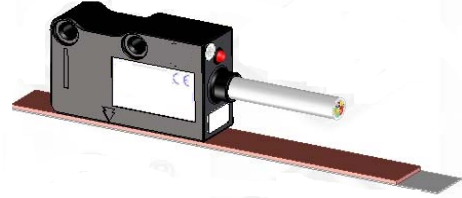


Code <b>CT06</b>	Project <b>A25-B</b>	Release <b>G</b>	Title <b>TECHNICAL DATASHEET</b>
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## MAGNETIC TRANSDUCER CSM L

### GENERAL FEATURES

- Small overall dimensions of the TRANSDUCER.
- MAGNETIC BAND MP500 (or MP500Z with positioned reference signals upon request) is composed of a magnetic strip, which is polarized at regular distances of 5+5 mm and supported by a stainless steel tape. Extremely easy to mount on the operating machine.



### MECHANICAL AND ELECTRICAL FEATURES

<b>MECHANICAL</b>			Code CSM L	
<ul style="list-style-type: none"> <li>• Die-cast transducer.</li> <li>• Double fixing system transducer with M4 screw thread or with M3 through screws.</li> <li>• Wide mounting tolerances.</li> </ul>			Reference signal	
<ul style="list-style-type: none"> <li>• Very flexible power cable.</li> <li>• High stability of signals.</li> <li>• For applications where max. speed exceeds 1 m/s, the use of a "special cable" is requested.</li> </ul>			constant pitch every 5 mm (C) external (E) positioned on magnetic band (Z)	
<b>ELECTRICAL</b>			Pole pitch	
			5+5 mm	
			Resolution	
			100 - 50 - 25 - 10 - 5 μm	
			Accuracy**	
			± 40 μm	
			Repeatability	
			± 1 increment	
			Cable	
			8 cores	
			Output signals	
			LINE DRIVER / PUSH-PULL	
			Max. measuring frequency	
			300 kHz	
			Sensor - magnetic band distance	
			see drawings	
			Power supply	
			5 ÷ 28 Vdc ± 5%	
			Current consump. without load	
			60 mA <sub>MAX</sub>	
			Current consumption with load	
			140 mA <sub>MAX</sub> (with 5 V and Zo = 120 Ω) 115 mA <sub>MAX</sub> (with 12 V and Zo = 1.2 kΩ) 90 mA <sub>MAX</sub> (with 28 V and Zo = 1.2 kΩ)	
			Phase displacement	
			90° ± 5° electrical	
			Max. speed	
			3 m/s (CSM L5) / 6 m/s (CSM L10)	
			Vibration resistance	
			300 m/s <sup>2</sup> [55 ÷ 2000 Hz]	
			Shock resistance	
			1000 m/s <sup>2</sup> (11 ms)	
			Protection class	
			IP67 DIN 40050/IEC 529	
			Operating temperature	
			0° ÷ 50°C	
			Storage temperature	
			-20° ÷ 80°C	
			Relative humidity	
			100% (not condensed)	
			Weight of transducer	
			40 g	
			Electrical protections	
			inversion of power supply polarity and short-circuits on output port	

CABLE (2 meters standard length)		
Minimum bending radius 60 mm	8 CORES Ø 5.3 mm	
CONNECTIONS	LINE DRIVER	PUSH-PULL
GREEN	A	A
ORANGE	$\bar{A}$	
WHITE	B	B
SKY BLUE	$\bar{B}$	
BLUE	Z	Z
YELLOW	$\bar{Z}$	
RED	V +	V +
BLACK	V -	V -
SHIELD		

The sensor is normally supplied with a 2 m cable. It is possible to require longer cable, considering the following maximum available length.  
 $L_{MAX} = 10$  m (sensor cable);  
 $L_{MAX} = 100$  m (2 m sensor cable + cable extension\*).

\* Cable extension with power supply conductor section of 0.5 mm<sup>2</sup>.

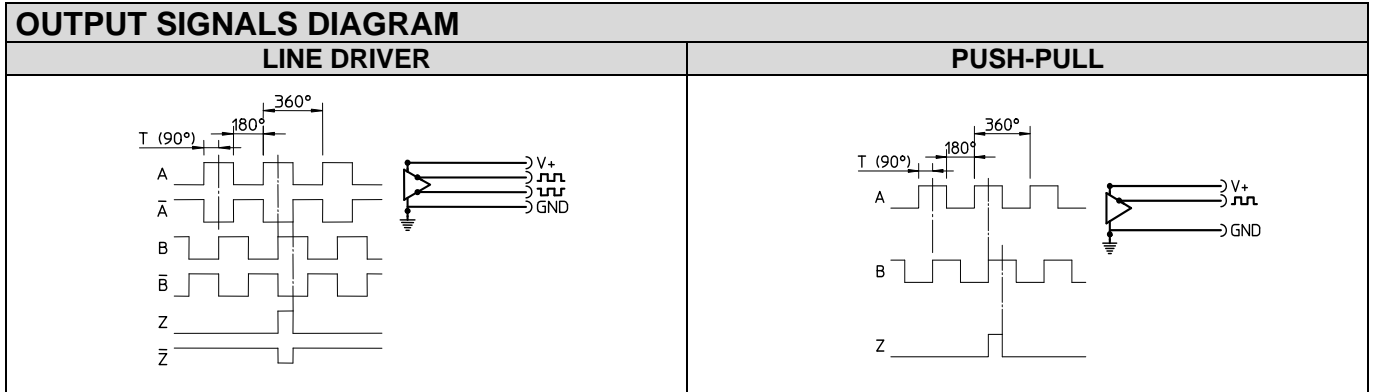
\*\* In order to obtain this accuracy value, it is necessary to respect the alignment tolerance values prescribed by Manufacturer. Better accuracy results can be obtained by reducing the gap between the sensor and the magnetic band.

