

8300 sets new standards for 1/8 DIN size controllers. Input sample rate of 5 scans per second and 3 Inputs (Universal, CT or analog input and event input) come standard on the 8300. 18 bit A/D and 15 bit D/A offer the highest accuracy for industrial control applications. The 8300 can be supplied with up to 2 control outputs, 2 alarms and communications (or analog retransmission). The 8300 can also be equipped with a 20VDC/25mA to supply power for remote field sensors.

Standard software functionality includes Fuzzy logic + PID, one Ramp/Soak segment, timer function, dual setpoint (event selectable), user programmable access prompts and more. With isolated inputs/outputs and UL/CE approvals, the 8300 can go anywhere and get the job done.

- Fuzzy Logic
- Fast Scan Rates
- UL/CSA/CE
- RS-485 Interface
- Optional Nema 4X/IP65
- Three Inputs Standard



FDC-8300 1/8 DIN CONTROLLER

## FDC-8300 SPECIFICATIONS

### POWER

90-264VAC, 50/60Hz  
11-26VAC/VDC

### INPUT

**Thermocouple (T/C):** Type J,K,T,E,B,R,S,N,L  
**RTD:** PT 100 ohm RTD (DIN 4370 or JIS)  
**Linear:** 4-20, 0-20mA, 0-1, 0-5, .1-5, 0-10V, 0-50mv  
**Range:** Per instruction manual  
**Accuracy:** Typically better than  $\pm .25\%$  of span  
**Cold Junction Compensation:** 0.1°C/°C ambient typical  
**Sensor Break:** Protection mode configurable  
**Common Mode Rejection:** 120dB  
**Sample Rate:** 5 times per second

### CONTROL

**Proportional Band:** 0.1-500°C (0.1-900°F)  
**Reset (Auto):** 0-1000 seconds  
**Rate (Derivative):** 0-360.0 seconds  
**Ramp Rate:** 0-500°C (900°F)/minute or hour  
**Dwell:** 0-6553.5 minutes  
**On-Off:** with adjustable hysteresis (0.1-100.0°F)  
**Control Action:** Direct and reverse

### INDICATION

**Process Display:** 0.4" red LED, 4 digits  
**Setpoint Display:** 0.3" green LED, 4 digits  
**Status Indicator:** Out1, Out2, ALM1, ALM2, °C, °F

### ENVIRONMENTAL AND PHYSICAL

**Operating Temperature:** -10 to 50°C  
**Storage Temperature:** -40 to 60°C  
**Humidity:** 0-90% RH (non-condensing)  
**Insulation:** 20M ohms minimum (500VDC)  
**Dielectric Strength:** 2000VAC, 50/60Hz for 1 minute  
**Shock Resistance:** 200m/s<sup>2</sup> (20G)  
**Vibration:** 10-55Hz, 10m/s<sup>2</sup> for 2 hours  
**Moldings:** Flame retardant polycarbonate  
**Dimensions:** 3.77" (H) x 1.88" (W) x 2.55" (D)  
**Weight:** 7.76 oz. (220 grams)

# ORDERING INFORMATION

Enter a number in each box which corresponds to the specifications you want when ordering the FDC-8300.

## FDC-8300

### POWER INPUT

- 4: 90-264VAC 50/60 HZ
- 5: 11-26VAC/VDC
- 9: Special Order

### SIGNAL INPUT

- 1: **INPUT 1** - Universal T/C, RTD or 4-20, 0-20mA  
0-1V, 0-5V, 1-5V, 0-10VDC
- INPUT 2** - CT and Analog input \*  
4-20, 0-20mA, 0-1V, 0-5V, 1-5V, 0-10VDC  
CT: 0-50Amp AC current transformer
- INPUT 3** - Event Input
- 9: Special Order

### OUTPUT 1

- 0: None
- 1: Form A Relay 2A/240VAC resistive (N.O.)
- 2: SSR Drive rated at 30mA/5VDC
- 3: 4-20/0-20mA linear, Isolated, maximum load 500 ohms
- 4: 1-5/0-5VDC linear, Isolated, minimum impedance 10K ohms
- 5: 0-10VDC linear, Isolated, minimum impedance 10K ohms
- 6: Triac 1A/240VAC
- 9: Special Order

### OUTPUT 2

- 0: None
- 1: Form A Relay 2A/240VAC resistive (N.O.)
- 2: SSR Drive rated at 30mA/5VDC
- 3: 4-20/0-20mA linear, Isolated, maximum load 500 ohms
- 4: 1-5/0-5VDC linear, Isolated, minimum impedance 10K ohms
- 5: 0-10VDC linear, Isolated, minimum impedance 10K ohms
- 6: Triac 1A/240VAC
- 7: 20VDC/25mA PS, Isolated
- 8: 12VDC/40mA PS, Isolated
- 9: 5VDC/80mA PS, Isolated
- A: Special Order

### ALARM 1

- 0: None
- 1: Form C Relay 2A/240VAC resistive (N.O, N.C)
- 9: Special Order

### ALARM 2

- 0: None
- 1: Form A Relay 2A/240VAC resistive (N.O)
- 9: Special Order

### COMMUNICATIONS

- 0: None
- 1: RS-485 Modbus RTU
- 2: RS-232 Modbus RTU
- 3: 0-20/4-20mA retransmission
- 4: 0-5/1-5VDC retransmission
- 5: 0-10VDC retransmission
- 9: Special Order

### OPTIONS

- 0: None
- 1: Nema 4X

\* Order CT94-1 if heater break function is required.

UL, CSA, CE

