

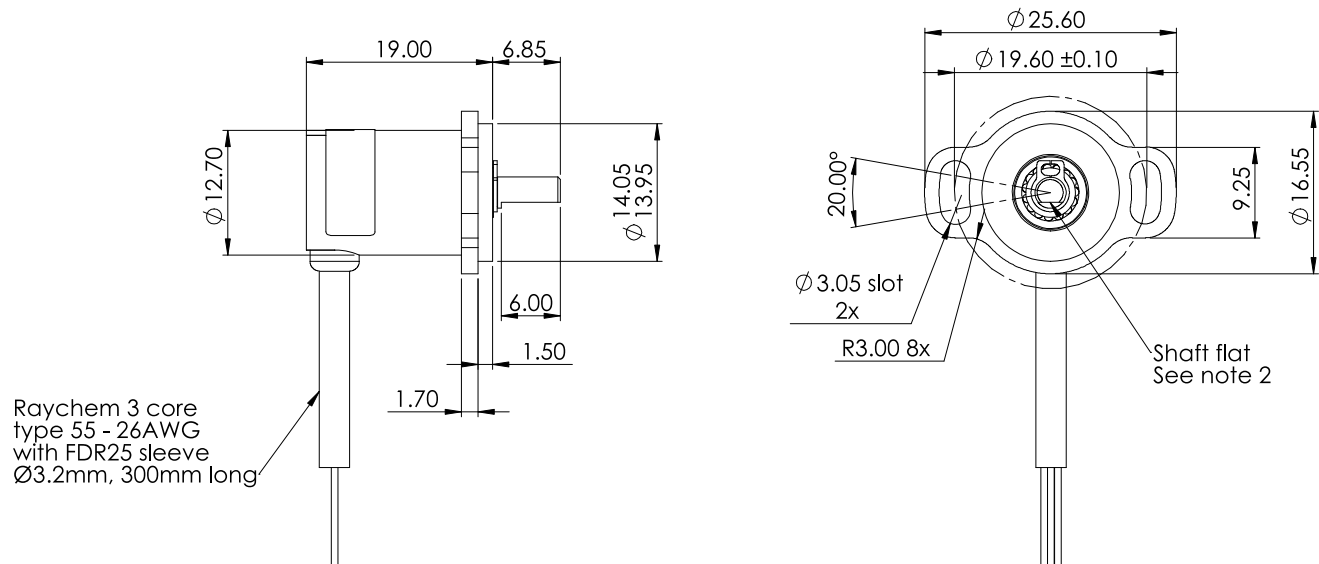
**MHR0500** miniature **Magni-Hall®** Rotary Position Sensors are ideal for applications that require a sensor which is compact and will fit conveniently into a limited space, or there is a need for extremely low mass. The operating shaft is set between 'two' stainless steel, low-friction, ball-race bearings.

### Key Features & Benefits

- Measurement range from 20° to 360°
- Very compact with low mass
- Operating temperature 150°C (302°F)
- Suitable for high dither vibration applications
- Synchro or flange mounting
- Suitable for high duty-cycle applications
- Superior accuracy (<math>\pm 0.25\% \text{ FS}</math>)



