GIVI MISURE
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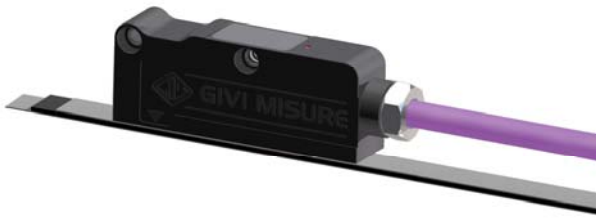
Code	Project	Release	
ST04	***A48-B***	***B***	***TECHNICAL DATASHEET***

ABSOLUTE MAGNETIC SENSOR AGM - CANopen

GENERAL FEATURES

- Linear magnetic sensor, with direct reading of the absolute position.
- Resolutions up to 1 µm.
- Measuring length up to 30 000 mm.
- CANopen protocol.
- Contactless reading.
- Extremely easy and fast mounting of the entire measuring system, with wide alignment tolerances.
- Small size, to allow installation in narrow spaces.
- Axial or radial cable output.



MECHANICAL AND ELECTRICAL CHARACTERISTICS

MECHANICAL

- Magnetic sensor with die-cast body.
- Possibility to fix the magnetic sensor with M4 screws or with through M3 screws.
- Wide alignment tolerances.
- Robust sealed cable exit.

ELECTRICAL

- Reading through positioning sensor based on magneto resistance, with AMR effect (Magnetic Anisotropy).
- Electrical protection against inversion of power supply polarity and short circuits on output ports.
- CABLE:
  - Standard for CAN bus connection, 2x2x0.34.
  - Standard length 0.3 m.
  - The cable is suitable for continuous movements.

The cable's bending radius should not be lower than 80 mm.

PIN	SIGNALS	CONDUCTOR COLOR
1	SCH	Shield
2	+ V	Brown
3	0 V	White
4	CAN_H	Green
5	CAN_L	Yellow

Cod. AGM	**M**
Pole pitch	2+2 mm
Repeatability	± 1 increment
Serial interface	CAN bus
Protocol - Profile	CANopen: encoder DS406 V. 3.1 communication DS301 V. 4.02 LSS service DS305 V.2.0
Resolution absolute position	100 - 50 - 10 - 5 - 1 µm
Accuracy	± 15 µm
Measuring length ML	up to 30 000 mm
Max. traversing speed	300 m/min *
Vibration resistance (EN 60068-2-6)	200 m/s^2 [55 ÷ 2 000 Hz]
Protection class (EN 60529)	IP 67
Operating temperature	0 °C ÷ 50° C
Storage temperature	-20 °C ÷ 70° C
Relative humidity	100%
Current consumption with 24 Vdc	60 mA_{MAX}
Electrical connections	see related table
Electrical protections	inversion of polarity and short circuits
Weight	80 g

* With a 1 µm resolution, the maximum traversing speed becomes 90 m/min.

GIVI MISURE S.R.L. A SOCIO UNICO
C.F. e Iscrizione al Reg. Imprese di Monza e Brianza n° 04355540156 - Cap. Soc. € 51.480,00 I.V.

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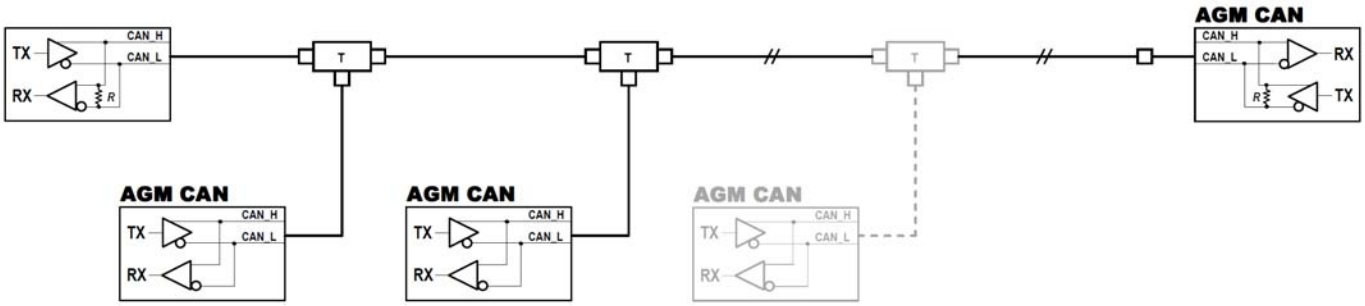
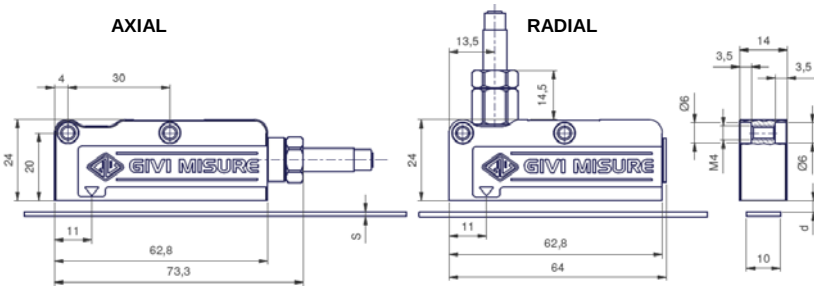
CABLE



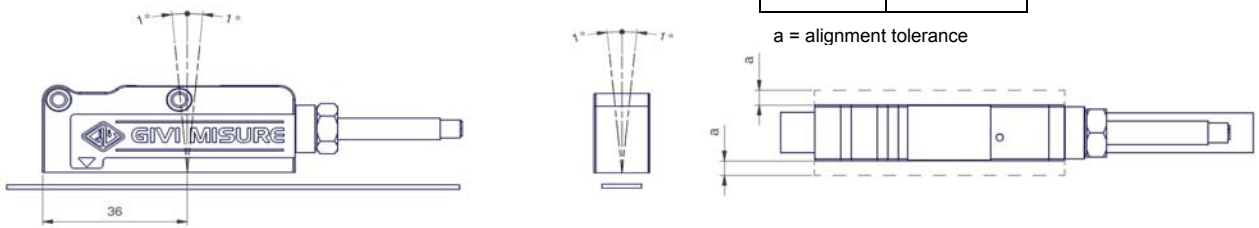
SENSOR DIMENSIONS



values in mm	MP200A	MP200A + CV103	MP200A + SP202
s	1.3	1.6	2.1
d	0.3 ÷ 1	0.7_{MAX}	0.2_{MAX}

s = thickness
d = distance to be maintained between sensor and surface of the magnetic band (or eventual cover/support)

SENSOR ALIGNMENT TOLERANCES



a	0.5 mm

a = alignment tolerance

ORDERING CODE

MODEL	POLE PITCH	RESOLUTION	CABLE OUTPUT	OUTPUT SIGNALS	CABLE LENGTH, CABLE TYPE	CONNECTOR CONNECTION	SPECIAL
AGM	**M**	**1**	**A**	**C**	**M0.3 / C**	**CH0**	
	M = 2+2 mm	**100** = 100 µm **50** = 50 µm **10** = 10 µm **5** = 5 µm **1** = 1 µm	**A** = axial **R** = radial	**C** = CANopen	**M0.3** = 0.3 m (standard) **C** = CAN bus	**CH0** = connector 5 Pin M12 **SC** = without connector	**No cod.** = standard **SPnn** = special nn

Example ☞ **ABSOLUTE MAGNETIC SENSOR AGM M1A C M0.3 / C CH0**