

ACW4 PWM

PWM 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 Vdc or 11 to 30 VDC – PWM 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 pins connector
Housing	Macromelt PA638
Weight	0,150 kg

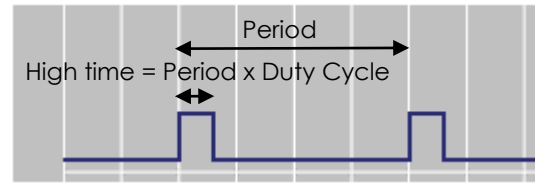
Electrical

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

PWM Output

Our PWM mode is defined with the following characteristics :

Supply	5-30Vdc
PWM frequency	1kHz
Duty cycle	10 to 90% (special duty cycle range on demand, for example 5% to 95%, consult us)
Output voltage	Minimum high level = $V_{cc}-2,5V_{dc}$.



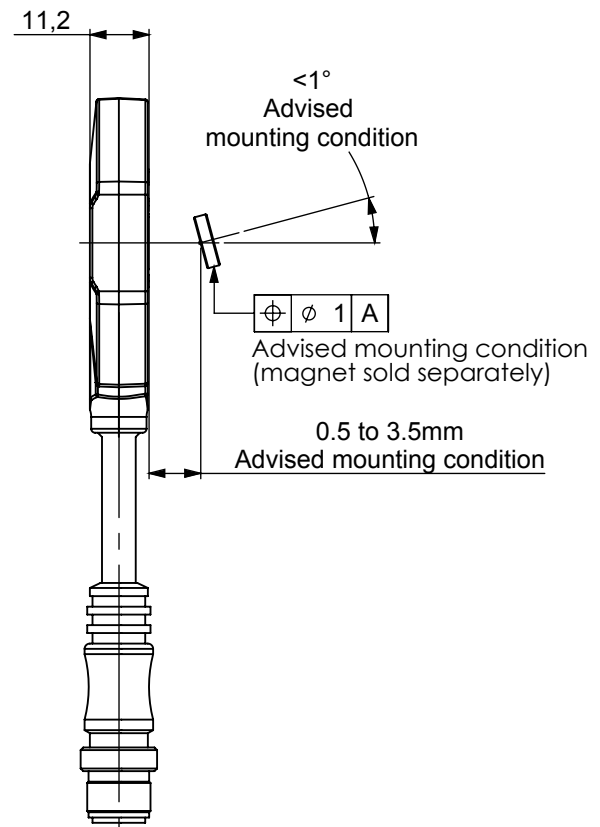
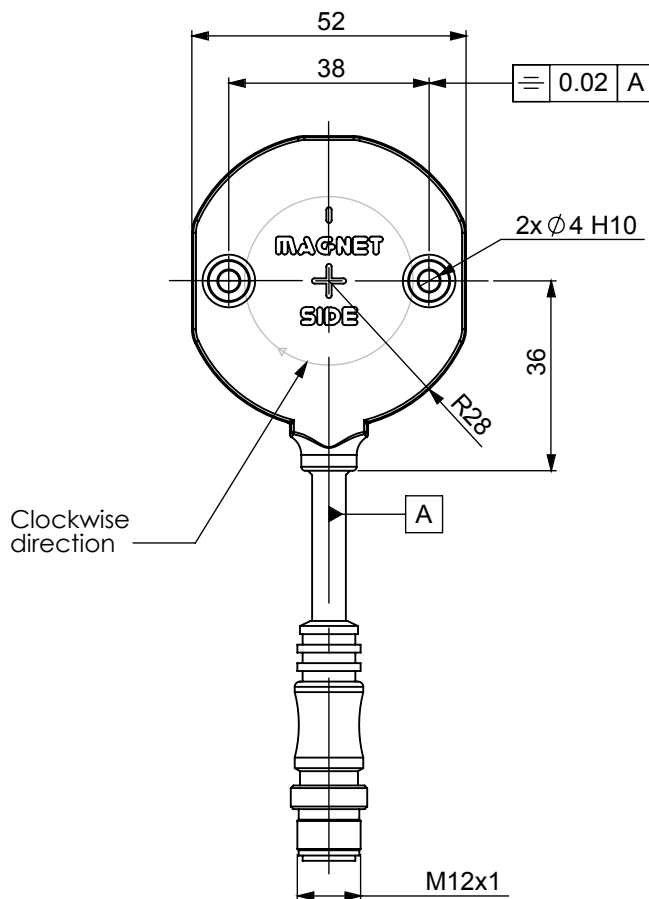
PWM output is highly linear and not subject to time delays. This makes it suitable for high speed applications and particularly in areas which may be subject to electrical interference. As data is time dependent, variation in voltage supply, data cable distances and subsequent circuitry have no appreciable effect on the data quality.