### ORDERING CODE

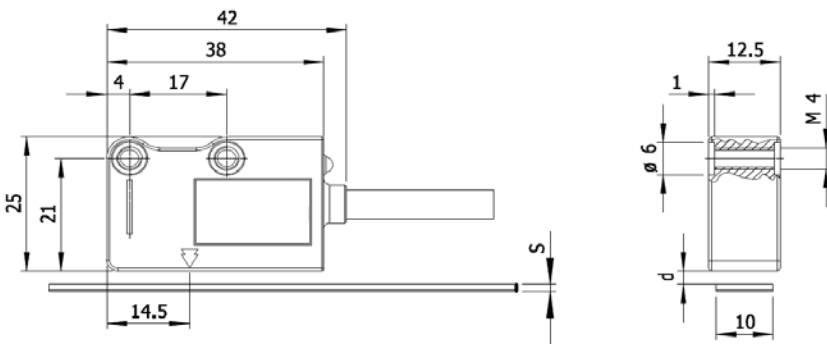
MODEL	PITCH	RESOLUTION	ZERO MARKER	POWER SUPPLY	OUTPUT	CABLE	CONNECTION
<b>CSM</b>	<b>L</b>	<b>10</b>	<b>C</b>	<b>528V</b>	<b>L</b>	<b>M02/N</b>	<b>SC</b>
CSM	L = 5+5mm	5 = 5μm 10 = 10μm 25 = 25μm .....	C = constant pitch E = external Z = selected on magnetic band	528V = 5÷28V	L = LINE DRIVER P = PUSH-PULL	M01/N = 1m M02/N = 2m M10/N = 10m	SC = without connector C3 = C3 C4 = C4

Example **MAGNETIC SENSOR CSM L25C 528VL M02/N SC**

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**SENSOR DIMENSIONS**

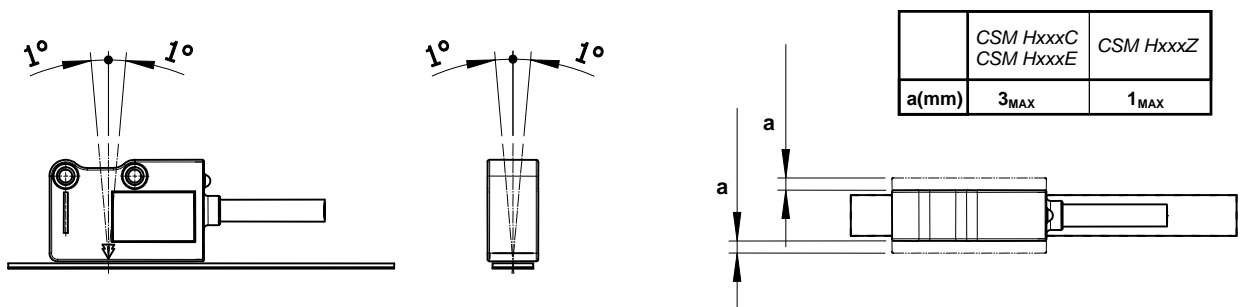


S(mm)	MP500Z	MP500Z+CV103	MP500Z+SP202
	1.3	1.6	2.1
d(mm)	0.3+3.5	3.2 <sub>MAX</sub>	2.7 <sub>MAX</sub>

S(mm)	MP500	MP500+CV103	MP500+SP202
	1.3	1.6	2.1
d(mm)	0.3+3.5	3.2 <sub>MAX</sub>	2.7 <sub>MAX</sub>

d → distance between sensor and top side of S

**ALIGNMENT TOLERANCES SENSOR-STRIP**



**INSTALLATION AND HANDLING**

<p><b>RECOMMENDED MAGNETIC BAND FIXING</b></p> <ol style="list-style-type: none"> <li>Remove grease from the surfaces by using alcohol and give a finishing touch by using a dry cloth.</li> <li>Fix the magnetic band.</li> <li>Fix the cover strip.</li> </ol> <p>After 48 hours the best adhesion will be obtained.</p>	<p><b>WHAT TO AVOID</b></p> <ol style="list-style-type: none"> <li>All mechanical reworks (cutting, drilling, face milling etc.).</li> <li>All modifications of the body of slider.</li> <li>All mishandling.</li> <li>Impacts and external stress.</li> <li>Exposure to external magnetic fields.</li> </ol>	
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