



TR3800/TR3840/TR3700/TR3740/TR3501

SMART SENSOR

TEMPERATURE AND HUMIDITY

DESCRIPTION

The TR3800 smart sensor is a slim attractive wall mounted temperature sensor with a very unique feature. It has a tiny fan that draws air in from the bottom of the housing over the sensor and discharges through the top. The fan is located at the top of the housing and draws air through an inlet plenum. The sensor is located at the bottom of the housing in the inlet plenum. The fan also draws air from the electronics section to remove heat.

The TR3840 smart sensor is similar to the TR3800 sensor except it has a 2 x 16 character LCD display and four pushbuttons. These are located behind a door with a viewing aperture for the display. The pushbuttons are Raise and Lower for setpoint adjustment, Select pushbutton to enable functions and a System On/Off pushbutton to turn the Air Conditioning System on and off when ever that function is enabled.

The TR3700 smart sensor is similar to the TR3800 except that it has a humidity sensor on board as well as the temperature sensor.

The TR3740 is similar to the TR3840 with the addition of the humidity sensor and has the display and pushbuttons.

All of the above sensors operate on a two wire non polarised connection to the TC5044 controller. Power and communications are supplied over the one pair of wires. Up to four sensors, including one TR3840 sensor can be connected to the same pair of non polarised wires. The controller will recognise how many are connected and average the sensors.

The TR3501 fan sensor is similar in appearance to the TR3800, however it is a three wire connection. This enables the sensor to be used with other controllers and systems. The sensor is a 10k thermistor resistance sensor and the power for the fan can be from 6-24V AC/DC.

LCD DISPLAY

This is a 2 x 16 character LCD display with white backlighting. The top line will display the Temperature and/or Humidity. This line will remain permanently displayed in normal mode. The second line displays the setpoint. This can be adjusted by using the Raise / Lower buttons to change the setpoint. It is adjustable in 0.5°C increments.

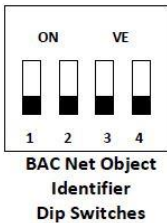
The TR3840 has a default setpoint of 20 – 25°C. This can be altered to any range between 10 and 40°C. It can also be reduced to a smaller range , 22 – 24°C or 23 – 23°C.

CONFIGURATION MENU

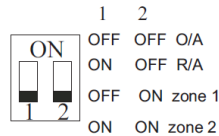
The configuration Menu is as set out below :

- EXIT
- SETPOINT RANGE
- SETPOINT RES
- SYSTEM TIMER
- SENSOR DISABLED
- REMOTE SENSOR
- REMOTE SP
- REMOTE CONFIG
- MODE SELECT
- RESET DEFLT
- RESET DEFLT
- EXIT

DIP SWITCH SETTINGS

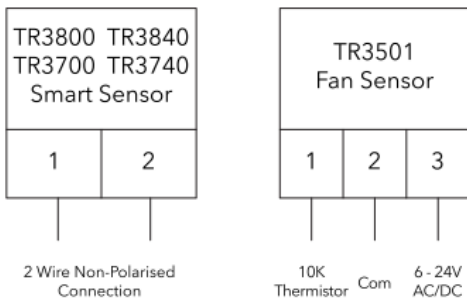


BACnet Dip Switches only applicable when using with TC6644



1 2
 OFF OFF O/A
 ON OFF R/A
 OFF ON zone 1
 ON ON zone 2

CONNECTION DIAGRAM



SYSTEM TIMER

This function is used to set a run timer for the A/C system whenever the TC5044 is set for FAN CONTROL.

For example, if set for 2 hours and the ON/OFF button is pushed, the system will run for 2 hours and turn off.

If the system is running, pressing the ON/OFF button will still turn the system off.

Press SEL for 10 seconds to enter the main menu page .
 Scroll down to the System Timer.

Press SEL and HOURS will appear.

Scroll up or down (if previously set) to adjust the runtime in 0.5hr increments. MAX. 12 hours.

Press SEL and the display will return to the main screen.

An Access Code is required for any further changes to the Smart Sensor including the following :

- SETPOINT RANGE
- SETPOINT RES
- SENSOR DISABLED
- REMOTE SENSOR
- REMOTE SP
- REMOTE CONFIG
- MODE SELECT
- RESET DEFLT
- Access Code - 351351

TECHNICAL DATA

ITEM	DESCRIPTION
Supply Voltage : TR3800, TR3040, TR3700, TR3740	Power and Comms supplied from TC5044 Controller
TR3501	6 – 24V AC/DC
Power Consumption	0.2W Max
Fan Life	MTTF 50,000 Hrs.
Ambient Temp Operation	0 - 50°C
Ambient Humidity	Max. 90% RH
Dimensions	L 115 x H 72 x D 16mm
Colours	Electric White
Weight	75g
TR3501	Thermistor 10k
NOTE :	Fan Aspirated Sensor – Patent Pending

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