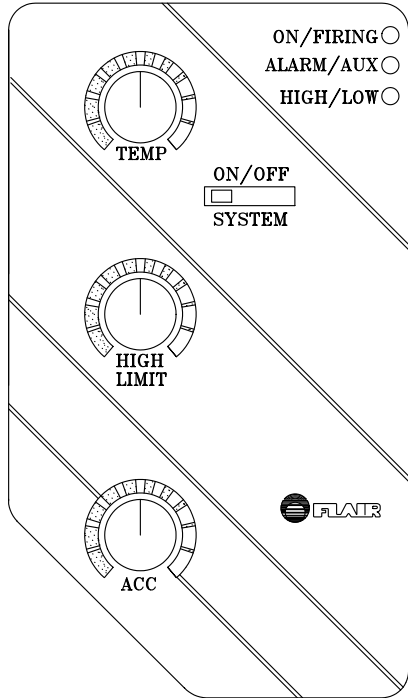


ELECTRONIC MULTISTAGE
CONTROLSTAT series CSEM

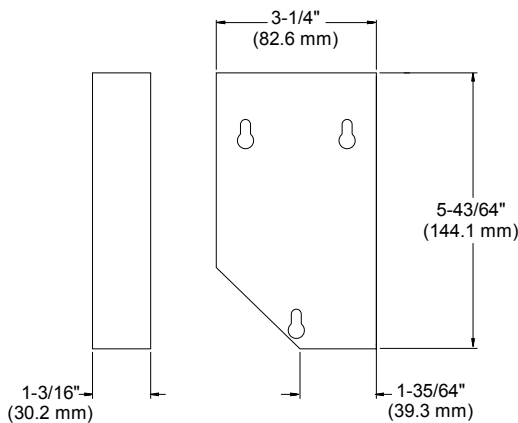
For control of two-stage oil and gas fired and electric boilers, furnaces and water heaters.

BENEFITS & SPECIAL FEATURES

- Accurately control system water (boilers, water heaters and aqua-boosters) or air (furnace) temperatures.
- Set minimum required temperature for fan (furnaces) or pump (boilers and aqua-boosters) to run.
- High limit control through independent sensor.
- One of two sensors may be selected or both averaged.
- System status indicators.
- Manual on/off override.
- Low and high limit monitor triggers alarm function.
- Auxiliary input can be attached to accessory equipment such as filter monitor, fuel sensor, or Flair flame quality indicator, and trigger alarm or indicator.
- Leak detector alarm.
- Alarm can be connected to external warning device or dialer.



DIMENSIONS

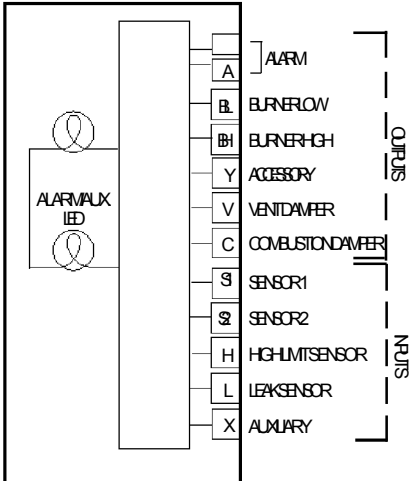


Thermostat

SPECIFICATIONS

Operating Voltage:	24, 115 and 230 vac, 50-60 Hz
Temperature Differential:	
Accuracy:	approx. $\pm 0.8^{\circ}\text{F}$ ($.4^{\circ}\text{C}$)
Sensor System:	
Type:	Negative Temperature Coefficient (NTC)
Enclosure:	Well, surface and duct mount sensors are available
Switches:	
Slide:	SYSTEM: ON/OFF
Rotating:	set TEMPERATURE
	set HIGH LIMIT temperature
	set ACCESSORY temperature
Indicator LED's:	system: ON (Steady Green) / FIRING (Flashing Green)
	HIGH (Flashing Yellow) / LOW (Steady Yellow)
	ALARM (Flashing Red) / AUXILIARY (Steady Red)
Alarm function:	Triggered if either minimum temperature, high limit (safety) is exceeded, leak or auxiliary input signal is detected.
Security:	Program and temperatures can be electronically locked and limited.
Dimensions:	5.6 x 2.9 x 1.18 Inches (143.4 x 74.2 x 30.2 mm)

MODEL NUMBERS AND DESCRIPTIONS FOR VARIOUS APPLICATIONS



Model Number:
 CSEMG02 Gas Boilers
 CSEMGF02 Gas Furnaces

Description: For gas-fired boilers and furnaces

Temperature Range:
 Operating range: 100 °F - 220 °F
 High limit: 180 °F - 220 °F
 Accessory: 100 °F - 180 °F

