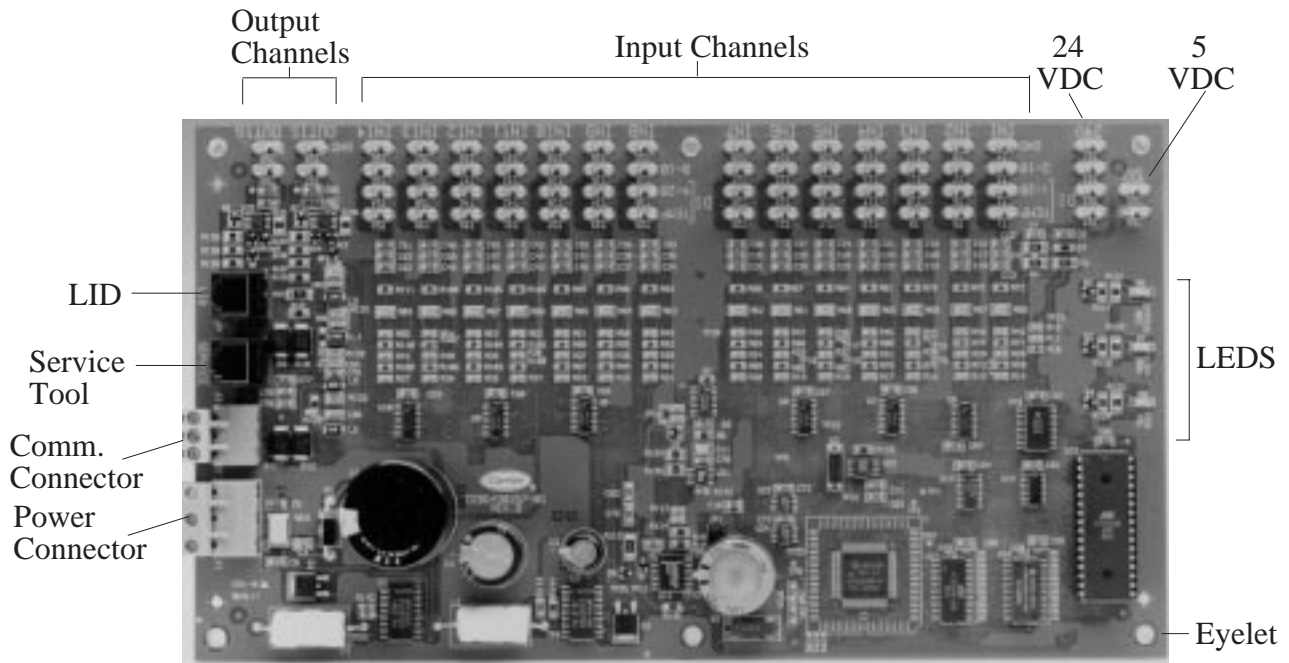


PSM Installation Instructions

The Programmable Service Monitor (part number CEPL130257), shown below, is a microcontroller-based module that provides monitoring capability for HVAC equipment without CCN controls, or auxiliary equipment such as pumps and cooling towers. The PSM is designed for use with ComfortWORKS Service Reports application to generate history data reports.

You can connect 16 field points (14 universal inputs and 2 discrete outputs) to the PSM. The outputs provide control capability, such as activating an alarm light or other signaling device.



Installation Procedure

1. Install the PSM printed circuit board into a field-supplied, grounded metal NEMA enclosure. Attach the circuit board to the enclosure with six sheet metal screws that insert through the eyelets that are integrated into the board.
2. Connect a field-supplied 24 Vac transformer to the power connector (7.5 mm plug-in type).
3. Connect the CCN to the communication connector (5 mm, plug-in type).
4. Wire the quick connect terminals for the required I/O channels. Each channel requires two connections.
5. Connect Service Tool or LID to labeled RJ11 modular jack.
6. Wire external milliamp sensors to the four 24 Vdc quick connect terminals (T61–T64). Supply power to pressure transducers via the two 5 Vdc quick connect terminals (T65 and T66).

Power Connector Pin Assignments

Pin Number	Power Connector
1	24 Vac or 33 Vdc (+)
2	24 Vac or 33 Vdc (-)
3	Chassis ground

Communication Connector Pin Assignments

Pin Number	Power Connector
1	CCN data (+)
2	CCN Signal ground
3	CCN data (-)

I/O Connections

The 14 input channel connections are made with the 0.250" quick connect terminals listed in the table below. Each channel has one ground terminal. Channels 15 and 16 are discrete output.

Input Channels	Input Types	Input Terminals	Common or Return Terminals
Channel 1	Thermistor Discrete Milliamp* Voltages	T1 T1 T61 (+) T3 (+)	T4 T2 T2 (-) T4 (-)
Channel 2	Thermistor Discrete Milliamp Voltages	T5 T5 T61 (+) T7	T8 T6 T6 (-) T8
Channel 3	Thermistor Discrete Milliamp Voltages	T9 T9 T61 (+) T11	T12 T10 T10 (-) T12
Channel 4	Thermistor Discrete Milliamp Voltages	T13 T13 T61 (+) T15	T16 T14 T14 (-) T16
Channel 5	Thermistor Discrete Milliamp Voltages	T17 T17 T62 (+) T19	T20 T18 T18 (-) T20
Channel 6	Thermistor Discrete Milliamp Voltages	T21 T21 T62 (+) T23	T24 T22 T22 (-) T24
Channel 7	Thermistor Discrete Milliamp Voltages	T25 T25 T62 (+) T27	T28 T26 T26 (-) T28
Channel 8	Thermistor Discrete Milliamp Voltages	T29 T29 T62 (+) T31	T32 T30 T30 (-) T32
Channel 9	Thermistor Discrete Milliamp Voltages	T33 T33 T63 (+) T35	T36 T34 T34 (-) T36
Channel 10	Thermistor Discrete Milliamp Voltages	T37 T37 T63 (+) T39	T40 T38 T38 (-) T40
Channel 11	Thermistor Discrete Milliamp Voltages	T41 T41 T63 (+) T43	T44 T42 T42 (-) T44
Channel 12	Thermistor Discrete Milliamp Voltages	T45 T45 T64 (+) T47	T48 T46 T46 (-) T48
Channel 13	Thermistor Discrete Milliamp Voltages	T49 T49 T64 (+) T51	T52 T50 T50 (-) T52
Channel 14	Thermistor Discrete Milliamp Voltages	T53 T53 T64 (+) T55	T56 T54 T54 (-) T56

* Use T61-T64 for milliamp source voltages.



- * Discrete inputs are wired between the thermistor and milliamp input terminals
- ** Milliamp input channels only require a connection from a +24 VDC source terminal to the corresponding milliamp input terminal.

LEDs

The PSM has three LEDs that are used to indicate operational status.

Red	Indicates control operating status, initialization and configuration storage
Green	Indicates the control is transmitting data to the LID
Yellow	Indicates the PSM is transmitting data to the CCN Communication Bus