EXTECH INSTRUMENTS
A FLIR COMPANY

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PRODUCT DATASHEET

Temperature PID Controllers

Fuzzy Logic PID, Auto Tuning, and Soft Start features combine for uncompromising, state-of-the-art control

Extech controllers now offer Fuzzy Logic enhanced PID and a Soft-Start feature that protects heaters from cold-starts. PID plus Fuzzy Logic tackles even the most demanding applications, eliminating over-shoot, unwanted process fluctuations, and drift. The Soft Start feature is ideally suited for processes, such as those employed in the Thermo-Plastics industry, where careful, exact, and slow heating of product is required.

Features:

- Dual 4-digit LED displays for process and setpoint values
- 1/16 DIN (48VFL) and 1/4 DIN (96VFL) model dimensions available
- Easy programming & navigation with user-friendly menus and tactile keypad
- Fuzzy Logic PID offers intuitive control simulating human control logic
- Manual mode allows the user to override automatic control and drive the controller output higher or lower with the touch of a button
- One-touch Auto Tuning for quick setup and stable, precise control
- Two 'Latching' Alarm relays standard with 8 Alarm modes plus advanced Timer modes
- Single stage Ramp and Soak program with Ramp-to-Setpoint Limit that can be combined with the Soft Start feature for critical process demands
- Accepts thermocouple and RTD inputs
- Select desired temperature display units (°F or °C) from setup menu
- Select thermocouple input type (9 selections) or RTD input (2 selections) from the display menu without the need for hardware modification
- Complete with mounting bracket hardware and screw terminals for easy wiring

Specfications		
Thermocouple Inputs	Type K	-58 to 2498°F (-50 to 1370°C)
	Type J	-58 to 1832°F (-50 to 1000°C)
	Type B	32 to 3272°F (0 to 1800°C)
	Type T	-454 to 752°F (-270 to 400°C)
	Type E	-58 to 1382°F (-50 to 750°C)
	Type R or S	32 to 3182°F (0 to 1750°C)
	Type N	-58 to 2372°F (-50 to 1300°C)
	Type C	-58 to 3272°F (-50 to 1800°C)
	PT100Ω RTD (DIN)	-328 to 1652°F (-200 to 850°C)
	PT100Ω RTD (JIS)	-328 to 1202°F (-200 to 650°C)
Control/Alarm Relay	5 Amp @ 110V, SPST (resistive load)	
DC Current Output	4-20mA (resistive); Impedance < 600 ohms	
Accuracy	Thermocouple: ±1.8°F (1ºC); RTD: ±0.36°F (0.2ºC)	
Sampling Time	Four (4) samples per second	
LED Display	Two 4-digit displays for Process Value, Setpoint, and programming modes	
LED Status	Alarm and Control output status	
Control Modes	Fuzzy Logic enhanced three-term PID with Auto Tune • Proportional Band 0 to 300.0% • Integral time 0 to 3600 seconds • Derivative time 0 to 900 seconds • Hysteresis 0.0 to 200.0 or 0.0 to 2000 • Cycle time 1 to 100 seconds	
Front Panel	Lexan construction, Drip/Dust proof; IR rating: IEC IP63	
Power Supply	90 to 264 VAC; 50/60 Hz (< 5VA power consumption)	

Ordering Information:

48VFL11 ....1/16 DIN Temperature PID Controller with one relay output
48VFL13 ....1/16 DIN Temperature PID Controller with 4-20mA output
96VFL11 ....1/4 DIN Temperature PID Controller with two relay outputs
96VFL13 ....1/4 DIN Temperature PID Controller with 4-20mA output

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