### MHR0510 - Model dimensions and mounting



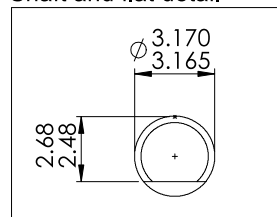
**Ordering Information**

MHR0510 XV-XXX

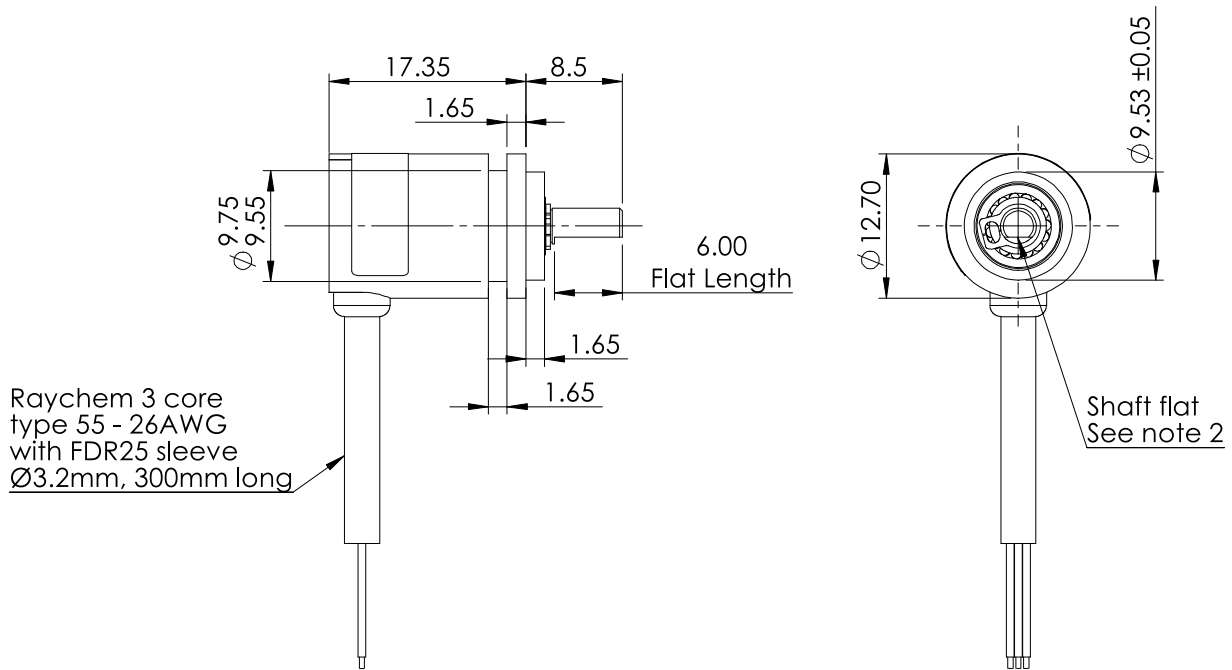
Output Direction (Viewed on shaft)  
 C = Clockwise  
 A = Anticlockwise

Electrical angle in degrees

### Shaft and flat detail



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

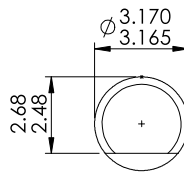


**Ordering Information**

MHR0520 XV-XXX

Output Direction (Viewed on shaft)  
 C = Clockwise  
 A = Anticlockwise  
 Electrical angle in degrees

**Shaft and flat detail**



**Electrical Connection (see note 1)**

Wire Colour	Function
Red	Supply Voltage (Vs)
White	Output Voltage (Vout)
Black	Ground

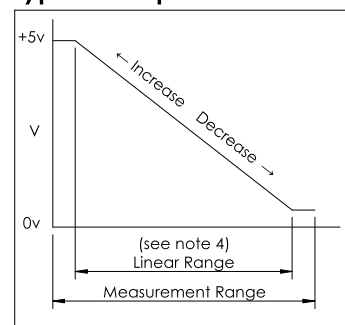
## MHR0500 - Electrical & mechanical specification

<b>Input Specification</b>		
Supply voltage (Vs)	5.0±10% regulated	V DC
Over voltage protection	Up to +24	V DC
Supply current	<15	mA
Reverse polarity protection	Up to -12	VDC
Power on settlement time	<100	mS
Input voltage rise time	0.25 minimum	V/mS
<b>Output Specification</b>		
Output type	Analogue	
Output direction	Clockwise or Anticlockwise (specified at time of order)	
Voltage output (Vout)	0-Vs (+5v)	V DC
Monotonic range	Linear Range (see note 4)	
Load resistance	>10K	Ohms
Output noise	<5	mV rms
<b>Performance Specification</b>		
Measurement range	20 to 360±2 in 1° increments	°
Resolution	0.025	% of measurement
Non-Linearity (see note 3)	<±0.25%	FS
Temperature coefficient (Vout)	<±0.003%	FS/°C
Update rate	500 Nom	Hz
Max operating speed	600	rpm
<b>General Specification</b>		
Weight	22.0	grams
Protection/Sealing	IP67K & IP69K	
Life (shaft bearing)	500 million cycles	(dependant on environment)
Dither life	Contactless - no degradation due to shaft dither	
Operational temperature	-40 to +150	°C
Storage temperature	-55 to +150	°C
Materials	Case - Aluminium 6026 Shaft - Stainless steel 316	

### Notes:

1. Incorrect wiring may cause internal damage.
2. When shaft marking is facing cable exit, instrument is mid-travel (2.5 output).
3. Non-linearity is calculated from Least Squares Best Fit method.
4. Linear range = measurement range x 0.995 nom.

### Typical Output



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