

| ACW4 CANopen

CANOPEN ABSOLUTE SINGLE TURN MODULAR SENSOR

Sensata-BEI Sensors' ACW4 sensors provide absolute single turn measurement with a CANopen output in an over-molded, two-part package that offers design flexibility & protection from the environment.



Features

- With its two-part design, the ACW4 CANopen absolute single-turn offers maximum flexibility for installation
- Rugged and excellent resistance to shock and vibration
- Robust, proven magnetic technology
- Environmentally resistant, IP 67 standard (IP69K option)
- Extended operating range from -30° C to 85° C
- Uses universal supply 5 to 30 VDC – CAN open output
- Available Resolution up to 12 bits per revolution
- Variety of magnet holders available
- Standard PVC cable with SUBD9 connector

Applications

- Factory Automation
- Process Automation



SPECIFICATIONS

Mechanical

Terminations	PVC Cable with SUBD9 connector
Housing	Macromelt PA638
Weight	0,150 kg

Electrical

Electrical Angle	360°
Output Function	CANopen
Minimal Cycle Time	< 400µs
Resolution	Single –turn, 12 bits
Accuracy	+/-0.3% on 360°
Repeatability	+/-0.1% on 360°
Supply Voltage	5 to 30 Vdc
Start-up	< 1 s
Current Requirements	< 40mA
Protection	Overvoltage Protection: Yes Reverse Polarity Protection: Yes Short Circuit Protection: Yes
EMC	IEC 61000-4-2 Electrostatic discharge (ESD) 4 kV, 8 kV IEC 61000-4-3 Electromagnetic fields 10 V/m (80MHz - 1GHz), 3V/m (1.4GHz - 2GHz), 1V/m (2GHz - 2.7GHz) IEC 61000-4-4 Electrical fast transients (burst) 1 kV IEC 61000-4-6 Conducted disturbances, induced by RF-fields 10 Veff.

Programmable Parameters

Resolution: Defines the resolution per revolution (0 to 4 096).

Transmission Speed: Programmable from 10kBaud (1 000m) to 1 Mbaud (25 m) ; value per default : 20 Kbaud.

Address: Defines the software address of the encoder on the bus (1 to 127, Value per default : id = 1).

Direction: Defines the direction of count of the sensor.

RAX: Defines the value of the current position (with the shaft held stationary)

CAMs: High and low limits.

Communication Modes

Sensor Configuration : Reading/Writing of the encoder objects dictionary (SDO mode).

3 modes are available to interrogate the encoder position/speed:

CYCLIC Mode: The sensor transmits its position in an asynchronous manner. The frequency of the transmission is defined by the programmable cyclic timer register from 0 to 65 535 ms,

SYNCHRO Mode: The Sensor transmits its position on a synchronous demand by the master.

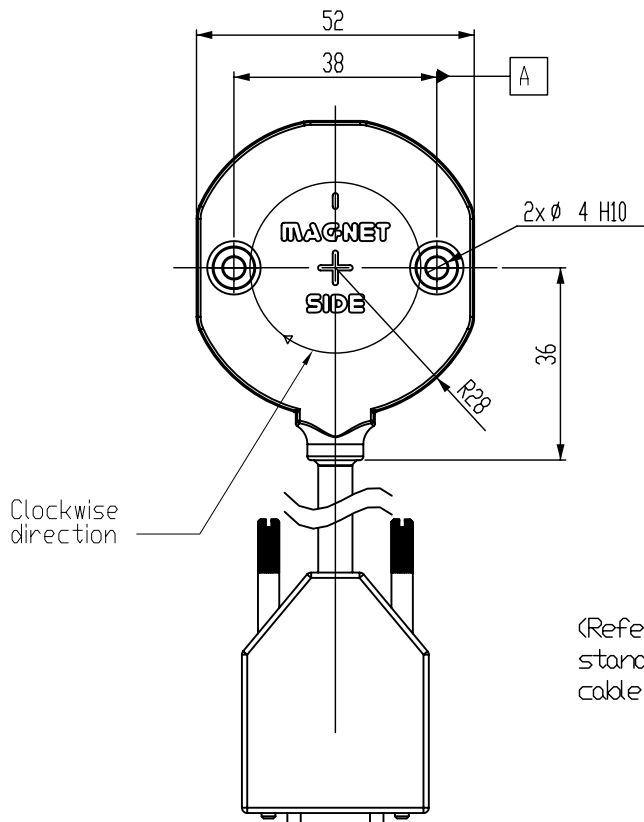
POOLING Mode (Answer to a RTR signal) : The sensor only answers to a request.



