

Snow Melt Control

SMC

- Operates a Motorized Valve, a Modulating Boiler, or a Multi-Boiler Control
- Melts the Snow based on the Slab Sensor or the Outdoor Sensor



Description:

The Heat-Timer SMC control system regulates the slab temperature to efficiently melt ice and snow. Therefore, it increases safety in many areas such as driveways, parking lots, staircases, walkways, station platforms, etc. It is designed to run an under slab hydronic heating system by controlling a motorized valve or a modulating boiler.

The SMC depends on the slab sensor to measure the slab temperature and the presence of precipitation. This sensor is designed to withstand heavy vehicle traffic. The sensor and its cabling must be installed before the slab concrete pour. In situations where the concrete slab is old and cannot be altered, the SMC can be used with an outdoor temperature sensor. The use of the outdoor temperature sensor eases the installation. However, it does not provide moisture detection that may increase energy usage.

In addition to the slab sensor, the SMC connects to two more temperature sensors to measure the slab supply and return temperatures. Their primary use is to help the SMC protect the slab from thermal stresses caused by rapid heating.

The SMC includes additional features that can be used to protect the plant and slab. The SMC can be used with a Boiler Return Sensor to help reduce the possibility of thermal shock and condensation to the boiler. Also, it is equipped with an Alarm output. This alarm is activated in many cases including sensor failure, the slab not receiving sufficient heat, or if the slab does not reach its melting temperature within 24 hours.

Features:

- *Adjustable Warm-Weather-Cutoff, Cold-Weather-Cutoff, Idle Set Point, System Delta T (ΔT), Maximum Supply Temperature, Minimum Run-Time, Heating Curve, and Precipitation Sensitivity*

- *Operates a Motorized Valve, Modulating Boiler, System and Slab Pumps, and Alarm Output*
- *Display of Current Temperatures, Modes, and Alarm Status*
- *Boiler Return Protection (Sensor is optional)*

Specifications

SMC Specifications

Operating Temperature	20°F/-6°C to 120°F/49°C
Voltage Input	120 VAC 60 Hz
Maximum Input Rating	48 VA Max
Output Built-in Relay Ratings	2 Amp inductive (Maximum of 1/4 HP) at 120 VAC 60 Hz
Output Built-in Relays	1 System, 1 Boiler, 1 Slab Pump, 1 Alarm, 2 Motorized Valve
Output LEDs	1 System, 1 Boiler, 1 Slab Pump, 1 Alarm, 2 Motorized Valve, and 1 Power
Inputs	Shutdown/Enable, Prove
	1 Slab Sensor (Composite), Outdoor, Slab Supply and Slab Return Temps, Boiler Return Temp
Modulating Outputs	0-10V, 4-20mA, or Floating (3-Point)
Seasons	Winter and Summer
Operating Modes	Slab Sensor or Outdoor Sensor
Control Mode	Mixing Valve, Boiler, or External Interface (sends a 4-20mA set point to an external control)
Warm Weather Cutoff	34°F/1°C to 44°F/7°C
Cold Weather Cutoff	On, Off, and 0°F/18°C to 20°F/-7°C
Idle Set Point	Off, and 20°F/-7°C to 44°F/7°C
Minimum Runtime	0 to 4 hours
Maximum Delay T	10F°/6C° to 50F°/28C°
Minimum Boiler Return	Off, and 40°F/4°C to 140°F/60°C
Heating Curve	from -10 to +10
Modulating Boiler Ignition %	from 1% to 50%
Buttons	4 buttons each with multiple functions
Dimensions	.7 1/8" W x 9 5/8" H x 3 1/2"D
Weight	.2 pounds

Slab Sensor Specifications:

Operating Temperature Range	-30°F/-34°C to 250°F/121°C
Sensor Case	Brass
Cable length Provided	100 Feet
Weight	5 pound

