

SERIE SMRS 64

SINGLETURN ABSOLUTE AND INCREMENTAL CONIC SHAFT ENCODER

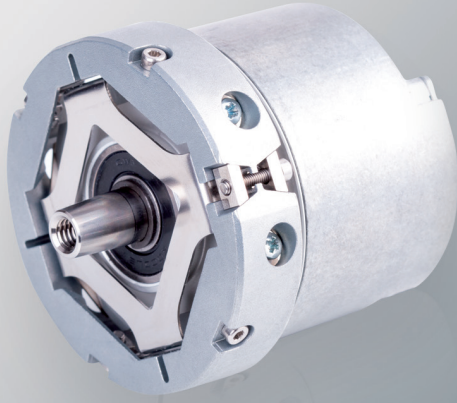


Image with Expanding coupling 90.1101



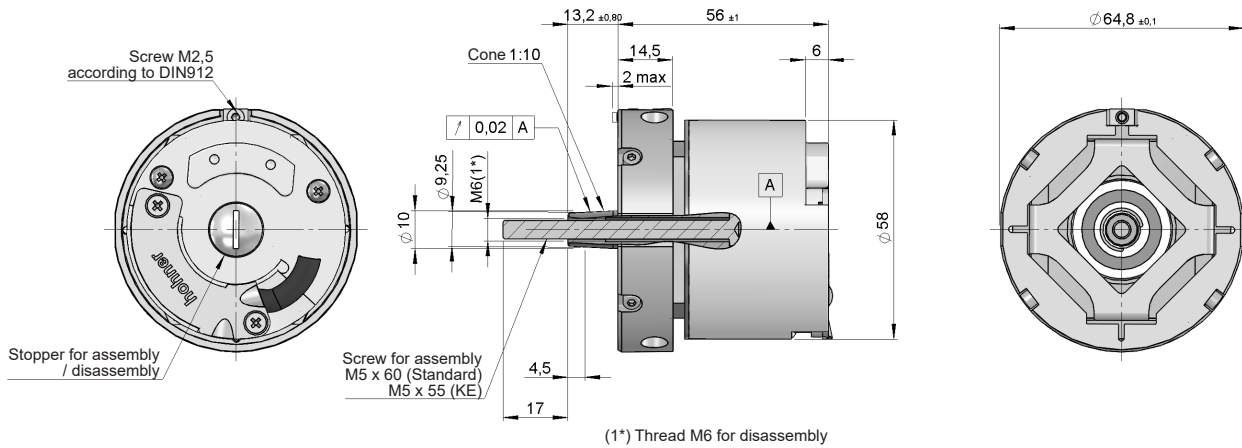
SSI SSI
SSI + SinCos

BISS INTERFACE BiSS-C
BiSS-C + SinCos

- Singleturn resolution up to 19 bits
- Incremental resolution 2048 SIN/COS per turn
- External diameter 58 mm
- Conic shaft 1:10
- Operating temperature range up to +100°C
- Protection class IP54 according to DIN EN 60529
- Anti-rotation system through flexible flange or expanding coupling
- Connection by cable (other cable length available)

