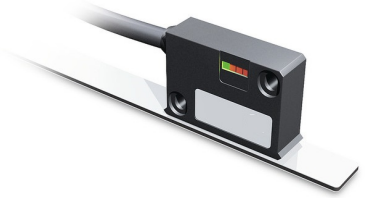
Code	Project	Release	Title
CT05	*A25-B*	*S*	*TECHNICAL DATASHEET*

MAGNETIC TRANSDUCER ACM H

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

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 signals.
- For applications where max. speed exceeds 1 m/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	
CONNECTIONS	**LINE DRIVER**	**PUSH-PULL**
GN	A	A
OG	$\overline{A}$	
WH	B	B
BU	$\overline{B}$	
BN	Z	Z
YE	$\overline{Z}$	
RD	V +	V +
BK	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*).

Code	
Reference signal	constant pitch every 5 mm **(C)** external **(E)** positioned on magnetic band **(Z)**
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 consumption without load	60 mA_{MAX}
Current consumption with load	140 mA_{MAX} (with 5 V and Zo = 120 Ω) 115 mA_{MAX} (with 12 V and Zo = 1.2 kΩ) 90 mA_{MAX} (with 28 V and Zo = 1.2 kΩ)
Phase displacement	90° ± 5° electrical
Max. speed	3 m/s **(ACM H5)** / 6 m/s **(ACM H10)**
Vibration resistance	300 m/s^2 [55 ÷ 2000 Hz]
Shock resistance	1000 m/s^2 (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 extension with power supply conductor section of 0.5 mm^2.
** 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.

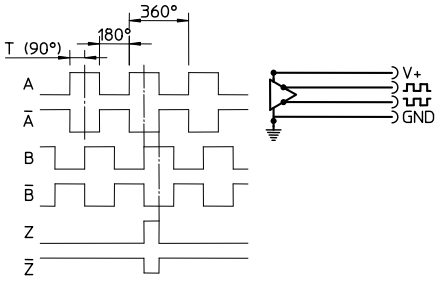
ORDERING CODE

MODEL	PITCH	RESOLUTION	ZERO MARKER	POWER SUPPLY	OUTPUT	CABLE	CONNECTION
ACM	**H**	**5**	**C**	**0528V**	**L**	**M02/N**	**A/B**
ACM	**H** = 5+5mm	**5** = 5µm **10** = 10µm **25** = 25µm	**C** = constant pitch **E** = external **Z** = selected on magnetic band	**0528V=** 5÷28V	**L** = LINE DRIVER **P** = PUSH-PULL	**M01/N** = 1m **M02/N** = 2m **M10/N** = 10m	**A** = without connector **B** = Cable exit

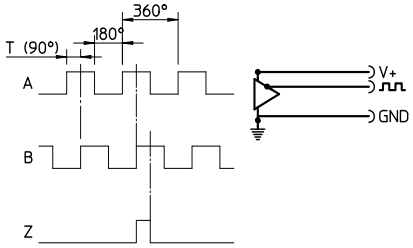
Code	Project	Release	Title
CT05	*A25-B*	*S*	*TECHNICAL DATASHEET*

OUTPUT SIGNALS DIAGRAM

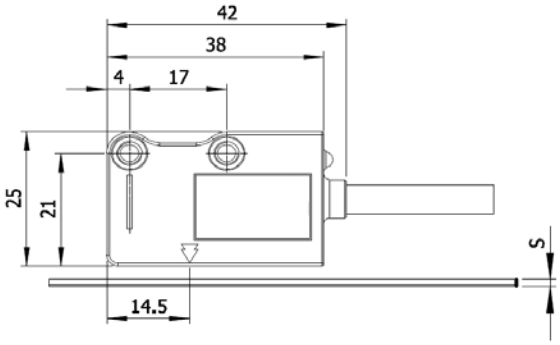
LINE DRIVER

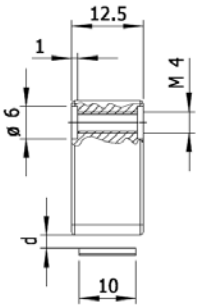


PUSH-PULL



SENSOR DIMENSIONS



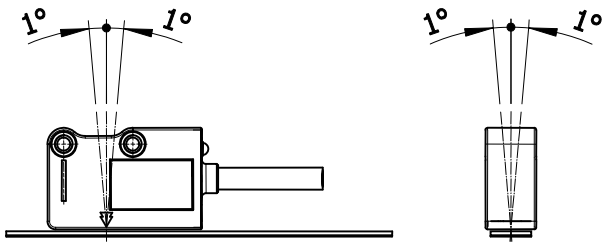


S(mm)	*MP500Z*	*MP500Z+CV103*	*MP500Z+SP202*
	1.3	*1.6*	*2.1*
d(mm)	**0.3÷3.5**	**3.2_{MAX}**	**2.7_{MAX}**

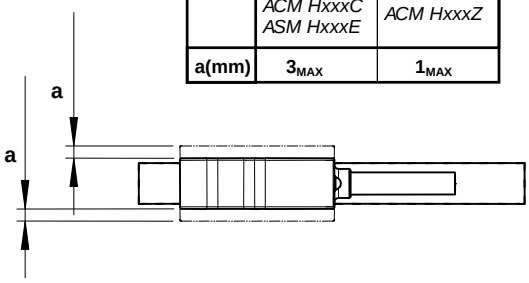
S(mm)	*MP500*	*MP500+CV103*	*MP500+SP202*
	1.3	*1.6*	*2.1*
d(mm)	**0.3÷3.5**	**3.2_{MAX}**	**2.7_{MAX}**

d → distance between sensor and top side of S

ALIGNMENT TOLERANCES SENSOR-STRIP



	ACM HxxxC ASM HxxxE	*ACM HxxxZ*
a(mm)	**3_{MAX}**	**1_{MAX}**



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.