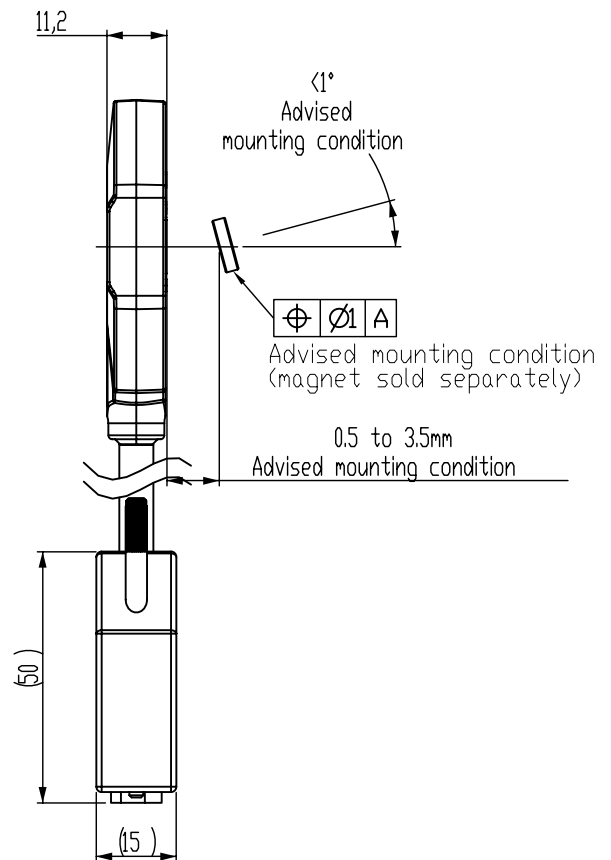
DIMENSIONS

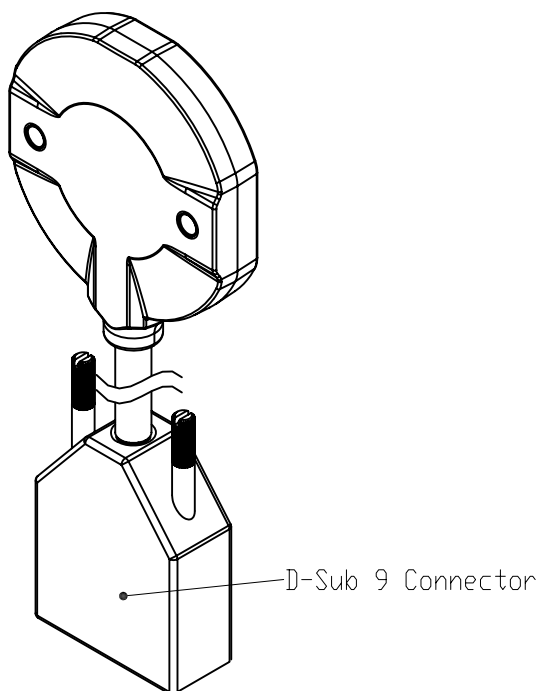
All Dimensions are in millimeters.

Shaft system with magnet to be ordered separately (see Accessories).



(Refer to the bus standards for max cable length)





CONNECTIONS

		N.C	CAN LOW	CAN GND / 0V	N.C.	N.C.	0V	CAN HIGH	N.C.	5/30Vdc	Ground
BB	PVC Cable + DB9	1	2	3	4	5	6	7	8	9	General Shielding

NOTES

Stray magnetic fields can interfere with accuracy and repeatability of the signal.



ORDERING OPTIONS

Example : ACW4_00//PBBB//12//BBR020

(Contact the factory for special versions, ex : dimensions, connections...)

	ACW4	00	//	P	BB	B	//	12	//	BBR	020
Family											
ACW4: Absolute Single-Turn Sensor											
Shaft Ø											
00: Modular											
Supply											
P: 5 to 30 Vdc											
Output Stage											
BB: CANopen											
Code											
B: Binary											
Resolution											
12: 12 bits											
Connection											
BBR: Side PVC cable with SUBD9 connector											
Cable Length											
020: 2 meters											

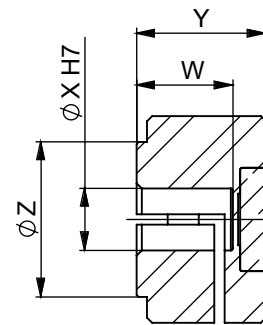
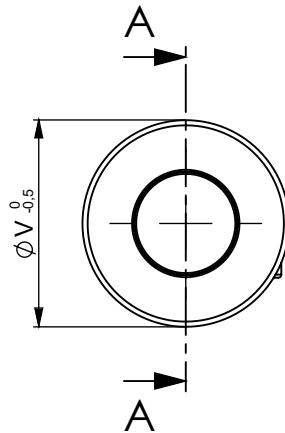
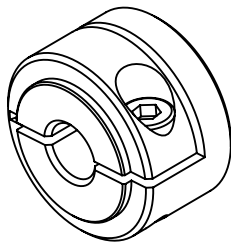


ACCESSORIES

Female magnet support + Magnet 8810/013

Ordering p/n : **M9105/Kxx**

KXX: Where XX is the shaft mounting diameter in mm. Standards are 06, 08, 10, 11, and 14 mm. i.e M9105/K10 mounts to a 10 mm shaft.

