



Titan-Moto

Model: TMS-23 Series

Non-Contact Rotary Position Sensor



Description:

The Titan-Moto TMS-Series of 'non-contact' rotary position sensors are designed to withstand the harsh environments of performance racing, automotive and industrial applications.

By using proven 'Hall Effect' technology we offer a sensor with high performance and reliability at extreme temperature from -40 to 150°C and withstand sustained vibration and shock levels.

With its modular construction, the TMS-Series has multiple options of mounting flange and options of the non-contact magnet interface to suit most applications. Also, single and dual electrical outputs which can be independently configured for applications within safety critical control or data logging.

Measurement ranges are pre-set from 20° to 360°, common and custom angles are selectable from our part numbering codes on page 3.

For applications that require some degree of customization we offer support and the service of a highly skilled design and manufacturing team at Stork Solutions.

Product Features:

- Non-Contact Technology
- Industry Standard Size
- Miniature Rugged Construction
- Single or Dual Output
- Electrical Angles from 20° to 360°
- High Operating Temperature
- Lightweight

Applications:

- Throttle Position
- Drive by Wire Controls
- Brake Pedal Position
- Steering Angle
- Actuator Position



Technical Specifications: TMS-23 Series Non-Contact Rotary Position Sensor

Sensor Technology	Non-Contact Hall Effect
Measurement Range	20° to 360° (custom options in 1° increments)
Supply	5V DC regulated
Over Voltage Protection Limit	40V DC
Reverse Polarity Protection	Yes, On supply
Output	0.5 to 4.5V (2.5V at centre position/ half of range)
Output Options	Single or Dual, semi or full redundancy, opposing signal direction
Output Direction	Output increases when shaft is rotated clockwise(CW) or counter-clockwise (CCW) when viewed from the shaft side
Maximum Output Current	8mA per channel
Resolution	12 Bit @ 5KHz or optional 14 Bit @ 1.667KHz
Independent Linearity	≤0.3% of measurement range
Operating Temperature Range	-40°C to 150°C
Temperature Coefficient	50ppm/°K of output signal
Magnet	Neodymium, diametric polarity ring magnet
Magnet Distance from Sensor	1 to 3mm from sensor flange surface ideally
Mechanical Life	>50 million operations
Mechanical Angle	360° Continuous rotation
Magnet Carrier (option)	PEEK, 10mm diameter with M3x2 mounting thread
Housing Material	Anodized aluminium
Electrical Connection	50cm, 26AWG 55spec cable + FDR 25 sleeve
Protection Class	IP68
Vibration & Shock	5-2000Hz vibration, 3m drop onto concrete shock
Weight	8g without cable



