TRACER 1
Digital Heat Trace Controller

The *TRACER 1* Digital Heat Trace Controller is a low cost simple, feature rich state of the art unit with many features including :

- One circuit control
- Alarms on temperature, current, loss of power, open heater, and probe fail.
- Programmable Ground Fault monitoring with multiple alarm and shut off options
- Timer Schedules can be set to nine pre–defined and 2 custom programs with weekday and weekend operation
- Fire protection mode
- Alarm output with program option to either open or close on Alarm.
- Dual Sensing Probes inputs can be programmed for High, Low, Average, Probe 1, Probe 2, or Ambient
- Programmable using Low voltage micro USB port
- Suitable for Indoor or Outdoor Applications (unit employs NEMA 4X enclosure)
- Power Supply "Extreme Temp" rated at 90–308V, 50/60Hz
- USB port for software upgrade using approved USB Memory stick.
- Operating Range –40°F to 131°F
- 2 /4 wire RS485 (Modbus) communications ports
- High reliability tactile switches for user interface
- Real Time Clock Calendar with battery backup
- Two PRTD 100Ω "385" Sensors interfaced to a 3 wire precision processor
- Two Relay Output rated at 30A @ 48–277 VAC disconnects both sides of line.
- Large, Bright 4 digit Red LED Display
- Alarm output mechanical relay with N.O. and N.C. output.
- Loss of Power output mechanical relay with N.O. and N.C. output.
- Output controls / breaks both sides of AC line to load when in "power off" alarm condition.
- Password Security and optional DIP Switch lock out.
- RS232 factory debugging port for field service use

Description:

The **TRACER 1** digital thermostat is a microprocessor based temperature control. It is used for freeze protection or process temperature maintenance of pipes or tanks protected by heat tracing products.

This thermostat can be used with Constant Wattage, Mineral Insulated or Self–Regulating heating cables.

This unit is designed to provide local temperature control and monitoring for heat traced pipes or tanks across a variety of industries and applications and will switch 30 amperes of current.

The **TRACER 1** provides easy programming of the temperature set point, GFEP set point, high and low temperature alarms, high and low current alarms, dead band, temperature units, RTCC Timer Scheduled functions and the alarm state through the front panel push buttons. LED lights are provided for indication of power to the unit, heater power on (load) and alarm status, set point display or actual temperature display.

A Fail Safe solid state alarm is included for wiring to your building management system to indicate alarm status. This alarm may be set to open or close on all alarm conditions including loss of power, high or low temperature alarm GFEP Alarm and RTD failure.

The mechanical Power Alarm relay has both N.O. and N.C. contacts. The minimum operating ambient temperature is –40°F. This unit has programmable high and low temperature alarm set points from –80°F to 999°F.

The **TRACER 1** is enclosed in an IP66, NEMA 4X FG enclosure measuring 6.6" x 6.6" x 3.6".

TRACER 1
Digital Heat Trace Controller

Specifications:

Input:

Sensor	3 wire PRTD, 100 ohm .00385Ω/Ω/°C +/-2°F
Number of sensors	1 or 2
Sensor Configuration	Probe 1, Probe 2, Average, Low, High, Ambient
DIP Switch (Option)	Lock out mode On or Off
User Interface	5 Tactile Switches : MENU, ENTER,UP,DOWN, PROGRAM
Line Voltage	100 to 277VAC 50/60Hz

Output

User Interface	4 x 7 segment Red display .56"
	Normal Mode Display Toggles: Setpoint/Actual
RTCC	Real Time Clock Calendar for Auto-Schedule
Power Switching	Mechanical Relays Switch Both Sides Of Line
Number of Circuits	1
Output Rating	30 Amps
Control Types	On/Off
Alarm Relay	1.8A, 120 / 240 VAC, 50/60Hz 1.8A, 80 VDC N.O., N.C., COM
Power Loss Relay	1.8A, 120 / 240 VAC, 50/60Hz 1.8A, 80 VDC N.O., N.C., COM
LED's (6)	Set Temp, Act Temp, Alarm, Power, Load, Heartbeat
Audible Alarm	Beeper
USB	Bootloader, Import via USB Memory Stick
Modbus Communications	RS485 2/4 wire

Parametric Ranges [stored in non-volatile memory]

Set Point	-80F to 999F (-62C to 537C)
Dead band	2 to 100
High / Low Temp. Alarm	-80F to 999F (-62C to 537C), OFF
Alarm Relay	Normally Open or Normally Closed
Power Loss Relay	Normally Closed will be closed on loss of power
Unit Of Measure	°C or °F
Sensor Alarm Output	0-100% On or Manual Mode
GFEP Latch	On or Off
GFEP Trip	Normal or Trip
Fire Protection Mode	On or Off
High / Low Current Alarm	Off, 1 to 40A
Auto Cycle / Self Test	Off, 1-999 hours
Ground Fault Alarm	Off, 30 to 300mA
Probe	Probe 1, Probe 2, Low, High, Average, or Ambient
Weekday Timer	Off, Preset 1 to 9, Custom 1, Custom2
Weekend Timer	Off, Preset 1 to 9, Custom 1, Custom2
Normal Temperature	-80F to 999F (-62C to 537C)
Economy Temperature	-80F to 999F (-62C to 537C)
Real Time Clock Calendar	YY/MM/DD/HH/MM/SS
Modbus Settings	ID, Speed, Parity
Key Click	On or Off
Reset To Defaults	No, Reset Parameters Only, Boot Load, or Reset

TRACER 1
Digital Heat Trace Controller

<u>Operating</u>

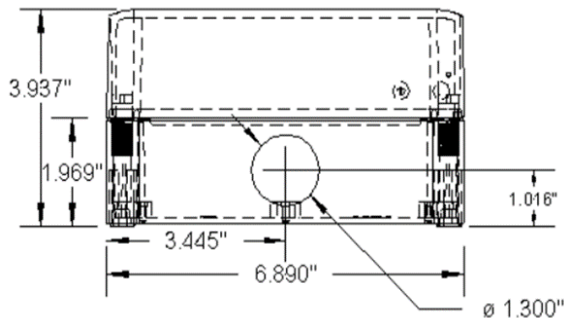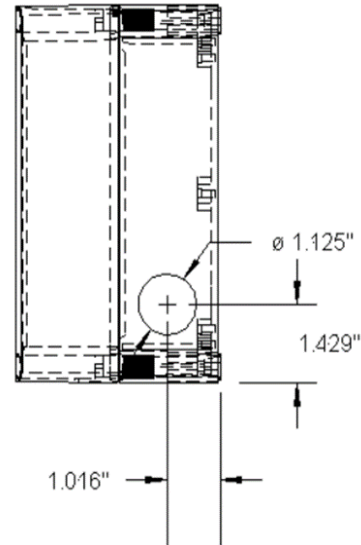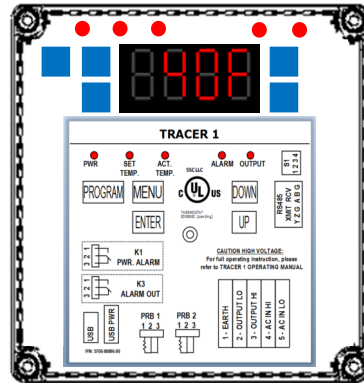|	
Temperature	−40°F to 104°F
Enclosure	6.9" x 6.9" x 3.9". IP66, NEMA 4X FG
Agency	cUL (UL60730)

Mechanical

Part Number	Model Number	Overlay	Customer Options
7300-13002-01	TBA	Standard	None
7300-13002-02	TBA	Custom	Custom parameters

THERMOSTAT
E508882   **Pending**