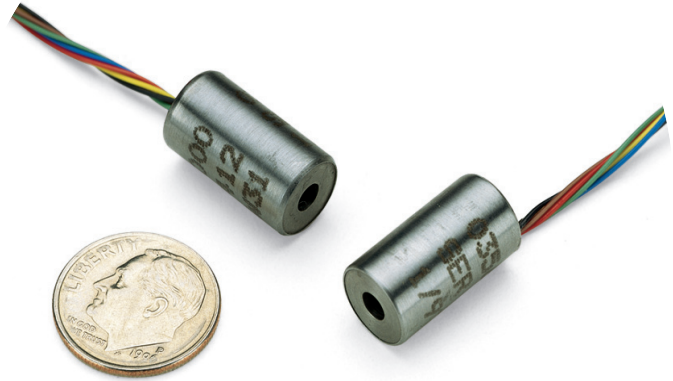


# MHR-Series

## Miniature LVDT

### DESCRIPTION

The **MHR Series** of LVDTs is ideal for applications where excessive core weight could influence the motion of sensitive mechanisms. The lightweight core also helps minimize stresses and preserves the structural integrity of the core actuation assembly. High sensitivity results from close electrical coupling between coil and core. A magnetic stainless steel housing provides electromagnetic and electrostatic shielding.



### FEATURES

- ◆ For Applications Where Installation Space or Weight is Limited
- ◆ Lightweight Core
- ◆ Calibration Certificate Supplied with All Models
- ◆ Compatible with All Schaevitz® Signal Conditioners
- ◆ High Temperature (220°C) and High Pressure (vented case) Available – Consult Factory

### APPLICATIONS

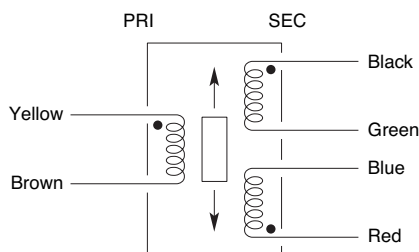
- ◆ Sensitive, Lightweight Devices

### OPTIONS

- ◆ Alternative 5.0 and 10.0 kHz Excitation Frequency Testing\*
- ◆ Metric Thread Core

\* Performance and electrical specifications for alternative frequencies will differ from the standard specifications listed below which are based on a 10 kHz excitation frequency. Consult factory for further information.

### wiring

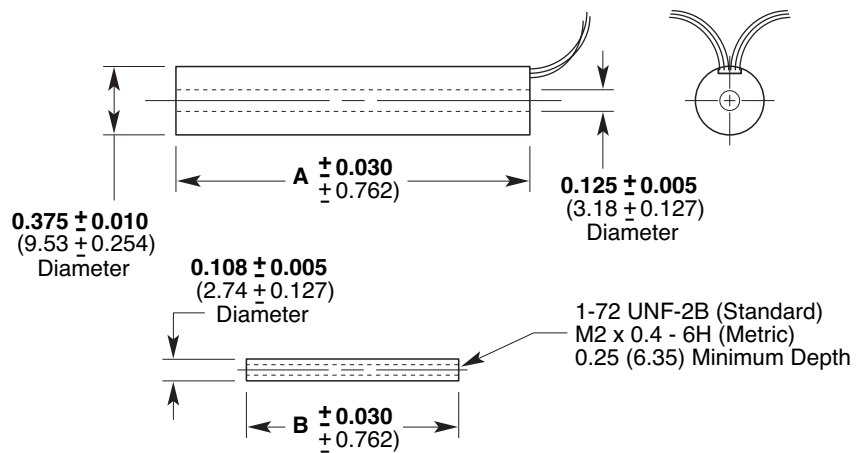


Connect Green to Blue for differential output

### specifications

<b>Input Voltage</b>	3 V rms (nominal)
<b>Frequency Range</b>	2 kHz to 20 kHz
<b>Operating Temperature</b>	-65°F to 300°F
<b>Range</b>	(-55°C to 150°C)
<b>Null Voltage</b>	<0.5% full scale output
<b>Shock Survival</b>	1,000 g for 11 msec
<b>Vibration Tolerance</b>	20 g up to 2 kHz
<b>Coil Form Material</b>	High density, glass-filled polymer
<b>Housing Material</b>	AISI 400 series stainless steel
<b>Lead Wires</b>	32 AWG, stranded copper, Teflon-insulated, 12 inches (300 mm) long (nominal)

