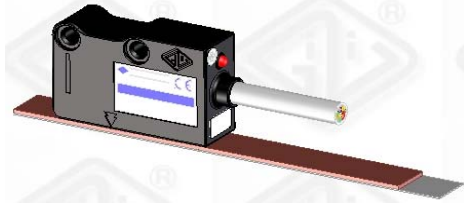


Code ST04	Project A40	Release D	Title TECHNICAL DATASHEET
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MAGNETIC TRANSDUCER MTV M

GENERAL FEATURES

- Small overall dimensions of the TRANSDUCER.
- MAGNETIC BAND MP200 is composed of a magnetic strip, which is polarized at regular distances of 2+2 mm and supported by a stainless steel tape. Extremely easy to mount on the operating machine.



MECHANICAL AND ELECTRICAL FEATURES

MECHANICAL <ul style="list-style-type: none"> • Die-cast transducer. • Double fixing system transducer with M4 screw thread or with M3 through screws. • Wide mounting tolerances. 		Code MTV M																					
		Reference signal	constant pitch every 2 mm (C) external (E)																				
ELECTRICAL <ul style="list-style-type: none"> • Very flexible power cable. • High stability of signals. • For applications where max. speed exceeds 1 m/s, the use of a "special cable" is requested. 		Pole pitch	2+2 mm																				
		Resolution	up to 0.5 μm**																				
CABLE (2 meters standard length) <table border="1"> <tr> <td>Minimum bending radius 60 mm</td> <td>8 CORES Ø 5.3 mm</td> </tr> </table>		Minimum bending radius 60 mm	8 CORES Ø 5.3 mm	Accuracy***	± 15 μm																		
		Minimum bending radius 60 mm	8 CORES Ø 5.3 mm																				
Repeatability	± 1 increment																						
CONNECTIONS <table border="1"> <tr> <td></td> <td>LINE DRIVER</td> </tr> <tr> <td>GREEN</td> <td>A</td> </tr> <tr> <td>ORANGE</td> <td>\overline{A}</td> </tr> <tr> <td>WHITE</td> <td>B</td> </tr> <tr> <td>SKY BLUE</td> <td>\overline{B}</td> </tr> <tr> <td>BROWN</td> <td>Z</td> </tr> <tr> <td>YELLOW</td> <td>\overline{Z}</td> </tr> <tr> <td>RED</td> <td>V +</td> </tr> <tr> <td>BLUE</td> <td>V -</td> </tr> <tr> <td>SHIELD</td> <td></td> </tr> </table>			LINE DRIVER	GREEN	A	ORANGE	\overline{A}	WHITE	B	SKY BLUE	\overline{B}	BROWN	Z	YELLOW	\overline{Z}	RED	V +	BLUE	V -	SHIELD		Cable	8 cores
			LINE DRIVER																				
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BLUE	V -																						
SHIELD																							
The sensor is normally supplied with a 2 m cable. It is possible to require longer cables, considering the following maximum available length. $L_{MAX} = 10\text{ m}$ (sensor cable); $L_{MAX} = 100\text{ m}$ (2 m sensor cable + cable extension*).		Output signals	1 Vpp																				
		Measuring frequency	6 kHz _{MAX}																				
<table border="1"> <tr> <td>Minimum bending radius 60 mm</td> <td>8 CORES Ø 5.3 mm</td> </tr> </table>		Minimum bending radius 60 mm	8 CORES Ø 5.3 mm	Sensor - magnetic band distance	see drawings																		
		Minimum bending radius 60 mm	8 CORES Ø 5.3 mm																				
Power supply	5 ÷ 28 Vdc ± 5%																						
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		CONNECTIONS	LINE DRIVER																				
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ORANGE	\overline{A}																						
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		CONNECTIONS	LINE DRIVER																				
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		CONNECTIONS	LINE DRIVER																				
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
ORANGE	\overline{A}																						
WHITE	B																						
SKY BLUE	\overline{B}																						
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
ORANGE	\overline{A}																						
WHITE	B																						
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		CONNECTIONS	LINE DRIVER																				
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
ORANGE	\overline{A}																						
WHITE	B																						
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
ORANGE	\overline{A}																						
WHITE	B																						
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BROWN	Z																						
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
ORANGE	\overline{A}																						
WHITE	B																						
SKY BLUE	\overline{B}																						
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
ORANGE	\overline{A}																						
WHITE	B																						
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		CONNECTIONS	LINE DRIVER																				
GREEN	A																						
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WHITE	B																						
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* Cable extension with power supply conductor section of 0.5 mm².

