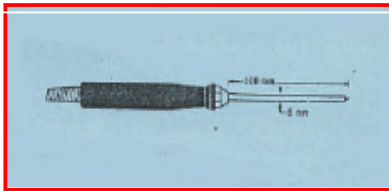


# PRECISION PULSE HALL EFFECT MAGNETOMETER

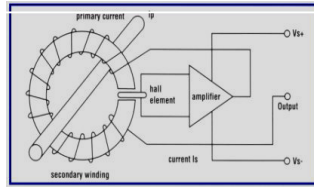
(Feedback controlled/multi-axis)

**MHEMM-Series** MHEMM series of high precision Hall effect based precision magnetometer (radial/axial/spherical) are available in more than 20 different regular models apart from tailor mode modules. These magnetometer can measure static/pulse/A.C. magnetic field with very high precision up to 0.01 milli-gauss consistently and are accordingly first choice of solid state physical application, geology application, super conductivity, telecom, airlines, railways, electrical utilities, battery operated vehicles, electrochemical, corrosion, petrochemical industry, organic/inorganic chemical, heavy electrical/mechanical industries, machine tools, non-conventional energy and many uncountable defense/nuclear applications. These are also being successfully acknowledged in power sector at distribution/transmission level and generation for measurement/control /protection applications.

**Operating principle :** The Hall element, which is placed in magnetic field, delivers a voltage which proportional to applied magnetic field. This sensor also offers a galvanic isolation. The small output voltage of the Hall element is amplified. There is an inevitable offset, i.e., a small DC voltage at zero current; the offset amplitude and temperature coefficient is subject to significant fluctuations. These offset may be tared. This Magnetometer is sensitivity to short current peaks in the circuit: according to the hysteresis properties of the core material, these peaks can cause static Magnetization in the core those results in a permanent remanence, and finally to an offset alteration of the Hall element.



MHEMM-00000901



fabrication view of hall sensor



MHEMM-09999902

**General Electrical/mechanical specification of Hall- magnetometer:**

Model	GAUSS max	Step-down ratio	k.hz	T <sub>max</sub> °C	Model	GAUSS max	Step-down ratio	k.hz	T <sub>max</sub> °C
MHEMM-0000091	0.000009	1:1000000	0-50	90	MHEMM-0099995	0009999	1:1000000	0-50	90
MHEMM-0000092	00.00099	1:1000000	0-50	90	MHEMM-0999996	0099999	1:1000000	0-50	90
MHEMM-0000993	009.0099	1:1000000	0-50	90	MHEMM-0000097	0999999	1:1000000	0-50	90
MHEMM-0009994	0000999	1:1000000	0-50	90	MHEMM-0000098	9999999	1:1000000	0-50	90

**General Specification of Hall Effect based Gaussmeter/magnetometer :**

- Operating voltage: 220 volt A.C. (50-20,000 Hz)/ 12 volts D.C.
- Measurement range (full scale): as above in different model and multi-axis
- Frequency: 0-400,000 hz
- Tesla signal (measurement): 10<sup>-3</sup>/10<sup>-6</sup>/10<sup>-9</sup> Tesla e AC/DC (optional)
- Input capacitance: 10 NF
- Response time: 1000 sample/sec
- Burden: less than 100 counts /full scales or better
- Step down ratio: 1:100000
- Accuracy error: 0.5/1.0/2.0 % reading
- Repeatability: 100 of reading
- Resolution: 1/5 mili/, 1/5 micro, 1/5 nano tesla
- Input imedence: ultra high (<1000 counts),
- Filtering: low pass (adjustable)
- Offset: variable upto 1000 counts (manual/auto)
- Relative measurement ; upto full scale
- CMMR: >80 db at 50-60 Hz
- Isolation: > 100 giga ohm
- Connector: BNC-9 pinx2 and BNC-25 pinx2
- Interface: RS-232
- Option: ADDITIONAL SOFTWARE to plot B/H/ OR ANY DESIRED INFERENCEAL PARAMETER.



MHEMM-00000992

**Hall Effect Monitor diemension:**

MHEMM-0000091	08X06X06	MHEMM-0000092	08X06X06
MHEMM-00000991	08X06X06	MHEMM-00000992	08X06X06
MHEMM-00009991	08X06X06	MHEMM-00009992	08X06X06

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