

CHARACTERISTICS

- + Angle Range: 0° to 360°
- + Absolute measure
- + Redundant sensors
- + Linearity up to $\pm 0.5^\circ$
- + Plastic housing

ADVANTAGES

- + Compact design
- + HALL Effect technology
- + High life time
- + High accuracy at economic prices
- + Different types of connection
- + Many parameters configurable by CANopen (Offset, Counting direction, angle range 0° - 360° or $\pm 180^\circ$)

ASX is a contact-less *magnetic absolute encoder series* featuring high operation speed employed in harsh environments such as, automation and process control fields.

CAN OPEN redundant output is available. **ASX** provide a unique digital code for each distinct angle storing the value of the actual position and, therefore, preventing the loss of information in case of restart of the system or power-loss.

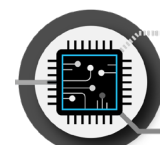
The operating principle of single-turn encoders is magnetic, suitable for industries where elevated speed, IP protection sealing and excellent wear and **temperature resistance** are needed.



HIGH PROTECTION LEVEL



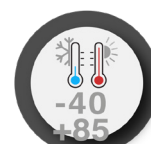
SHOCK/VIBRATION RESISTANT



REDUNDANCY OUTPUT



REVERSE POLARITY PROTECTION



WIDE RANGE TEMPERATURE



DIRECTIVE 2011/65/EU



CANOPEN OUTPUT



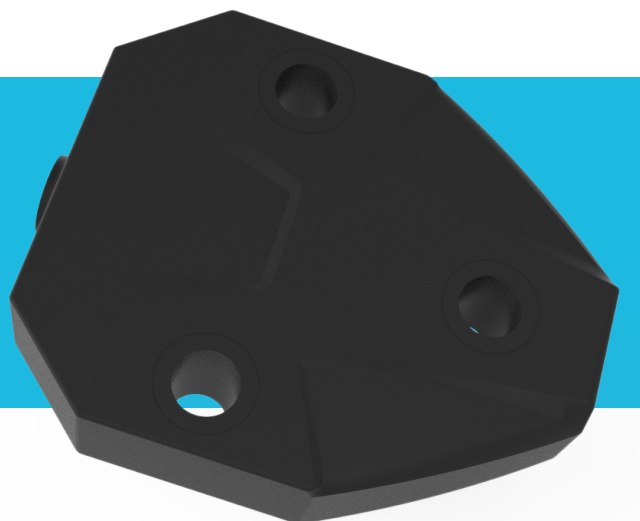
COST SAVING



FUNCTIONAL SAFETY



EU CONFORMITY



**+ HEAVY LIFT
CONSTRUCTION**



**+ URBAN
MUNICIPAL**



**+ LOGISTIC
TRANSPORTS**



+ AGRICULTURE

PRODUCT CODE

ASX

A

B

C

D

E

F

ORDER
CODE

A	COUNTING DIRECTION
1	= CH1 & CH2 = CW
2	= CH1 & CH2 = CCW
3	= CH1 = CW, CH2 = CCW *
4	= CH1 = CCW, CH2 = CW

B	POWER SUPPLY
2	= 9 ... 30 V DC

C	ANGLE DEGREE
360	= 360°

D	OUTPUT
28	= CANopen SIL2-Pld

E	TYPE OF CONNECTION
1	= Male connector M12x5, PUR cable 30cm
34	= Cable 2mt 8x0.22mm PVC Ø4.5mm

F	TYPE OF MAGNET
0	= Custom
5	= Screw Magnet "M10x1, SW17"

TECHNICAL CHARACTERISTICS

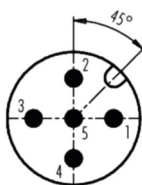
MEASURING RANGE	0 ... 360°
RESOLUTION	0.01° (settable 1° - 0.1° - 0.01°)
LINEARITY	±0.5°
PROTECTION	IP68
TEMPERATURE DRIFT	100 ppm/K
TEMPERATURE RANGE	-40°C ... +85°C [-40°F ... +185°F]
WEIGHT	approx. 90 g
SHOCK RESISTANCE	acc. to CEI EN 60068-2-27
VIBRATION RESISTANCE	acc. to CEI EN 60068-2-6:2009
CURRENT CONSUMPTION	<40mA at 12 VDC