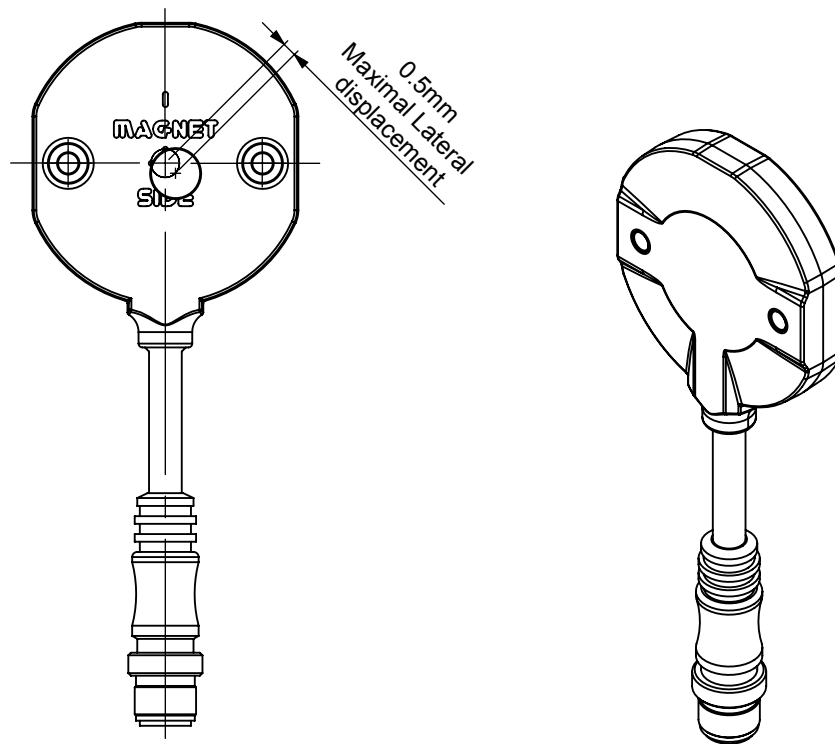


DIMENSIONS

All Dimensions are in millimeters.

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





CONNECTOR PIN OUT

Function	Vcc	0V	Analog Out	Ground
Color	Brown BN	White WH	Green GN	Shield



NOTES

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



ORDERING OPTIONS

Example : ACW4_00//5LP1//00360//L3 R020

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

	ACW4	00	//	5LP	1	//	00360	//	L3	R020
Family										
ACW4: Absolute Single-Turn Sensor										
Shaft Ø										
00: Modular										
Supply/Output Stage										
5LP: 11 to 30 Vdc										
2LP: 5Vdc +/- 5%										
PWM 1 kHz, 10% to 90% duty cycle										
Direction										
1: CW, Clockwise positive										
2: CCW, Counterclockwise positive										
Resolution										
Angle in degrees, ie 00360 = 360 degrees										
Connection										
L3: 3 conductor PVC cable										
Connection Orientation										
R020: Radial cable 2m long										

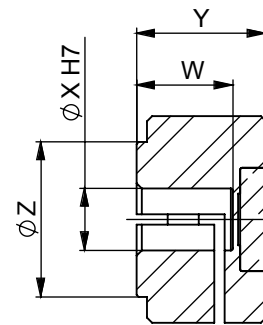
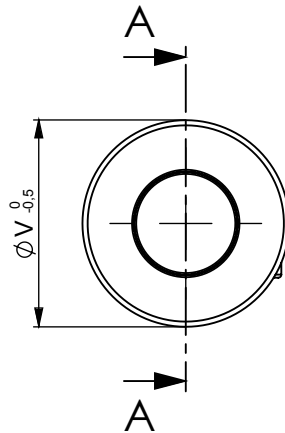
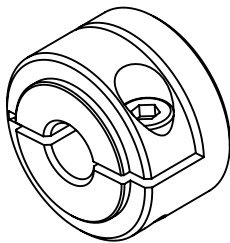


ACCESSORIES

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.

