



SERIE SMRS 59

SINGLETURN ABSOLUTE AND INCREMENTAL HOLLOW SHAFT ENCODER



SSI
SSI + SinCos



BiSS-C
BiSS-C + SinCos

- Singleturn resolution up to 21 bits
- Incremental resolution 2048 SIN/COS
- External diameter 58 mm
- Hollow shaft $\varnothing$ 10 or 12 mm
- Operating temperature range up to 100°C
- Protection class IP54 according to DIN EN 60529
- Connection by cable (other cable length available)



Optical Encoder



Absolute and incremental encoder



Electronic output SIN/COS



Vibration and shock resistant



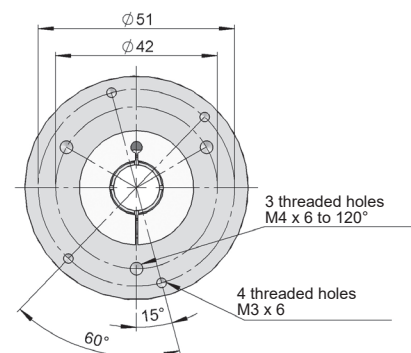
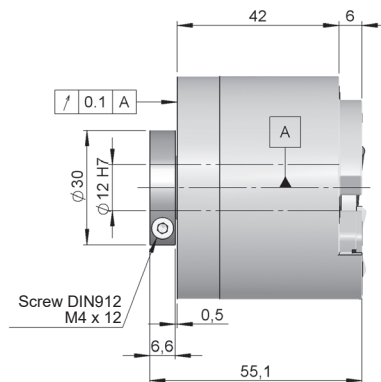
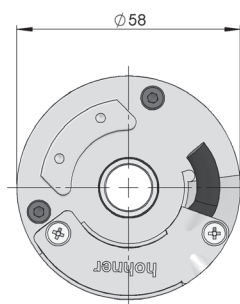
IP 54



Temperature range
+100°C



Express Delivery



Drawing hollow shaft type 3, connection type 10, without flange

REFERENCE

Reference example: SMRS19-31101311S-17

Serie	Hollow shaft	Anti-rotation system	Connection	Interface	Code	IP	Power supply	Parameters config.	Absolute resolution	Special customer
SMRS59 -	☐	☐	☐ ☐	☐	☐	☐	☐	☐ -	☐ ☐	☐ ☐
	3. $\varnothing$ 12 mm 4. $\varnothing$ 10 mm	1. None	10. Helicoidal cable 20. 30 cm cable + connector D-Sub 15p	1. SSI 2. SSI + 2048 SIN/COS 3. BiSS-C 4. BiSS-C + 2048 SIN/COS	1. Binary CW 2. Binary CCW 3. Gray (*) CW 4. Gray (*) CCW 5. BiSS (**)	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 21. 21 bits	KD. Halogen-free cable

(*) Options only available for Interface type 1 (SSI) and 2 (SSI + 2048 SIN/COS).

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

Default configuration: Binary CW

Order your reference
Step file 3D

info@encoderhohner.com
service available in 24 h

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



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TECHNICAL SPECIFICATIONS

Materials	Housing: Aluminium Flange: 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	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	-10°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
Direction (*)	Interface 1 and 2 (SSI): External controlled by cable Interface 3 and 4 (BiSS-C): Configurable by BUS
Reset (**)	Interface 1 and 2 (SSI): External controlled by cable Interface 3 and 4 (BiSS-C): CConfigurable by BUS
Linearity	± ½ LSB
Helicoidal cable	2 meters cable (other cable lengths available or connector mounted at the end of the cable, upon request)
Axial or radial connection	2 meters cable or industrial connector M23 (other cable lengths available on order) or 30 cm cable + connector D-Sub 15p

(*) Connecting DIR input to positive changes its direction.

(**) Connecting RESET input to positive will reset the encoder (Timeout: 15 ms).

SSI / BiSS INTERFACE



Electronic output	RS485	RS485
Max. load capability / channel	±20 mA	±20 mA
Resolution	10...19 bits 21 bits - Upon request	10, 12, 13, 14, 17, 19 bits
Code	Binary Gray	Binary
Clock frequency	50 kHz ... 2 MHz	50 kHz ... 10 MHz
Protocol	SSI	BiSS-C

INCREMENTAL OUTPUT

SIN/COS



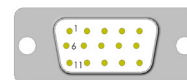
Electronic output	Differential 1 Vpp
Signal offset	2,5 VDC
Resolution	2048 ppr
Cutoff frequency (-3 db)	>500 kHz

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CONNECTION



	Cable (**) 6x2x0,14 mm ² 95.0008072	Cable (**) 6x2x0,14 mm ² Halogen-free cable up to 90°C 95.0008073	D-Sub 15p High density
GND	White	White	13
VCC	Brown	Brown	12
DATA+	Pink	Pink	7
DATA-	Grey	Grey	2
CLOCK+	Yellow	Yellow	6
CLOCK-	Green	Green	1
DIR or RESET	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	Housing

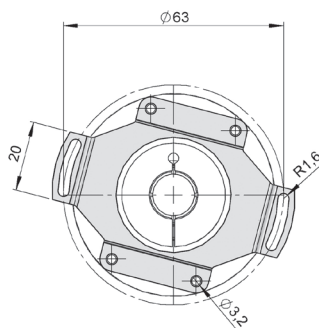
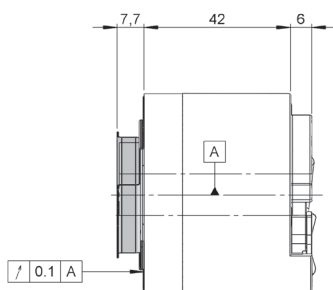
(*) Shield connected to the encoder housing. It is recommended to connect the end of the wire shield to the ground of the equipment where the encoder is connected. $\perp$

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

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

ANTI-ROTATION SYSTEMS DIMENSIONS

Flexible flange
90.1027



90.1027

