

TC5044 control & Smart Sensor Features and Benefits

Applications.

Temperature control.

On-Off and Proportional control (0-10vdc).

Temperature and/or humidity control.

On-Off and Proportional Temp. control.

On-Off and Proportional Humidity control.

Air pressure control.

Six range selection.

0-25pa, 0-50pa, 0-100pa,

0-250pa, 0-500pa, 0-1000pa.

Water pressure control.

Two range selections.

0-400kpa, 0-1000kpa.

Refrigerant pressure control.

Range selection: 0-3000kpa.

Carbon monoxide control.

Three range selections.

0-100ppm, 0-200ppm, 0-300ppm.

Carbon dioxide control.

Range selection: 0-2000ppm.

Voltage relay. 0-10vdc input.

Four stage relay

Features & Benefits

Universal voltage supply. 24 - 265 vac-vdc

Simple to use. No tools required

30+ pre-programmed menus's.

Operates with passive and active inputs.

Smart Sensor. Temperature models TR3800W/TR3840W

Smart Sensor. Combined Temperature & humidity models. TR3700W/TR3740W.

Sensors. 10k, 2k, 1k NTC.

Sensors. 1k nickel & 1k platinum PTC.

Transmitters. 4-20mA 2 or 3 wire or 0-10vdc.

Sensor averaging.

Up to 4 standard sensors can be averaged

Standard parameters pre-set for each menu.

Note: All parameters adjustable.

Temperature adjustment range for TC5044

-20oC to 120oC.

Temperature adjustment range for Smart Sensors with display

10oC to 40oC. Range selectable.

Temperature increments on TC5044 & Smart Sensors with display.

Selectable. 0.5oC or 0.1oC.

Compact dimensions for TC5044.

W70xH88xD52. Note DIN rail supplied with control



**TC5044
Universal Controller**



Smart Sensor



TR2500W Sensor

Getting started: Selecting the Menu

The TC5044 Controller default configuration is Menu 005: - 2 Heat 2 Cool.

To select a different menu, press and hold the SEL button for approx 10 seconds to display current menu. I.e. >+005 TEMP. Use the Up or Down arrow to scroll to menu number required. I.e. 001 TEMP. See table below. Press SEL button to select. Press and hold Down arrow and scroll to EXIT. Press SEL button and return to main screen.

Menu	Temperature. All menu's have 3 analogue(0-10vdc)outputs for modulating valves or dampers
001	2 stage reverse cycle control with 1 stage electric boost heat.
002	3 stage reverse cycle.
003	4 stage On/Off heat control.
004	3 stage On/Off heat & 1 stage cool.
005	2 stage On/Off heat & 2 stage cool.
006	1 stage On/Off heat & 3 stage cool.
007	4 stage cool control.
008	4 stage time proportional heat control.
009	3 stage time proportional heat & 1 stage cool.
010	2 stage time proportional heat & 2 stage cool.
011	1 stage time proportional heat & 3 stage cool.
012	2 stage On/Off heat & PWM cool output for thermotronic valve & cooling pump call
013	2 x PWM heat/cool outputs for thermotronic valves & cooling and heating pump call.
	Temperature & fan control. Smart sensor required. 3 x analogue outputs for valves or dampers
025	2 stage reverse cycle system and system stop/start button
026	1 stage On/Off heat & 2 stage cool and system stop/start button.
	Temp. & Humid. Smart sensor required. 3 x analogue outputs for valves, dampers or humidity.
041	2 stage reverse cycle and humidity control
042	1 stage heat & 2 stage cool On/Off control and humidity control.
043	1 stage heat & 1 stage cool On/Off control and humidity & de-humidity On/Off control.
	Humidity. Humidity transmitter required. 3 x analogue outputs for humidity & de-humidity control
051	Humidity and de-humidity control.
	Low pressure control. I.e. Air Pressure Control. Pressure transmitter required
061	Operating range. 0 - 25pa. 4 relay and 3 analogue outputs for dampers or VSD control.
062	Operating range. 0 - 50pa. As per menu 061
063	Operating range. 0 - 100pa. As per menu 061.
064	Operating range. 0 - 250pa. As per menu 061.
065	Operating range. 0 - 500pa. As per menu 061
066	Operating range. 0 - 1000pa. As per menu 061
	Medium pressure control. I.e. Water Pressure Control. Pressure transmitter required.
067	Operating range. 0 - 400kpa. As per menu 061
068	Operating range. 0 - 1000kpa. As per menu 061
	High pressure control. I.e. Refrigerant Pressure Control. Pressure transmitter required
069	Operating range. 0 - 3000kpa. As per menu 061.
	4 stage voltage relay
081	4 individually adjustable relay outputs from one common 0-10vdc input signal.
	CO. Carbon monoxide control. Car park fan auto control. CO transmitter required
091	Operating range. 0 - 100ppm. 4 relay and 3 analogue outputs for fan start, VSD or damper control.
092	Operating range. 0 - 200ppm. As per menu 091
093	Operating range. 0 - 300ppm. As per menu 092
	Co2. Carbon dioxide control. Automatic ventilation control. Co2 transmitter required
101	Operating range. 0 - 2000ppm. 4 relays and 3 analogue outputs for fan start, VSD or damper control.

To reset Controller to Factory settings

The TC5044 Controller default configuration is Menu 005.

To reset the controller, press and hold the SEL button for approx 10 seconds.

The current menu will be displayed, I.e. >+001 TEMP.

Press the Down arrow and scroll to select FACTORY RESET, press SEL button to select.

RESETTING DB, PLEASE WAIT is displayed. After 30 secs >+005 TEMP is displayed.

To exit press and hold Down arrow and scroll to EXIT. Press SEL and return to main screen.

Typical TC5044 wiring diagrams

