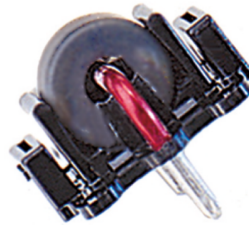


## Description

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    | NA-25        | NAP-25 |
|-----------------------------------------|----------|--------------|--------|
| Full Scale (FS) DC or AC peak (1) ..... | $\pm$ A  | 25           |        |
| Full Scale output (2) .....             | $\pm$ 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 .....              | $\pm$ mV | 25         |  |
| Maximum hysteresis of offset (3) ..... | $\pm$ 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 .....                  | $\pm$ $\mu$ V/ $^{\circ}$ C | 40    |  |
| Excitation change of $\pm 1\%$ Max. sensitivity change ..... | $\pm$ %                     | 1     |  |
| Maximum sensitivity drift with temperature .....             | $\pm$ %/ $^{\circ}$ C       | -0.07 |  |

### Withstand Capabilities

|                            |    |           |  |
|----------------------------|----|-----------|--|
| Dielectric test (4) .....  | kV | 0.5       |  |
| Output short or open ..... |    | No Damage |  |

### General Information

|                                                    |                                                                                                       |              |     |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------|-----|
| Operating temperature range .....                  | $^{\circ}$ C                                                                                          | -40 to +85   |     |
| Storage temperature range .....                    | $^{\circ}$ 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 $V_H$ . |              |     |

# Current Sensors

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