Helmholtz coils

Field standards

- Field accuracy of 0.75%
- Field uniformity of 0.5%*
- Standard field coil (field generation)
- Maximum field strengths from ≈26 G to ≈60 G
- Single axis configuration with 2.5 in, 6 in, and 12 in diameter coils

Magnet moment measurement

- Calibration accuracy of 0.5%
- Use with Model 480 fluxmeter only
- Inspection and research of magnets (measure moment)
- Single and 2-axis configurations with 2.5 in, 6 in and 12 in diameter coils

*Model dependent, see technical specifications

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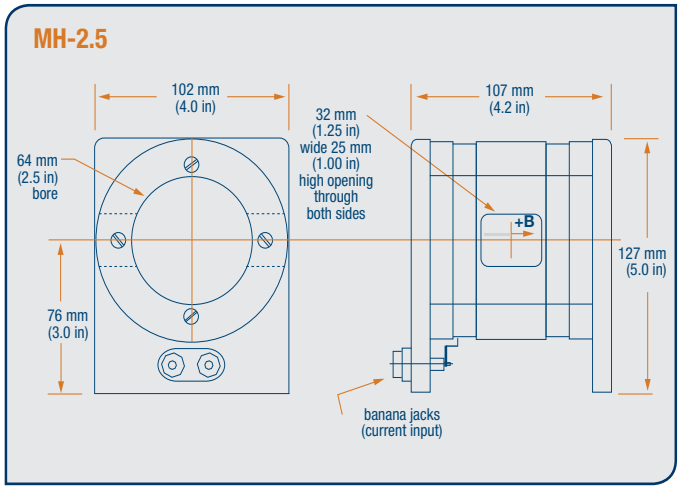
Lake Shore CRYOTRONICS

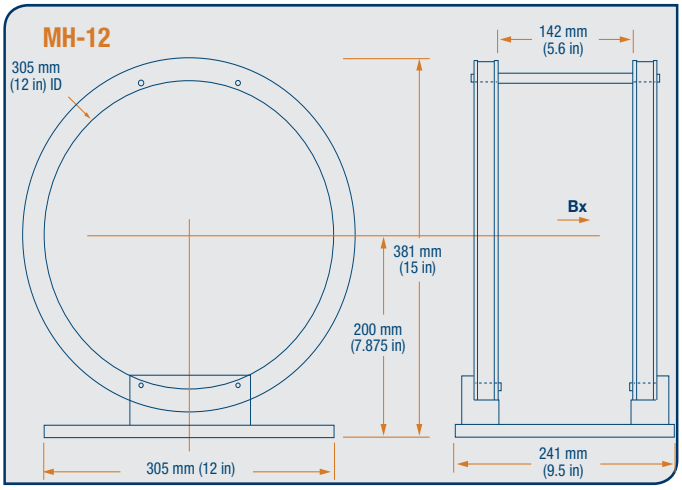
Field standards

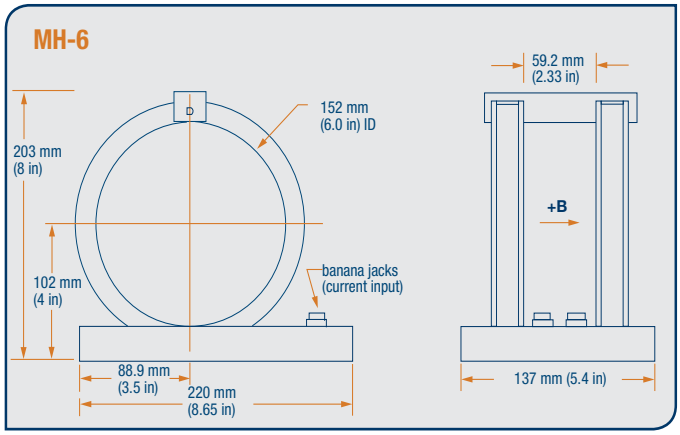
for use with current source or power supply only

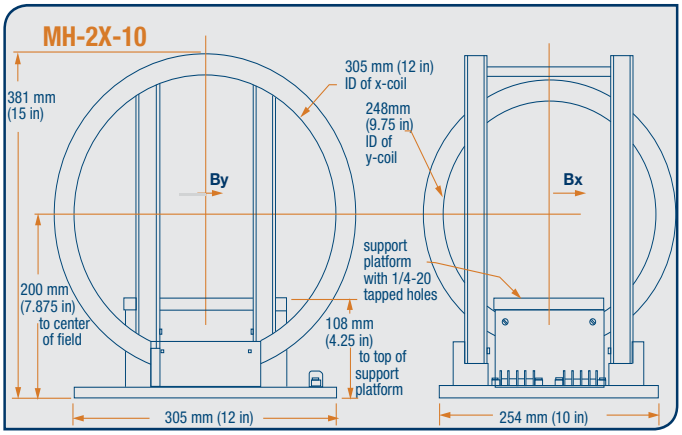
We offer 4 Helmholtz coils for field standards: 64 mm (2.5 in), 152 mm (6 in), and 305 mm (12 in) diameter single-axis, and the MX-2X-10 double-axis.

	MH-2.5	MH-6	MH-12	MH-2X-10
Field accuracy (center)	0.75%			
Inside diameter	64 mm (2.5 in)	152 mm (6 in)	305 mm (12 in)	305 mm (12 in) x-axis and 248 mm (9.75 in) y-axis
Field strength	≈30 G/A	≈25 G/A	≈13 G/A	≈30 G/A (note: coils are not exactly matched)
Max continuous current	2 A (DC or RMS)			
Field uniformity	0.5% within a cylindrical volume 19 mm (0.75 in) long, 19 mm (0.75 in) diameter, at center of coil	0.5% within a cylindrical volume 41 mm (1.6 in) long, 41 mm (1.6 in) diameter, at center of coil	0.5% within a cylindrical volume 76 mm (3.0 in) long, 76 mm (3.0 in) diameter, at center of coil	≈0.5% within a 64 mm (2.5 in) cube, at center of coil
DC coil resistance/ inductance (approx)	3 Ω/6.3 mH	10 Ω/36 mH	20 Ω/93 mH	20 Ω (x-axis), 15 Ω (y-axis)/128 mH (x-axis), 74 mH (y-axis)
Operating temp range	-20 °C to 40 °C (-4 °F to 104 °F)			









Ordering Information

Part number	Description
MH-2.5	64 mm (2.5 in) inside diameter, maximum field approximately 60 G
MH-6	152 mm (6 in) inside diameter, maximum field approximately 50 G
MH-12	305 mm (12 in) inside diameter, maximum field approximately 26 G
MH-2X-10	305 mm (12 in) inside diameter (x-axis), 248 mm (9.75 in) inside diameter (y-axis), maximum field approximately 30 G

NOTE: The MH Series coils are for use as low field standards. They cannot be used with the Model 480 fluxmeter.

All specifications are subject to change without notice

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