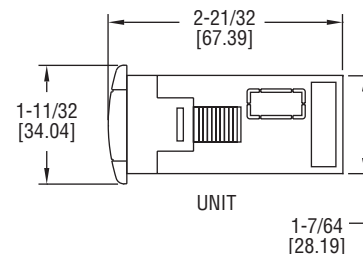
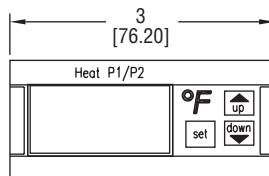




# Series TSCC Digital Dispensing Temperature Control

## Specifications - Installation and Operating Instructions



The Series TSCC Digital Dispensing Temperature Control is used to monitor and control product temperature and dispensing rate in the production of melted cheese, chili, or other heated food products. One selectable PTC or NTC thermistor is used to monitor the product temperature while a SPDT relay is used to control the temperature. Two SPST relays are used for controlling two dispensing rates for either different size containers or different products. A three digit, easy-to-read display is included on the controller. The buttons on the face of the controller enable the user to program the desired control parameters. Parameters can be copied from one device to another using our TS2-K configuration key. Security protection is offered using a password code.

**NOTICE** Unit must be mounted away from vibration, impacts, water and corrosive gases.

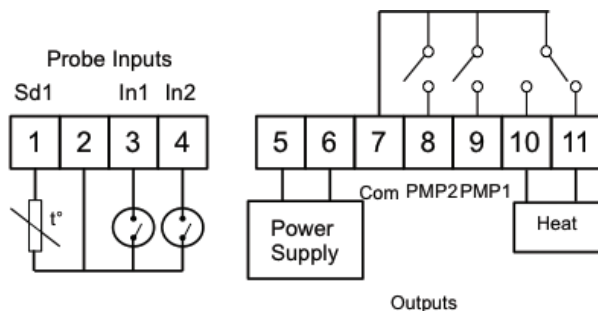
Cut hole in panel 2.80 x 1.14 in (71 X 29 mm).

Apply silicone or use the included rubber gasket around the perimeter of the hole to prevent leakage.

Insert unit into the hole of panel.

**NOTICE** POWER SUPPLY VOLTAGE  
Take note of the power supply voltage marked on the controller. Do not exceed the specified power supply voltage.

### WIRING DIAGRAM



### SPECIFICATIONS

**Probe Range:**

- PTC: -58 to 302°F (-50 to 150°C);
- NTC: -58 to 230°F (-50 to 110°C).

**Input:** 2 free voltage contact input, 1 PTC thermistor 1000Ω @ 25°C or 1 NTC thermistor 10K Ω @ 25°C.

**Output:**

- 1 each relay SPDT 16 A @ 240 VAC resistive, 5 A inductive;
- 2 each relay SPST 5 A @ 240 VAC resistive.

**Control Type:** ON/OFF.

**Power Requirements:** 115 VAC ±10%; 230 VAC ±10% (depending on model).

**Power Consumption:** 4 VA.

**Accuracy:** ±1% FS.

**Display:** 3-digit and sign, 1/2" red LED digits.

**Resolution:** 1°.

**Memory Backup:** Nonvolatile memory.

**Temperature Limits:**

- Operating: 32 to 158°F (0 to 70°C);
- Storage: -4 to 176°F (-20 to 80°C).

**Weight:** 8.8 oz (250 g).

**Front Panel Rating:** IP64.

**Agency Approvals:** CE, cUL, UL.

## PARAMETERS

Label	Description	Units	Range	Default Values
SP	Set Point	Degrees	r1 to r2	0
r0	Differential or Hysteresis	Degrees	1 to 99	1
r1	Lower Value for SP	Degrees	0 to r2	0
r2	Higher Value for SP	Degrees	r1 to 999	999
c0	Output Status with Probe Error	Range	OFF/ON	OFF
P1	Ambient Probe Adjustment	Degrees	-.30 to 30	0
H5	Access Code to Parameters	Numeric	0 to 999	0
H6	Ambient Probe Type	Range	PTC/NTC	PTC
t1	Time of Relay P1 Close	Seconds	0 to 99.9	0
t2	Time of Relay P2 Close	Seconds	0 to 99.9	0

### Parameter Descriptions

**SP:** Set point. Desired Product Regulation Temperature

**r0:** Differential or Hysteresis

if temperature < SP – r0, load is connected

if temperature ≥ SP, load is disconnected

**r1:** Lowest Value for SP

**r2:** Highest Value for SP

**c0:** Output Status with Probe Error

**P1:** Ambient Probe Adjustment

**H5:** Access Code to Parameters (Set to 00 from factory)

**H6:** Ambient Probe Type (PTC, NTC)

**t1:** Time that relay PMP1 is engaged after input 1 is closed to GND

**t2:** Time that relay PMP2 is engaged after input 2 is closed to GND

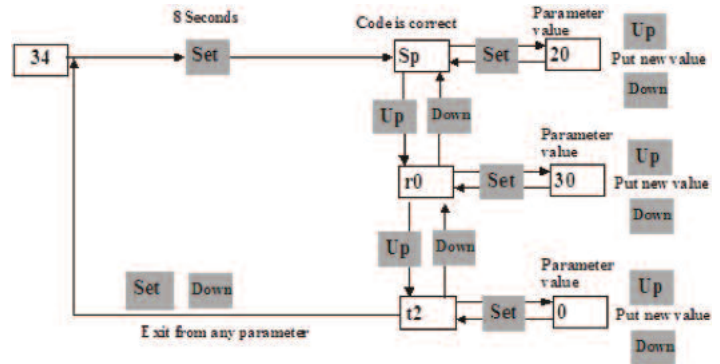
### PARAMETER PROGRAMMING

**Set Point (SP), t1, and t2 are the only parameters the user can access without code protection.**

- Press SET. SP text will appear on the display.
- With the UP and DOWN arrows, select SP, t1, or t2.
- Press SET again. The value of the parameter appears on the display.
- The value can be modified with the UP and DOWN arrows.
- Press SET to enter any new values.
- Press SET and DOWN at the same time to quit programming or wait one minute and the display will automatically exit programming mode.

### Access to all code protected parameters

- Press SET for 8 seconds. The access code value 00 is shown on the display. (Unit comes with code set at 00 from factory).
- With the UP and DOWN arrows, code can be set to user needs
- Press SET to enter the code. If code is correct, the first parameter label is shown on the display (SP).
- Move to the desired parameter with the UP and DOWN arrows.
- Press SET to view the value on the display.
- The value can be modified using the UP and DOWN arrows.
- Press SET to enter the value and exit.
- Repeat until all necessary parameters are modified.
- Press SET and DOWN at the same time to quit programming or wait one minute and the display will automatically exit programming mode.



### LED INDICATIONS

**HEAT:** Indicates that heat relay is active.

**P1/P2:** Indicates that either Pump 1 relay or Pump 2 relay is active.

### DISPLAY MESSAGES

In normal operation, the probe temperature will be shown on the display. In case of an error, the following messages will be shown:

- Er = Memory Error
- oo = Open Probe
- - - - = Short Probe

### RESET TO DEFAULT KEYPAD CODE

The parameter H5 (keypad code) can be reset to ZERO by turning off the controller and turning it on again while keeping the SET key depressed.

### FACTORY DEFAULT PROCEDURE

Press UP and DOWN while turning the controller on, all parameters will be reset to factory values.

### MAINTENANCE/REPAIR

Upon final installation of the Series TSCC no routine maintenance is required. The Series TSCC is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

### WARRANTY/RETURN

Refer to "Terms and Conditions of Sales" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.