SIEMENS

Installation Instructions
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MEC 100K Thermistor Option Kit

Product Description

The MEC 100K Thermistor Option allows an MEC voltage input point to monitor a 100K thermistor sensor.

An independent PPCL program equates the voltage monitored to a virtual temperature input point. Temperature is reported in degrees Fahrenheit or Celsius depending on slope and intercept.

Product Numbers

549-646 MEC 100K Thermistor Option Kit, Package of 4

Expected Installation Time

10 minutes (in addition to MEC installation time)

Caution Notation

CAUTION		Equipment damage or loss of data may occur if you do not follow a procedure as specified.

Required Tools

- Laptop computer
- MMI cable (P/N 540-143)
- ESD wrist strap

Prerequisites

- All necessary wiring is pulled into the enclosure and the service box is installed.
- MEC and PXM installation are complete.
  - Jumpers are set for analog output points.
  - Jumpers are set for analog input points that are not monitoring a 100K thermistor.
  - PXM baud rate and address are set.

For more information, see the *APOGEE Automation Startup Procedures* for MEC (145-295).

Installation

NOTE: The jumpers are shipped in the Voltage (V) position. The jumpers must remain in this position when they are not being used.

Setting up the Database

1. Do the following for each MEC 100K thermistor point:
   a. If working with an existing database, delete the old thermistor point(s).
   b. Add a physical voltage input point to the point database using Commissioning Tool (CT). Use the following settings:
      - Point name = *OldTempPointName*.100K
      - Physical point type = LAI
      - Voltage sensor
      - Slope = 0.000390625
      - Intercept = -1.4
      - Float 6
      - Alarm low limit = 0.048 (short or hot)
      - Alarm high limit = 4.800 (open or cold)
      - COV = slope
   c. Add a virtual temperature input point to the CT point database.

   NOTE: Use the old temperature point name so that the new virtual point works with existing PPCL.

   Use the following settings:
      - Point name = *OldTempPointName*
      - Virtual point type = LAI
      - Name, float, slope, intercept, COV, and alarm limits are the same as the existing thermistor point, if retrofitting.
        - For Fahrenheit temperature, slope = 1.0 and intercept = 0.0
        - For Celsius temperature, slope = 0.5556 and intercept = -17.7778

2. Go to *PPCL Fixes* on the Tools and Data Web site (http://iknow.us.abatos.com/tad/).
   a. Right click on the MEC 100K Thermistor Program link.
   b. Select **Save Target As** MEC100K.pcl in the CT Jobs directory.
3. From the **Program** menu in CT Program Editor, click **Import** and select MEC100K.pcl from the CT Jobs directory.
4. Create GOSUB statements for each 100K thermistor point as outlined in MEC100K.pcl file.
5. Using a unique System Name, save the program to the CT database for the MEC.

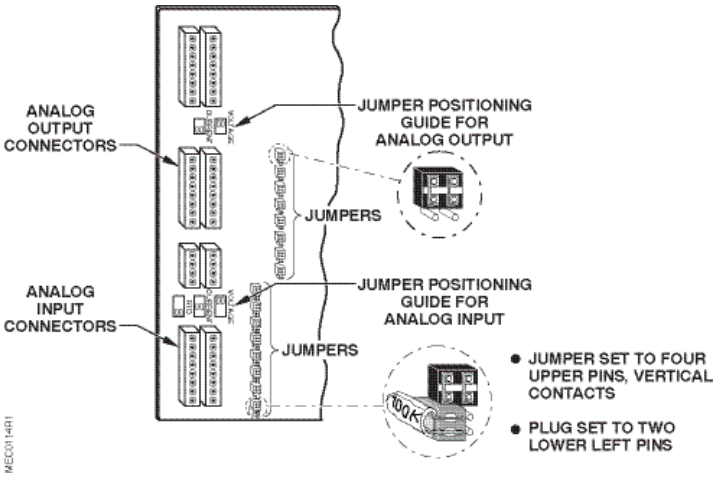

Figure 1. MEC Jumper Locations.

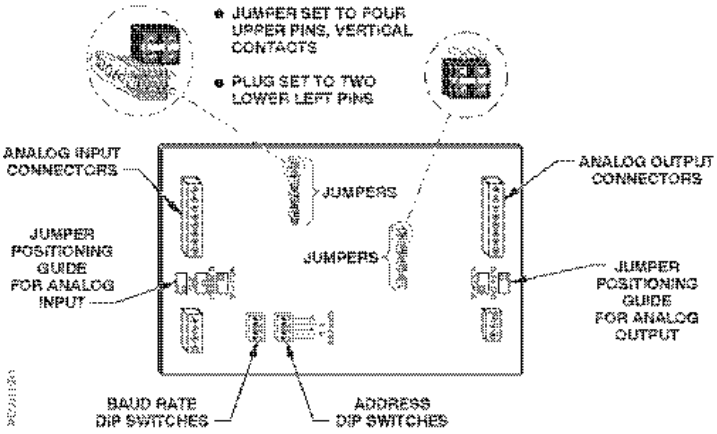

Figure 2. PXM Jumper and DIP Switch Locations.

Installing the 100K Thermistor Jumper

CAUTION:

Always wear an electro-static discharge (ESD) wrist strap and discharge accumulated static before touching field panel components.

1. With the ESD wrist strap attached to your wrist and a good Earth ground, remove the MEC or PXM front cover.
2. Do the following for each physical point that is monitoring a 100K thermistor:
   a. Install the jumper in the voltage position (on the upper four pins with the contacts vertically oriented).
   b. Install the MEC100K Thermistor jumper on the lower left pins (the white 100K label faces left). See Figure 1 and Figure 2.
   c. The lower right pins remain open.
3. Replace the MEC or PXM front cover.
4. Download the MEC database from CT and check for proper operation.

CAUTION:

If the thermistor program is disabled, the virtual temperature point does not update, and your control strategy may be affected.

Verify that the program is enabled, and do not add other PPCL commands to the MEC 100K Thermistor Program.

The installation is now complete.

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