

1-800-GRAINGER (472-4643)

Temperature Controllers

Designed to monitor and control heating and/or cooling process applications. Thermocouple input, no calibration required. Hardware included for panel mounting.

E5C2 Series—Manual dial setting; Type J thermocouple input. 8-pin octal relay socket mountable; order 5X852 on page 216.

DIN Size	Input Voltage	Switch Function	Output	Control Mode*	D	Mfr. Model	Item No.
E5C2 Series							
1/16	100 to 240V AC	SPDT	(1) 3A Relay	On/Off	4 in	E5C2R20JWAC10024032392	4A481
1/16	100 to 240V AC	SPDT	(1) 3A Relay	PD	4 in	E5C2R40JWAC10024032392	4A482
E5CS Series							
1/16	100 to 240V AC	SPST NO	(1) Relay	On/Off or PID	3.31 in	E5CSVR1TF AC100-240	1BEF8
1/16	100 to 240V AC	SPST NO	12V DC	On/Off or PID	3.31 in	E5CSVQ1TF AC100-240	1BEH2

* PID=Proportional-integral-derivative. PD=Proportional-derivative.



4A482



1BEF8

Analog Temperature Controllers

Proportional controls feature dial/potentiometer setpoint. 5A output relay. 20-sec. cycle time. Temp. range: 50° to 850°F. UL Recognized, CSA and CE Certified.



3FXJ3



3FXJ7

DIN Size	Description/Special Features	Input Voltage	Output	D	J TYPE		K TYPE	
					Mfr. Model	Item No.	Mfr. Model	Item No.
1/16	Dial Setpoint	100 to 130V AC	(1) 5A Relay	3.75 in	TEC17112	3FXJ3	TEC17126	3FXJ4
1/4	Deviation Meter Display, Dial Setpoint	120/240V AC	(1) 5A Relay	2.56 in	TEC57201	3FXJ5	TEC57203	3FXJ6
1/4	Dial Setpoint, Single Red LED Digital Display	90 to 264V AC	(1) 5A Relay	2.56 in	TEC57401	3FXJ7	TEC57403	3FXJ8



Temperature Control Boxes

Include 6-ft. cord. All components are UL Listed or Recognized, CSA and CE Certified.

PCT Series—Feature pilot light and 15A straight-blade heater receptacle. For indoor use. Analog boxes have blue metal housing, mounting slots, and 4° typical hysteresis. Digital boxes have plastic housing, TEC-220 electronic temp. controller, and red illuminated On/Off rocker switch. 5FYL4 to 5FYL7 have Invensys-type mechanical thermostat with 4" bulb and 48" capillary.

PCM Series—NEMA 12 enclosure. Feature TEC-9100 electronic temp. control. 5FYN6 to 5FYN9 have 20A straight-blade heater receptacle and standard thermocouple jacks. 5FYP0 to 5FYP3 have internal blocks and can be used on single or 3 phase.



Analog Control Box



Digital Control Box

Control Mode	Amps	Temp. Range	Sensor Type	Output	Input Voltage	Mfr. Model	Item No.	Input Voltage	Mfr. Model	Item No.
Analog										
On/Off	15	60° to 250°F	Bulb	—	120V AC	PCT10001	5FYL4	240V AC	PCT10003	5FYL6
On/Off	15	150° to 550°F	Bulb	—	120V AC	PCT10002	5FYL5	240V AC	PCT10004	5FYL7
On/Off	15	32° to 1000°F	J	—	120V AC	PCT20001	5FYL8	240V AC	PCT20003	5FYN0
On/Off	15	32° to 1000°F	K	—	120V AC	PCT20002	5FYL9	240V AC	PCT20004	5FYN1
Digital										
PID	15	0° to 1200°F	J	(1) Relay	120V AC	PCT30001	5FYN2	240V AC	PCT30002	5FYN3
PID	15	0° to 2400°F	K	(1) Relay	120V AC	PCT30003	5FYN4	240V AC	PCT30004	5FYN5
PID	16	0° to 1200°F	J	(1) Relay	120V AC	PCM10001	5FYN6	240V AC	PCM10002	5FYN7
PID	16	0° to 2400°F	K	(1) Relay	120V AC	PCM10003	5FYN9	240V AC	PCM10004	5FYN9
PID	24	Dependent on Sensor Type	Universal Contactor	—	240V AC	PCM10005	5FYP0	480V AC	PCM10006	5FYP1
PID	48	Dependent on Sensor Type	Universal Contactor	—	240V AC	PCM10007	5FYP2	480V AC	PCM10008	5FYP3



Digital Temperature Controllers

Microcontroller-based controls with autotuning fuzzy logic PID are designed for industrial and commercial heating and cooling applications. Universal thermocouple or RTD programmable. 90 to 250VAC power input. NEMA 4X front.



