

# ACW4 SSI

## SSI ABSOLUTE SINGLE TURN MODULAR SENSOR

Sensata-BEI Sensors' ACW4 sensors provide absolute single turn measurement with an SSI output in an over-molded, two-part modular design that offers flexibility and environmental protection.



### 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

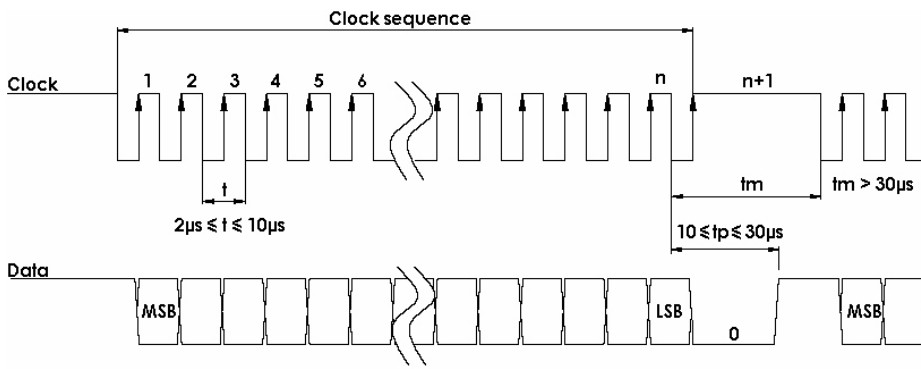
### Mechanical

<b>Terminations</b>	PUR cable
<b>Housing</b>	Macromelt PA638
<b>Weight</b>	0,150 kg

### Electrical

<b>Electrical Angle</b>	360°
<b>Output Function</b>	SSI, 2LP = 5Vdc; 5LP = 11 to 30 Vdc
<b>Minimal Cycle Time</b>	1ms
<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>	5V to 30 Vdc
<b>Start-up</b>	< 1s
<b>Response time</b>	< 10 ms
<b>Recommended Load</b>	> 10 kOhms
<b>Isolation</b>	500 Veff
<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.

# SSI Transmission

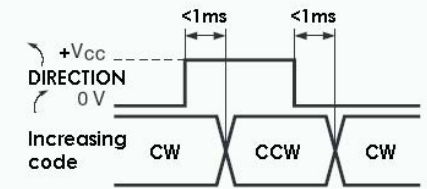


<b>Transmission</b>	Transmission up to 400m* at 100kHz as a function of the cable characteristics.
<b>Cable</b>	High security of transmission by using shielded cable and twisted pairs.

\* Consult us for length > 100m.

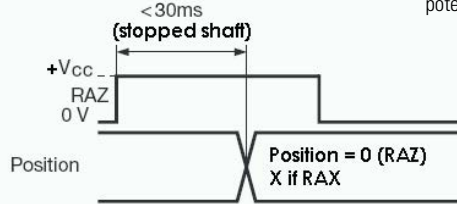
Note: Connect DIRECTION and RAZ/RAX to a potential (RAZ at 0V if not used)

## DIRECTION input



	min	max	Increasing
Level "0"	0 V	0,3x(+V <sub>CC</sub> )	CW
Level "1"	0,7x(+V <sub>CC</sub> )	+V <sub>CC</sub>	CCW
I direction	< 5mA		

