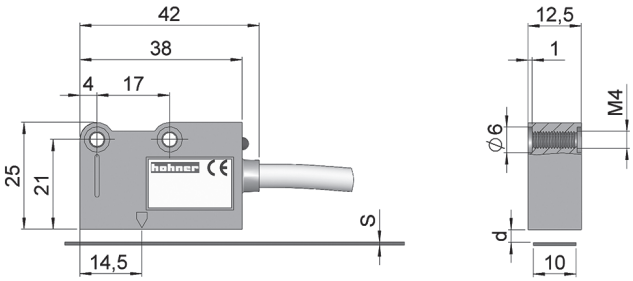
SERIE MSH

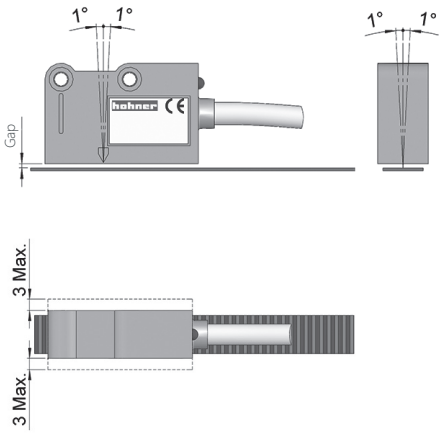
LINEAR MEASURING MAGNETIC SENSOR

- Magnetic detection without contact
- Easy assembly
- Resolution 5 µm
- Accuracy ±6 µm
- Pole pitch 1+1
- Protection class IP67
- Metallic cover
- Connection by cable (other cable length available)

Linear measurement system | Magnetic | Vibration and shock resistant | IP 67



Drawing MSH sensor dimensions



Sensor alignment tolerances

Magnetic band CSH

	CSH	CSH + PS (*)	CSH + AP (*)
S (mm)	1.3	1.6	2.1
d (mm)	0.1 ÷ 0.4	-	-

SENSOR REFERENCE

Reference example: MSH-5C528

Serie	Resolution	Zero	Power supply	Special Customer
MSH -	☐	☐	☐☐☐	.☐☐
Pole pitch 1+1	**5.** 5 µm (*)	**C.** Constant step (every 2 mm) (**)	**528.** 5...28 VDC	

(*) Resolution between edges (1 Pulse = 4 edges). Other resolutions available, upon request (0.5, 1, 10 µm).

(**) Integrated zero available, upon request.

BAND REFERENCE

Serie	
CSH	Band length: ☐☐,☐☐ m (*)

(*) 1 unit = 1 meter.

IMPORTANT: In order not to compromise the accuracy of the system, the magnetic band must be longer than the machine run of at least 4 cm from each side.

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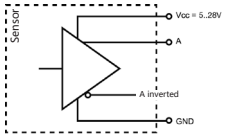
SENSOR SPECIFICATIONS

Resolution	5 µm
Accuracy	±6 µm
Reference indexes	**C.** Constant step every 2 mm (Constant step every 4 mm for resolution 1000 mm) Integrated zero available upon request, positioned on the magnetic band.
Repeatability	±1 increment
GAP, distance sensor/band (d) see previous table	0.1 to 0.4 mm
Speed	6 m/s (10 µm)
Housing	Metallic
Protection class (EN 60529)	IP67
Operating temperature range	0°C to +50°C
Storage temperature range	-20°C to +80°C
Humidity	100% not condensed
Vibration (EN 60068-2-6)	300 m/s² (55...2000 Hz)
Shock (EN 60068-2-27)	1000 m/s² (11ms)
Weight	0.04 Kg
Connection	2 meters cable (other cable lengths available on order)

OUTPUT SIGNALS



OUTPUT CIRCUIT	Line Driver
Power supply	5...28 VDC ±5%
Current consumption without load	Max: 60 mA
Current consumption with load	140 mA max (VDC=5V and R= 120Ω) 90 mA max (VDC=28V and R= 1.2kΩ)
Frequency	300 kHz
Short circuit protection	Yes
Protection polarity inversion	Yes

Channel A leads 90° electrics channel B

CONNECTION

	Cable 3x2x0.14+2x0.35 mm²
GND	Blue (BU)
+UB	Red (RD)
A	Green (GN)
B	White (WH)
$\overline{A}$	Orange (OG)
$\overline{B}$	Light blue (LBU)
Z	Brown (BN)
$\overline{Z}$	Yellow (YE)
Case	Shield

The cable's bending radius should not be lower than 60 mm.

BAND SPECIFICATIONS

Pole pitch	1+1 mm
Accuracy at 20°C	±20 µm/meter
Width band	10 mm
Thickness band "S" (see previous table)	1.3 mm
Maximum length	75 m
Thermal expansion	10.6 x 10^{-6} $°C^{-1}$ Tref: 20°C ± 0.1°C
Bending radius	130 mm $_{MIN}$
Operating temperature range	-20°C to +70°C
Storage temperature range	-20°C to +80°C

IMPORTANT: In order not to compromise the accuracy of the system, the magnetic band must be longer than the machine run of at least 4 cm from each side.