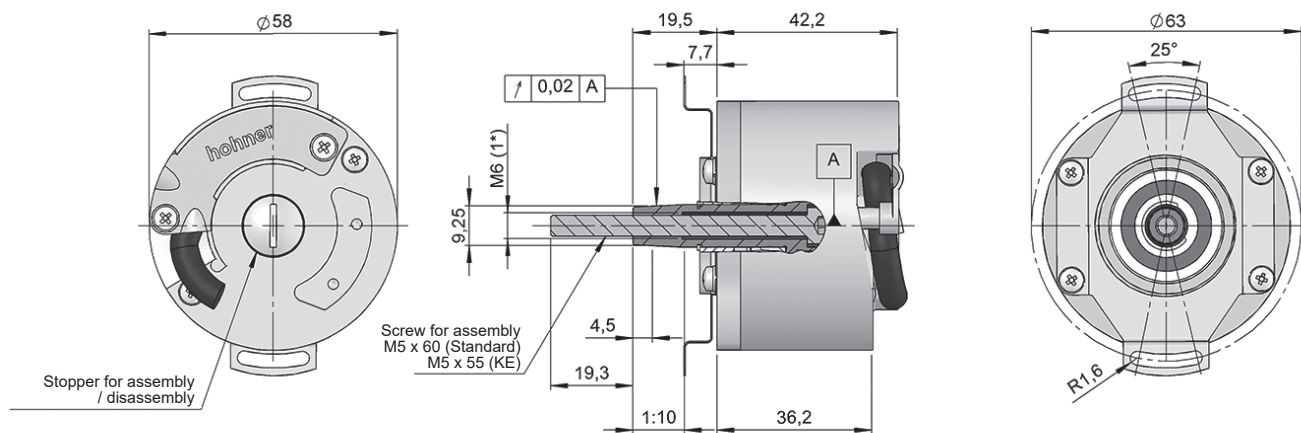
### Expanding coupling (90.1101)



(1\*) Thread M6 for disassembly

Drawing mechanical option type 2, conic shaft 1:10, connection type 10

### Flexible flange (90.1027)



(1\*) Thread M6 for disassembly

Drawing mechanical option type 1, conic shaft 1:10, connection type 10



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## SINGLETURN ABSOLUTE AND INCREMENTAL CONIC SHAFT ENCODER

SIN/COS + SIN/COS

### REFERENCE


Reference example: SMRS64S-12106012-2048

Serie	Shaft	Mechanical option	Connection	Interface	IP	Power supply	Pulses number	Special customer
SMRS64S -	<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"/> 2 <input type="checkbox"/> 0 <input type="checkbox"/> 4 <input type="checkbox"/> 8	<input type="checkbox"/> <input type="checkbox"/>
	1. Conic 1:10	1. Flexible flange 90.1027 2. Expanding coupling 90.11001 (*)	10. Helicoidal cable 20. 30 cm cable + connector D-Sub 15p	60. Absolute 1 SIN/COS in 360° and incremental 2048 SIN/COS	1. IP54	2. 5 VDC		KD. Halogen-free cable KE. Screw for assembly M5x55 95.0004099

(\*) Anti-rotation system type 1 (Flexible flange 90.1027) and 2 (Expanding coupling 90.1101) supplied assembled.

Other extension cable options available with specific connectors mounted at the end of the cable for different market drives, on request.

All systems and required assembly and disassembly screws available in the section "ACCESSORIES".

 Assembly and disassembly instruction manual available in: [www.encoderhohner.com/product/serie-smrs64s/](http://www.encoderhohner.com/product/serie-smrs64s/)

**Order your reference  
Step file 3D**

[info@encoderhohner.com](mailto:info@encoderhohner.com)  
service available in 24 h

### TECHNICAL SPECIFICATIONS

Materials	Housing: Aluminium Flange: Aluminium Shaft: Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 <sup>10</sup> rev.
Housing fixing	Expanding coupling 90.1101 (assembled) Flexible flange 90.1027 (assembled)
Permitted misalignment	±0.5 mm axial (90.1101) ±0.5 mm axial, ±0.3 mm radial (90.1027)
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> Kg·m <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.	0,4 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)
Consumption	≤ 90 mA
Power supply	5 VDC ±10%
Electronic incremental output	SIN/COS, 1 V <sub>pp</sub> ±20%
Incremental resolution	2048 SIN/COS
Electronic absolute output	SIN/COS, 1 V <sub>pp</sub> ±20%
Absolute resolution	1 SIN/COS in 360°
Frequency (-3 dB)	≤ 200 kHz
Signal offset	2,5 VDC
Helicoidal cable	2 meters cable (other cable lengths available or connector mounted at the end of the cable, upon request) or 30 cm cable + connector D-Sub 15p

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SINGLETURN ABSOLUTE AND INCREMENTAL CONIC SHAFT ENCODER

SIN/COS + SIN/COS

## CONNECTION



	<b>Cable</b> 6x2x0,14 mm <sup>2</sup> (**) up to 100°C 95.0008072	<b>Cable</b> 6x2x0,14 mm <sup>2</sup> (**) Halogen-free cable up to 90°C 95.0008073	D-Sub 15p HD
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### POWER SUPPLY

GND	White	White	7
VCC	Brown	Brown	9

### INCREMENTAL SIGNALS

A+	Green	Green	5
A-	Yellow	Yellow	6
B+	Blue	Blue	8
B-	Red	Red	1
Z+	Grey-Pink	Grey-Pink	3
Z-	Red-Blue	Red-Blue	4

### ABSOLUTE SIGNALS

C+	Grey	Grey	11
C-	Pink	Pink	10
D+	Black	Black	12
D-	Violet	Violet	13
Shield*	Shield	Shield	Housing

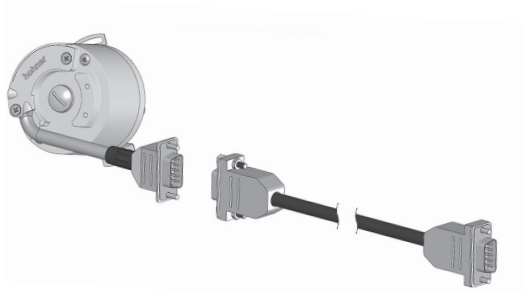
(\*) Shield connected to the encoder housing. It is recommended to connect the end of the wire shield to the ground of the equipment where the encoder is connected.

(\*\*) The recommended maximum cable length is 10 meters.

For longer lengths use connection option type 20 connection with extension accessories.

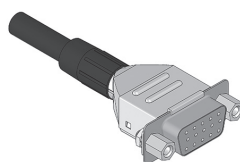
## ACCESSORIES

### Extension cable connection



Other extension cable options available with specific connectors mounted at the end of the cable for different market drives, on request.

### Female connector (not included)



#### (D-Sub 15p)

The female connector is supplied disassembled, with the assembly instruction manual.

### Screw for assembly (included)



**95.0004105**  
M5x60  
(Standard)

**95.0004099**  
M5 x 55  
(Special Customer KE)

### Screw for disassembly (not included)



**95.0004106**  
M6x55

**95.0004420**  
Grub screw M5 x 20  
45H DIN913