ELECTRICAL CHARACTERISTICS

POWER SUPPLY	9 ... 30 V DC
INTERFACE	CANopen
PROFILE CONFORMITY	CiA DS301
ELECTROMAGNETIC COMPATIBILITY	acc. to EN 61326-3-1(2017), EN 61326-1(2013) The electromagnetic environment envisaged for the use of the test equipment is: industrial electromagnetic environment
CE COMPLIANT	acc. to EMC guideline 2014/30/EU RoHS guideline 2011/65/EU

ELECTRICAL CONNECTIONS - WIRE CONNECTOR

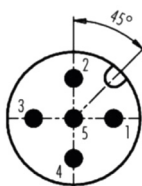
BLACK	GND
RED	+Vin
YELLOW	n.c.
GREEN	n.c.
BLUE	CAN-L
WHITE	CAN-H
ORANGE	n.c.
BROWN	n.c.



Pinout

ELECTRICAL CONNECTIONS - M12x5 PINS

1	n.c.
2	+Vin
3	GND
4	CAN-H
5	CAN-L



Pinout

OPERATING PRINCIPLE

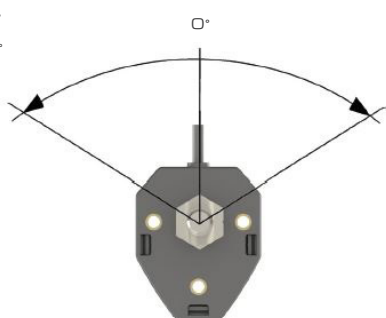
+ HALL EFFECT

The production of a potential difference across an electrical conductor when a magnetic field is applied in a direction perpendicular to that of the flow of current.

COUNTING DIRECTION (BOTTOM VIEW)

1. CH1 & CH2 = CW

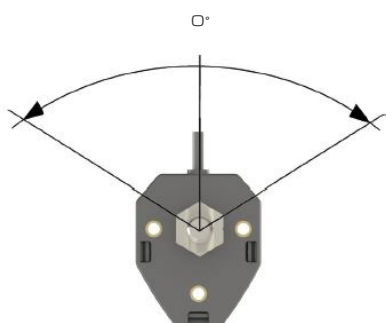
CH1: 315°
CH2: 315°



CH1: 45°
CH2: 45°

2. CH1 & CH2 = CCW

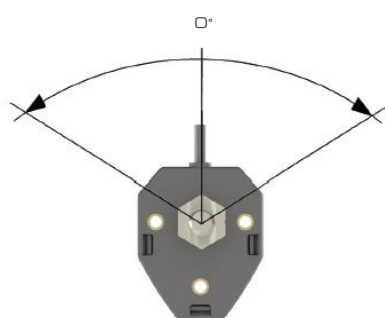
CH1: 45°
CH2: 45°



CH1: 315°
CH2: 315°

3. CH1 = CW, CH2 = CCW

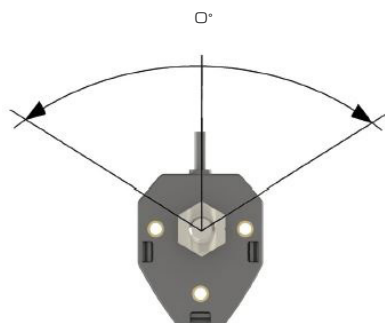
CH1: 315°
CH2: 45°



CH1: 45°
CH2: 315°

4. CH1 = CCW, CH2 = CW

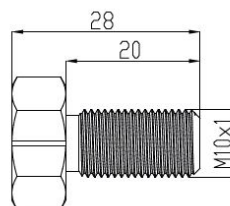
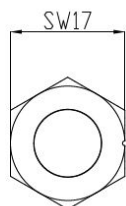
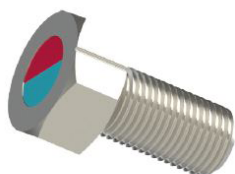
CH1: 45°
CH2: 315°



