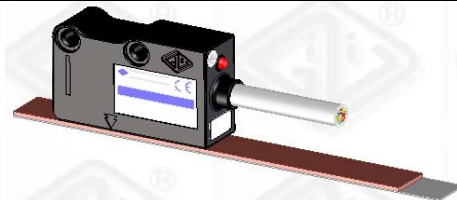


Code ST06	Project A40	Release D	Title TECHNICAL DATASHEET
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MAGNETIC TRANSDUCER MTV H

GENERAL FEATURES

- Small overall dimensions of the TRANSDUCER.
- MAGNETIC BAND MP500 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

MECHANICAL

- Die-cast transducer.
- Double fixing system transducer with M4 screw thread or with M3 through screws.
- Wide mounting tolerances.

ELECTRICAL

- Very flexible power cable.
- High stability of the signals.
- For applications where max. speed exceeds 1m/s, the use of a "special cable" is requested.

CABLE (2 meters standard length)

Minimum bending radius 60 mm	8 CORES Ø 5.3 mm
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CONNECTIONS

LINE DRIVER

GREEN	A
ORANGE	A
WHITE	B
SKY BLUE	B
BROWN	Z
YELLOW	Z
RED	V +
BLUE	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.
 $L_{MAX} = 10\text{ m}$ (sensor cable);
 $L_{MAX} = 100\text{ m}$ (2 m sensor cable + cable extension*).

* 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.

Code MTV H	
Reference signal	constant pitch every 5 mm (C) external (E)
Pole pitch	5+5 mm
Resolution	up to 1 µm**
Accuracy***	± 40 µm
Repeatability	± 1 increment
Cable	8 cores
Output signals	1 Vpp
Measuring frequency	2.4 kHz _{MAX}
Sensor - magnetic band distance	see drawings
Power supply	5 ÷ 28 Vdc ± 5%
Current consump. without load	90 mA _{MAX}
Current consumption with load	110 mA _{MAX} (with 5 V and Zo = 120 Ω)
Phase displacement	90° ± 5° electrical
Speed	12 m/s _{MAX}
Vibration resistance	300 m/s ² [55 ÷ 2000 Hz]
Shock resistance	1000 m/s ² (11 ms)
Protection class	IP 67
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

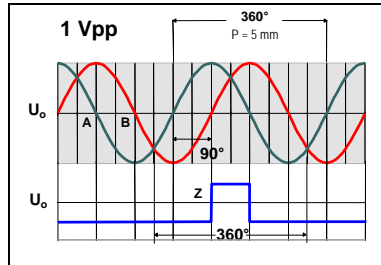
ORDERING CODE

MODEL	PITCH	PERIOD	ZERO MARKER	POWER SUPPLY	OUTPUT	CABLE	CONNECTION
MTV	H	5K	C	528V	S	M02/N	SC
MTV	H = 5+5mm	5K = 5mm	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

Example ↪ **MAGNETIC SENSOR MTV H5KC 528VS M02/N SC**

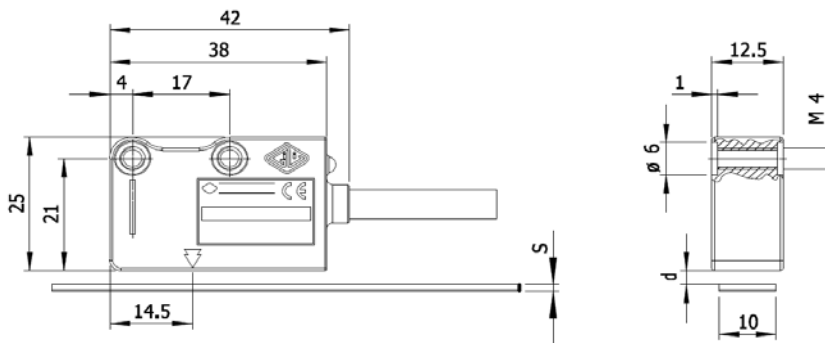
Code ST06	Project A40	Release D	Title TECHNICAL DATASHEET
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OUTPUT SIGNALS DIAGRAM



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
Signals amplitude is referred to a differential measurement made with 120 Ω impedance, with power supply voltage to the transducer of 5 V ± 5%.	

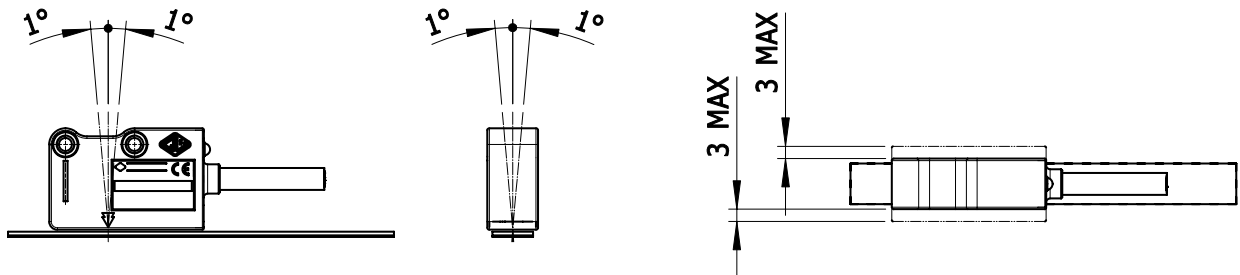
SENSOR DIMENSIONS



S(mm)	MP500	MP500+CV103	MP500+SP202
	1.3	1.6	2.1
d(mm)	0.3+3.5	3.2 _{MAX}	2.7 _{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. Expositions to external magnetic fields.

