

ACW4 SSI

SSI ABSOLUTE SINGLE TURN MODULAR



Features

- With its two-part design, the ACW4 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 -40° C to 85° C
- Uses universal supply 5 to 30 VDC – SSI Output
- Available Resolution up to 12 bits per revolution
- Variety of magnet holders available

Applications

- Factory Automation
- Process Automation



SPECIFICATIONS

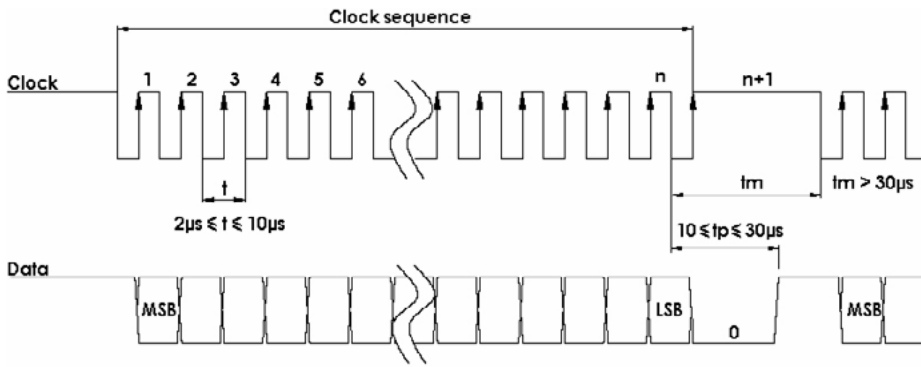
Mechanical

Terminations	PUR cable with M12 5 pin connector
Housing	Macromelt PA638
Weight	0,150 kg

Electrical

Electrical Angle	360°
Output Function	SSI, 10% to 90% Duty Cycle, 2LP = 5Vdc; 5LP = 11 to 30 Vdc
Minimal Cycle Time	1ms
Resolution	Single –turn, 12 bits
Accuracy	+/-0.3% on 360°
Repeatability	+/-0.1% on 360°
Supply Voltage	5V to 30 Vdc
Start-up	< 1s
Response time	< 10 ms
Recommended Load	> 10 kOhms
Isolation	500 Veff
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.

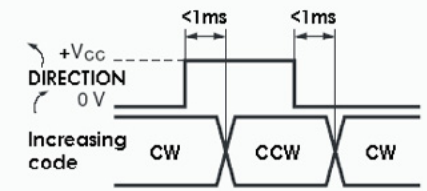
SSI Transmission



Transmission	Transmission up to 400m* at 100kHz in function of the cable characteristics.
Cable	High security of transmission by using shielded cable and twisted pairs.

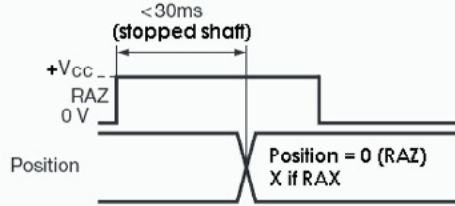
* Consult us for length > 100m.

DIRECTION input



	min	max	Increasing
Level "0"	0 V	0,3x(+V _{CC})	CW
Level "1"	0,7x(+V _{CC})	+V _{CC}	CCW
I direction	< 5mA		

RAZ / RAX Input



	min	max
Level "0"	0 V	0,3x(+V _{CC})
Level "1"	0,7x(+V _{CC})	+V _{CC}
I raz/rax	< 5mA	

