

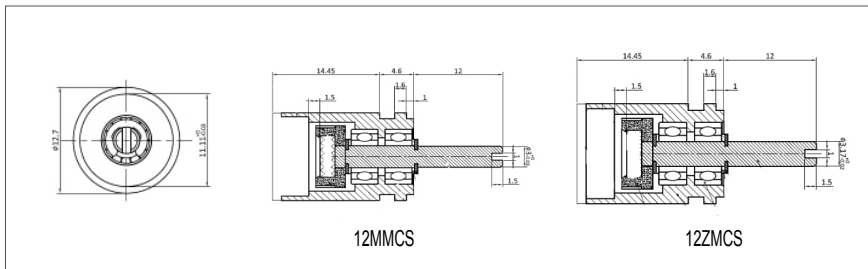
# RotaCol® - Miniline PRECISION ANALOG CONTACTLESS ROTARY POSITION SENSORS - SERVO MOUNTING

12A M/Z MCS



[www.rotacol.info12ammcs.pdf](http://www.rotacol.info12ammcs.pdf)  
[www.rotacol.info12azmcs.pdf](http://www.rotacol.info12azmcs.pdf)

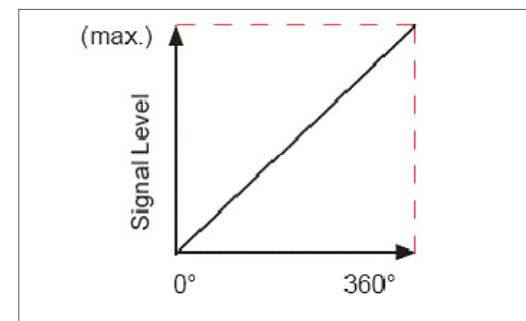
Analog - interface, 12mm housing, Mini size  
Hall CMOS technology, low cost  
Output : 0-5V ratiometric  
Ball bearing - Servo mounting



## FUNCTION PRINCIPLE

The determination of angular position and signal generation is realised by an intelligent CMOS Hall sensor. A diametrical polarised magnet induces its magnetic field into the sensor. It rotates and provides a conditioned signal to the integrated electronic.

## ANALOG INTERFACE



At the output of the sensor a variable voltage is provided proportional to the position of the shaft / axis over a complete angle range of 360° or a subrange. The contactless sensor electronic guarantees a steady signal level and a very low linearity error of 0.3%. With supply voltage of 5V ± 10% , output signal of 0 - 5V (ratiometric) at the sensor is provided. Besides this a large variety of electrical options such as Zero point programming, Centre point programming, Multipoint programming are provided.

## ELECTRICAL CHARACTERISTICS

Electrical angle	20° to 360° (in 1° step programmable)	
Resolution	4096 step (12 bit)	
Independent linearity tolerance		
Signal type	Supply voltage	Output signal
0505	5V ±10%	0 - 5V ratiometric
Supply current (mA)	< 16 mA	
Update rate	1 ms	

## MECHANICAL CHARACTERISTICS

Mechanical angle	(O) 360°(continuous)	
Shaft diameter and length (FMS)	3 mm Ø X 12mm (MMCS) 1/8" Ø X 12mm (ZMCS)	
Mechanical speed (Max.)	3000 rpm	
Electrical speed (Max.)	160 rpm	
Rotational life	~ 15 million rotations	
Operating torque (approx.)	0.5 -1 Ncm	
Operating temperature range	- 40 to +85° C	
Protection	IP	
Weight		

## MATERIAL

Housing	Aluminium anodized
Shaft	Stainless Steel
Bearing	2 precision ball bearings
Terminals	Brass, silver plated

## OPTIONS AND ORDERING REFERENCES

Housing diameter	Analog output	Metric Miniline ( Bush Thread M6 X0.75& Shaft Ø 3 mm)	Inch Miniline ( Bush Thread 1/4" X 32 UNEF & Shaft 1/8" Ø)	Miniline RotaCol	Servo mounting	Signal	Angle of rotation	Electrical rotational direction	Programming options for non - effective electrical angle	Programming options
12	A	M	Z	MC	S	0 - 5V (ratiometric)	any angle from 20 to 360° (in 1° step programmable)	Clockwise (CW) Counter clockwise (CCW)	Delta 1/2 Low level High level Variable level	Zero point Center point Multipoint
12	A	M / Z		MC	S	S0505	Oxxx	CW / CCW	PEx	POx

Example with description - 12A ZMCS S0505 O360CW - 12mm diameter, analog output, Inch Shaft 1/8"Ø, Miniline RotaCol, Servo mount, Signal - 0-5V ratiometric, 360 angle and clockwise

Standard Version : 360° CW Electrical & Mechanical angle, Medium torque, 0-5V ratiometric output

For complete RotaCol Contactless Rotary Sensor product range refer - [www.rotacol.info/rotamec.pdf](http://www.rotacol.info/rotamec.pdf)

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