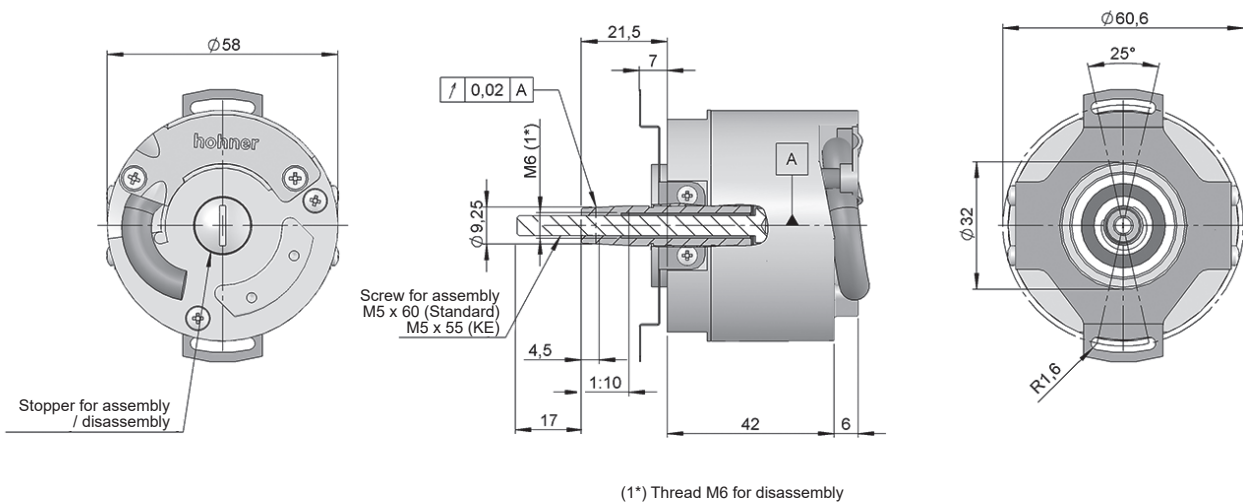


Expanding coupling (90.1101)



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

Flexible flange (90.1038)



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

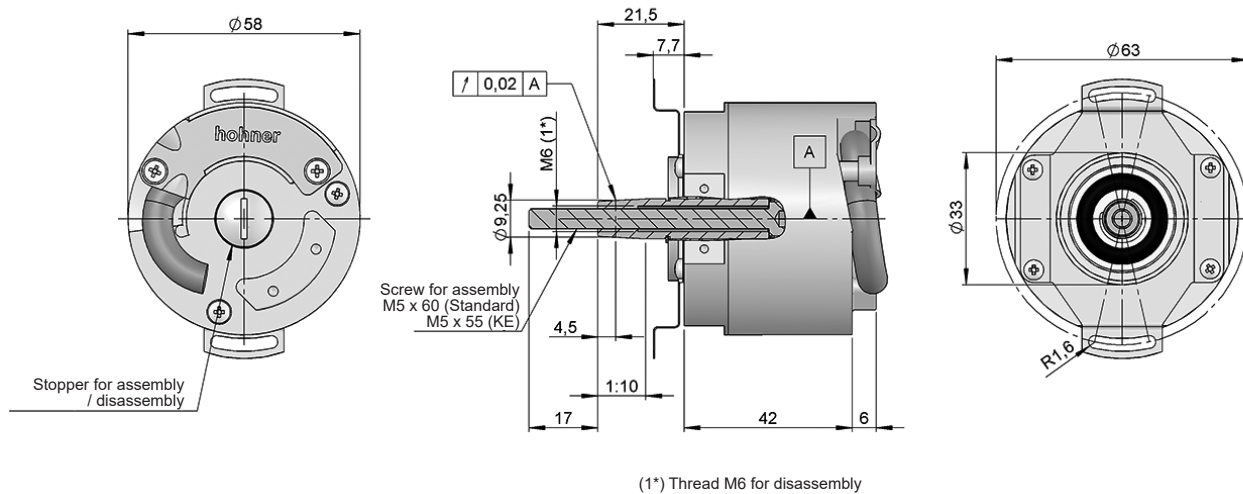


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SSI + SinCos
BiSS-C
BiSS-C + SinCos

Flexible flange (90.1027)



Drawing mechanical option type 3, conic shaft 1:10, connection type 10

REFERENCE

Reference example: SMRS64-131013115-17

Serie	Conic shaft	Mechanical option	Connection	Interface	IP	Power supply	Parameters config.	Absolute resolution	Special customer
SMRS64 -	<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"/>
	1. Conic 1:10	1. Flexible flange 90.1038 2. Expanding coupling 90.1101 3. Flexible flange 90.1027 (*)	10. Helicoidal cable 20. 30 cm cable + connector D-Sub 15p	11. SSI Binary CW 12. SSI Binary CCW 13. SSI Gray CW 14. SSI Gray CCW 21. SSI + 2048 SIN/COS Binary CW 22. SSI + 2048 SIN/COS Binary CCW 23. SSI + 2048 SIN/COS Gray CW 24. SSI + 2048 SIN/COS Gray CCW 35. BiSS-C 45. BiSS-C + 2048 SIN/COS	1. IP54	1. 4..30 VDC 2. 5 VDC	S. Direction R. Reset	10. 10 bits 12. 12 bits 13. 13 bits 14. 14 bits 17. 17 bits 19. 19 bits (**)	KD. Halogen-free cable KE. Screw for assembly M5x55 95.0004099

Order your reference
Step file 3D

info@encodenhohner.com
service available in 24 h

(*) Anti-rotation system type 1 (Flexible flange 90.1038), 2 (Expanding coupling 90.1101) and 3 (Flexible flange 90.1027) supplied assembled.

