

# TraceMate™ Series

HEAT TRACE CONTROLLERS

## TraceMate™ ADVANTAGES

### Early Warning

- TraceCheck™
- Alarm status indicators
- Separate fail-safe alarms, local and remote

### System Fault Alarm Package

### Remote Monitoring

- Form C alarm dry contact output for digital alarm interface

### Available in:

- 120 VAC
- 208-240 VAC
- 277 VAC

### Hazardous or Non-Hazardous Area Usage

### Built-in Ground Fault

### RTD Included

### Low Installed Cost

## TraceMate II-CTR™ FEATURES

### 2-Circuit Monitoring and Control

### 2 RTD Sensors (included)

### Liquid Crystal Display (LCD)

### Early Warning System

- TraceCheck™
- Alarm status indicators
- Separate fail-safe alarms, local and remote

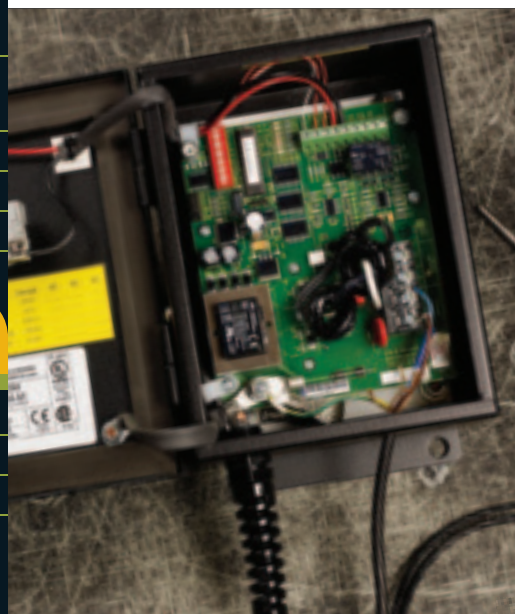
### System Fault Alarm Package

### Compatible for

### Laptop Programming

TraceMate™ Series Controllers from Nextron meet all your heat tracing control and monitoring needs in one convenient, compact and economically priced package.

TraceMate™ Series Controllers from Nextron are advanced electronic thermostats designed for indoor or outdoor use in non-hazardous, general purpose areas, or for use in hazardous Class I, Division 2 / Zone II areas.



TraceMate™ Series Controllers not only control and monitor temperature but they also monitor your heat trace system for current and ground leakage. TraceMate™ Series Controllers are compatible with every type of electric heat trace and tubing bundle available.

All TraceMate™ Series Controllers are complete packages that come with a built-in Ground Fault Protection Device (GFPD), eliminating the need for separate ground fault breaker panels and their associated costs of installation. Temperature sensing is through the included 100-ohm, 3-wire platinum RTD, which you can mount on the pipe, or use for ambient sensing.

With TraceCheck™, a feature of the controllers, you can be sure your heat tracing is working when you need it because the feature exercises dormant lines every 24 hours for early warning for shutdown prevention.



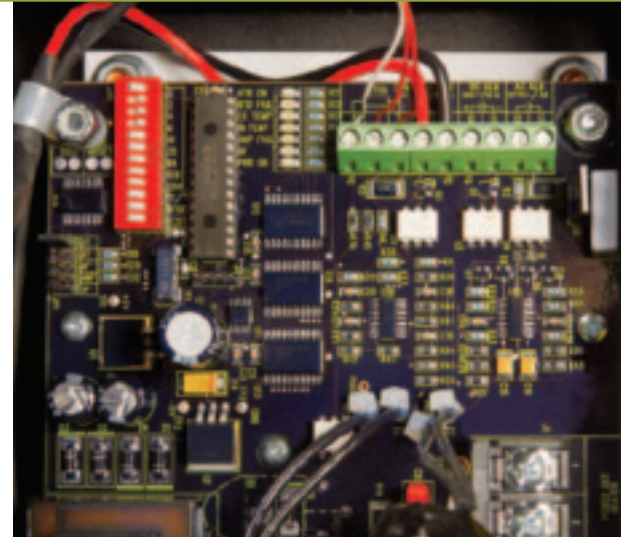
SAI GLOBAL

TraceMate™ Series Controllers provide outstanding reliability ensuring that your time is spent producing, not troubleshooting. Comprehensive ALARM PACKAGES provide quick fault detection, and the Ground Fault Trip provides optimal performance and safety.

