

# 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

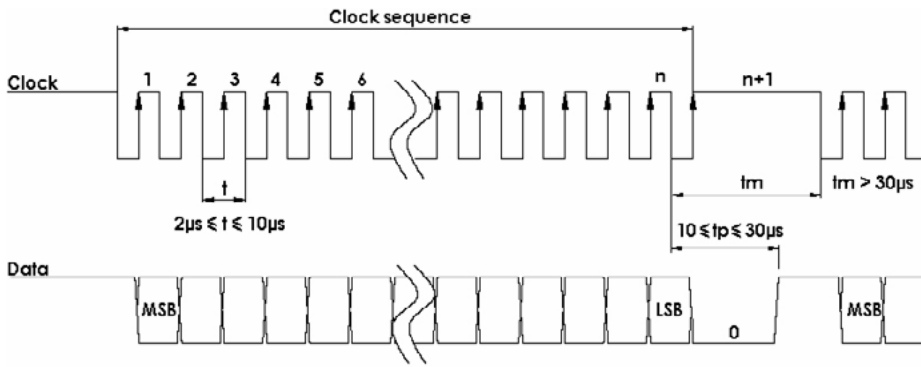
### Mechanical

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

### Electrical

<b>Electrical Angle</b>	360°
<b>Output Function</b>	SSI, 10% to 90% Duty Cycle, 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.

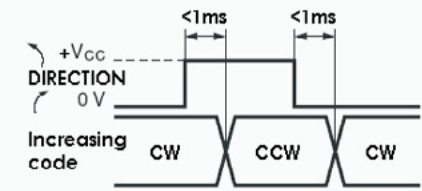
# SSI Transmission



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

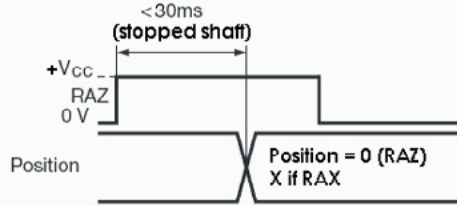
\* Consult us for length > 100m.

## DIRECTION input



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

## RAZ / RAX Input



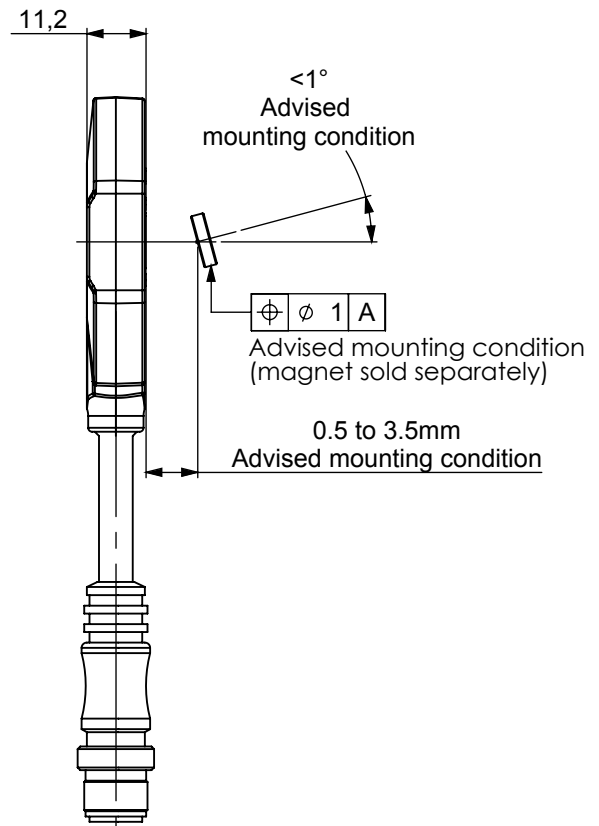
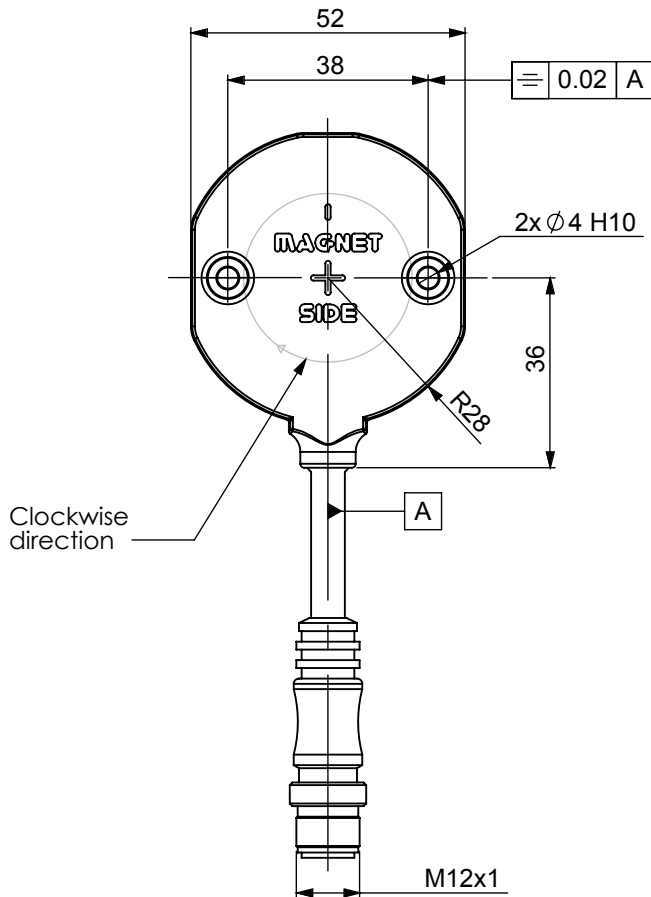
	min	max
Level "0"	0 V	0,3x(+V <sub>CC</sub> )
Level "1"	0,7x(+V <sub>CC</sub> )	+V <sub>CC</sub>
I raz/rax	< 5mA	