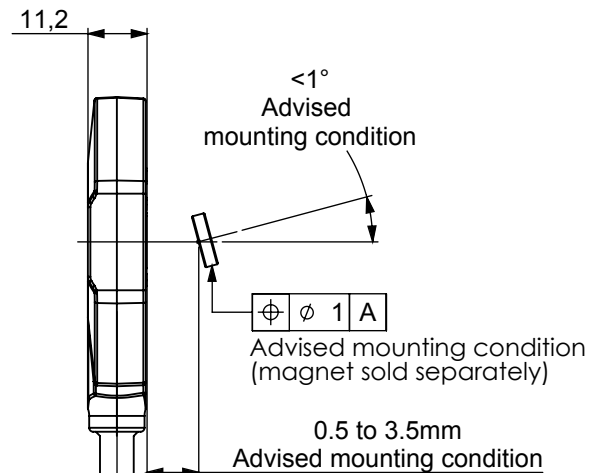
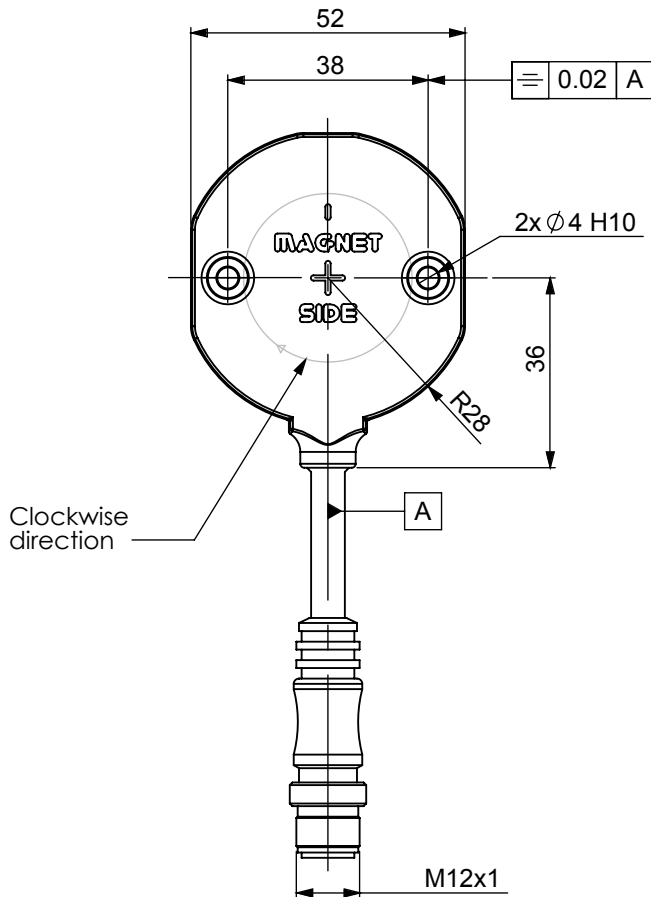
Nota : Note: Connect DIRECTION and RAZ/RAX to a potential (RAZ at 0V if not used)

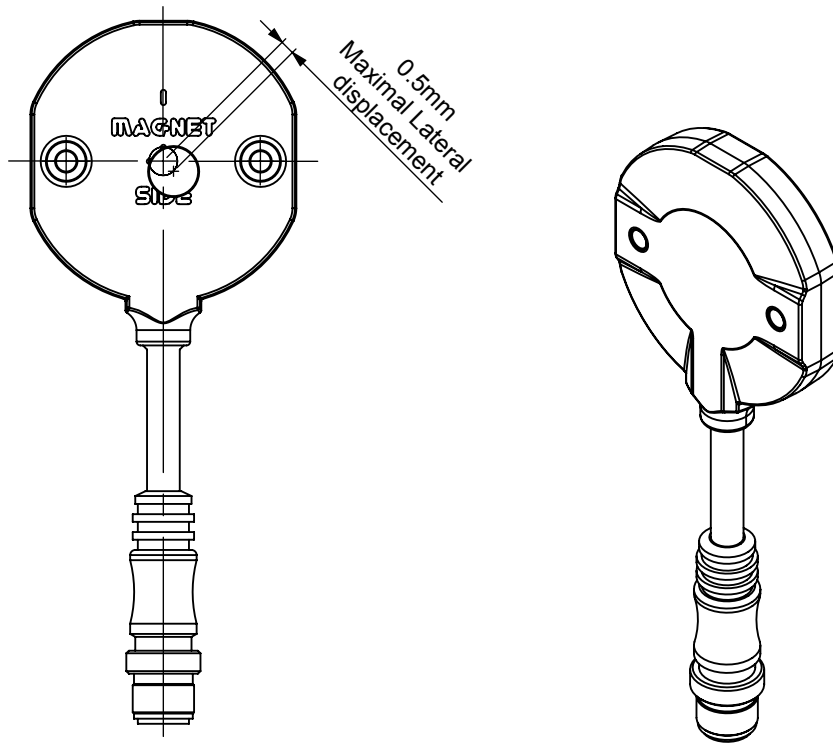


DIMENSIONS

All Dimensions are in millimeters.