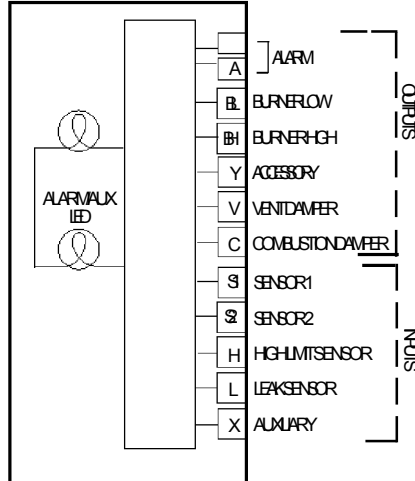
CSEMGW02 Residential Gas Water Heaters

Temperature Range:
 Operating range: 100 °F - 160 °F
 High limit: 200 °F
 Accessory: 100 °F - 140 °F

CSEMGW02 Commercial Gas Water Heaters

Temperature Range:
 Operating range: 100 °F - 180 °F
 High limit: 200 °F
 Accessory: 100 °F - 160 °F

Switching Current at 24 VAC:
 Gas valve: 1 A
 Pump/Fan: 10 A
 Vent damper: 1 A
 Combustion damper: 1 A
 Weight: .4 lbs. (880 g)



Model Number:
 CSEMOB04 Oil Boilers
 CSEM0F04 Oil Furnaces

Description: For oil-fired boilers and furnaces

Temperature Range:
 Operating range: 100 °F - 220 °F
 High limit: 180 °F - 220 °F
 Accessory: 100 °F - 180 °F

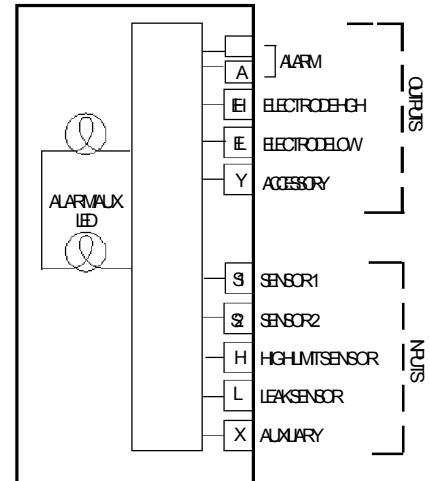
CSEMGW04 Residential Oil Water Heaters

Temperature Range:
 Operating range: 100 °F - 160 °F
 High limit: 200 °F
 Accessory: 100 °F - 140 °F

CSEMGW04 Commercial Oil Water Heaters

Temperature Range:
 Operating range: 100 °F - 180 °F
 High limit: 200 °F
 Accessory: 100 °F - 160 °F

Switching Current at 120 VAC:
 Burner: 10 A
 Pump/Fan: 10 A
 Vent damper: 1 A
 Combustion damper: 1 A
 Weight: .4 lbs. (880 g)



Model Number:
 CSEMEB04 Electric Boilers
 CSEMEB07 Electric Boilers
 CSEMEF04 Electric Furnaces
 CSEMEF07 Electric Furnaces

Description: For electric boilers and furnaces

Temperature Range:
 Operating range: 100 °F - 220 °F
 High limit: 180 °F - 220 °F
 Accessory: 100 °F - 180 °F

CSEMEW04 Electric Water Heaters
 CSEMEW07 Electric Water Heaters

Temperature Range:
 Operating range: 100 °F - 220 °F
 High limit: 180 °F - 220 °F
 Accessory: 100 °F - 180 °F

Switching Current at 120 VAC:
 Burner: 10 A
 Accessory: 10 A
 Weight: .4 lbs. (880 g)

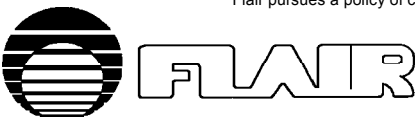
ACCESSORIES

Temperature Sensor	
Immersion (well)	XXXXXXXX
Surface mount	XXXXXXXX
Duct mount	XXXXXXXX
Auxiliary Relay	XXXXXXXX
Leak Sensor	XXXXXXXX
Transformers:	
40 VA	TR140100
20 VA	TR120100
Relay Transformers:	
20 VA (2) SPST 120 VAC relay	TR440200
20 VA (1) SPST 120 VAC relay	TR440300

REFERENCES

For More Information On:	See:
Other controllers for single-stage and proportional systems	This section
Zone Actuators	Star Actuator section
Zone Valves	Star Valve section
Wiring Panels	Control Panels section
Weather Compensation Controls	Weather Compensation Controls section
Warranty & pricing	Pricing and terms section

Flair pursues a policy of constant improvement. For this reason, all specifications are subject to change without notice.



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