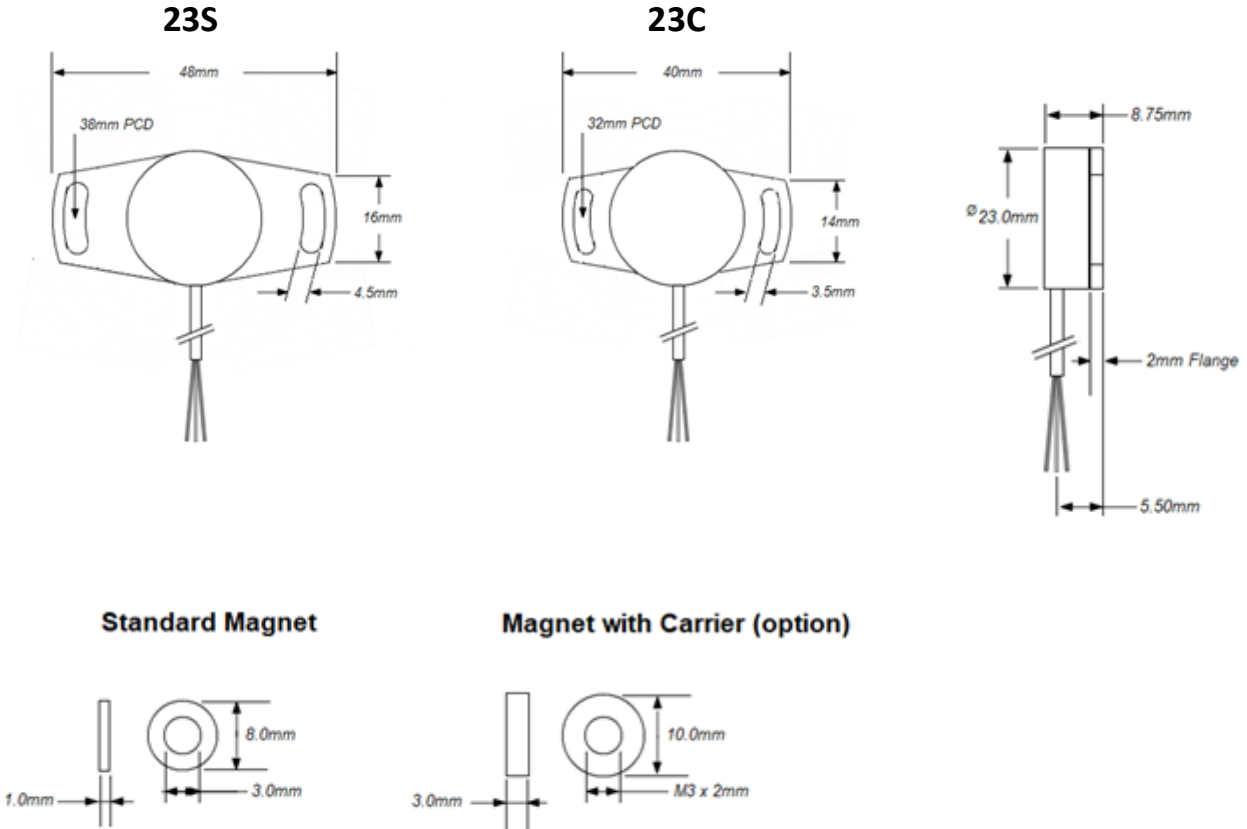
STORK SOLUTIONS

Part Numbering Codes: TMS-23 Series Non-Contact Rotary Position Sensor

TMS-23	S	-030	-AX	-MS	-000
Housing Size	↑				
S type, see drawings, 38mm PCD	S				
C type, see drawings, 32mm PCD	C				
Electrical Angle	↑				
30°		030			
60°		060			
120°		120			
240°		240			
360°		360			
Custom XXX (Insert angle required in 1° increments)		XXX			
Output Signal		↑			
Single channel, CW rotation: 0.5 to 4.5V			AX		
Single channel, CCW rotation: 4.5 to 0.5V			BX		
Dual channel, CW rotation: 0.5 to 4.5V			AA		
Dual channel, CCW rotation: 4.5 to 0.5V			BB		
Dual channel opposite, CW, CCW rotation: 0.5 to 4.5V & 4.5 to 0.5V			AB		
Magnet Type			↑		
MS. Magnet standard supplied with sensor				MS	
MC. Magnet inside PEEK carrier				MC	
No magnet				00	
Custom Options				↑	
No options					000
4W. dual channel 4 wire, common supply					4W
R14. 14 Bit resolution					R14
V1. Output 0.25 to 4.75V					V1
V2. Output 0.1 to 4.9V					V2
LXXXX. Cable length in mm (L1000 = 1000mm)					L1000
Consult factory for:					
Independent measurement angles for CH1 & CH2					
Output offset phase shifted CH1 & CH2					



Dimension Details: TMS-23 Series Non-Contact Rotary Position Sensor



Magnets are diametric polarity.

Standard magnet supplied with sensor. Magnet bonded to Peek carrier with M3 thread optional.

Electrical Connections:

	+ Ve Supply	0V Supply	+ Ve Supply	0V Supply	Signal	Signal
Single Channel (3 wire)	Red	Black	-	-	Yellow	-
Dual Channel (6 wire)	Red	Black	Brown	Blue	Yellow	White
Dual Channel (4 wire)	Red	Black	-	-	Yellow	White