## RAZ / RAX input

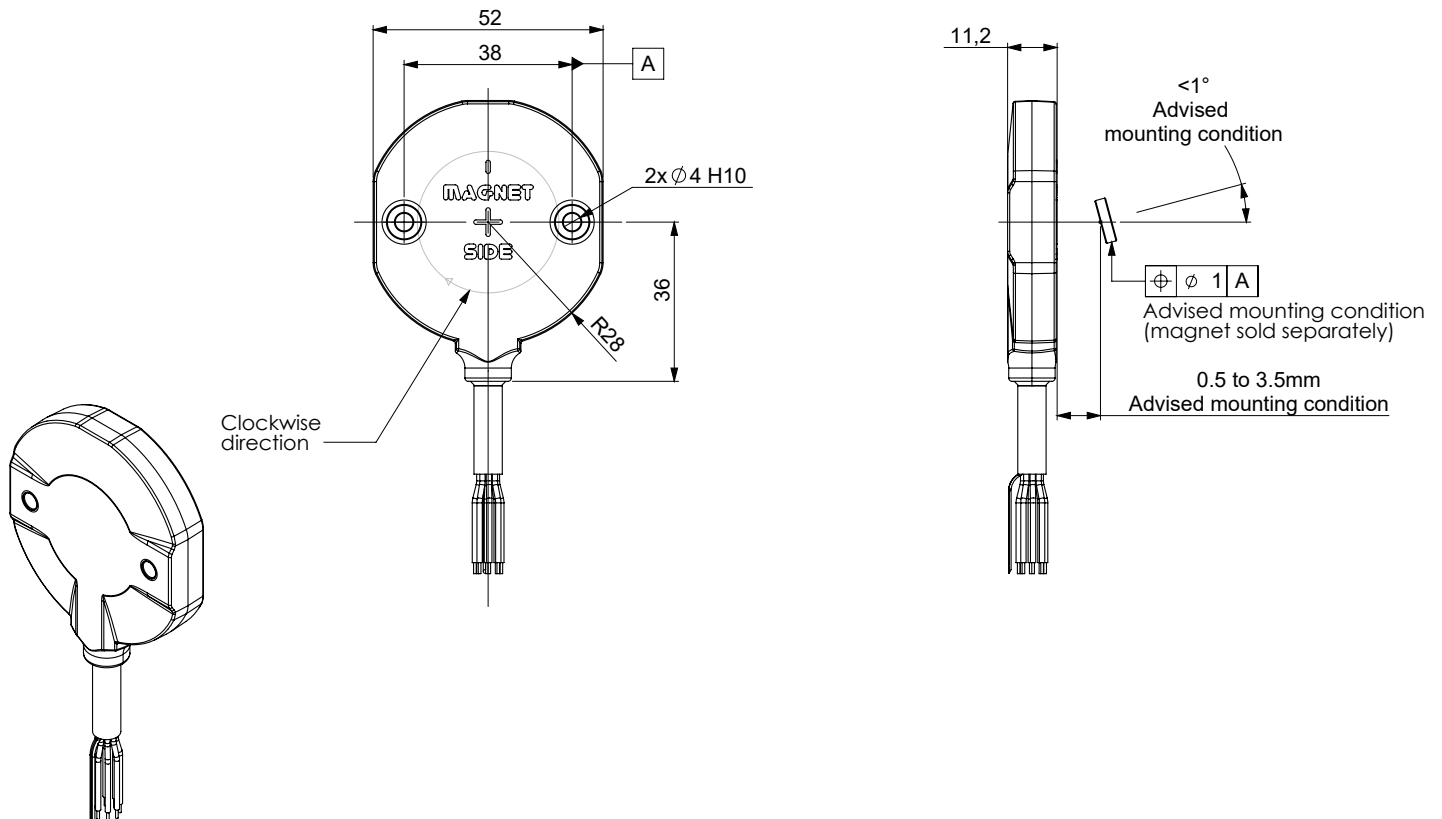


	min	max
Level "0"	0 V	0,3x(+V <sub>CC</sub> )
Level "1"	0,7x(+V <sub>CC</sub> )	+V <sub>CC</sub>
I raz/rax	< 5mA	

## DIMENSIONS

All Dimensions are in millimeters.