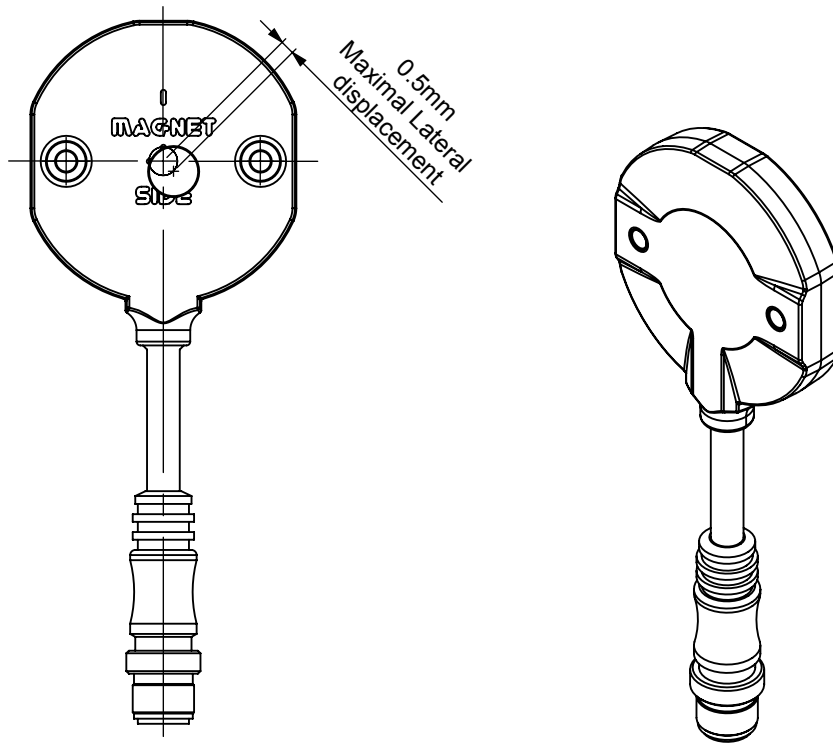
Nota : Note: Connect DIRECTION and RAZ/RAX to a potential (RAZ at 0V if not used)



## 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... )

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

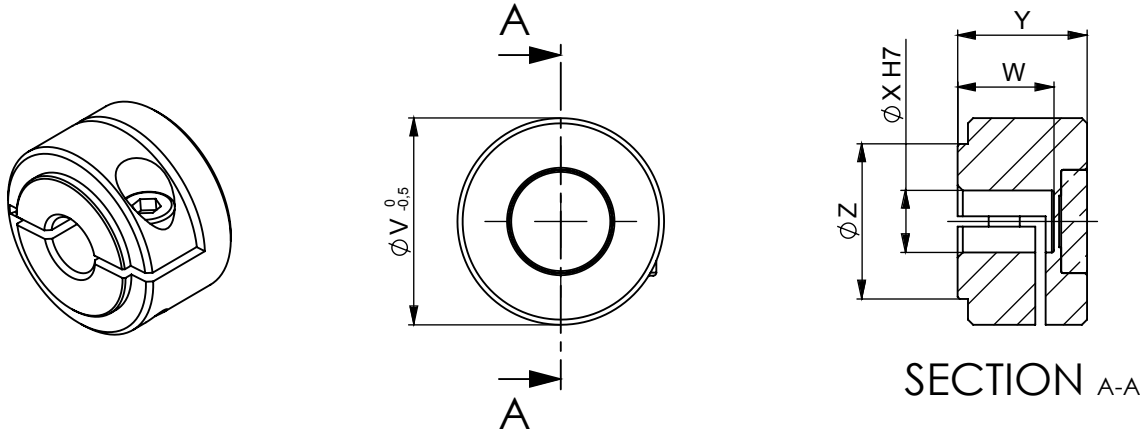


# ACCESSORIES

## 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.



	<b>M9105/K06</b>	<b>M9105/K08</b>	<b>M9105/K10</b>	<b>M9105/K11</b>	<b>M9105/K14</b>
<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

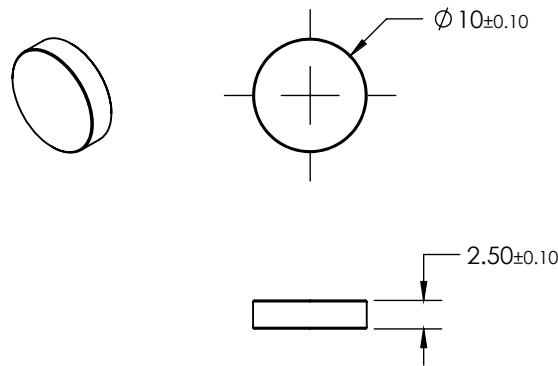
**Frontal magnet support + Magnet 8810/013**  
 Ordering p/n : **M9105/F26**



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



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



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