

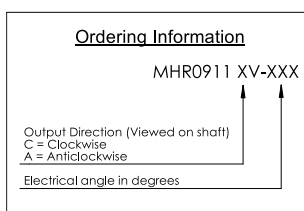
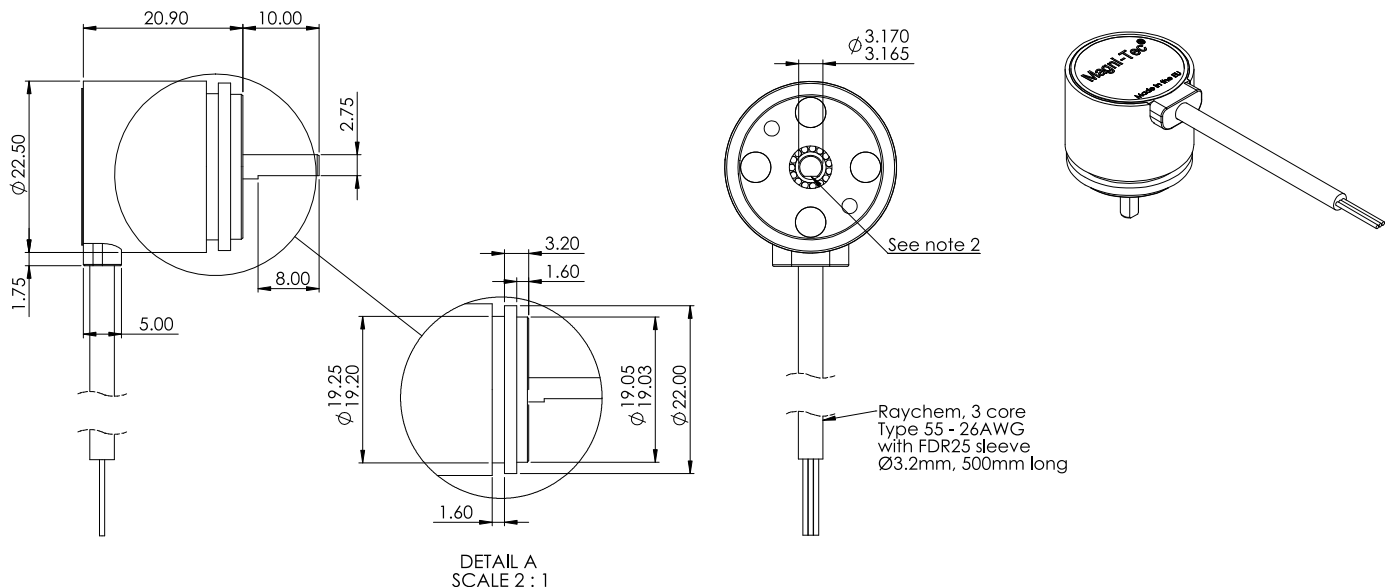
MHR0900 Magni-Hall® Rotary Position Sensors are interchangeable with synchro mount type potentiometers. The sensing circuit is fully encapsulated, sealed to IP68 & IP69K, making them ideal for measurement systems that experience severe shock and vibration. The 1/8th (Ø3.17mm) operating shaft is set between 'two' stainless steel, low-friction, ball-race bearings.

Key Features & Benefits

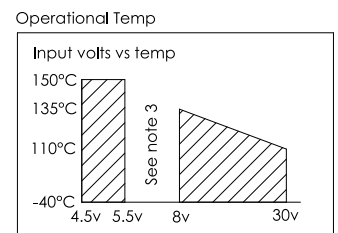
- Measurement range from 20° to 360°
- Servo mount
- Very compact with low mass
- Operating temperature 150°C (302°F)
- Suitable for high dither vibration and high duty-cycle applications
- Superior accuracy (<±0.25% FS)
- Both 5 Vdc and 8-30 Vdc operation
- Dual output option available



