

INSTALLATION INSTRUCTIONS

TS-16

Description:

A temperature sensing device for compatible apex control panels.

Specifications:

Temperature sensing range: 32 deg to 127 deg F

Temperature offset range: +6.3 deg to -6.3 deg F (+3.5 deg to -3.5 deg C) in 0.9 deg F (0.5 deg C) steps

Temperature accuracy: +0.9 deg to -1.8 deg F (+/- 0.5 deg C)

Humidity: 0 to 90% non-condensing

Power:

Current draw: 50mA

Source: 4 wire bus

Operating voltage: 9.5 to 14VDC

Wiring:

Observing proper color code, attach the TS-16 to the 4 wire bus using four-wire stranded cable. For wire runs up to 50 feet, 24 gauge is recommended and for runs over 50 feet use 22 gauge. A TS-16 can be wired directly to the control panel or daisy chained to any other 4 wire bus peripheral in the system.

Placement:

Use the same principles that would be used for placing a standard thermostat. Place in an area that is free of dirt and moisture and is convenient to the 4 wire communication bus. Be aware of environmental conditions such as drafts, direct sunlight and airflow from HVAC return ducts that will have a negative influence on accurate temperature sensing.

LED's:

Green Status Light

Solid: Operating Correctly

Flashing: Error Detected

Programming:

Consult the control panel Installation Manual for programming information.

Dip Switches:

Defaults			
Switch	Position	Label	Name
1	Off	A0	Address 0
2	Off	A1	Address 1
3	Off	A2	Address 2
4	Off	A3	Address 3
5	Off	BF	Slow / Fast Broadcast
6	Off	00	Temperature Offset 0
7	Off	01	Temperature Offset 1
8	Off	02	Temperature Offset 2
9	Off	+/-	Add / Subtract Temp.
10	Off	AD	Average

Device Address Settings				
TS-16	Switch 1	Switch 2	Switch 3	Switch 4
1	Off	Off	Off	Off
2	On	Off	Off	Off
3	Off	On	Off	Off
4	On	On	Off	Off
5	Off	Off	On	Off
6	On	Off	On	Off
7	Off	On	On	Off
8	On	On	On	Off
9	Off	Off	Off	On
10	On	Off	Off	On
11	Off	On	Off	On
12	On	On	Off	On
13	Off	Off	On	On
14	On	Off	On	On
15	Off	On	On	On
16	On	On	On	On

Position	Slow / Fast Broadcast Switch 5	Average Switch 10
On	Broadcast every minute	Temperature Averaging Disabled
Off	Broadcast every 10 minutes	Temperature Averaging Enabled

Temperature Offset Settings				
Offset FE (CE)	Switch 6	Switch 7	Switch 8	Switch 9
-6.3 (-3.5)	On	On	On	Off
-5.4 (-3.0)	Off	On	On	Off
-4.5 (-2.5)	On	Off	On	Off
-3.6 (-2.0)	Off	Off	On	Off
-2.7 (-1.5)	On	On	Off	Off
-1.8 (-1.0)	Off	On	Off	Off
-.09 (-0.5)	On	Off	Off	Off
0.0 (0.0)	Off	Off	Off	Off
0.0 (0.0)	Off	Off	Off	On
+.09 (+0.5)	On	Off	Off	On
+1.8 (+1.0)	Off	On	Off	On
+2.7 (+1.5)	On	On	Off	On
+3.6 (+2.0)	Off	Off	On	On
+4.5 (+2.5)	On	Off	On	On
+5.4 (+3.0)	Off	On	On	On
+6.3 (+3.5)	On	On	On	On

Device Address:

Determines if the TS-16 is TS-16 # 1 - 16

Slow/Fast Broadcast:

Determines how often the temperature is updated in the absence of changing temperatures. Temperatures are immediately updated any time a change occurs.

Temperature offset:

TS-16's temperature readings can be offset to match readings of a calibrated temperature sensing instrument.

Averaging:

Determines if the TS-16 transmits averaged temperature samples or the absolute temperature.