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.

	Units	NA-25	NAP-25
Measuring Circuit			
Full Scale (FS) DC or AC peak (1)	± A	25	
Full Scale output (2)	± mV	22.5 to 62.5	
Excitation Circuit			
Nominal excitation current (Ic)	mA	7	
Maximum excitation current (Ic)	mA	10	
Input resistance	ohms	450 to 900	
Output			
Sensitivity (2)	mV/A	0.9 to 2.5	
Linearity	%FS	1	
Maximum zero offset	± mV	25	
Maximum hysteresis of offset (3)	± mV	0.15	
Minimum load resistance	k ohms	10	
Output resistance	ohms	<3200	
Frequency Response	kHz	1	
Influences On Accuracy			
Maximum offset drift with temperature	± µV/°C	40	
Excitation change of ±1% Max. sensitivity change	± %	1	
Maximum sensitivity drift with temperature	± %/°C	-0.07	
Withstand Capabilities			
Dielectric test (4)	kV	0.5	
Output short or open		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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4607 SE International Way
Milwaukie, OR 97222
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F.W. BELL®

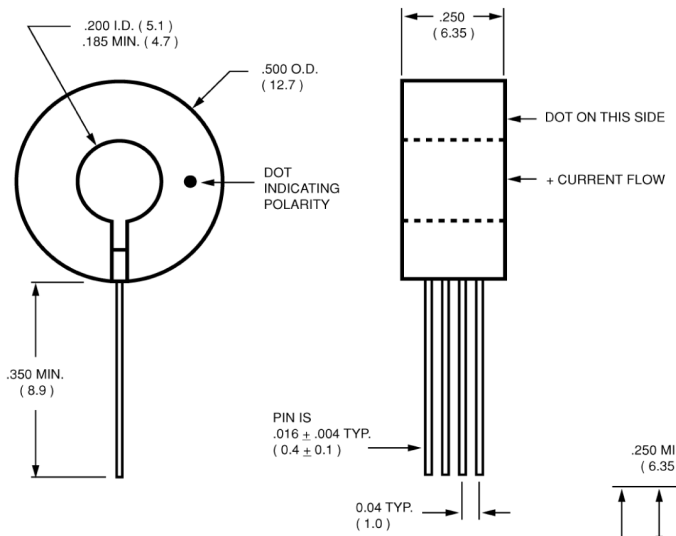
Rev. date 04/2003

Mechanical **Dimensions**

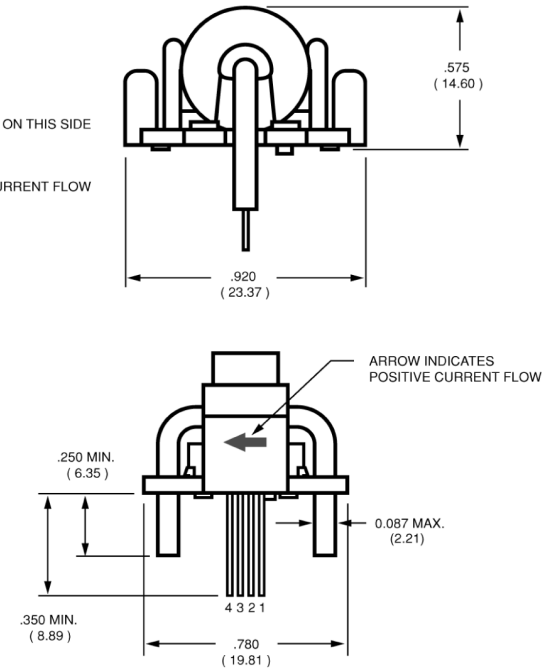
All dimensions are in inches (millimeters)

Models NA-25/NAP-25

NA-25

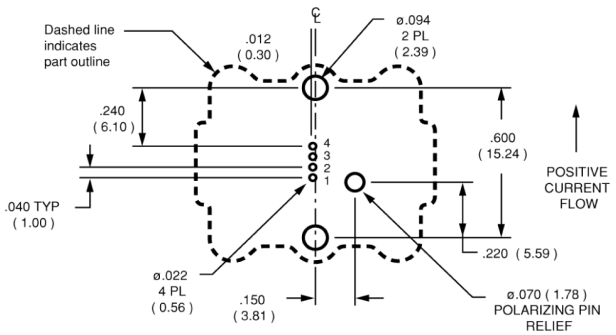


NAP-25



PIN	SIGNAL	DESCRIPTION
1	$+I_C$	+ CONTROL CURRENT
2	$+V_H$	+ OUTPUT VOLTAGE
3	$-I_C$	– CONTROL CURRENT
4	$-V_H$	– OUTPUT VOLTAGE

RECOMMENDED
P.C.B. HOLE PATTERN



Notes:

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

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