

Future Design's 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/CE
- RS-485 Interface
- Optional Nema 4/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/s² (20G)
Vibration: 10-55Hz, 10m/s² 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 4

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

UL, CE (Approvals Pending)

