

# Flameproof Temperature Controller with Programmable Alarm

## FPC-3T

Gas Group IIA, IIB Certified  
Five 3/4" ET Cable Glands  
Self-Tune PID & On-Off Control  
RTD Pt100, J/K Thermocouple Inputs

**Process Precision Instruments**  
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### Salient Features

- 2 Rows of 4 Digit, 7-Segment LED Display
- Selectable Inputs: RTD Pt100, J / K Type Thermocouple
- Programmable Digital Filter & Zero Offset Input Signal
- Self-Tune PID & On-Off Control
- Programmable Heat (Reverse) or Cool (Direct) Control Mode
- Relay or SSR Control Output
- Programmable Alarm with Relay or SSR Output
- Flame Proof Enclosure (Aluminum Alloy)
- Certified for Gas Groups IIA & IIB
- Five 3/4" ET Cable Entries with Glands
- Enclosure Size : 400(H) X 182(W) X 175(D), mm
- Wide Supply Voltage Range : 85 ~ 265 VAC

### General Information

<b>Product Type</b>	Flameproof Temperature Controller with Programmable Alarm Certified for Gas Groups IIA & IIB
<b>Ordering Code</b>	FPC-3T
<b>Quantity</b>	1 Unit

# Flameproof Temperature Controller with Programmable Alarm

## Operator Interface

Display	Upper Readout : 4 digits, 0.80" Bright Red LED, 7 Segment Lower Readout : 4 digits, 0.56" Bright Green LED, 7 Segment
Status Indicator	2 Red LED (3mm Round); OP1 (Control) & OP2 (Alarm) Status
Keys (Internal)	4 Push Button Switches PAGE, DOWN, UP, ENTER

## Sensor Input

Type (User Configurable)	RTD Pt100, 3 wire J / K Thermocouple
Corrections	<ul style="list-style-type: none"><li>• Cold-Junction Compensation for Thermocouples</li><li>• Lead Resistance Compensation for Pt100 (Up to 22 Ohms in each lead)</li></ul>
Accuracy	± 0.25% of reading ± 1°C
Display Range	<b>J Type TC</b> : 0 to +960°C <b>K Type TC</b> : -200 to +1376°C <b>RTD Pt100</b> : -199 to +600°C
Display Resolution	RTD Pt100 : 0.1 / 1 °C (User Programmable) Thermocouple : 1 °C Fixed
ADC	16 Bit (± 32,768 Counts), Sigma-Delta (ΣΔ)
Sampling Time	200mS (5 Samples per Second)
Input Resistance	> 1 MΩ
Common Mode Rejection	> 100dB at 50/60 Hz
Signal Conditioning	R-C Analog Filter with Programmable Digital Low-Pass Filter
Zero Offset	User Adjustable over Full Range

## Alarm

Numbers	1
Programmable Parameters	Type : Process Low, Process High, Deviation, Window Logic : Normal, Reverse Hysteresis : 1 to 999 Unit Counts Inhibit : No, Yes
Output (OP2)	Standard : Relay Change-over Contacts Optional : SSR Drive

## Control

Type	ON-OFF or Self-Tune PID
Mode	Heat only, Cool only
Control Parameters	<ul style="list-style-type: none"><li>• ON-OFF : Hysteresis</li><li>• Self Tune PID : Proportional Band, Integral Time, Derivative Time, Cycle Time, Power Low, Power High, Overshoot Inhibit</li></ul>
Output (OP1)	Standard : Relay Change-over Contacts Optional : SSR Drive

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## Outputs

Relay	Contact Type : Potential-free Change-over Contacts Contact Rating : 7A Resistive @ 120/250 VAC Contact Life : > 5,00,000 Operations at Rated Voltage / Current
SSR Drive	≅ 12 VDC @ 40 mA

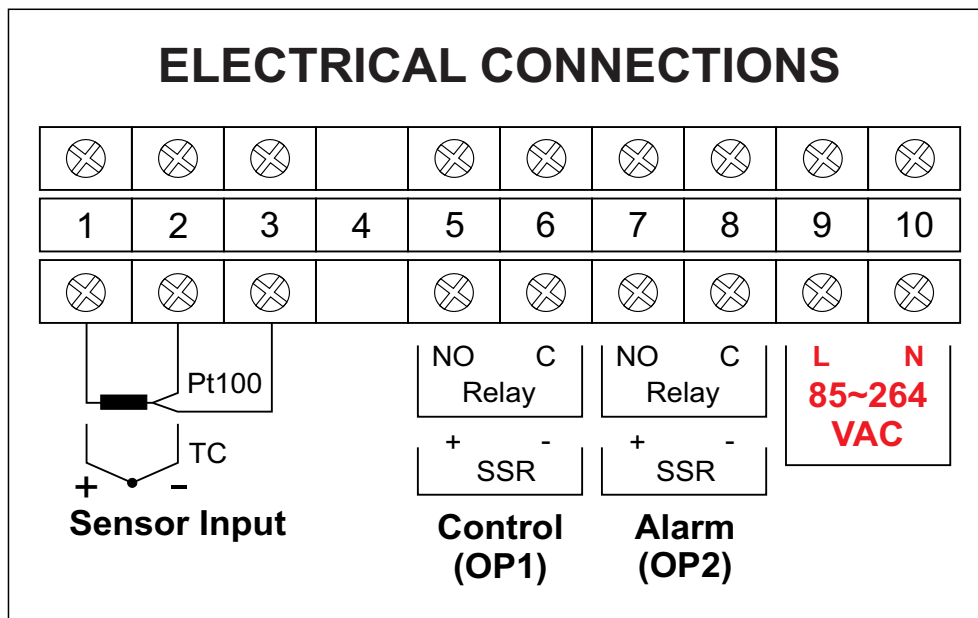
## Power Supply

Type	Switch Mode (SMPS)
Line Voltage	85~264 VAC, 50/60Hz
Consumption	5 VA Max

## Physical

Enclosure	Flame Proof (Aluminum Alloy), Certified for Gas Groups IIA & IIB
Overall Dimensions	400(H) X 182(W) X 175(D), mm
Terminals	5 Cable Glands with Inside Screw Type Terminations

## Electrical Connections



## Process Precision Instruments (An ISO 9001 : 2008 Company)

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