Single Display



Dual Display

DIN Size	Output	D	Std.	Mfr. Model	Item No.
Single Red LED Digital Display					
1/32	(1) 4 to 20mA and (1) 2A Relay	4.37 in	UL, CSA, CE	TEC03030	3FXK2
1/32	(1) Solid State Relay Drive-5V DC and (1) 2A Relay	4.37 in	UL, CSA, CE	TEC03031	3FXK1
1/32	(2) 2A Relay	4.37 in	UL, CSA, CE	TEC03002	3FXJ9
1/16	(1) 4 to 20mA and (1) 2A Relay	3.75 in	UL, CSA, CE	TEC15023	3FXK5
1/16	(1) Solid State Relay Drive-5V DC and (1) 2A Relay	3.75 in	UL, CSA, CE	TEC15011	3FXK4
1/16	(2) 2A Relay	3.75 in	UL, CSA, CE	TEC15002	3FXK3
High Limit, Single Red LED Digital Display					
1/16	(1) 2A Relay	3.75 in	UL, CSA, CE, FM	TEC16001	3FXK6
Dual Red LED Digital Display					
1/16	(1) 2A Relay	4.96 in	UL, CSA, CE	TEC14044	3FXK7
1/16	(1) 4 to 20mA	4.96 in	UL, CSA, CE	TEC14092	3FXK9
1/16	(1) Solid State Relay Drive-5V DC	4.96 in	UL, CSA, CE	TEC14040	3FXK8
1/16	(2) 2A Relay	4.96 in	CE, CSA, UL	TEC18002	5FYK7
1/8	(1) 2A Relay	3.12 in	UL, CSA, CE	TEC34034	3FXL1
1/8	(1) 4 to 20mA	3.12 in	CE, CSA, UL	TEC34018	5FYJ4
1/8	(1) 4 to 20mA and (1) 2A Relay	3.12 in	CE, CSA, UL	TEC34026	5FYJ5
1/8	(1) Solid State Relay Drive-5V DC	3.12 in	CE, CSA, UL	TEC34016	5FYJ3
1/8	(1) Solid State Relay Drive-5V DC and (1) 2A Relay	3.12 in	CE, CSA, UL	TEC34015	5FYJ2
1/8	(2) 2A Relay	3.12 in	UL, CSA, CE	TEC34025	3FXL2
1/4	(1) 2A Relay	2.56 in	UL, CSA, CE	TEC56025	3FXL3
1/4	(1) 4 to 20mA	2.56 in	CE, CSA, UL	TEC56019	5FYJ7
1/4	(1) Solid State Relay Drive-5V DC	2.56 in	CE, CSA, UL	TEC56013	5FYJ6



PXU Series Temperature Controllers

- Programmable
- 2 alarms
- 100 to 240VAC or 24VDC

Accept a wide variety of thermocouple and RTD sensor inputs to meet varying application requirements. Designed for simultaneous viewing of temperature/process, and setpoint values. Features on demand auto-tuning for easy set up and provides 2 control outputs, which can be individually configured for reverse or direct applications using front panel push-button or Crimson® software. Large dual line, 4-digit displays. IP65 ingress protection. UL Listed, 61010-1 approved.



793J18

DIN Size	Output	D	Mfr. Model	100 to 240V AC Item No.	24V DC Item No.
1/16	(1) 4 to 20mA	3.4 in	PXU300	793J17	793J29
1/16	(1) 4 to 20mA, (1) Relay	3.4 in	PXU31A	793J18	793J33
1/16	(1) Logic/SSR	3.4 in	PXU200	793J24	793J35
1/16	(1) Logic/SSR, (1) Relay	3.4 in	PXU21A	793J21	793J37
1/16	(1) Relay	3.4 in	PXU100	793J16	793J26
1/16	(2) Relay	3.4 in	PXU11A	793J15	793J27
1/8	(1) 4 to 20mA, (1) Relay	3.27 in	PXU31A	793J23	793J36
1/8	(1) Logic/SSR	3.27 in	PXU200	793J32	—
1/8	(1) Logic/SSR, (1) Relay	3.27 in	PXU21A	793J31	—
1/8	(1) Relay	3.27 in	PXU100	793J22	—
1/8	(2) Relay	3.27 in	PXU11A	793J20	793J34
1/4	(1) 4 to 20mA, (1) Relay	3.27 in	PXU31A	793J25	793J28
1/4	(2) Relay	3.27 in	PXU11A	793J19	793J30