TraceMate™ Series Controllers have a temperature range of -50°C to 500°C (-58°F to 932°F) within ±2°C (±3.6°F) using solid-state controls and microprocessor driven commands. The digital temperature setpoints offer fast, precise settings over a wide range.

No mechanical thermostat can come close to matching TraceMate™ performance. The units are self-contained and easy to install with no special maintenance staff training or special tools required.

By combining control, system monitoring and testing requirements of a heat trace controller in a single package, TraceMate™ Series Controllers offer you significant low-cost system upgrades and a controller that can be customized to meet your specific requirements.



## FEATURES AND BENEFITS

### Temperature Control

0°C to 511°C / 0°F to 511°F setpoint  
Non-ambiguous, digital temperature setpoint  
100-ohm platinum RTD\* sensor  
3-wire, lead resistance compensation

### System Fault Alarms

Breaker off or tripped  
Heater continuity or low current  
Low temperature / high temperature  
Ground fault trip / sensor fault

### Early Warning

TraceCheck™ exercises dormant systems every 24 hours for early warning for shutdown prevention

Status indicators show cause of alarms

Separate fail-safe local and remote alarms

### Remote Monitoring

Form C dry alarm contact for PLC or remote alarm indication  
LED Alarm indicator viewable on door

### Hazardous / Non-hazardous Area Usage

CSA approved for non-hazardous or Class I, Division 2, Groups A, B, C, D / Zone II hazardous area

Operating range:  
-40°C to +50°C / -40°F to +122°F

30 amps @120, 208 or 240, and 277 VAC rating

Weatherproof, NEMA-4X enclosure

Easy retrofit replacement for mechanical thermostat

### Low Installed Cost

Competitively priced  
Self contained, no control panel to build  
Ground fault trip eliminates expensive ground fault circuit breaker  
Standard model simplifies spare parts stocking

## TEMPERATURE RANGE

Range: -50°C to 500°C, -58°F to 932°F  
Hysteresis: ±2°C, ±3.6°F  
Absolute Accuracy: 2.5°C, 4.5°F  
Repeatability: ±1°C, ±1.8°F  
RTD:\* 100-ohm platinum, 3-wire  
20 ohms maximum lead resistance

## HEATER SWITCHING

Configuration: Single-pole 120 VAC and 277 VAC  
Dual-pole 208-240 VAC and 277 VAC  
Dual SCR per phase  
Ratings: Single-pole 120 VAC and 277 VAC @ 30 amps  
Dual-pole 208-240 VAC and 277 VAC @ 30 amps  
Protection: Control power from heater voltage protected by 2A fuse  
MOV transient protection

## CONTROL POWER

Power: Control power from heater voltage  
Requirements: Single-pole 120 VAC and 277 VAC, 10VA  
Dual-pole 208-240 VAC and 277 VAC, 10VA  
Protection: Control power from heater voltage protected by 2A fuse  
MOV transient protection and RC snubber

## USER INTERFACE

Heater Setpoint: 12 position dip switch  
Reset/Heater Test: Dip switch  
Panel Indicators: Power on  
Heater on  
Low temperature alarm  
High temperature alarm  
Current fail alarm  
Ground fault trip alarm  
RTD fail alarm

## ENVIRONMENT

Approvals: CSA NRTL/C US / C and FM Class I, Division 2, Groups A, B, C, D Class I, Zone II, Groups IIC  
Operating Range: -40°C to +50°C / -40°F to +122°F  
**Heater current derated**

