

NA-25 and NAP-25

Open Loop Hall Effect

Current Sensors

Description

The NA-25 and NAP-25 Hall effect current sensors accurately measure DC and AC currents and provide electrical isolation between the output of the sensor and the current carrying conductor.



Measuring Circuit

	Units
Full Scale (FS) DC or ACpeak (1)	± A
Full Scale output (2)	± mV

NA-25 NAP-25

_____ 25 _____

_____ 22.5 to 62.5 _____

Excitation Circuit

Nominal excitation current (Ic)	mA
Maximum excitation current (Ic)	mA
Input resistance	ohms

_____ 7 _____

_____ 10 _____

_____ 450 to 900 _____

Output

Sensitivity (2)	mV/A
Linearity	%FS
Maximum zero offset	± mV
Maximum hysteresis of offset(3)	± mV
Minimum load resistance	k ohms
Output resistance	ohms
Frequency Response	kHz

_____ 0.9 to 2.5 _____

_____ 1 _____

_____ 25 _____

_____ 0.15 _____

_____ 10 _____

_____ <3200 _____

_____ 1 _____

Influences On Accuracy

Maximum offsetdrift with temperature	± µV/°C
Excitation change of ±1% Max.sensitivity change	± %
Maximum sensitivity drift with temperature	± %/°C

_____ 40 _____

_____ 1 _____

_____ -0.07 _____

Withstand Capabilities

Dielectric test(4)	kV
Output short or open	

_____ 0.5 _____

_____ No Damage _____

General Information

Operating temperature range	°C	_____ -40 to +85 _____
Storage temperature range	°C	_____ -40 to +100 _____
Aperture opening	inches(mm)	_____ 0.20 (5.1) _____
Current carrying conductor diameter (12 AWG)	inches(mm)	_____ 0.087 (2.21) _____
Weight	grams	_____ 3.4 _____ 7.0 _____
Output short or open circuit		_____ No Damage _____
Output reference		Conventional current flowing in direction of dot or arrow results in a positive difference in V _H .



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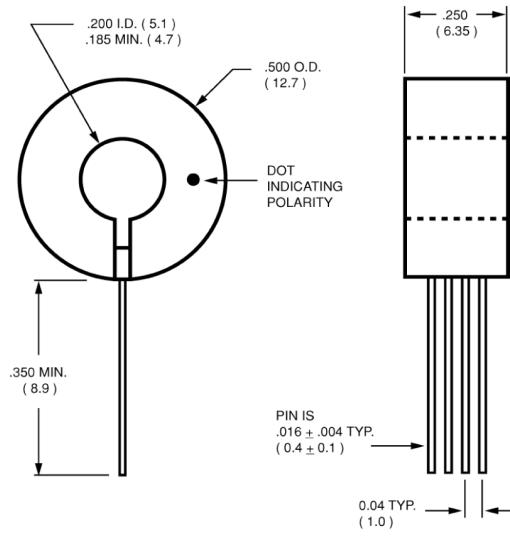
Current Sensors

Mechanical Dimensions

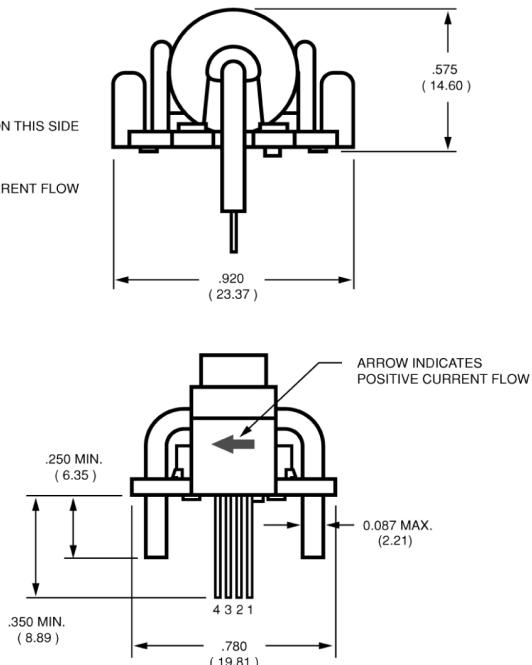
All dimensions are in inches (millimeters)

Models NA-25/NAP-25

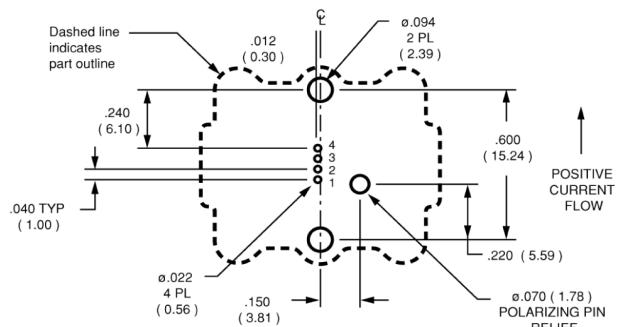
NA-25



NAP-25



RECOMMENDED
P.C.B. HOLE PATTERN



Notes:

- With a duty cycle less than 30% (conductor limited), linearity to 100 A Full Scale is 1% F.S.
- At a nominal control current of 7 mA.
- Hysteresis specifications given for a Full Scale aperture current remnant.
- The dielectric test consists of 0.5 kVAC at 60 Hz for one minute between a bare 0.10 inch diameter conductor and the output of the sensor.
- Due to continuous process improvement, all specifications are subject to change without notice.



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