

Future Design's 200 Series controllers take advantage of time proven SMD technology. Software has been refined and offers logical menu structures and advance noise immunity.

By using the unique "Conf" function, the user has the flexibility of assigning any parameters to be shown at the operator level. Fuzzy logic + PID keeps you "in control" even in the toughest applications. 5 scans per second (input sample rate), timer function and programmable ramp rate are standard features on the 9200. The 9200 offers a wide variety of outputs/alarms to meet your control needs.

- Fuzzy Logic
- Ramp rate function
- Security Configurable
- UL/CSA/CE
- RS-485 Interface
- Timer Function
- Nema 4X/IP65 protection



**FDC-200 SERIES CONTROLLERS**

## FDC-200 SERIES SPECIFICATIONS

### POWER

90-264VAC, 50/60Hz  
 20-32VAC/VDC

### INPUT

**Thermocouple (T/C):** Type J,K,T,E,B,R,S,N  
**RTD:** PT 100 ohm RTD (DIN 4370 or JIS)  
**Linear:** 4-20, 0-20mA, 0-10V  
**Range:** User configurable  
**Accuracy:** Typically better than  $\pm .25\%$  of span  
**Cold Junction Compensation:**  $0.1^{\circ}\text{C}/^{\circ}\text{C}$  ambient typical  
**Sensor Break:** Protection mode configurable  
**Linear Voltage Input Impedance:** 100K ohms  
**External Resistance:** 100 ohms maximum  
**Normal Mode Rejection:** 60dB  
**Common Mode Rejection:** 120dB  
**Sample Rate:** 5 times per second

### CONTROL

**Proportional Band:** 0-200 $^{\circ}\text{C}$  (0-360 $^{\circ}\text{F}$ )  
**Reset (Auto):** 0-3600 seconds  
**Rate (Derivative):** 0-1000 seconds  
**Ramp Rate:** 0-55.55 $^{\circ}\text{C}$  (99.99 $^{\circ}\text{F}$ )/minute  
**Dwell:** 0-9999 minutes  
**Cycle Time:** 0-99 seconds

**On-Off:** with adjustable hysteresis 0-11 $^{\circ}\text{C}$  (0.1-19.99 $^{\circ}\text{F}$ )

**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, ALM1, ALM2,  $^{\circ}\text{C}$ ,  $^{\circ}\text{F}$

### CONSUMPTION

Less than 5VA

### ENVIRONMENTAL AND PHYSICAL

**Operating Temperature:** -10 to 50 $^{\circ}\text{C}$   
**Humidity:** 0-90% non-condensing  
**Insulation:** 20M ohms minimum (500VDC)  
**Breakdown:** AC 2000V, 50/60Hz, 1 minute  
**Vibration:** 10-55Hz, amplitude 1mm  
**Shock:** 200m/s<sup>2</sup> (20G)  
**Weight:** 2220 3.8 oz. (110 grams)  
 9200 5.3 oz. (150 grams)  
**Dimensions:** 2220 .94" (H) x 1.8" (W) x 3.89" (D)  
 9200 1.99" (H) x 1.99" (W) x 3.46" (D)  
**Moldings:** Flame retardant polycarbonate

FDC-2220 is 1/32 DIN  
FDC-9200 is 1/16 DIN

# ORDERING INFORMATION

Enter a number in each box which corresponds to the specifications you want when ordering the FDC-200 series.

FDC-2220  
FDC-9200

## POWER INPUT

- 4: 90-264VAC
- 5: 20-32VAC/VDC
- 9: Special Order

## SIGNAL INPUT

- 5: Configurable
- 9: Special Order

## RANGE CODE

- 1: Configurable
- 9: Other

## CONTROL MODE

- 3: PID/On-Off Control

## OUTPUT 1 OPTION

- 0: None
- 1: Relay 3A/240VAC resistive - SPST
- 2: SSR Drive rated 20mA/24V
- 3: 4-20mA linear, maximum load 500 ohms
- 4: 0-20mA linear, maximum load 500 ohms
- 5: 0-10VDC linear, minimum impedance 500K ohms
- 9: Other

## OUTPUT 2 OPTION

- 0: None

## ALARM OPTION

- 0: None
- 1: Relay 2A/240VAC resistive (2220 only)
- 2: Dual Relays 2A/240VAC resistive (9200 only).
- 9: Other

## COMMUNICATIONS

- 0: None
- 1: RS-485
- 2: 4-20mA retransmission
- 3: 0-20mA retransmission
- 9: Other

UL FILE# E196206  
CE,CSA