## USER-DEFINABLE OPTIONS

Heater Setpoint =  
Low temperature alarm setpoint:  
High temperature alarm setpoint:  
0°C to 511°C, 1°C steps  
0°F to 511°F, 1°F steps  
Temperature Units: 0°C or °F  
Current Fail Alarm Setpoint: 0.0A - 30.0A, 0.1 A steps  
Ground Fault Trip Alarm Setpoint: 0mA - 511mA, 1mA steps

## ENCLOSURE

Type: NEMA-4X steel, powder coat painted (black)  
Size: Single-pole: 8"H x 6"W x 4"D  
Dual-pole: 10"H x 8"W x 4"D  
Features: Quick release latches to open door  
One 3/4" conduit knockout for power and two 1/2" conduit knocks for RTD and signal wiring

## ALARMS

Low Temperature: Actual temperature < low temperature alarm setpoint  
High Temperature: Actual temperature > high temperature alarm setpoint  
Current Fail: Heater current < current fail alarm setpoint  
Switch shorted  
Ground Fault Trip: Ground fault current > ground fault trip alarm setpoint  
RTD Fail: RTD open, RTD short  
Hardware: No incoming voltage  
TraceCheck™: Current fail alarm  
Configuration: NC / NO contacts  
Alarm Output: Form C contact:  
12-277 VAC/0.5A, 30VDC/0.1A  
Rating: LED indicator: 6VDC/50mA

## ALARM FUNCTION

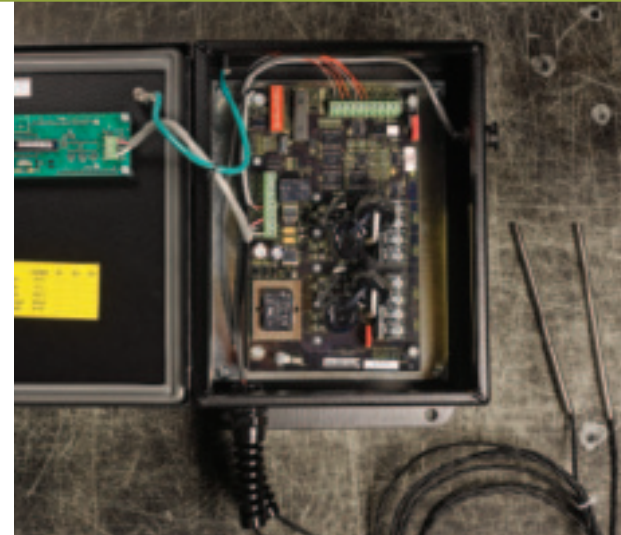
Temperature: Low temperature alarm  
High temperature alarm  
Current: Current fail alarm  
Ground Fault: Ground fault trip  
Hardware: RTD open, RTD short, switch shorted

\*Standard RTD rated to 200°C

The TraceMate II-CTR™ offers a low-cost solution to two-circuit heat control and monitoring while also monitoring your heat process for current and ground leakage.

The system is designed for indoor or outdoor use in non-hazardous or Class I, Division 2, Groups A, B, C, D or Zone II hazardous areas.

Based on the outstanding reliability of Nextron's proven technology, the TraceMate II-CTR™ offers advanced monitoring features including an LCD display along with convenient programming capabilities. The unit can be programmed by a 12-point dipswitch located on the printed circuit board, or by laptop programming. Specialized software is downloaded into compatible PC devices for field communication to the thermostat unit.



## FEATURES AND BENEFITS

### Temperature Control

0°C to 511°C / 0°F to 511°F setpoint  
Non-ambiguous, digital temperature setpoint  
100-ohm platinum RTD sensor  
3-wire, lead resistance compensation

### System Fault Alarms

Breaker off or tripped  
Heater continuity or low current  
Low temperature / high temperature  
Ground fault trip / sensor fault

### Early Warning

TraceCheck™ exercises dormant systems every 24 hours for early warning for shutdown prevention  
Status indicators show cause of alarms  
Separate fail-safe local and remote alarms

### Remote Monitoring

DC or AC alarm output for PLC or remote alarm indication  
Form C dry contact alarm output  
LCD display on the front door