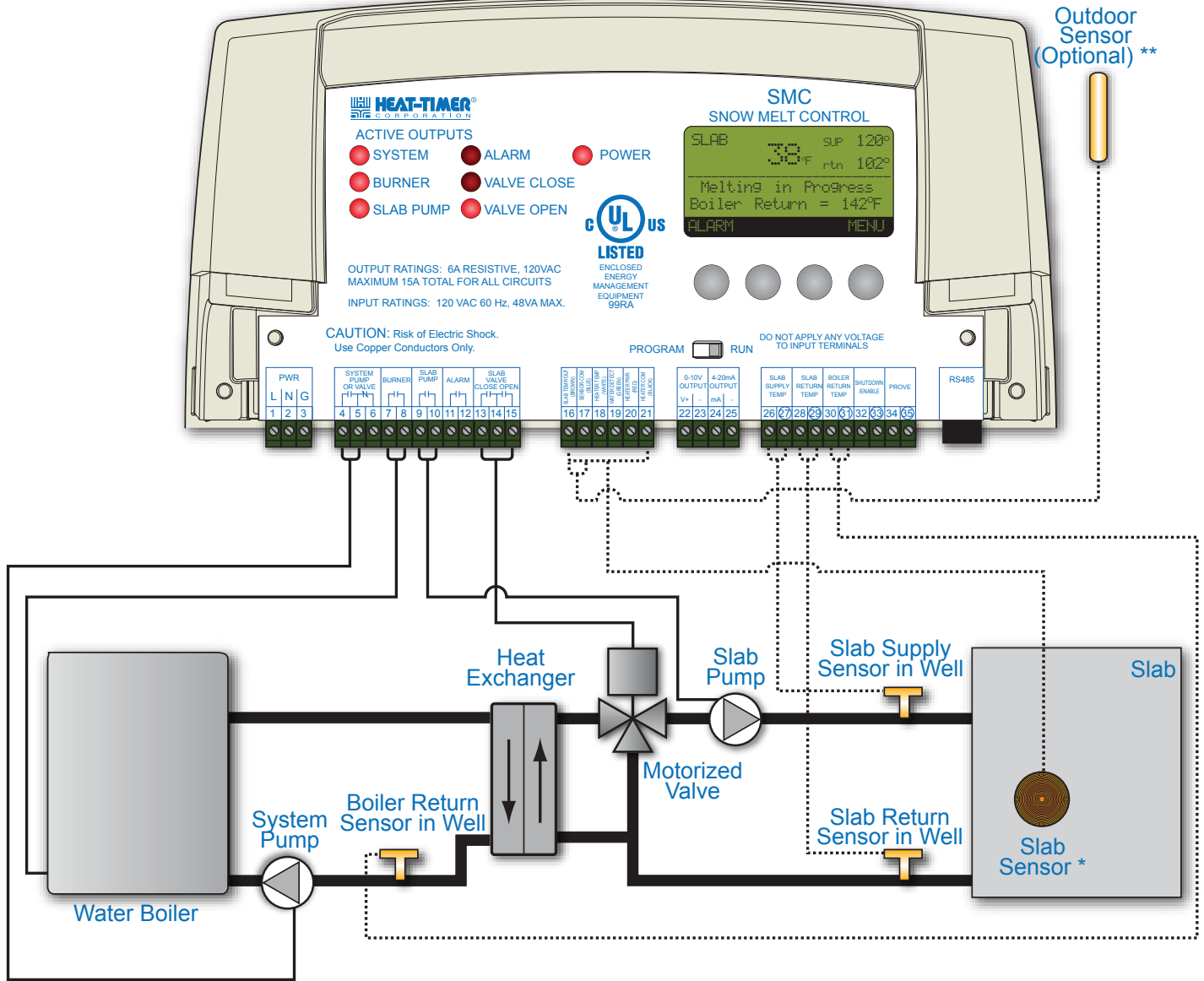
SMC-Elite Items

Item Description	Part #
SMC Complete with Slab Sensor, Slab Supply, and Slab Return Sensors and Wells	926820-00
Slab Precipitation Sensor Complete with Sensor, Housing, and 100 ft of Cable	904200-00
Slab Precipitation Sensor with only the Sensor and 100 ft of Cable	904198-00
3-in-1 Temperature Sensor (used as Boiler Return Sensor or Outdoor Sensor)	904220-00
Well (for Boiler Return Sensor)	904011-00
Vis-U-Larm	925011-00

HT# 056185-00B



SMC Modulating a 3-Way Motorized Valve Using Water to Glycol Heat-Exchanger



⚠️ ALERT

Heat-Timer Corp. is aware that each installation is unique. Thus, Heat-Timer Corp. is not responsible for any installation related to any diagram generated by Heat-Timer Corporation. The provided illustrations are to demonstrate Heat-Timer Corporation's control operating concept only.