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



Ref.	Type	+ Vcc	0 V	Clk+	Data+	RAZ	Data-	Clk-	Direction	Ground
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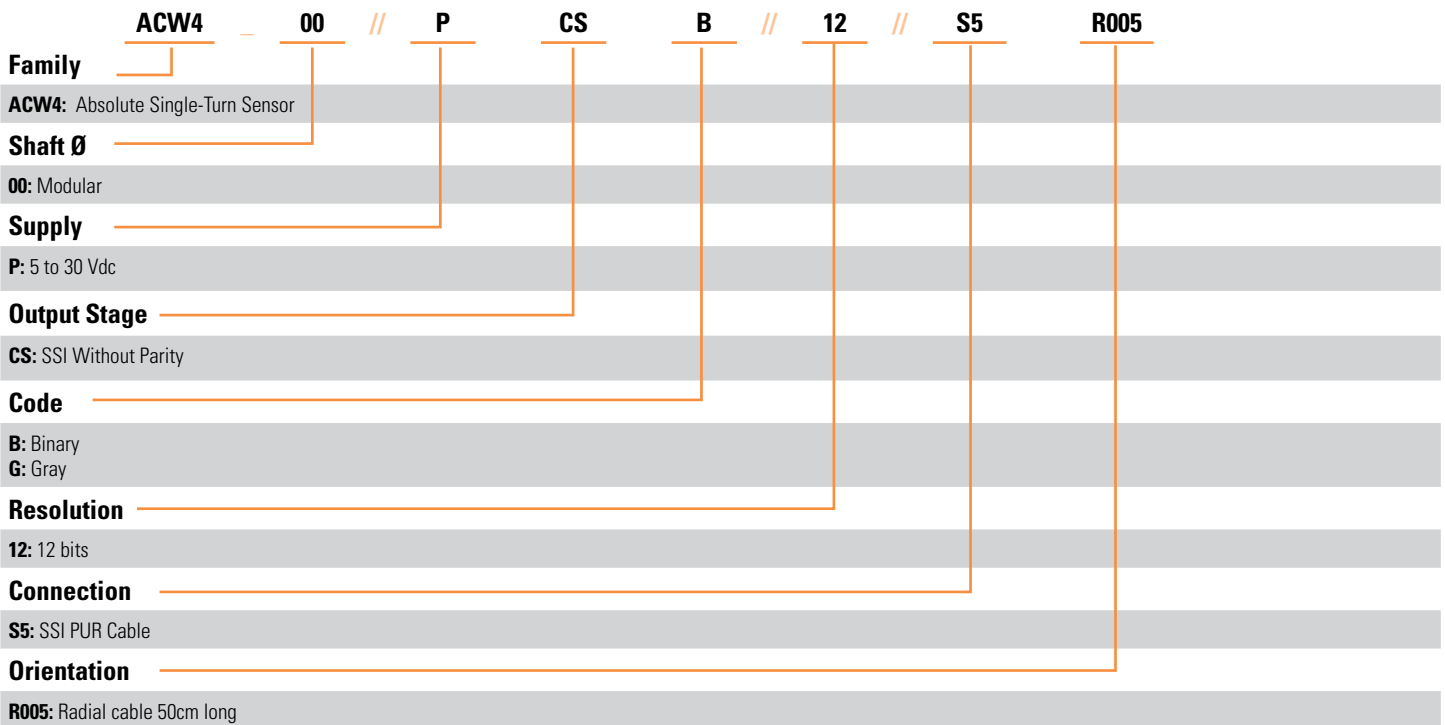

**NOTES**

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


**ORDERING OPTIONS**

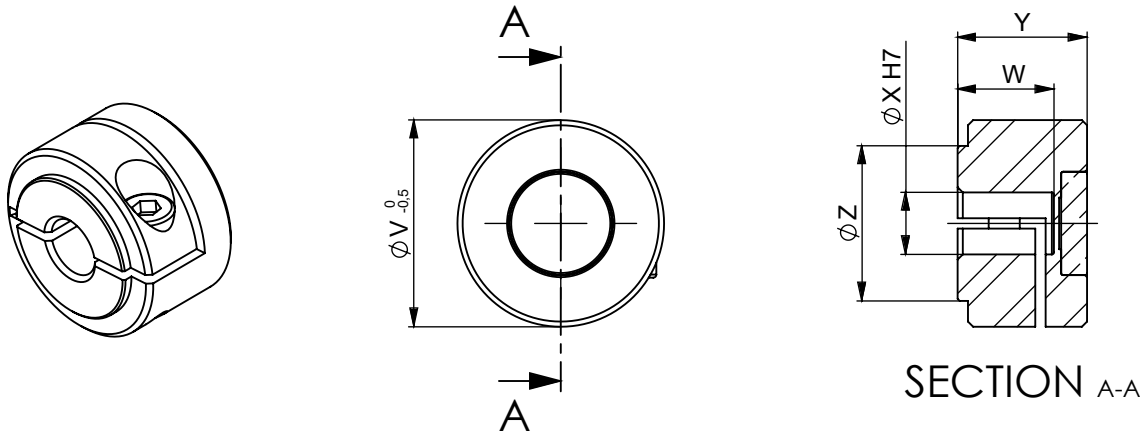
Example : ACW4\_00//P CS B // 12 // S5 R005