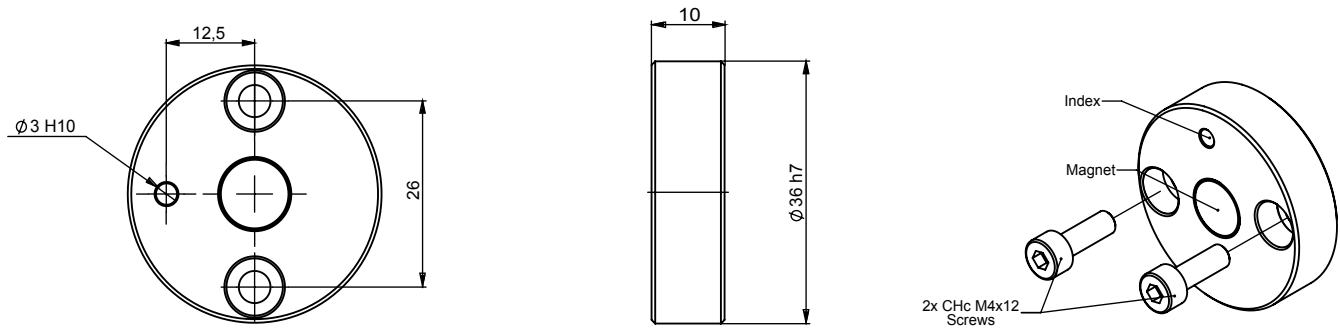


SECTION A-A

	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

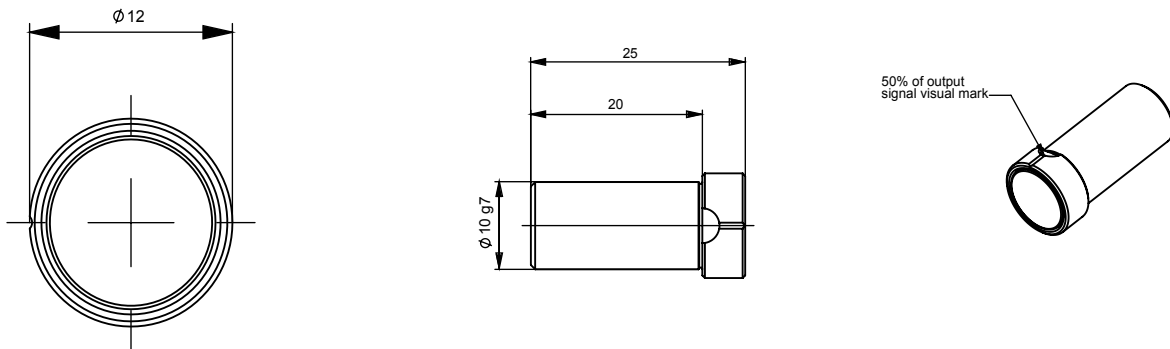
Frontal magnet support + Magnet 8810/013

Ordering p/n : **M9105/F26**



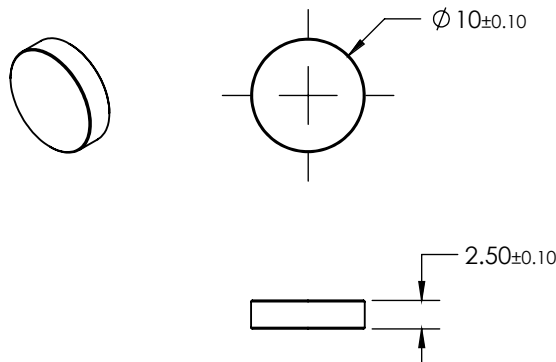
Male magnet support + Magnet 8810/013

Ordering p/n : **M9105/M10-01**



Magnet

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



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