CH1: 315°
CH2: 45°

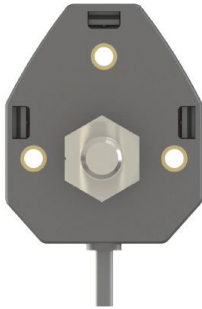
TYPE OF MAGNET (mm)

5. SCREW MAGNET "M10X1. SW17"

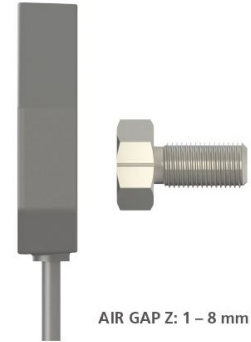


POSITION MAGNET TOLERANCES

MAX RADIAL X - Y MISALIGNMENT: 1 MM



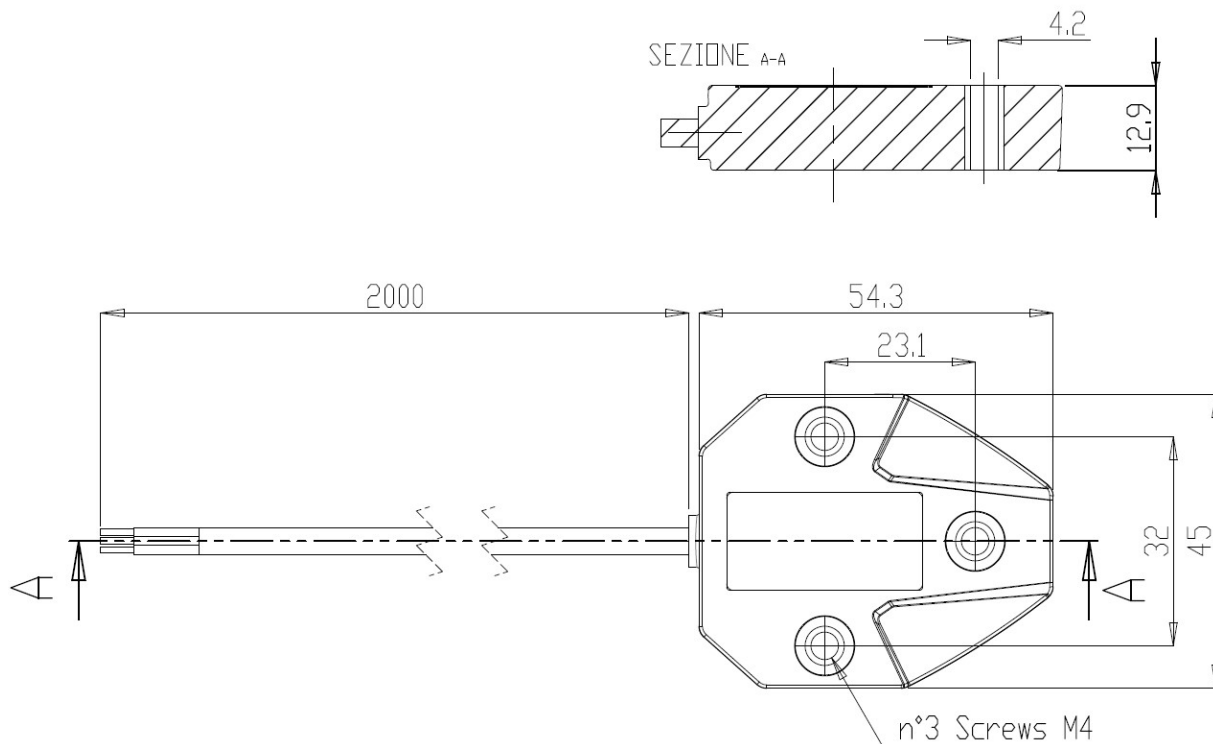
AIR GAP Z: 1 – 8 MM



NOTE: each offset from the axis misalignment or magnetic, will increase the non-linearity.

- EACH SENSOR MUST BE MOUNTED WITH ITS OWN ROTOR/SCREW/ MAGNET INCLUDED IN
- THE BOX; SHOULD BE USED AMAGNETIC SUPPORT.

DIMENSIONS



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* The company reserves the right to make any kind of design or functional modification at any moment without prior notice