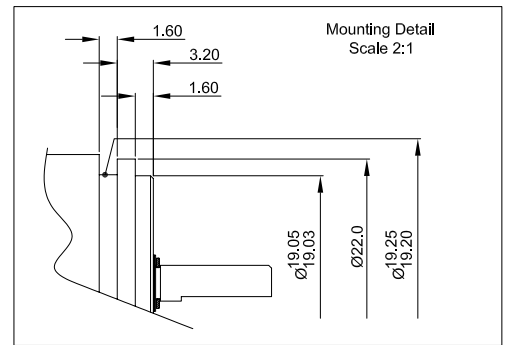
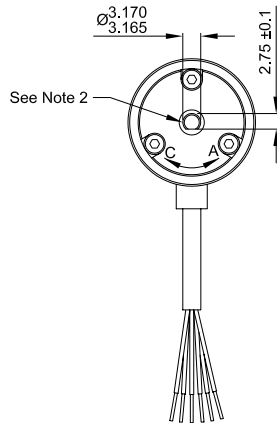
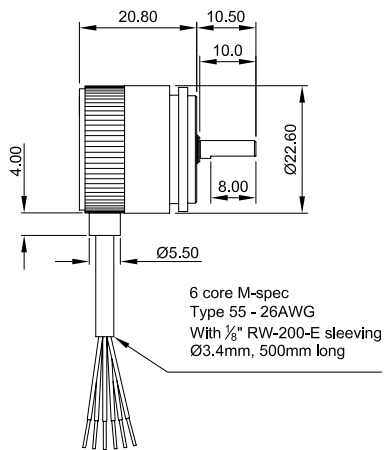
MHR0911 - Model dimensions and mounting



Electrical Connection (see note 1)	
Wire Colour	Function
Red	Supply Voltage (Vs)
White	Output Voltage (Vout)
Black	Ground



MHR0921 - Model dimensions and mounting

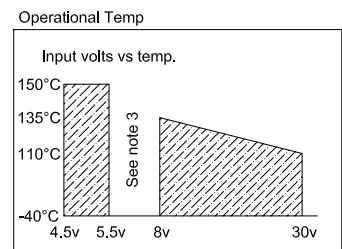


Ordering Information
MHR0921 X_V-XXX

Output direction (viewed on shaft)
A = Both outputs anticlockwise
C = Both outputs clockwise
D = One output anticlockwise,
One output clockwise

Electrical angle in degrees

Electrical Connections (see note 1)		
	Wire Color	Function
Channel 1	Red	Supply Voltage (Vs)
	White	Output Voltage (Vout)
	Black	Ground
Channel 2	Blue	Supply Voltage (Vs)
	Yellow	Output Voltage (Vout)
	Green	Ground



MHR0900 - Electrical & mechanical specification

Input Specification

Supply voltage (Vs)	5.0±10% regulated	8 to 30 unregulated	V DC
Over voltage protection	Up to 50		V DC
Supply current	<15		mA
Reverse polarity protection	Up to -10		VDC
Power on settlement time	<100		mS
Input voltage rise time	0.25 minimum		V/mS

Output Specification

Output type	Analogue		
Output direction	Clockwise or Anticlockwise (specified at time of order)		
Voltage output (Vout)	0-Vs (+5v)	0 - 5.0	V DC
Line regulation	Ratiometric with Vs	<0.01% FS/V	
Monotonic range	0 - 100% measurement range		
Load resistance	>10K		Ohms
Output noise	<5		mV rms

Performance Specification

Measurement angle	20 to 360 ±2 in 1° increments		°
Resolution	0.025		% of measurement angle
Non-Linearity (see note 4)	<±0.25%		FS
Temperature coefficient	<±0.003%	<±0.011%	FS/°C
Update rate	500 Nom		Hz
Max operating speed	600		rpm

General Specification

Weight	23.0		grams
Protection/Sealing	Sensing circuit: IP68/IP69K Ball race bearings: IP65		
Life (Bearings)	> 500 million operations		(dependant on environment)
Dither life	Contactless - no degradation due to shaft dither		
Operational temperature	-40 to +150	See de-rating graph	°C
Storage temperature	-55 to +150		°C
Materials	Case - Aluminium 6026 Module - Thermoplastic Shaft - Stainless steel 316		

Notes:

1. Incorrect wiring may cause internal damage.
2. When shaft marking is facing cable exit, instrument is mid-travel (2.5v output).
3. Do not operate between 5.5V and 8V.
4. Non-linearity is calculated from Least Squares Best Fit method.
5. Phasing for the MHR0921 DV-XXX option is at mid-travel only.

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