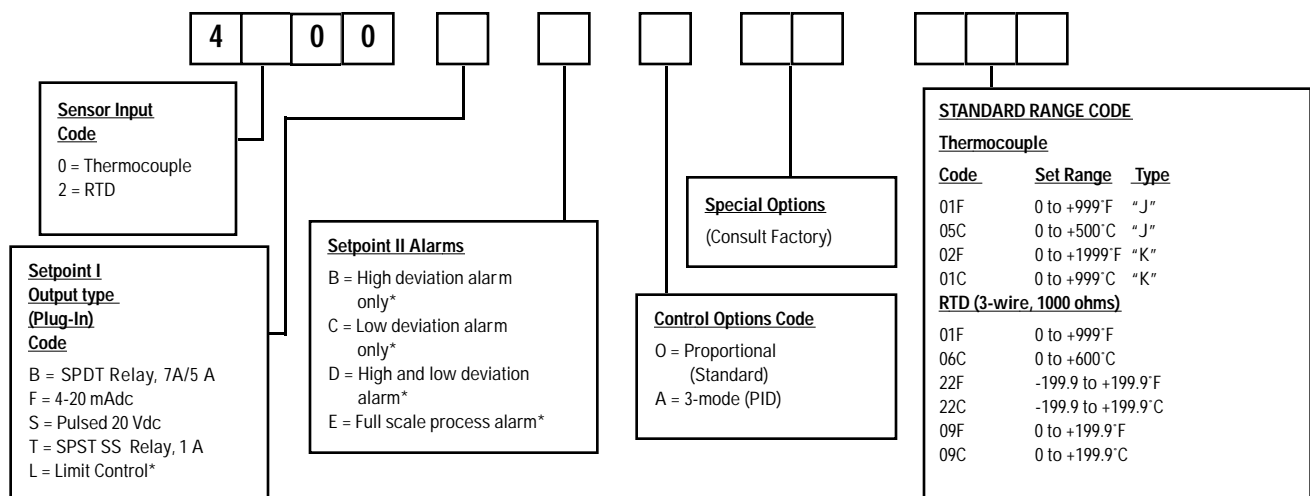


Digital Indicating, Full Feature Short Case Temperature Controllers

- Accurate Proportional Temperature Control Ideal for Most Processes
- Noise-Immune Analog Circuitry
- Filtered Digital LED Display with 1 or 0.1 Readability Available
- 25-turn Setpoint Pots-Optional Second (Alarm) Setpoint
- Adjustable Bandwidth and Manual Reset to Eliminate Offset Error
- Choice of Standard Outputs for Energizing Most Common Output Devices
- Compact 1/4 DIN Case
- 3-Mode PID Available
- Available as FM-Approved Limit Controller



Ordering Information

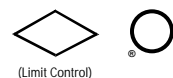


Example

Model 4000-B-E-05C = a controller with a thermocouple sensor input; and SPDT relay output (non plug-in) for setpoint I; a full scale process alarm for setpoint II; and a thermocouple J input range of 0 to 500°C.

*Not available on 4200

Athena's ZC/PC solid state contactors, and Series 91 and 93 or Series 19 and 39 SCR power controllers, can be added to boost ac load switching capacity.



SPECIFICATIONS

Line Voltage:	120/240 V \pm 10%, 50/60 Hz \pm 15%
Power Consumption:	Less than 5 VA
Common Mode Rejection:	Maximum error \pm 1°C with 240 V, 60 Hz applied as a common mode signal between sensor input and chassis ground
Series Mode Rejection:	Maximum error \pm 1°C with series mode signal of 100 mV pk-to-pk at 60 Hz
Sensor Break Protection:	Up scale standard, zero output for open sensor
Thermocouple:	Maximum lead resistance 100 Ω for rated accuracy, cold junction compensation standard
RTD:	100 ohms (0°C) Platinum, DIN coefficient standard
Setpoints:	Momentary switch displays Set I or Set II (optional), 25-turn pot provides 1 or 0.1 settability, range dependent; Set I-Adjustable over full span; Set II-process alarm (-E) adjustable over full span. Deviation alarm (-B,-C,-D), consult factory.
Setpoint Repeatability:	\pm 0.1% to \pm 0.2% of span
Setpoint Resolution:	1 or 0.1 (Range dependent)
Calibration	

Accuracy:	a. T/C input \pm 0.4% of span over 10% to 90% of range b. RTD inputs \pm 0.1% of span for 1°F or 1°C ranges; \pm 0.2% of span for 0.1°F or 0.1°C ranges
Ambient Stability:	a. T/C input 3 V/°F ambient to input b. RTD input 0.1% for 80° to 130°F (27° to 55°C)
Process Indication:	Filtered LED, 3 or 3-1/2 digits, 2 readings per second update; readability is 1°F, 1°C, 0.1°F or 0.1°C, range dependent
Dimensions:	Front Panel - 3.780 sq. in. (96 mm ²) Case - 4.646" (118 mm) Depth Behind Panel - 3.780" (92 mm) Panel Cut-out - 3.622 sq. in. (92 mm ²)

Note: Applies to all units with exception of "F" output controllers when used with other than Athena SCRs or stagers.

Output Type	Setpoint I (Plug-In)					Setpoint II	
	B	F	S	T	L	B,C,D	E
	SPDT relay resistive load rating 7 A/120 V 5 A/240 V 50 VA inductive	4:20 ma dc into 1000 ohms maximum; not isolated from thermocouple	Pulsed DC for driving SS contactors 0-20 V, open ckt; 0-20 mA, short ckt; not isolated from thermocouple	SPST SS relay, zero voltage switched 1 A 120/240 V ac, 10 A inrush, 2-4 mA leakage.	Limit Controller	SPDT relay 3 A 120 V ac resistive (4000 only)	SPDT relay 3 A 120 V ac resistive
Proportional Band	Adjustable for .2to 5% of span				Not applicable	On/off(see differential below)	On/off(see differential below)
Output cycle time (Switch selectable)	On-off 5-10-15 seconds	Continuous Proportioning	0.5-1.0-1.5 seconds	0.5-1.0-1.5 seconds	Not applicable	Not applicable	Not applicable
Manual reset (Off set)	Standard - adjustable for full proportional bandwidth (Eliminated if PID is ordered)				Not applicable	Not applicable	Not applicable
Optional 3-mode (PID) action	Fast = 0.1 sec. rate, 48 sec. reset; Medium = 18 sec. rate, 90 sec. reset; Slow = 65 sec. rate, 300 sec. reset				Not applicable	Not applicable	Not applicable
Differential	0-5% adjustable				Not applicable	\pm 1°F or \pm 1°C	1% maximum of unit span
Indication	Red LED "ON" when output signal is present or relay is energized				Red LED "ON" when output signal is present or relay is energized		
Operating Ambient	30° to 131°F (0 to 55°C)					30° to 131°F (0 to 55°C)	