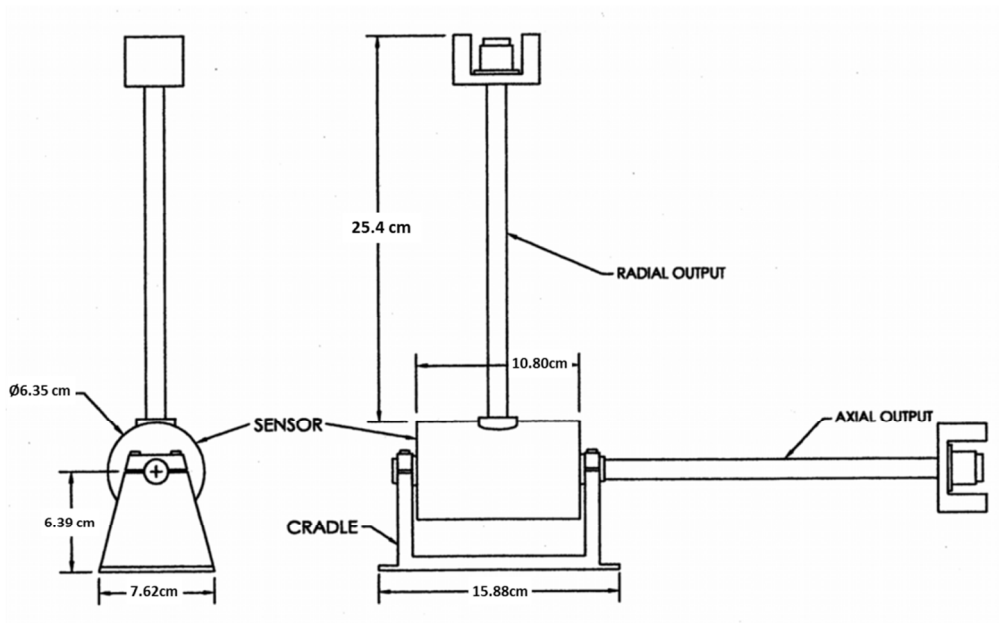


MTB-2 magnetic field sensor – multi-turn, free field

The MTB-2 is a multi-turn free-field B-Dot sensor that produces a voltage output in response to a time variant B-field and is equivalent to the AFWL model MTL-2. This sensor was designed to have greater sensitivity in relation to it's size. Its 10-turn loop configuration is the same equivalent area as model B20 with a significant reduction in size. The electrostatic shield minimises E-field drive and the internal loop resistors dampen high frequency resonances. The sensor output is differential and can be used with an appropriate balun.



This sensor can be ordered with either an axial or radial output direction. The standard output connector is GR twinaxial but other connector types can be ordered. The sensor is a passive device therefore external power is not required.

SPECIFICATION

	MTB-2
Equivalent Area (Aeq)	1 x 10 ⁻² m ²
Freq. Resp.(3 db pt.)	12.7MHz
Risetime (tr 10-90)	<28ns
Maximum output (peak)	+ 5kV
Output connector(s)	GR TCC (twinax)

EQUATION

$$V_o = A_{eq} \frac{dB}{dt}$$

Where V_o = sensor output (volts), A_{eq} = sensor equivalent area (m²), B = magnetic flux density (teslas)