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





CONNECTOR PIN OUT

Ref.	Type	+ Vcc	0 V	Clk+	Data+	RAZ	Data-	Clk-	Direction	Ground
S5	SSI cable PUR 8230/050	BN/GN Brown/ Green	WH/GN White/Green	GN Green	GY Gray	BU Blue	PK Pink	BN Brown	WH White	General shielding

NOTES

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



ORDERING OPTIONS

Example : ACW4_00//PCSB//12//S5R005

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

	ACW4	00	//	P	CS	B	//	12	//	S5	R005
Family											
ACW4:	Absolute Single-Turn Sensor										
Shaft Ø											
00:	Modular										
Supply/Output Stage											
P:	5 to 30 Vdc										
Output Stage											
CS:	SSI Without Parity										
Code											
B:	Binary										
G:	Gray										
Resolution											
12:	12 bits										
Connection											
S5:	SSI PUR Cable										
Orientation											
R005:	Radial cable 50cm long										

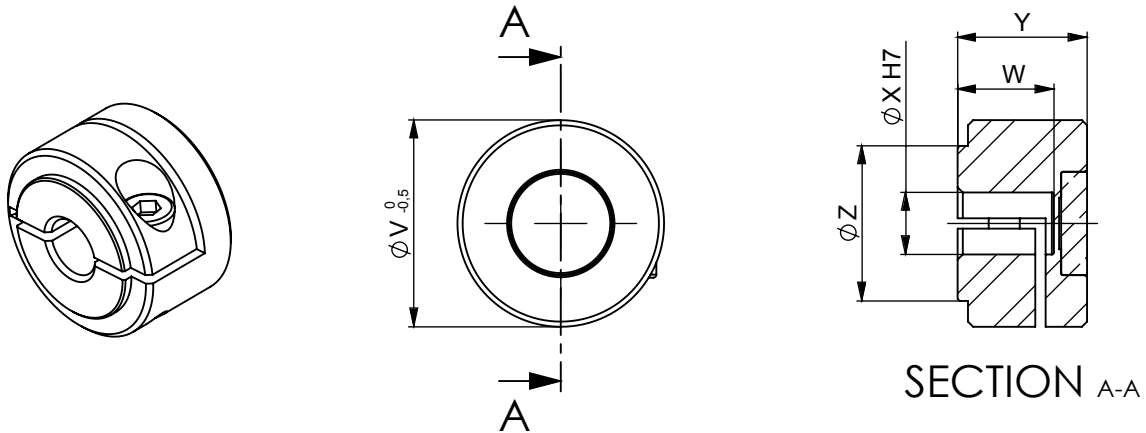


ACCESSORIES

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.



	M9105/K06	M9105/K08	M9105/K10	M9105/K11	M9105/K14
W	6 H7	8 H7	10 H7	11 H7	14 H7
X	20	20	26	26	29
Y	12,5	12,5	14	14	14
Z	15	15	15	15	18

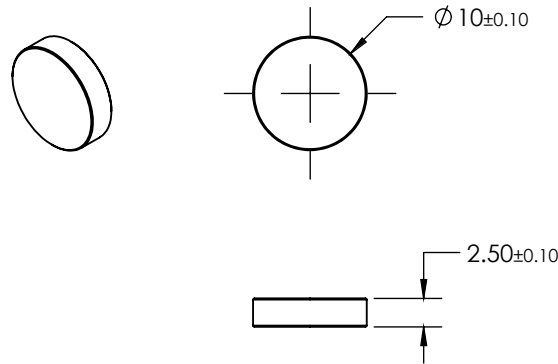
Frontal magnet support + Magnet 8810/013
 Ordering p/n : **M9105/F26**



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



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



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 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

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