(**) 21 bits - Upon request.

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.encodedhohner.com/product/serie-smrs64/

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SSI
SSI + SinCos
BiSS-C
BiSS-C + SinCos

TECHNICAL SPECIFICATIONS

Materials	Housing: Aluminium Flange: Aluminium Shaft: Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 ¹⁰ rev.
Housing fixing	Expanding coupling 90.1101 (assembled) Flexible flange 90.1038 (assembled) Flexible flange 90.1027 (assembled)
Permitted misalignment	±0.5 mm axial (90.1101) ±0.5 mm axial, ±0.3 mm radial (90.1038, 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 ⁻⁶ Kgm 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	60 N
Weight aprox.	0,4 Kg
Operating temperature range	-20°C to +100°C
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)
Consumption	≤ 90 mA
Power supply	5 VDC ±10% / 4...30 VDC
Linearity	± ½ LSB
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

SSI / BiSS INTERFACE



(*)

Electronic output	RS485	RS485
Max. load capability / channel	±20 mA	±20 mA
Resolution	10...19 bits 21 bits - Upon request	10...19 bits 21 bits - Upon request
Code	Binary Gray	Binary
Clock frequency	50 kHz ... 2 MHz	50 kHz ... 10 MHz
Protocol	SSI	BiSS-C

(*) BiSS protocol allows to configure CRC, Alarm messages, Warnings, Sense, Reset and Absolute resolution by BUS. Default configuration: Binary CW.

INCREMENTAL OUTPUT

SIN/COS



Electronic output	Differential 1 Vpp
Signal offset	2,5 VDC
Resolution	2048 PPR
Cutoff frequency (-3 db)	>500 kHz

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SSI
SSI + SinCos
BiSS-C
BiSS-C + SinCos

CONNECTION



	Cable 3x2x0,14+2x0,34 (**) 95.0008003	Cable 6x2x0,14 mm ² (**) up to 100°C 95.0008072	Cable 6x2x0,14 mm ² (**) Halogen-free cable up to 90°C 95.0008073	D-Sub 15p HD
GND	Black	White	White	13
VCC	Red	Brown	Brown	12
DATA+	Yellow	Pink	Pink	7
DATA-	Green	Grey	Grey	2
CLOCK+	Brown	Yellow	Yellow	6
CLOCK-	Blue	Green	Green	1
DIR or RESET	Grey	Red-Blue	Red-Blue	11
A+(cos)	-	Red	Red	8
B+(sin)	-	Black	Black	9
A-(cos)	-	Blue	Blue	3
B-(sin)	-	Violet	Violet	4
Shield*	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. The 95.0008003 cable for Interfaces types 11, 12, 13, 14 and 35 and the 95.0008072 cable for Interface types 21, 22, 23, 24 and 45. The 95.0008073 cable for special customer KD.

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



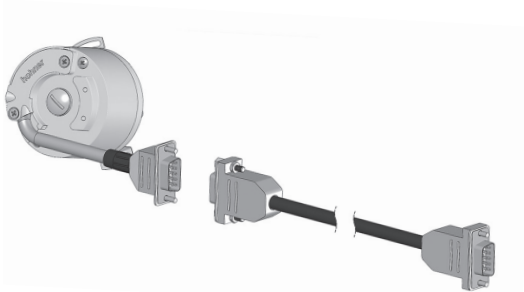
Cable length:	< 25 m	< 50 m	< 100 m	< 200 m	< 400 m
Transmission speed	< 1 MHz	< 400 kHz	< 300 kHz	< 200 kHz	< 100 kHz



Cable length	< 10 m	< 25 m	< 60 m	< 100 m
Transmission speed	< 10 MHz	< 5 MHz	< 2 MHz	< 1 MHz

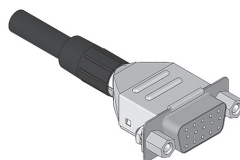
ACCESSORIES

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