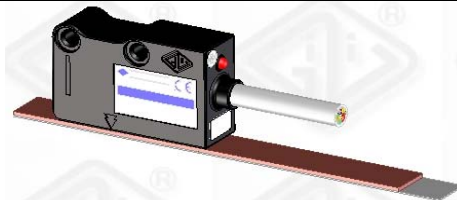


Code ST05	Project A40	Release D	Title TECHNICAL DATASHEET
---------------------	-----------------------	---------------------	-------------------------------------

MAGNETIC TRANSDUCER MTV P

GENERAL FEATURES

- Small overall dimensions of the TRANSDUCER.
- MAGNETIC BAND MP100 is composed of a magnetic strip, which is polarized at regular distances of 1+1 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 P	
ELECTRICAL <ul style="list-style-type: none"> • Very flexible power cable. • High stability of the signals. • For applications where max. speed exceeds 1 m/s, the use of a "special cable" is requested.. 		Reference signal	constant pitch every 1 mm (C)
CABLE (2 meters standard length)		Pole pitch	1+1 mm
Minimum bending radius 60 mm	8 CORES Ø 5.3 mm	Resolution	up to 0.1 µm**
CONNECTIONS		Accuracy***	± 10 µm
	LINE DRIVER	Repeatability	± 1 increment
GREEN	A	Cable	8 cores
ORANGE	A	Output signals	1 Vpp
WHITE	B	Measuring frequency	12 kHz _{MAX}
SKY BLUE	B	Sensor - magnetic band distance	see drawings
BROWN	Z	Power supply	5 ÷ 28 Vdc ± 5%
YELLOW	Z	Current consump. without load	90 mA _{MAX}
RED	V +	Current consumption with load	110 mA _{MAX} (with 5 V and Zo = 120 Ω)
BLUE	V -	Phase displacement	90° ± 5° electrical
SHIELD		Speed	12 m/s _{MAX}
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*).		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

* 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

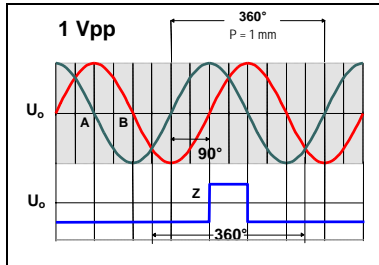
MODEL	PITCH	PERIOD	ZERO MARKER	POWER SUPPLY	OUTPUT	CABLE	CONNECTION
MTV	P	1K	C	528V	S	M02/N	SC

MTV **P** = 1+1mm **1K** = 1mm **C** = constant pitch **528V** = 5÷28V **S** = sinusoidal **M01/N** = 1m **SC** = without conn.
M02/N = 2m **C3** = C3
M10/N = 10m **C4** = C4

Example ↪ **MAGNETIC SENSOR MTV P1KC 528VS M02/N SC**

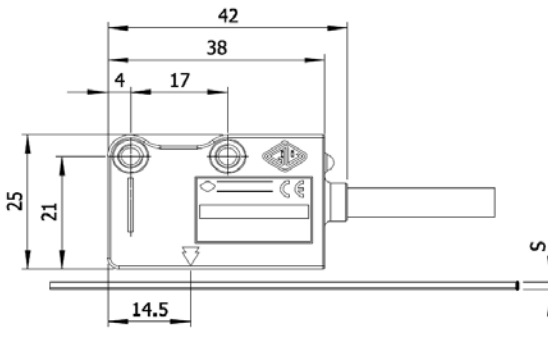
Code ST05	Project A40	Release D	Title TECHNICAL DATASHEET
---------------------	-----------------------	---------------------	-------------------------------------

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%.	

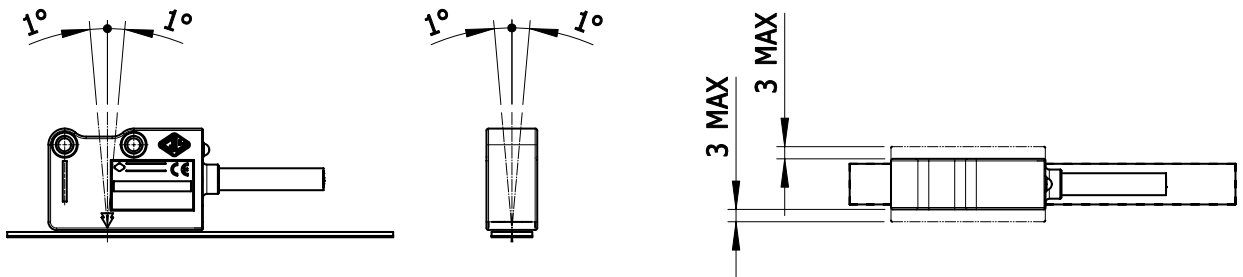
SENSOR DIMENSIONS



S(mm)	MP100	MP100+CV103	MP100+SP202
	1.3	1.6	2.1
d(mm)	0.1±0.5	N.A.	N.A.

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.
4. 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.

