

## **Air Bearing LVDT**

Mechanical Specs

**Description:** Linear Porous Air Bearing - long and short body versions

**Dimensions:** 3" long (2" for short body version) by .750" diameter stainless

steel body (plus adjustable transformer out back end and

.400" moving shaft out front, see print)

**Total Travel:** .200 inches

**Pretravel to Gaging Range:** Adjustable

**Orientation Constraints:** None, operational in any orientation

**Probe Tip Retraction:** Pneumatic probe tip retraction port

weight):

**Tip Gaging Force:** 

Radial Compliance (measured with 100g Long Body - Less than or equal to 2 microinchs per gram

Short Body - Less than or equal to 3 microinchs per gram

1/10 gram minimum - adjustable

**Probe Tip Thread:** 4-48

Air Connection: 3-56 to 1/16" I.D. hose fitting

Air Pressure: 60 PSIG Air Flow: <1 SCFH

Air Requirements: Clean, dry air - 5 micron filtered

MHR Series Model	Nominal Linear Range		Linearity (±% full range)				Sensitivity mV out/V in Per		Impedance Ohms		Phase Shift
Number	inches	mm	50	100	125	150	0.001 in	mm	Pri	Sec	Degrees
005 MHR	±0.005	±0.13	0.20	0.25	0.30	0.40	8.70	342	84	302	+38
010 MHR	±0.010	±0.25	0.10	0.25	0.35	0.35	6.05	238	165	300	+20
025 MHR	±0.025	±0.64	0.15	0.25	0.25	0.30	8.10	319	238	485	+15
050 MHR	±0.050	±1.27	0.15	0.25	0.35	0.50	3.15	124	419	154	+8
100 MHR	±0.100	±2.54	0.15	0.25	0.25	0.30	2.80	110	400	200	+5
250 MHR	±0.250	±6.35	0.15	0.25	0.35	0.50	2.07	86	345	420	+7
500 MHR	±0.500	±12.70	0.15	0.25	0.30	0.75	1.96	77	264	810	+4
	±1.000	±25.40	0.20	0.25	0.50		0.77	30	155	450	-1
erformance	and Elect		cifications		Hz¹		0.77 Sensit mV out/V	ivity	155 Imper Oh	fance	Phase Shift
Performance MHR Series	and Elect	trical Spec	cifications	@ 2.5 k	Hz¹		Sensit	ivity	Impe	fance	Phase
Performance MHR Series Model	and Elect Nor Linear	trical Spec ninal Range	cifications	@ 2.5 k	Hz¹ % full ran	nge)	Sensit mV out/V	ivity / in Per	Impe	fance ms	Phase Shift
Performance MHR Series Model Number	And Elect Nor Linear inches	trical Spec ninal Range mm	Lir 50	@ 2.5 k	Hz¹ % full ran 125	nge) 150	Sensit mV out/V 0.001 in	ivity V in Per mm	Impe Oh Pri	fance ms Sec	Phase Shift Degrees
MHR Series Model Number 005 MHR	Nor Linear inches ±0.005	ninal Range mm ±0.13	Lir 50 0.20	@ 2.5 k	Hz¹ % full ran 125 0.30	nge) 150 0.40	Sensit mV out/V 0.001 in 3.14	ivity / in Per mm	Impe Oh Pri 59	dance ms Sec 260	Phase Shift Degrees +73
MHR Series Model Number 005 MHR 010 MHR	Nor Linear inches ±0.005 ±0.010	rical Special rical Special rical Special rical	Lir 50 0.20 0.10	@ 2.5 k	Hz <sup>1</sup> % full ran 125 0.30 0.35	nge) 150 0.40 0.35	Sensit mV out/V 0.001 in 3.14 3.29	ivity / in Per mm 124 129	Imper Oh Pri 59 78	dance ms Sec 260 192	Phase Shift Degrees +73 +39
MHR Series Model Number 005 MHR 010 MHR 025 MHR	Nor Linear inches ±0.005 ±0.010 ±0.025	rical Specininal Range mm ±0.13 ±0.25 ±0.64	Lir 50 0.20 0.10 0.15	@ 2.5 k nearity (±' 100 0.25 0.25 0.25	Hz <sup>1</sup> % full ran 125 0.30 0.35 0.25	nge) 150 0.40 0.35 0.30	Sensit mV out/V 0.001 in 3.14 3.29 4.36	ivity V in Per mm 124 129 172	Imper Oh Pri 59 78 116	dance ms Sec 260 192 286	Phase Shift Degrees +73 +39 +38
Performance MHR Series Model Number 005 MHR 010 MHR 025 MHR	Nor Linear inches ±0.005 ±0.010 ±0.025 ±0.050	trical Spec minal Range mm ±0.13 ±0.25 ±0.64 ±1.27	Lir 50 0.20 0.10 0.15 0.15	earity (±' 100 0.25 0.25 0.25 0.25	#z¹ % full ran 125 0.30 0.35 0.25 0.35	0.40 0.35 0.30 0.50	Sensit mV out/V 0.001 in 3.14 3.29 4.36 2.55	ivity / in Per mm 124 129 172	Imper Oh Pri 59 78 116 141	dance ms Sec 260 192 286 90	Phase Shift Degrees +73 +39 +38 +36
Number 005 MHR 010 MHR 025 MHR 050 MHR 100 MHR	nd Elect Nor Linear inches ±0.005 ±0.010 ±0.025 ±0.050 ±0.100	trical Special	Lir 50 0.20 0.10 0.15 0.15 0.15	earity (±' 100 0.25 0.25 0.25 0.25 0.25	#z¹ % full ran 125 0.30 0.35 0.25 0.35 0.25	nge) 150 0.40 0.35 0.30 0.50 0.30	Sensit mV out/V 0.001 in 3.14 3.29 4.36 2.55 2.40	ivity V in Per mm 124 129 172 100 94	Imper Oh Pri 59 78 116 141 135	dance ms Sec 260 192 286 90 125	Phase Shift Degrees +73 +39 +38 +36 +30