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



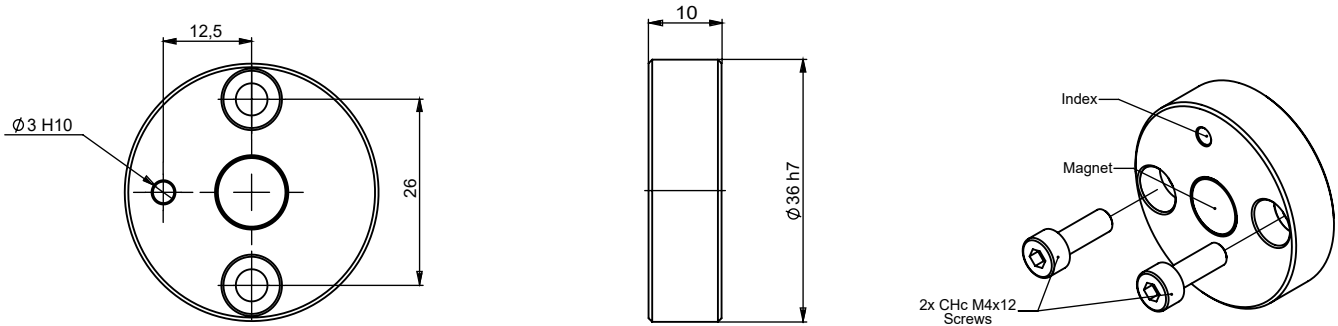
**Female magnet support + Magnet 8810/013**  
 Ordering p/n : **M9105/Kxx**

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.

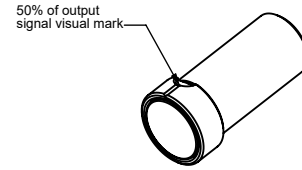
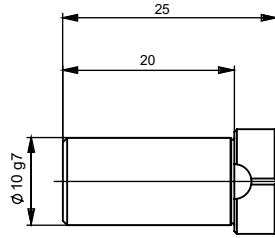
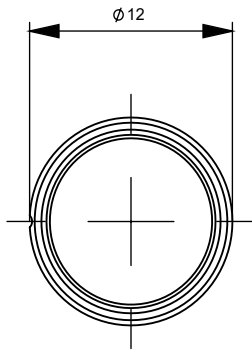


	M9105/K06	M9105/K08	M9105/K10	M9105/K11	M9105/K14
<b>X</b>	06 H7	08 H7	10 H7	11 H7	14 H7
<b>V</b>	20	20	26	26	29
<b>W</b>	9,3	9,3	10	10	10
<b>Y</b>	12,5	12,5	14	14	14
<b>Z</b>	15	15	15	15	18

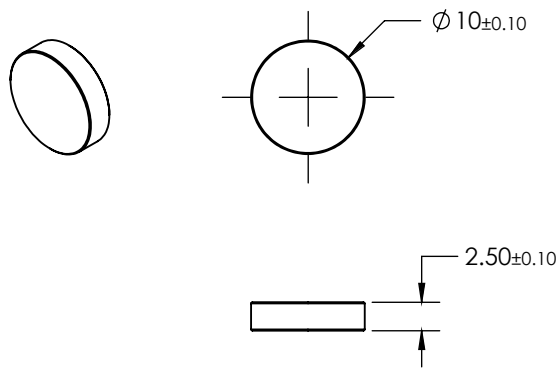
**Frontal magnet support + Magnet 8810/013**  
 Ordering p/n : **M9105/F26**



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



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



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