### Hazardous / Non-hazardous Area Usage

CSA approved for non-hazardous or Class I, Division 2, Groups A, B, C, D / Zone II hazardous area  
Operating range:  
40°C to +50°C / -40°F to +122°F  
30 amps @ 120/277 VAC rating  
Weatherproof, NEMA-4 enclosure  
Easy retrofit replacement for mechanical thermostat

### Low Installed Cost

Competitively priced  
Self contained, no control panel to build  
Ground fault trip eliminates expensive ground fault circuit breaker  
Standard model simplifies spare parts stocking

## TEMPERATURE RANGE

Range: -50°C to 500°C, -58°F to 932°F  
Hysteresis: ±2°C, ±3.2°F  
Absolute Accuracy: 2.5°C, 4.5°F  
Repeatability: ±1°C, ±1.8°F  
RTD: 100-ohm platinum, 3-wire  
20 ohms maximum lead resistance

## HEATER SWITCHING

Configuration: Single-pole one SCR per heater, or dual-pole, one SCR per phase  
Ratings: 120/277 VAC @ 30 amps  
208/240 VAC @ 30 amps  
250 amp 1/2 cycle inrush  
Line Frequency: 50 or 60 HZ

## CONTROL POWER

Power: Control power from heater voltage  
Requirements: 120/208/240/277VAC, 10VA  
Protection: Control power from heater voltage protected by 2A fuse  
MOV transient protection and RC snubber

## USER INTERFACE

Heater Setpoint: 12 position dip switch  
Reset/Heater Test: Dip switch  
Panel Indicators: Power on  
Heater on  
Low temperature alarm  
High temperature alarm  
Current fail alarm  
Ground fault trip alarm  
RTD fail alarm  
LCD Display: Heater status and setpoint values  
RS232 Port: Compatible PDA or laptop programming

## ENVIRONMENT

Approvals: CSA C US  
Class I, Division 2, Groups A, B, C, D  
Class I, Zone II, Groups IIC  
Operating Range: 120/277V: -40°C to +50°C / -40°F to +122°F  
(LCD display: -20°C to +50°C / -4°F to +122°F)  
Heater current derated

## USER-DEFINABLE OPTIONS

Heater Setpoint:  
Low Temperature Alarm Setpoint:  
High Temperature Alarm Setpoint:  
0°C to 511°C, 1°C steps  
0°F to 511°F, 1°F steps  
Temperature Units: 0°C or °F  
Current Fail Alarm Setpoint: 0.0 A - 30.0A, 0.1 A steps  
Ground Fault Trip Alarm Setpoint: 0mA - 511mA, 1mA steps

## ENCLOSURE

Type: NEMA-4 steel, powder coated painted (black)  
Size: 10"H x 8"W x 4"D  
Features: Quick release latches to open door  
One 3/4" conduit knockout for power wiring  
Two 3/8" or 1/2" conduit knockouts for RTD wiring  
One 3/8" or 1/2" conduit knockout for signal wiring  
One 0.610" knockout for RS232 communication

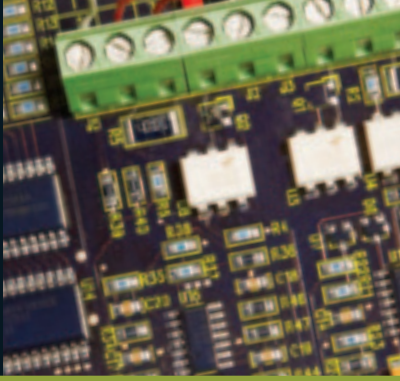
## ALARMS

Low Temperature: Actual temperature < low temperature alarm setpoint  
High Temperature: Actual temperature > high temperature alarm setpoint  
Current Fail: Heater current < current fail alarm setpoint  
Switch shorted  
Ground Fault Trip: Ground fault current > ground fault trip alarm setpoint  
RTD Fail: RTD open, RTD short  
Hardware: No incoming voltage  
TraceCheck™: Switch shorted  
Current: Fail alarm  
Configuration: NC contacts  
Alarm Output: AC contact: 12-240 VAC @ 0.5A maximum  
DC contact: 30VDC/0.1A, 500mW maximum  
LED indicator: 6VDC/50mA  
Form C contact: 12-277 VAC/0.5A, 30VDC/0.1A

