



## | ACW4 CANopen

CANOPEN ABSOLUTE SINGLE TURN MODULAR



### 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

<b>Terminations</b>	PVC Cable with SUBD9 connector
<b>Housing</b>	Macromelt PA638
<b>Weight</b>	0,150 kg

### Electrical

<b>Electrical Angle</b>	360°
<b>Output Function</b>	CANopen
<b>Minimal Cycle Time</b>	< 400µs
<b>Resolution</b>	Single –turn, 12 bits
<b>Accuracy</b>	+/-0.3% on 360°
<b>Repeatability</b>	+/-0.1% on 360°
<b>Supply Voltage</b>	5 to 30 Vdc
<b>Start-up</b>	< 1 s
<b>Current Requirements</b>	< 40mA
<b>Protection</b>	Overvoltage Protection: Yes Reverse Polarity Protection: Yes Short Circuit Protection: Yes
<b>EMC</b>	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 10kBaod (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 encoder.

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

**Games:** High and low limits.

## Communication Modes

Encoder 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.

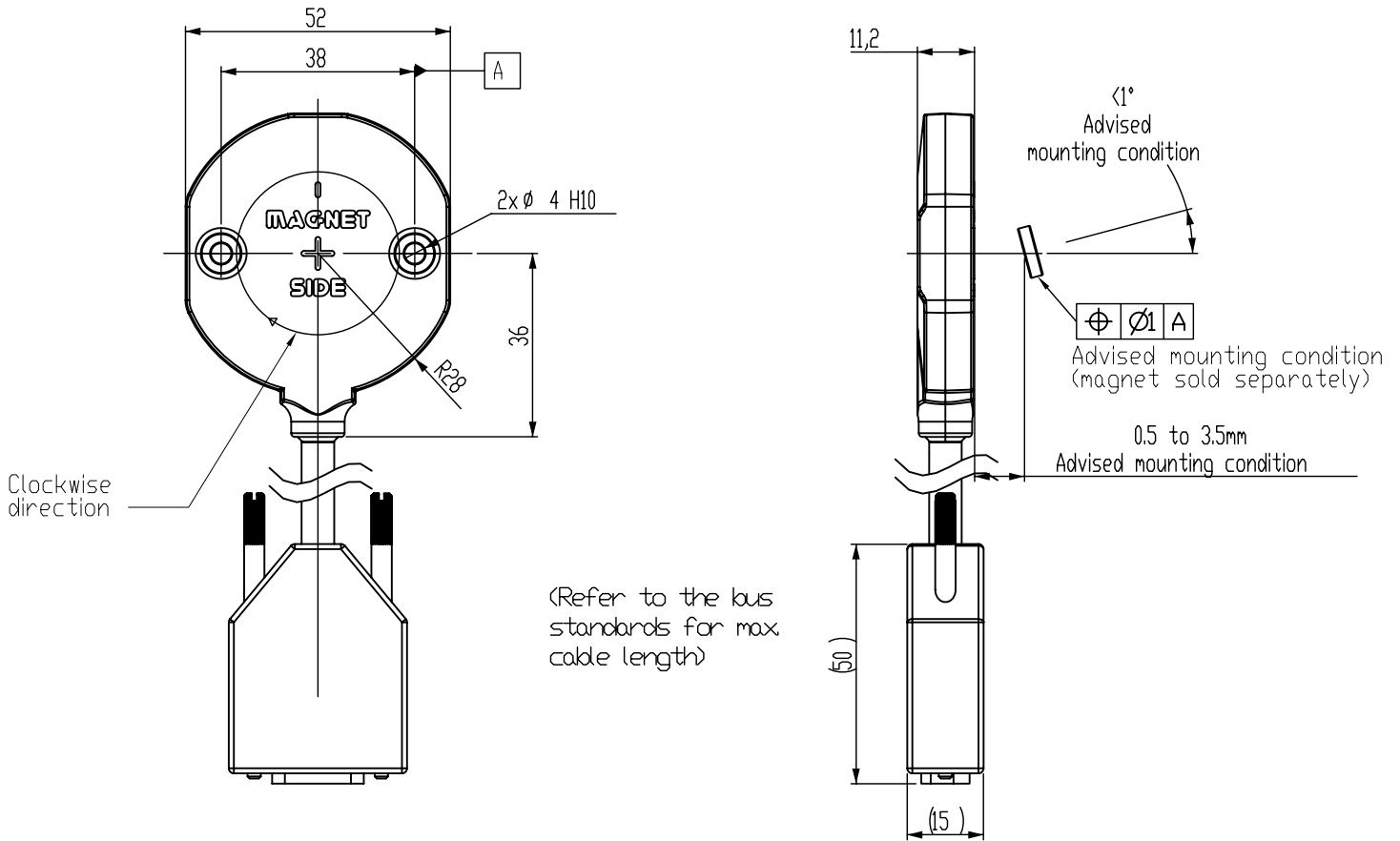
**POOLING Mode (Answer to a RTR signal) :** The sensor only answers to a request.



## DIMENSIONS

All Dimensions are in millimeters.

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





### CANOPEN CONNECTION, CABLE + DB9 CONNECTOR

		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//PBB//12//BBR020

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

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

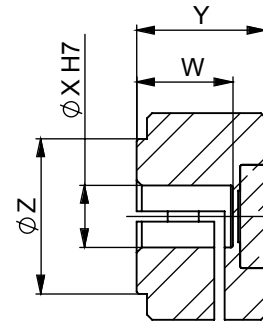
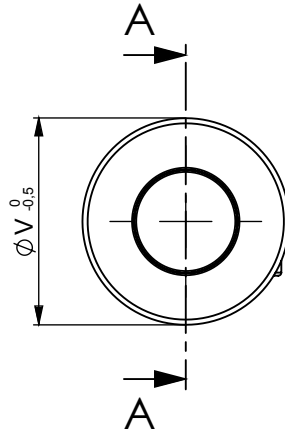
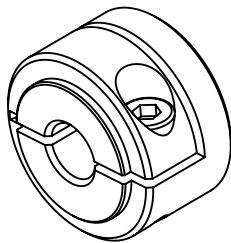


## ACCESSORIES

### 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
<b>W</b>	6 H7	8 H7	10 H7	11 H7	14 H7
<b>X</b>	20	20	26	26	29
<b>Y</b>	12,5	12,5	14	14	14
<b>Z</b>	15	15	15	15	18

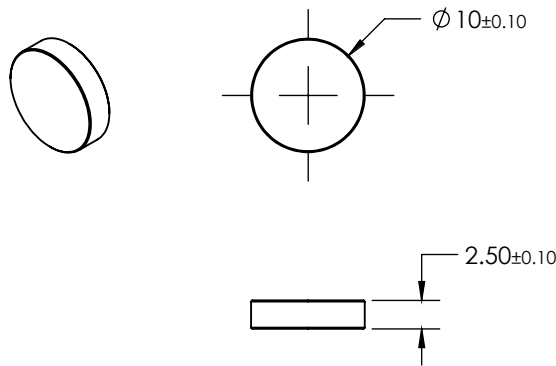
**Frontal magnet support + Magnet 8810/013**  
 Ordering p/n : **M9105/F26**



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



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



Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://www.sensata.com) SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

**CONTACT US**

**Americas**  
 +1 (800) 350 2727  
[sales.beisensors@sensata.com](mailto:sales.beisensors@sensata.com)  
**EMEA**  
[position-info.eu@sensata.com](mailto:position-info.eu@sensata.com)  
 +33 (3) 88 20 8080  
**Asia Pacific**  
[sales.isasia@list.sensata.com](mailto: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



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.