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

CE

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

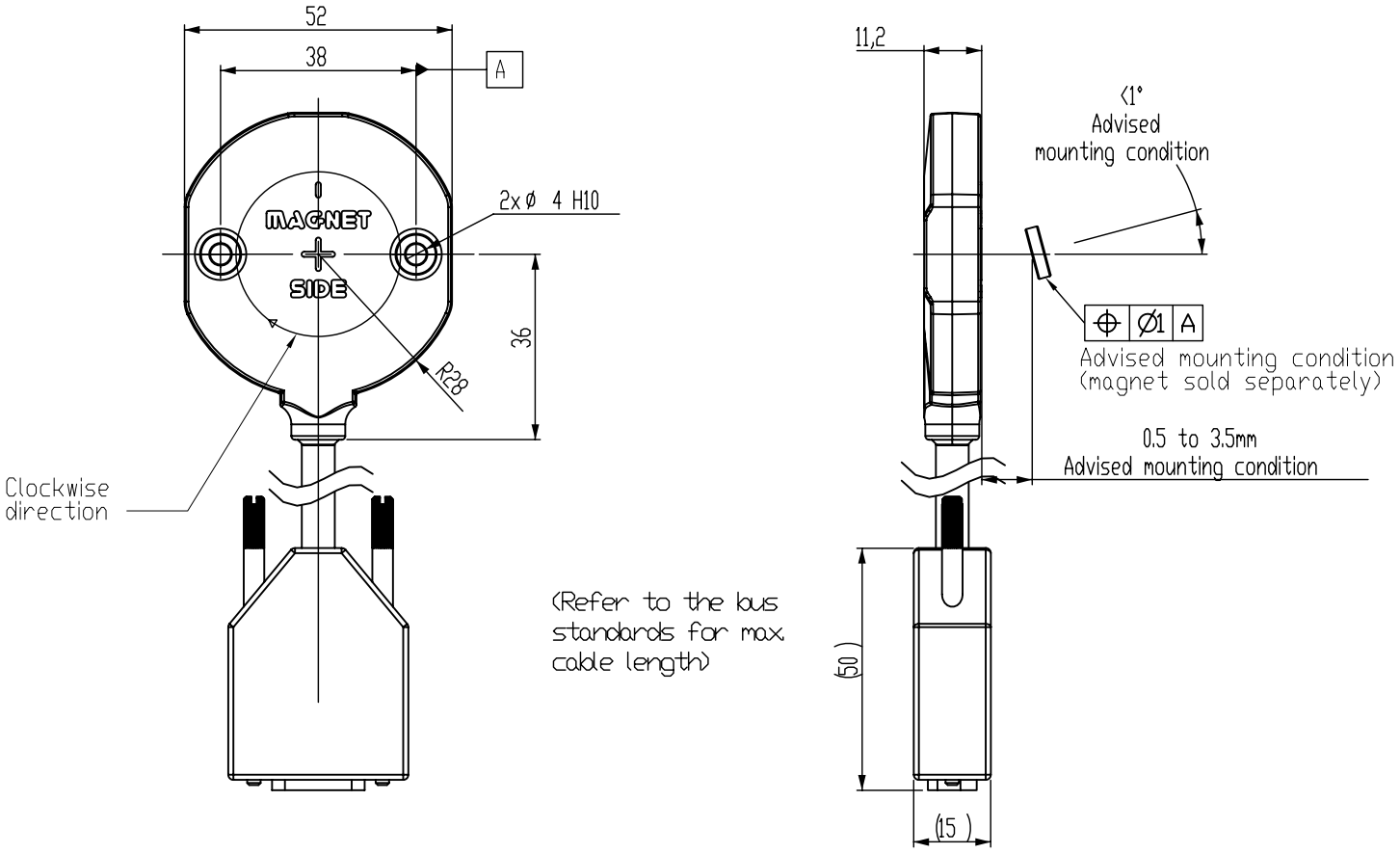
Resolution: Defines the resolution per revolution (0 to 4 096).
Transmission Speed: Programmable from 10kBaud (1 000m) to 1 Mbaud (25 m) ; value per default : 20 Kbaud.
Address: Defines the software address of the encoder on the bus (1 to 127, Value per default : id = 1).
Direction: Defines the direction of count of the sensor.
RAX: Defines the value of the current position (with the shaft held stationary)
CAMs: High and low limits.

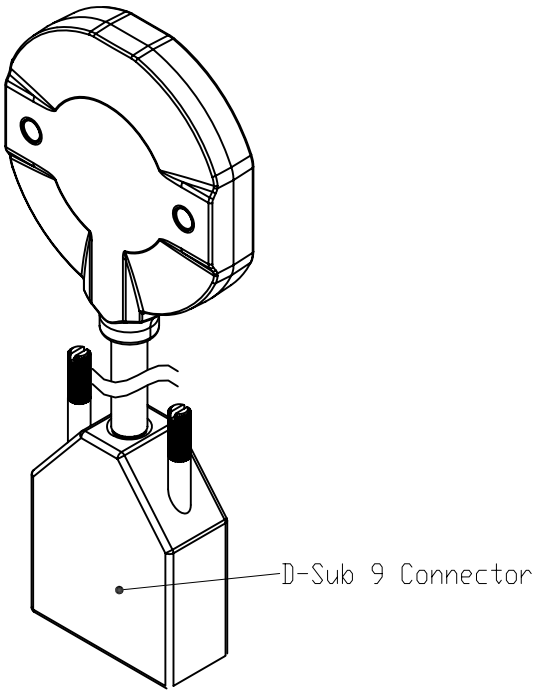
Communication Modes

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).