** Depending on CNC division factor.

*** 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

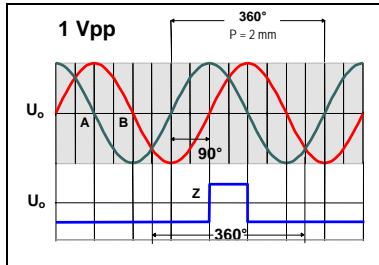
MODEL	PITCH	PERIOD	ZERO MARKER	POWER SUPPLY	OUTPUT	CABLE	CONNECTION
MTV	M	2K	C	528V	S	M02/N	SC

MTV	M = 2+2mm	2K = 2mm	C = constant pitch E = external	528V = 5÷28V	S = sinusoidal	M01/N = 1m M02/N = 2m M10/N = 10m	SC = without conn. C3 = C3 C4 = C4
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Example ↪ **MAGNETIC SENSOR MTV M2KC 528VS M02/N SC**

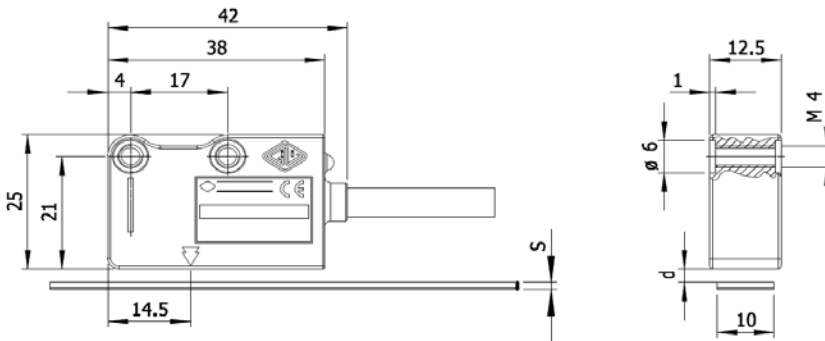
Code ST04	Project A40	Release D	Title TECHNICAL DATASHEET
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OUTPUT SIGNALS DIAGRAM



A and B amplitude	0.6 Vpp ÷ 1.2 Vpp typical 1 Vpp
Z amplitude	0.25 V ÷ 0.6 V (usable part)
A and B phase displacement	90° ± 10° electrical
Reference voltage U_o	2.5 V
Signal amplitude is referred to a differential measurement made with 120 Ω impedance, with power supply voltage to the transducer of 5 V ± 5%.	

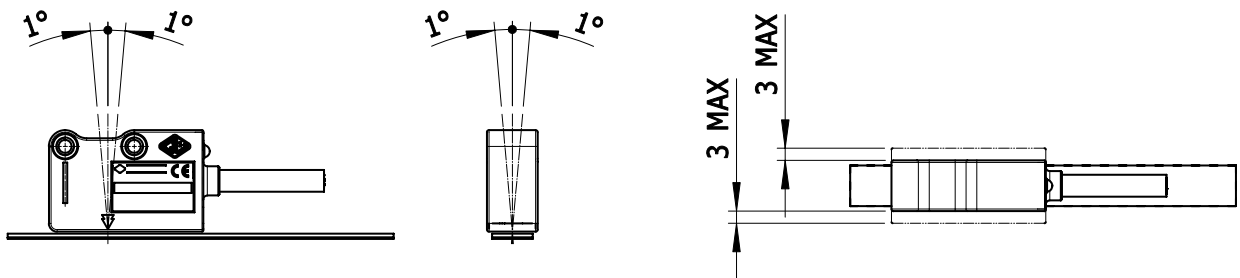
SENSOR DIMENSIONS



S(mm)	MP200	MP200+CV103	MP200+SP202
	1.3	1.6	2.1
d(mm)	0.3±1.5	1.2 _{MAX}	0.7 _{MAX}

d → distance between sensor and top side of S

ALIGNMENT TOLERANCES SENSOR-STRIP



INSTALLATION AND HANDLING

RECOMMENDED MAGNETIC BAND FIXING

1. Remove grease from the surfaces by using alcohol and give a finishing touch by using a dry cloth.
 2. Fix the magnetic band.
 3. Fix the cover strip.
- After 48 hours the best adhesion will be obtained.

WHAT TO AVOID

1. All mechanical reworks (cutting, drilling, face milling etc.).
2. All modifications of the body of slider.
3. All mishandling.
4. Impacts and external stress.
5. Exposure to external magnetic fields.