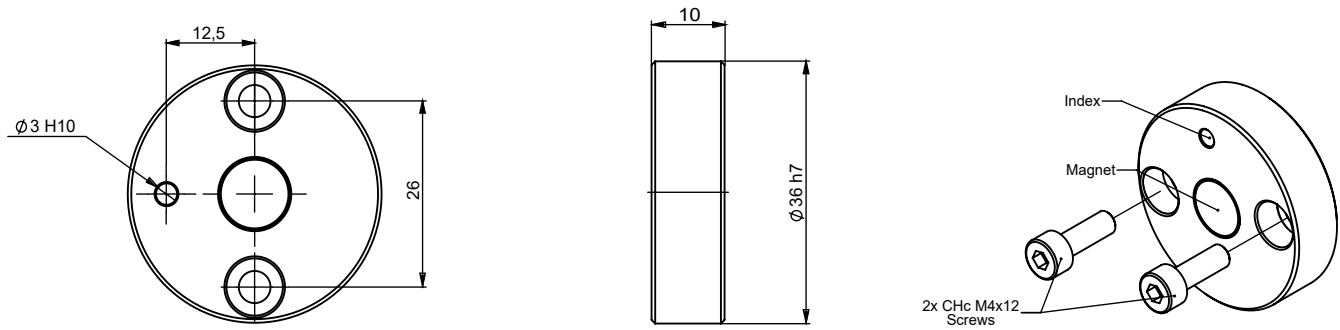


SECTION A-A

	M9105/K06	M9105/K08	M9105/K10	M9105/K11	M9105/K14
X	06 H7	08 H7	10 H7	11 H7	14 H7
V	20	20	26	26	29
W	9,3	9,3	10	10	10
Y	12,5	12,5	14	14	14
Z	15	15	15	15	18

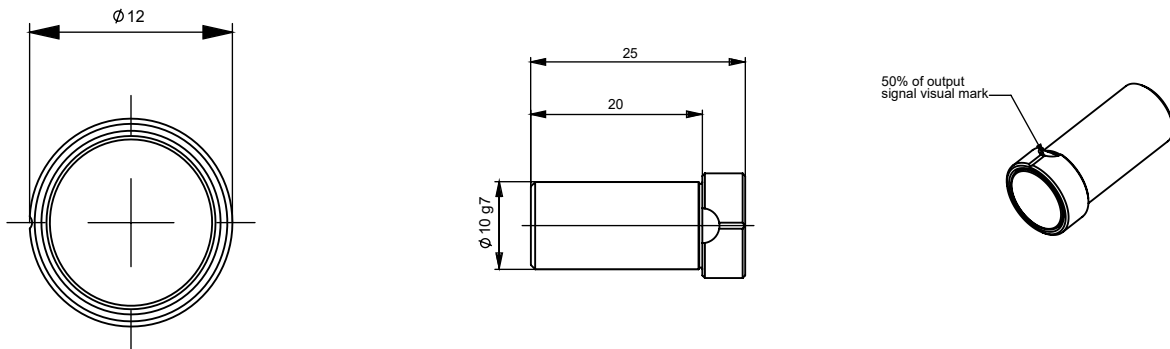
Frontal magnet support + Magnet 8810/013

Ordering p/n : **M9105/F26**



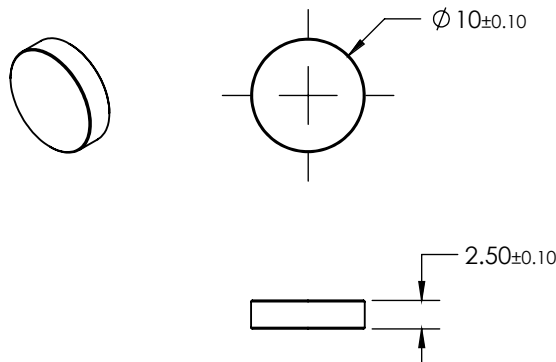
Male magnet support + Magnet 8810/013

Ordering p/n : **M9105/M10-01**



Magnet

Ordering p/n : **8810/013**



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