PRECILEC
OUR EXPERIENCE, YOUR FUTURE

CANopen®   CE

Code	Project	Release	
CST50	**B25-D**	**C**	**TECHNICAL DATASHEET**

MAGNETIC SENSOR CSA - 2 Series

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.
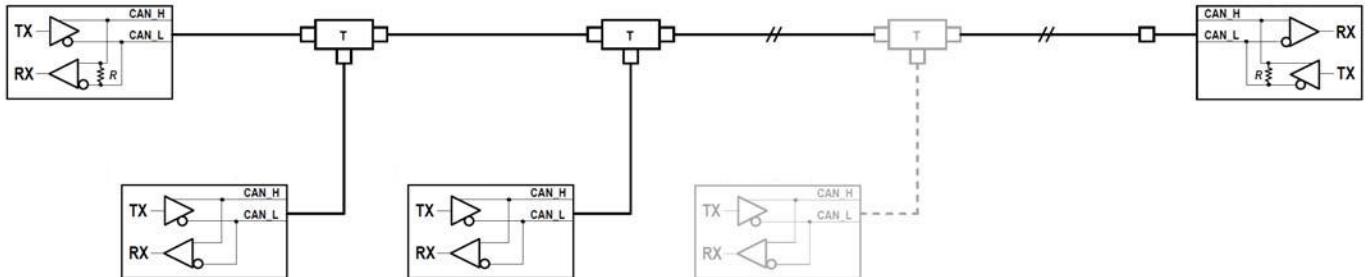- Small size, to allow installation in narrow spaces.
- Axial or radial cable output.
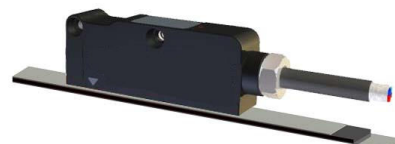
MECHANICAL AND ELECTRICAL CHARACTERISTICS

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

Model. CSA	2
Pole pitch	2+2 mm
Repeatability	$\pm$ 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	$\pm$ 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 $\div$ 2 000 Hz]
Protection class (EN 60529)	IP 67
Operating temperature	0 °C $\div$ 50° C
Storage temperature	-20 °C $\div$ 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	85 g

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

Without prior notice, the products may be subject to modifications that the Manufacturer reserves to introduce as deemed necessary for their improvement.

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CABLE

SENSOR DIMENSIONS

AXIAL **RADIAL**
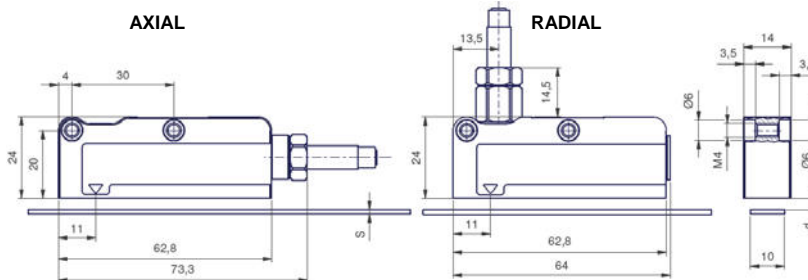
values in mm	CP200A	CP200A + CV103	CP200A + SP202
s	1.3	1.6	2.1
d	0.3 ÷ 1	0.7$_{MAX}$	0.2$_{MAX}$

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
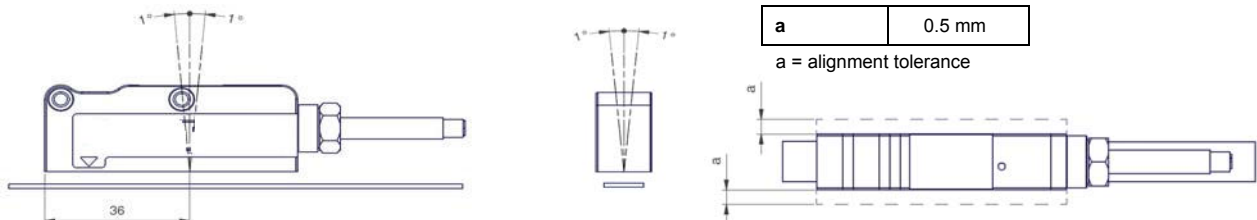
ORDERING CODE

MODEL	POLE PITCH	RESOLUTION	CABLE OUTPUT	OUTPUT SIGNALS	CABLE LENGTH, CABLE TYPE	CONNECTOR CONNECTION	SPECIAL
CSA	**2**	**1**	**A**	**C**	**M0.3 / C**	**CH0**	

	POLE PITCH	RESOLUTION	CABLE OUTPUT	OUTPUT SIGNALS	CABLE LENGTH, CABLE TYPE	CONNECTOR CONNECTION	SPECIAL
	2 = 2+2 mm	**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 **SNxx** = special nn

Standard ☞ **ABSOLUTE MAGNETIC SENSOR CSA 21A C M0.3 / C CH0**