



National Plastic Heater

Call Toll Free 1.877.674.9744

TEMPERATURE AND PROCESS CONTROL PROFILERS & CONTROLLERS

**'The best value temperature
controller on the market'**



***only 80mm behind the panel**

- ❑ Temperature & Process Controller
- ❑ Single Loop, 5 Size Formats
- ❑ Thermocouple/RTD/DC Linear Input
- ❑ Relay, SSR & DC Linear Output's
- ❑ Profiling Capability, 2 x 8 Segments
- ❑ Heat & Cool PID Algorithm
- ❑ Open Loop Valve Motor Control
- ❑ Remote Setpoint Input
- ❑ Re-transmission (Recorder) Output
- ❑ RS232/485 & TTL Communications

CONTROLLING

The FUZZYLOGIC Controller is a field proven controller that handles some of the toughest environments in the World. The use of the latest technology in design, components and manufacturing gives excellent performance and unit stability, while double-sided surface mount technology results in comprehensive functionality at a low price. Solid case construction, coated screw terminals, superb spring design and faultless locking mechanism ensure long life and trouble free operation.

Basic Specification

General

Size (WxHxD)	FZ/PFY400 (48x48x80mm), FZ/PFY800 (48x96x80mm), FY/PFY600 (96x48x80mm), FZ/PFY700 (72x72x80mm), FZ/PFY900 (96x96x80mm)
Display Type	Dual 4 digit 7 segment Display (Red upper Process Value, Green lower Set Value)
Display Dimensions	Models 400/600/800 7mm PV & SV, Models 700/900 13mm PV & 10mm SV
Status Indication LED's	Output 1 & 2 (green), Auto-tuning (yellow), Program mode (yellow), Alarm 1, & 2 (red) – All Models. Alarm 3 (red) and Manual mode (yellow), LED Bar Graph (green) displays output power as a percentage (0 - 100%) – All Models except 400
Sampling Rate	250mS
Accuracy	Within 0.2% of displayed value ± 1 LSD

Operating & Environmental

Temperature & RH	0 to 50 deg. C, 85% maximum RH non-condensing
Power Supply	85 to 265V AC 50/60Hz, 10 to 50V DC option. Power Consumption ~ 4 VA

Control Functions

Control Types	PID, Fuzzy Logic and ON/OFF Heat & Cool, Motorised Valve without feedback
Tuning Types	Manual Tune, Auto-tuning
Auto/Manual	Bumpless or with manual control output (except Model 400)

Input

Process Input	Thermocouple (types L, J, K, E, N, T, R, S, B, PL, W, U), 3 Wire RTD (PT100, PT50, JIS & DIN), DC Linear (0-20mA, 4-20mA, 0-1V, 0-5V, 0-10V, 1-5V, 2-10V, -10-10mV, 0-10mV, 0-20mV, 0-50mV)
Auxiliary Input	DC Linear (0-20mA, 4-20mA, 0-1V, 0-5V, 0-10V, 1-5V, 2-10V) for RSP

Outputs & Options

Relay Contacts	SPDT 3A @240V AC for Heat/Cool Control, VMD, Alarm, Event Outputs
SSR Drive	20V DC/20mA for Heat/Cool Outputs
Analogue DC Linear	DC Linear (0-20mA, 4-20mA, 0-5V, 0-10V, 1-5V, 2-10V) for Control & Re-transmission
Communications	RS232, RS485, TTL



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Additional Information

Program Mode	2 profiles of 8 segments or 1 profile of 16 segments (1 segment = ramp or dwell, set in mins/hours). The final SP, time to complete segment & output limit value can be set for each segment
Ramp & Dwell <i>(available on standard FY controller)</i>	Single ramp from PV(units/min) range: 0.00 to 99.99, single dwell (hours/mins) range : 0.00 to 99.59
Panel Cut-out	FY/PFY400 44.5 x 44.5mm (+ 0.5 -0) FY/PFY700 68.5 x 68.5mm (+ 0.5 -0) FY/PFY800 44.5 x 90.5mm (+ 0.5 -0) FY/PFY600 90.5 x 44.5mm (+ 0.5 -0) FY/PFY900 90.5 x 90.5mm (+ 0.5 -0)
Weight	Model 400 150g, Model 700 250g, Models 600/800 250g, Model 900 320g
Alarm Types	Absolute (Process), Deviation or Band – Direct, Reverse
Alarm Function	Flicker Alarm, Continuous Alarm, On Delay Timer Alarm
Password Protection	Set via Front Panel, 6 levels permitted

CE Certification

CE Approval	Safety, EMI Susceptibility, EMI Emission, Harmonics, Voltage Fluctuations
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Functionality Guide

DIN Format	1/16 DIN	1/8 DIN	1/8 DIN	N/A	1/4 DIN
Front Panel Dimensions (W x H)	48 x 48mm	48 x 96mm	96 x 48mm	72 x 72mm	98 x 96mm
MODEL					
Single SP Controller	FY400	FY800	FY600	FY700	FY900
Multi SP Profiler	PFY400	PFY800	PFY600	PFY700	PFY900
DISPLAY					
Dual 4 Digit Display	●	●	●	●	●
INPUTS					
Thermocouple / RTD	●	●	●	●	●
DC Linear mA/mV/V	●	●	●	●	●
Remote Setpoint (RSP)		○(1)	○(1)	○	○
OUTPUTS & OPTIONS					
Maximum number of Outputs/Options	3	5	5	5	6
Control OP1 – Relay / SSR / DC Linear	●	●	●	●	●
Control OP2 – Relay / SSR / DC Linear	○	○	○	○	○
Control OP1 & 2 – Valve Motor Drive	○	○	○	○	○
Alarm 1 – Relay	○	○	○	○(5)	○
Alarm 2 – Relay	○	○	○	○(6)	○
Alarm 3 – Relay		○(3)	○(3)		○(3)
Re-transmission Output – DC Linear	○(2)	○(4)	○(4)	○	○
RS232 / RS485 / TTL Comms	○	○	○	○	○
POWER SUPPLY					
85 to 265V AC	●	●	●	●	●
20 to 50V DC	○	○	○	○	○

- Standard
- Available as Option

Note: (1) RSP Input not available with Comms
 (2) Re-transmission Output not available with Comms
 (3) Output 2 not available with Alarm 3
 (4) Re-transmission Output not available with three Alarms
 (5) Output 2 not available with Alarm 1
 (6) Alarm 2 not available with RSP Input



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