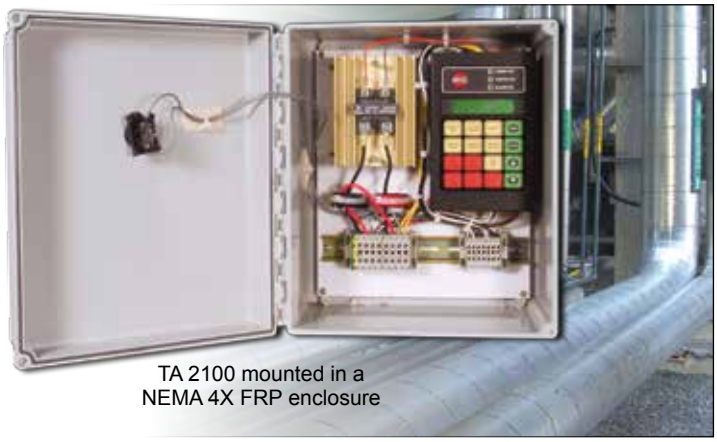
PRODUCT SPECIFICATIONS

TA 2100™

DUAL INPUT, SINGLE OUTPUT CONTROL MODULE

APPLICATION

The TA 2100 is a microprocessor-based temperature control and monitoring module developed specifically for heat tracing. The unit provides control and monitoring capabilities via digital information display for one heat tracing circuit with input from two RTD's. Each RTD can provide independent sensing of the heated surface and, as a safety feature, can activate a high temperature alarm and shut down the heater. The unit can be programmed to use one RTD.



TA 2100 mounted in a NEMA 4X FRP enclosure

RATINGS

Control and monitoring capacity ..... 1 heat tracing circuit (up to 30 amps)
Module supply voltages ... 110-120, 208-240 or 277 [1] Vac
Controlled output voltages ..... 110-480 Vac
Power consumption ..... 6 watts
Operating ambient [2] ..... -40°F to 140°F (-40°C to 60°C)
Maximum storage ambient ..... 158°F (70°C)
Data retention ..... nonvolatile EEPROM
Power clamp function . programmable from 20% to 100%
Temperature input ... one or two 3-wire platinum 100 Ω RTD's
Temperature control range ..... -40°F to 932°F (-40°C to 500°C)
Control band .... programmable in increments of 1 degree
Enclosure dimensions (HxWxD) ..... 14" x 12" x 8" (355 x 305 x 203 mm)
High operating current alarm ..... 1.0 to 30.0 amps
Low operating current alarm ..... 0.0 to 30.0 amps (in 1 mA increments)
Ground leakage alarm/trip ..... 30 to 150 mA
Alarm indication ..... red LED light on door
Self-test frequency ..... programmable from 2 to 99 hours

Notes

1. Module contains a step-down transformer for 277 Vac supply voltages.
2. LCD heater is recommended for ambients below -4°F (-20°C).

DESCRIPTION

The TA 2100 control and monitoring module, heat sink, solid state relay, door mounted alarm indicator with all points pre-wired to terminal blocks is mounted in a NEMA 4X FRP enclosure

CERTIFICATIONS/APPROVALS

When housed in a NEMA 4 or 4X enclosure and equipped with a solid-state relay, the TA 2100 is approved for use in ordinary (nonclassified) and hazardous (classified) areas.

FM Approvals
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups A, B, C and D

Underwriters Laboratories Inc.
Enclosed Industrial Control Panels

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PRODUCT SPECIFICATIONS

TA 2100™

DUAL INPUT, SINGLE OUTPUT CONTROL MODULE

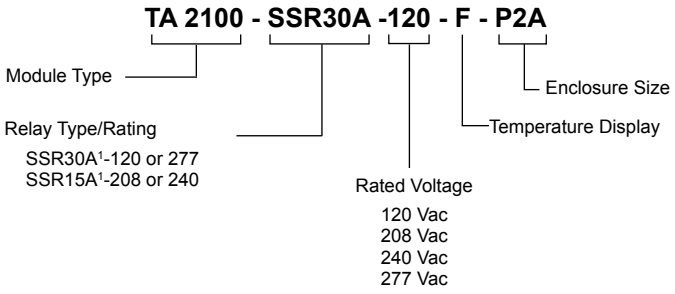
SOLID-STATE RELAY

The TA 2100 is configured with a zero crossing solid-state relay which will allow three different modes of operation:

- **On-Off Control**—User input for maintain temperature and control band provides the on-off limits for the controlled heater.
- **On-Off Control with Soft Start**—Adds a three-minute 0% to 100% ramp-up feature to the on-off control function to minimize the effects of start-up power.
- **Proportional**—Adjusts the amount of heat generated through time sequencing of the heater. Reduces energy consumption for ambient-controlled systems and provides precise control of temperatures when line sensing control is used.

The ambient conditions in which the module is energized determine the electrical load capability of the solid-state relay. The chart below indicates the amperage ratings (at the temperatures indicated) using the standard enclosure and heat sink. The 40°F (4°C) rating should be used with freeze protection applications as the controlled circuit would not be energized above this temperature.

HOW TO SPECIFY



Relay	Configuration	Operating Ambient	Heat Sink Style	Amperage Ratings
SSR30A[1] 120v or 277v	Internal Heat Sink (single pole relay)	40°F (4°C)	A	30 amps
		104°F (40°C)	A	19 amps
SSR15A[1] 120v or 277v	Internal Heat Sink (double pole relay)	40°F (4°C)	A	22 amps
		104°F (40°C)	A	9 amps

Note

1. When phase-to-phase heaters are controlled and qualified personnel are not maintaining the system, 2-pole relays or a 2-pole EPD circuit breaker is recommended."

ENCLOSURES

The standard enclosure is a NEMA 4X fiberglass-reinforced polyester with a hinged cover held in place with quick release latches.

An optional stainless steel enclosure is available. Replace the standard -P2A designation with -SS2A at the end of the catalog number.