## ALARM FUNCTION

Temperature: Low temperature alarm  
High temperature alarm  
Current: Current fail alarm  
Ground Fault: Ground fault trip  
Hardware: RTD open, RTD short, switch shorted



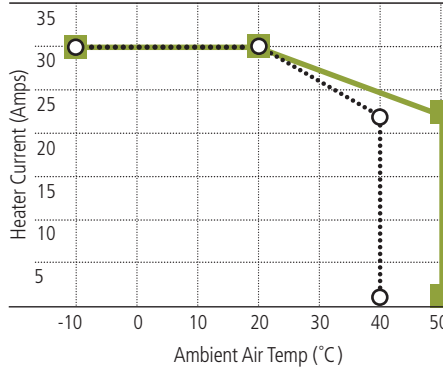


THE ONLY THERMOSTAT YOU WILL EVER NEED

**TraceMate™ Heater Current Ratings**

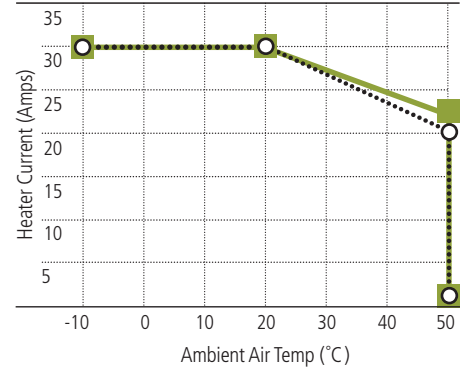
**120 VAC/208-240 VAC Heater Current Rating**

■ 1-Pole Switching ○ 2-Pole Switching



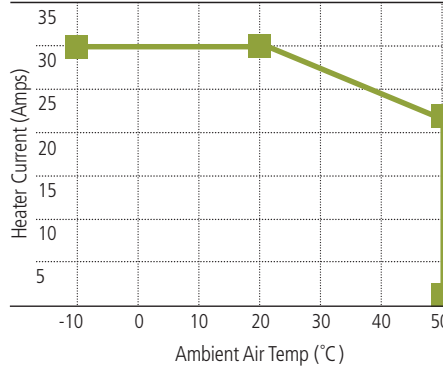
**277 VAC Heater Current Rating**

■ 1-Pole Switching ○ 2-Pole Switching



**TraceMate II-CTR™ Heater Current Ratings**

**Heater Current Rating**



Manufactured by:



#14, 6120 – 11 Street S.E.  
Calgary, Alberta, Canada T2H 2L7

**Phone** (403) 735-9555  
**Fax** (403) 735-9559  
**Toll Free** 1-866-639-2875  
**Email** sales@nextron.ca

**www.nextron.ca**



Scan this code for more information.

The manufacturer believes the information provided by the manufacturer and describing the manufacturer's products is correct. However, users of the manufacturer's information accept all risk of any damages or loss whatsoever that a user may suffer from using the manufacturer's information and the manufacturer's products (including, without limitation, defects in the manufacturer's products), whether the action is based in contract or not (including negligence). Therefore, users should evaluate the product and the suitability of the product for the user's application.

WITHOUT LIMITING THE ABOVE, IN NO EVENT SHALL THE MANUFACTURER BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES FOR ANY BREACH OR OUR OBLIGATIONS OR WARRANTIES OF ANY SORT, EXPRESS OR IMPLIED, RESULTING FROM THE USER'S USE OF THE MANUFACTURER'S INFORMATION.

The user hereby agrees to save and hold the manufacturer harmless from any loss, damage, or product liability claim of any sort resulting from the user's use of information or the manufacturer's products.