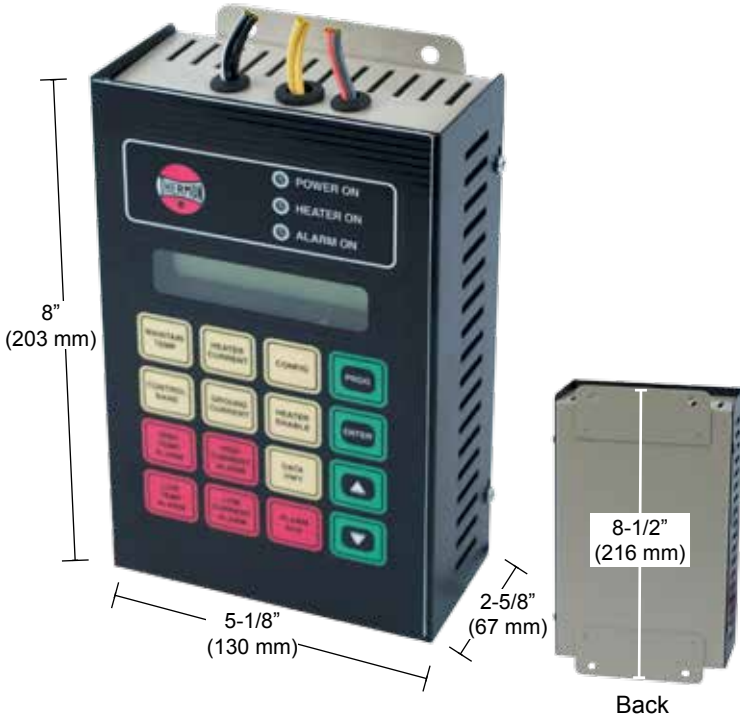




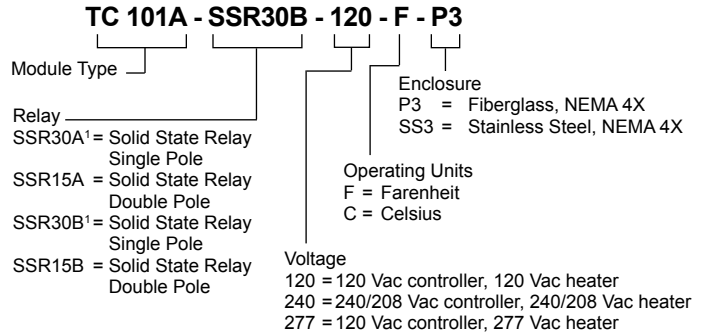
PRODUCT SPECIFICATIONS

TC 101a

CONTROL AND MONITORING MODULE



HOW TO SPECIFY



Relay	Configuration	Operating Ambient	Heat Sink Style	Amperage Ratings
SSR30A ¹	Internal Heat Sink (single pole relay)	40°F (4°C)	A	30 amps
		104°F (40°C)	A	24 amps
SSR15A	Internal Heat Sink (double pole relay)	40°F (4°C)	A	24 amps
		104°F (40°C)	A	12 amps
SSR30B ¹	External Heat Sink (single pole relay)	40°F (4°C)	B	30 amps
		104°F (40°C)	B	30 amps
SSR15B	External Heat Sink (double pole relay)	40°F (4°C)	B	24 amps
		104°F (40°C)	B	24 amps

CONTROL METHODS

Heat tracing circuits are controlled with the TC 101a via zero crossing solid-state relays which will allow four 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.
- **Self-adjust**—The user inputs the setpoint and the control band (maximum on temperature); the controller adjusts the heat generated to stay within the limits imposed.

The ambient conditions and heat sink style determine the amperage rating of a solid-state relay. The chart indicates the amperage ratings (at the temperatures indicated) using the standard enclosures and heat sinks. The 40°F (4°C) ratings should be used with freeze protection applications as the controlled circuit would not be energized above this temperature.

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

Thermon offers both metallic and nonmetallic enclosures to meet a variety of application environments. Each enclosure includes a 3" x 3" (76 x 76 mm) clear polycarbonate viewing window.

Metallic: NEMA 4X stainless steel with a hinged cover held in place by screw closures. A quick release latch option is available.

Nonmetallic: NEMA 4X fiberglass reinforced polyester with a hinged cover held in place with quick release latches.

