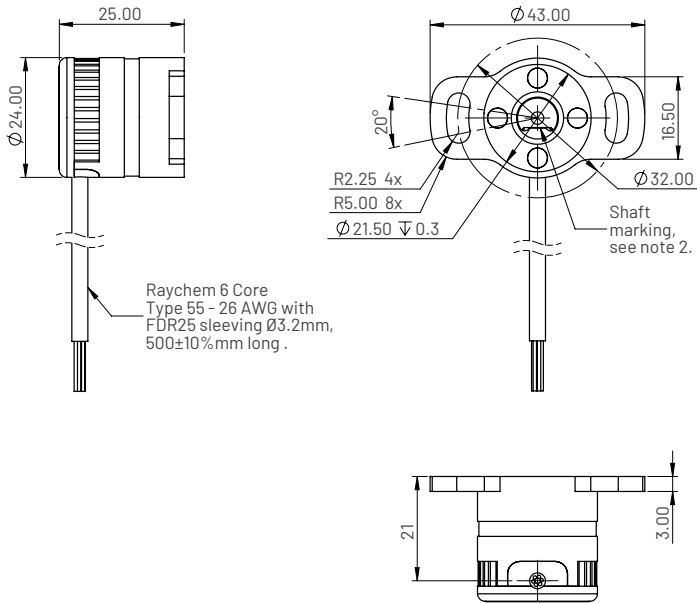


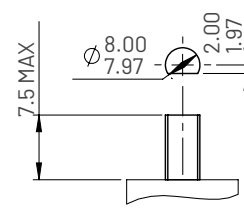
MHR5450 Series

Magnetic Hall rotary position sensor

Dimensions for MHR5450 - Flange mounting with a D-type socket



Drive shaft detail



Ordering information

MHR545X XV-XXX

- Heatshrink boot
 - 0 = Unbooted
 - 1 = Heatshrink boot
- Output increases (viewed on shaft)
 - C = Clockwise
 - A = Anticlockwise
 - D = Chan 1 output anticlockwise
Chan 2 output clockwise
- Electrical angles in degrees

Electrical and mechanical specification for MHR5100 CE

Parameters	Values	Units
Input specification		
Supply voltage (Vs)	5.0 \pm 10% regulated 8 to 30 unregulated	VDC
Over voltage protection	Up to 50	VDC
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 voltage	
Output direction	Clockwise or Anticlockwise (specified at time of order)	
Voltage output (Vout)	0 to Vs (+5v) 0 to 5.0	VDC
Line regulation	Ratiometric with Vs <0.01	%FS
Monotonic range (Note 7)	Linear Range	
Load resistance	>10K	Ohms
Output noise	<5	mV RMS
Performance specification		
Measurement range	20 to 360 in 1° increments	
Resolution	0.025	% of measurement range
Sensitivity tolerance (Note 4, 5)	< \pm 2.5	%
Non-linearity (Note 5)	< \pm 0.25	%FS
Phasing (Note 6)	<0.5	%FS
Temperature coefficient (Vout)	< \pm 0.003 < \pm .011	%FS/°C
Update rate (nominal)	500	Hz
Max operating speed	600	rpm
General specification		
Weight (approx.)	28	grams
Protection/sealing	Electronic housing IP68 and IP69K	
Life (shaft in bush bearing)	>500 million cycles	dependent 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	Sensor Case: Aluminium 6082	
	Top cap GF polymer	

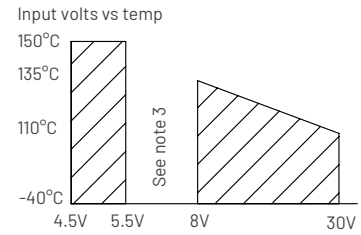
MHR5450 Series

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Notes

1. Incorrect wiring may cause internal damage.
2. When shaft marking is facing cable exit, instrument is mid-travel (2.5 output).
3. Do not operate between 5.5V and 8V.
4. Ideal sensitivity (mV/°) is calculated from the span of 5000mV (5.0 - 0V DC) divided by the measurement range in degrees.
5. Sensitivity and Non-linearity are calculated from least squares best fit method.
6. Phasing for the MHR54IX DV-XXX option is at mid-travel only.
7. Linear Range = Measurement Range x 0.995 Nom.
8. Due to Hall effect technology used in this device, ferrous materials or magnetic fields may influence output.

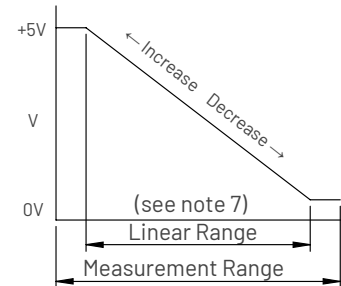
Input voltage de-rating graph



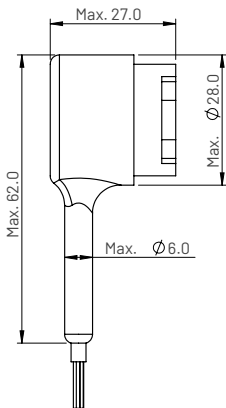
Electrical connections (see note 1)

	Wire Colour	Function
Chan 1	Red	Supply Voltage (Vs)
	White	Output Voltage (Vout)
	Black	Ground
Chan 2	Blue	Supply Voltage (Vs)
	Yellow	Output Voltage (Vout)
	Green	Ground

Typical output



Accessories



Boot
Part No: JN025-002

Material
Polyolefin