



## AIRPAX® | 4100 Series

### BIMETAL THERMOSTAT, BRASS PROBE

#### FEATURES

- RoHS compliant per EU directive 2002 / 95 / EC
- Isolated or grounded case
- Low-cost brass probe, multiple configurations
- Ideal for immersion sensing

#### DESCRIPTION

The Airpax™ 4100 series is a brass probe, bimetal disc immersion thermostat designed to provide low-cost thermal protection in temperature ranges from 40°C to 120°C (104°F to 248°F) in 5°C increments. Its standard gold-plated crossbar contacts allow it to be used in very low-current, low-voltage applications.

The 4100 features epoxy/crimp protection that enables it to meet NEMA 4 and 13 (IP67) standards. It can withstand a variety of harsh environments, including pressure washing. The thermostat is available in both English and metric housings, with a wide assortment of terminations, including standard automotive connectors, in either isolated or grounded case configurations.

Typical applications for the Airpax 4100 include monitoring the temperature of engine manifolds, oil, coolant and hydraulic systems. It is also suited to refrigeration systems, heat exchangers and HVAC systems. These applications are found in such varied segments as off-road vehicles, air compressors, marine engines, mining equipment, long-haul trucks, railroads, public transportation and engine-generator sets.

#### SPECIFICATIONS

| Contact Ratings                  | <i>Cycles</i>                                                                                    | <i>Voltage</i> | <i>Amps (resistive)</i> |
|----------------------------------|--------------------------------------------------------------------------------------------------|----------------|-------------------------|
|                                  | 5,000                                                                                            | 28 VDC         | 3                       |
|                                  | 30,000                                                                                           | 32 VDC         | 1                       |
|                                  | 30,000                                                                                           | 120 VAC        | 1                       |
| <b>Contact Operations</b>        | Either close on rise (make) or open on rise (break), SPST (Single Pole, Single Throw)            |                |                         |
| <b>Max Operating Temperature</b> | 40°C to 130°C (104°F to 266°F) with nominal operating temperature settings in 5°C increments.    |                |                         |
| <b>Temperature Tolerance</b>     | Standard tolerance of ± 5°C (± 9°F). Optional tolerances of ± 3°C (± 5.4°F) and ± 10°C (± 18°F). |                |                         |
| <b>Dielectric Strength</b>       | 600VAC, 60Hz terminals to case                                                                   |                |                         |
| <b>Shock</b>                     | MIL-STD-202, 213C                                                                                |                |                         |
| <b>Vibration</b>                 | MIL-STD-202, 204D                                                                                |                |                         |
| <b>Materials</b>                 | Brass, epoxy/crimp seal (NEMA 4 & 13)                                                            |                |                         |