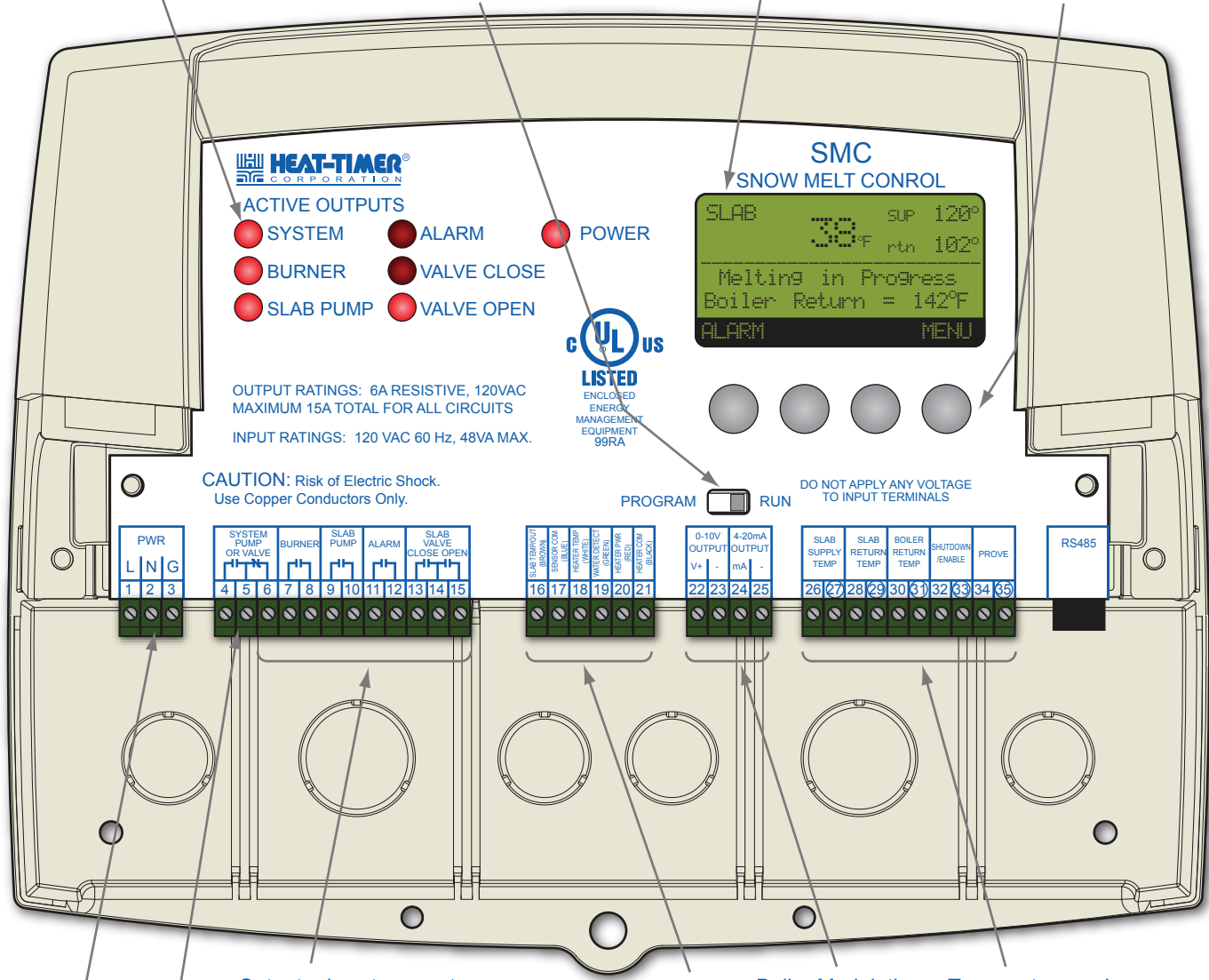
SMC Function Chart

LED indicates the associated relay status.

The digital display shows the Slab or Outdoor, Supply, and Return temperatures in addition to Boiler Status and its return temperature. To view and adjust settings, press the appropriate buttons.

Program Switch to restrict access to function changes. This switch is covered with Wiring Enclosure.

Button functions are presented on Bottom Row of display.



ACTIVE OUTPUTS

- SYSTEM
- BURNER
- SLAB PUMP
- ALARM
- VALVE CLOSE
- VALVE OPEN
- POWER

OUTPUT RATINGS: 6A RESISTIVE, 120VAC
 MAXIMUM 15A TOTAL FOR ALL CIRCUITS
 INPUT RATINGS: 120 VAC 60 Hz, 48VA MAX.



CAUTION: Risk of Electric Shock.
 Use Copper Conductors Only.

DO NOT APPLY ANY VOLTAGE TO INPUT TERMINALS

120VAC Power .

Output relays to operate boiler, slab pump, alarm, and modulating valve.

Slab or Outdoor Sensor
 Boiler Modulation output signal or 4-20mA
 Ext. Interface Set Point.

Temperature and Dry-contact inputs.

System Output operates the system pump or valve.

HT# 056185-00B



ISO 9001:2008
 CERTIFIED



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