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

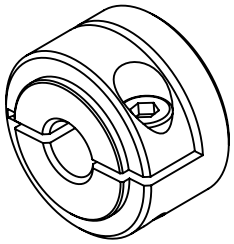
Cable Length

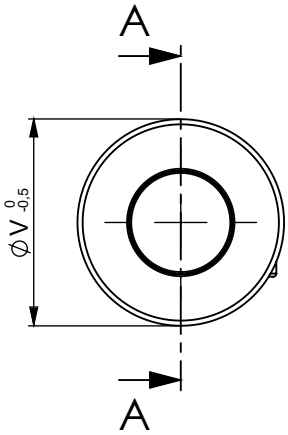
020: 2 meters

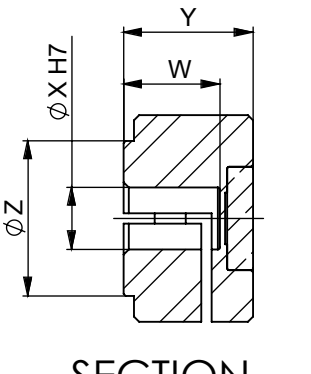
ACCESSORIES

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.



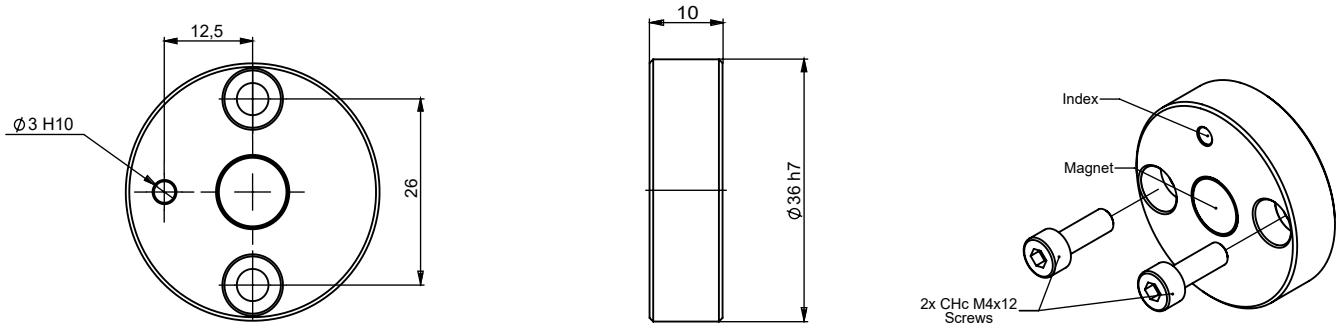




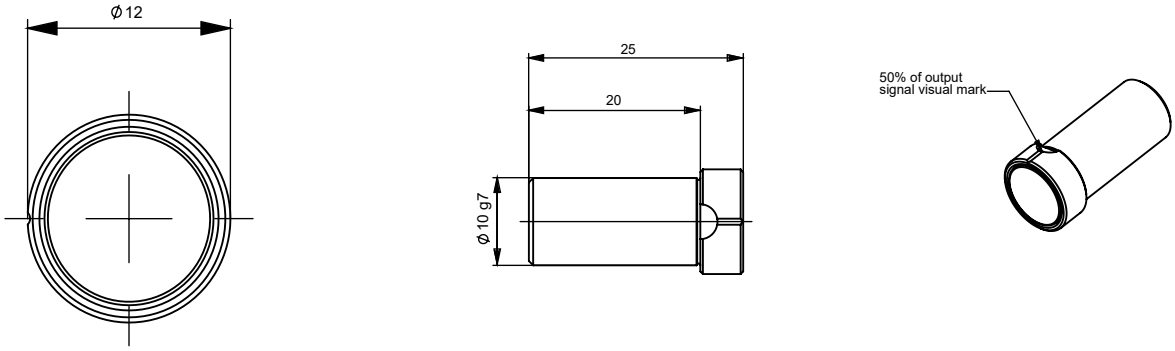
SECTION A-A

	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

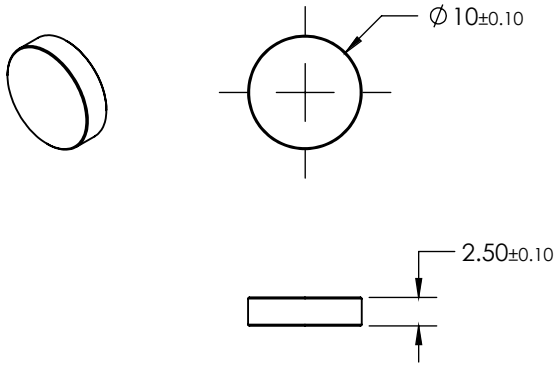
Frontal magnet support + Magnet 8810/013
Ordering p/n : **M9105/F26**



Male magnet support + Magnet 8810/013
Ordering p/n : **M9105/M10-01**



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



CONTACT US
Americas
+1 (800) 350 2727
sales.beisensors@sensata.com
EMEA
position-info.eu@sensata.com
+33 (3) 88 20 8080
Asia Pacific
sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006 ext 2808