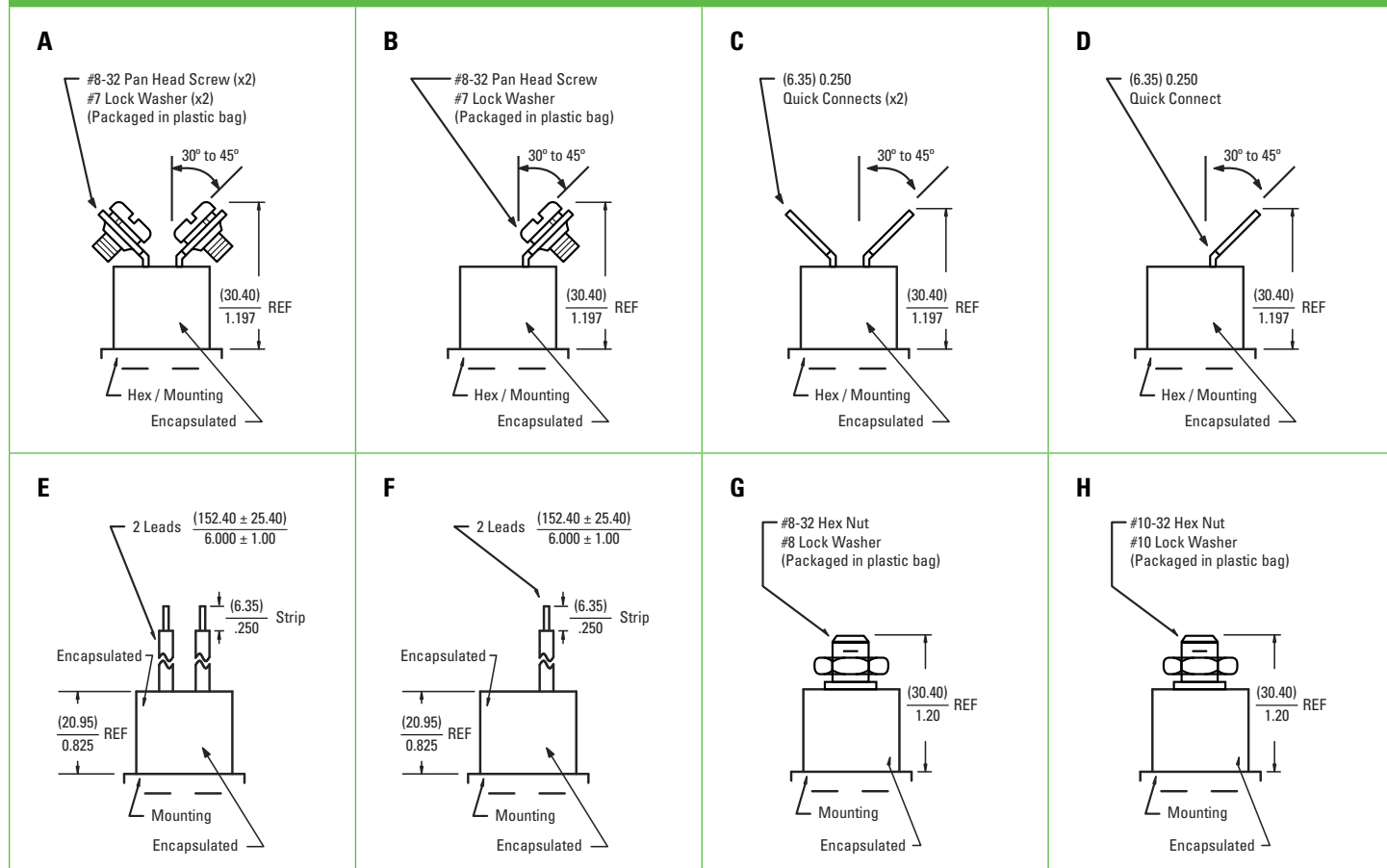
## 1. CONTACT OPERATION

| CODE     | DESCRIPTION                |
|----------|----------------------------|
| <b>O</b> | Letter "O" = Open on Rise  |
| <b>C</b> | Letter "C" = Close on Rise |

To build your part number (PN), choose the proper codes from pages 2 to 4.

Consult Sensata Technologies when a code Z is used to indicate a special requirement. Sensata will assign a unique, customer-specific four digit nondescript number. To complete the customer specific part number build, place a "-" dash after the PN preceded by the assigned four digit nondescript.

## 2. TERMINAL SELECTION (ISOLATED & GROUNDED CASE)



## 3. THREAD TYPE / BODY CONFIGURATION

| CODE     | THREAD TYPE   | LENGTH | HEX SIZE        |
|----------|---------------|--------|-----------------|
| <b>A</b> | 1/4" -18 NPTF | 0.485" | 0.688" x 0.225" |
| <b>B</b> | 3/8" -18 NPTF | 0.585" | 0.688" x 0.225" |
| <b>C</b> | 1/2" -14 NPTF | 0.656" | 0.875" x 0.225" |
| <b>D</b> | 3/4" -16 NPTF | 0.498" | 1.0" x 0.225"   |
| <b>E</b> | M14 - 1.5     | 11mm   | 22mm x 5.7mm    |
| <b>F</b> | M16 - 1.5     | 11.5mm | 24mm x 5.7mm    |
| <b>G</b> | M18 - 1.5     | 12.5mm | 27mm x 5.7mm    |

#### 4. PROBE LENGTH

| CODE                                                                         | LENGTH (ENGLISH) | LENGTH (METRIC) |
|------------------------------------------------------------------------------|------------------|-----------------|
| <b>A</b>                                                                     | 0                | 0               |
| <b>B</b>                                                                     | 0.500"           | 12.7mm          |
| <b>C</b>                                                                     | 1.0"             | 25.4mm          |
| <b>D *</b>                                                                   | 1.5"             | 38.1mm          |
| <b>E *</b>                                                                   | 2.0"             | 50.8mm          |
| <b>F</b>                                                                     | 0.750"           | 19.1mm          |
| * Probes D & E are not available with thread / body configurations A, E or F |                  |                 |

#### 5. TEMPERATURE CALIBRATIONS (°C)

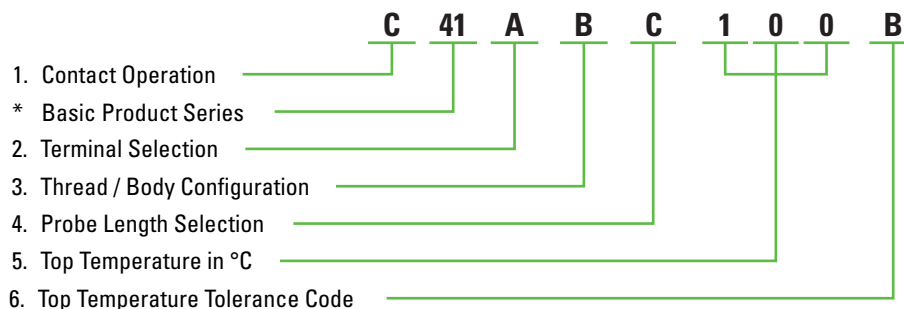
| SETPOINT (°C) | MINIMUM DIFFERENTIAL | MINIMUM RESET |
|---------------|----------------------|---------------|
| 40            | 4                    | 20            |
| 45            | 4                    | 20            |
| 50            | 4                    | 30            |
| 55            | 4                    | 30            |
| 60            | 4                    | 40            |
| 65            | 4                    | 40            |
| 70            | 4                    | 50            |
| 75            | 4                    | 50            |
| 80            | 6                    | 55            |
| 85            | 6                    | 55            |
| 90            | 6                    | 60            |
| 95            | 6                    | 60            |
| 100           | 6                    | 70            |
| 105           | 6                    | 70            |
| 110           | 6                    | 80            |
| 115           | 6                    | 80            |
| 120           | 9                    | 85            |
| 125           | 9                    | 85            |
| 130           | 9                    | 90            |

#### EXAMPLE : C41CAC100B

Close contacts on temperature rise, 4100 series, isolated case 8-32" screw terminals, 3/8" - 18 NPTF threads, 1.0" probe, 100°C top temperature with a  $\pm 5^\circ\text{C}$  standard top tolerance and a standard 45°F differential between top and bottom temperature for temperature range of 95°C to 130°C with a standard minimum reset

#### 6. TOP TEMPERATURE TOLERANCE CODE

| CODE     | TOLERANCE (°C)         |
|----------|------------------------|
| <b>A</b> | $\pm 3^\circ\text{C}$  |
| <b>B</b> | $\pm 5^\circ\text{C}$  |
| <b>C</b> | $\pm 10^\circ\text{C}$ |





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