

MHR Series

PERFORMANCE SPECIFICATIONS

ELECTRICAL SPECIFICATIONS (common)	
Input voltage	3Vrms sine wave
Input freq. range	2kHz to 20kHz
Test frequency	2.5kHz (standard)

ELECTRICAL SPECIFICATIONS @ 10kHz (recommended operation)									
Parameter	005 MHR	010 MHR	025 MHR	050 MHR	100 MHR	250 MHR	500 MHR	1000 MHR	2000 MHR
Stroke range	±0.005 [±0.13]	±0.010 [±0.25]	±0.025 [±0.64]	±0.05 [±1.27]	±0.10 [±2.54]	±0.25 [±6.35]	±0.5 [±12.7]	±1 [±25.4]	±2 [±50.8]
Sensitivity mV/V/.001in [mV/V/mm]	8.70 [343]	6.05 [238]	8.10 [319]	3.15 [124]	2.80 [110]	2.07 [81]	1.96 [77]	0.77 [30]	0.49 [19]
Output at stroke ends, mV/V (*)	43.5	60.5	202.5	157.5	280	517.5	980	770	980
Phase shift	+38°	+20°	+15°	+8°	+5°	+7°	+4°	+1.5°	+15°
Input impedance (PRIMARY)	84Ω	165Ω	238Ω	419Ω	400Ω	345Ω	264Ω	155Ω	504Ω
Output impedance (SECONDARY)	302Ω	300Ω	485Ω	154Ω	200Ω	420Ω	810Ω	450Ω	1780Ω
Linearity, ±% of FS									
@ 50% stroke	0.20	0.10	0.15	0.15	0.15	0.15	0.15	0.20	/
@100% stroke (maximum)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50
@125% stroke	0.30	0.35	0.25	0.35	0.25	0.35	0.30	0.50	/
@150% stroke	0.40	0.35	0.30	0.50	0.30	0.50	0.75	/	/
Null voltage (max)	5% FSO	1% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO

ELECTRICAL SPECIFICATIONS @ 2.5kHz (standard)									
Parameter	005 MHR	010 MHR	025 MHR	050 MHR	100 MHR	250 MHR	500 MHR	1000 MHR	2000 MHR
Stroke range	±0.005 [±0.13]	±0.010 [±0.25]	±0.025 [±0.64]	±0.05 [±1.27]	±0.10 [±2.54]	±0.25 [±6.35]	±0.5 [±12.7]	±1 [±25.4]	±2 [±50.8]
Sensitivity mV/V/.001in [mV/V/mm]	3.19 [126]	3.36 [132]	4.36 [172]	2.55 [100]	2.40 [94]	1.73 [68]	1.60 [63]	0.70 [27]	0.47 [19]
Output at stroke ends, mV/V (*)	16	33.6	109	127.5	240	432.5	800	700	940
Phase shift	+73°	+59°	+58°	+36°	+30°	+29°	+19°	+6°	+3°
Input impedance (PRIMARY)	59Ω	78Ω	116Ω	141Ω	135Ω	147Ω	145Ω	100Ω	304Ω
Output impedance (SECONDARY)	260Ω	192Ω	286Ω	90Ω	125Ω	268Ω	445Ω	370Ω	13620Ω
Linearity % of FS									
@ 50% stroke	0.20	0.10	0.15	0.15	0.15	0.15	0.15	0.20	/
@100% stroke (maximum)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
@125% stroke	0.30	0.35	0.25	0.35	0.25	0.35	0.30	0.50	/
@150% stroke	0.40	0.35	0.30	0.50	0.30	0.50	0.75	/	/
Null voltage (max)	6% FSO	3% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO	0.5% FSO

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ENVIRONMENTAL SPECIFICATIONS & MATERIALS

Operating temperature	-65°F to +300°F [-55°C to 150°C]
Shock survival	1,000 g (11ms half-sine)
Vibration tolerance	20 g up to 2KHz
Housing material	AISI 400 Series stainless steel
Lead-wire type/length	Six lead-wires, 32 AWG stranded Copper, PTFE insulated, 1 foot [0.3m] long

Notes:

All values are nominal unless otherwise noted

Electrical specifications are for the test frequency indicated in the table

Dimensions are in inch [mm] unless otherwise noted

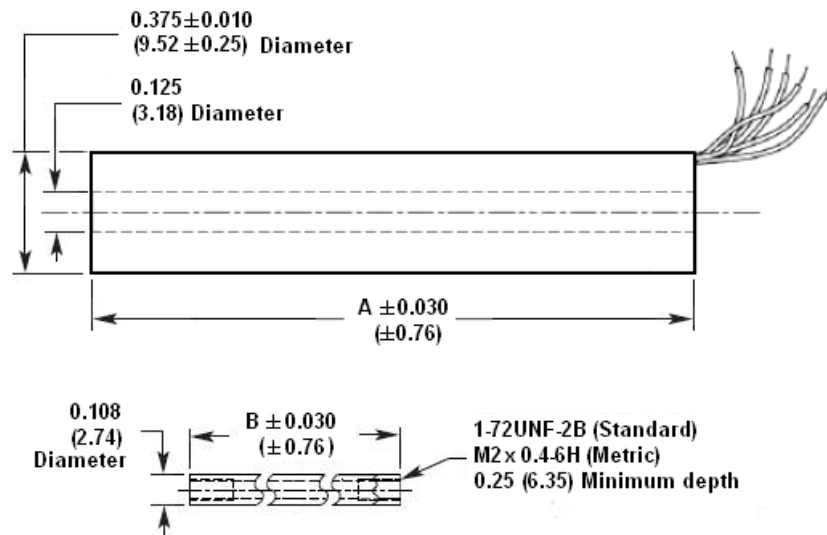
FS: Full Scale is 2X for ±X stroke

FSD: Full Scale Output is the output at X position for ±X stroke

(*) Unit for output at stroke ends is millivolt per volt of excitation

MECHANICAL SPECIFICATIONS

	050 HR	100 MHR	025 MHR	050 MHR	100 MHR	250 MHR	500 MHR	1000 MHR	2000 MHR
Body length "A"	0.375 [9.5]	0.535 [13.6]	0.660 [16.8]	0.815 [20.7]	0.990 [25.1]	1.850 [47.0]	3.300 [83.82]	5.600 [142.2]	8.000 [203.2]
Core length "B"	0.180 [4.6]	0.233 [5.9]	0.400 [10.2]	0.500 [12.7]	0.625 [15.9]	1.125 [28.6]	2.000 [50.8]	3.000 [76.2]	3.00 [76.2]
Body weight, oz [g]	0.07 [2]	0.11 [3]	0.18 [5]	0.21 [6]	0.21 [6]	0.32 [9]	0.60 [17]	0.92 [26]	1.4 [40]
Core weight, oz [g]	0.004 [0.1]	0.007 [0.2]	0.016 [0.5]	0.016 [0.5]	0.025 [0.7]	0.032 [0.9]	0.056 [1.6]	0.088 [2.5]	0.088 [2.5]



Dimensions are in inches (mm)