### dimensions



# MHR-Series

## performance and electrical specifications @ 10 kHz<sup>1</sup> (recommended)

MHR Series Model Number	Nominal Linear Range		Linearity ( $\pm\%$ full range)				Sensitivity mV out/V in Per		Impedance Ohms		Phase Shift
	inches	mm	50	100	125	150	0.001 in	mm	Pri	Sec	Degrees
	005 MHR	$\pm 0.005$	$\pm 0.13$	0.20	0.25	0.30	0.40	8.70	342	84	302
010 MHR	$\pm 0.010$	$\pm 0.25$	0.10	0.25	0.35	0.35	6.05	238	165	300	+20
025 MHR	$\pm 0.025$	$\pm 0.64$	0.15	0.25	0.25	0.30	8.10	319	238	485	+15
050 MHR	$\pm 0.050$	$\pm 1.27$	0.15	0.25	0.35	0.50	3.15	124	419	154	+8
100 MHR	$\pm 0.100$	$\pm 2.54$	0.15	0.25	0.25	0.30	2.80	110	400	200	+5
250 MHR	$\pm 0.250$	$\pm 6.35$	0.15	0.25	0.35	0.50	2.07	86	345	420	+7
500 MHR	$\pm 0.500$	$\pm 12.70$	0.15	0.25	0.30	0.75	1.96	77	264	810	+4
1000 MHR	$\pm 1.000$	$\pm 25.40$	0.20	0.25	0.50	—	0.77	30	155	450	-1

## performance and electrical specifications @ 2.5 kHz<sup>1</sup>

MHR Series Model Number	Nominal Linear Range		Linearity ( $\pm\%$ full range)				Sensitivity mV out/V in Per		Impedance Ohms		Phase Shift
	inches	mm	50	100	125	150	0.001 in	mm	Pri	Sec	Degrees
	005 MHR	$\pm 0.005$	$\pm 0.13$	0.20	0.25	0.30	0.40	3.14	124	59	260
010 MHR	$\pm 0.010$	$\pm 0.25$	0.10	0.25	0.35	0.35	3.29	129	78	192	+39
025 MHR	$\pm 0.025$	$\pm 0.64$	0.15	0.25	0.25	0.30	4.36	172	116	286	+38
050 MHR	$\pm 0.050$	$\pm 1.27$	0.15	0.25	0.35	0.50	2.55	100	141	90	+36
100 MHR	$\pm 0.100$	$\pm 2.54$	0.15	0.25	0.25	0.30	2.40	94	135	125	+30
250 MHR	$\pm 0.250$	$\pm 6.35$	0.15	0.25	0.35	0.50	1.73	68	147	268	+29
500 MHR	$\pm 0.500$	$\pm 12.70$	0.15	0.25	0.30	0.75	1.60	67	145	445	+19
1000 MHR	$\pm 1.000$	$\pm 25.40$	0.20	0.25	0.50	—	0.70	27	100	370	+6

## mechanical specifications

MHR Series Model Number	Weight				Dimensions			
	Body		Core		A (Body)		B (Core)	
	oz	gm	oz	gm	in	mm	in	mm
005 MHR	0.07	2	0.004	0.1	0.38	9.7	0.18	4.6
010 MHR	0.11	3	0.007	0.2	0.54	13.7	0.23	5.8
025 MHR	0.18	5	0.016	0.4	0.66	16.8	0.40	10.2
050 MHR	0.21	6	0.016	0.4	0.80	20.3	0.50	12.7
100 MHR	0.21	6	0.025	0.5	1.00	25.4	0.62	15.7
250 MHR	0.32	9	0.032	0.9	1.85	47.0	1.12	28.4
500 MHR	0.60	17	0.056	1.6	3.30	83.8	2.00	50.8
1000 MHR	0.92	26	0.088	2.5	5.60	142.2	3.00	76.2

### ordering information

Specify the MHR Model followed by the desired option number(s) added together.

#### Ordering Example:

**Model Number 050 MHR-009** is an MHR Series LVDT with a  $\pm 0.05$ " range (050 MHR), with the 10 kHz testing option (003), Metric thread core (006).

### MHR model

005 MHR  
010 MHR  
025 MHR  
050 MHR  
100 MHR  
250 MHR  
500 MHR  
1000 MHR

### options

Number	Description
002	5.0 kHz Linearity Test
003	10 kHz Linearity Test
006	Metric Thread Core