

Future Design's 90 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 "SEL" function, the user has the flexibility of assigning the parameters to be shown at the operator level. The 90 Series offers a wide variety of options to meet your control needs for 1/16 to 1/4Din panel cutouts.

Manual control of the output is standard with offset and shift functions to allow process values to be corrected for intrinsic offsets and on-site calibrations. Dual alarms can be independently configured as process alarm, deviation alarm, deviation band alarm or latching alarm.

- Fuzzy Logic
- Ramp rate function
- Security Config
- Timer Function
- Nema 12
- UL/CSA/CE


FDC-90 SERIES CONTROLLERS

FDC-90 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: -10 to 60mV
Range: User configurable
Accuracy: Typically better than $\pm .25\%$ of span
Cold Junction Compensation: 0.1°C/°C ambient typical
Sensor Break: Protection mode configurable
External Resistance: 100 ohms maximum
Normal Mode Rejection: 60dB
Common Mode Rejection: 120dB
Sample Rate: 3 times per second

CONTROL

Proportional Band: 0-200°C (0-360°F)
Reset (Auto): 0-3600 seconds
Rate (Derivative): 0-1000 seconds
Ramp Rate: 0-200.0°C (0-360.0°F)/minute
Dwell: 0-3600 minutes
Cycle Time: 0-120 seconds
On-Off: with adjustable hysteresis (0-20% of span)
Control Action: Direct and reverse

INDICATION

Process Display: Red LED, 4 digits
Setpoint Display: Green LED, 4 digits
Status Indicator: Output, Alarm, °C and °F.

CONSUMPTION

Less than 5VA

ENVIRONMENTAL AND PHYSICAL

Operating Temperature: -10 to 50°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/s² (20G)
Moldings: Flame retardant polycarbonate
Weight:
 9090 – 6.0 oz. (170 grams)
 8120/4120 – 8.46 oz. (240 grams)
 8130 – 9.17 oz. (260 grams)
Dimensions:
 9090 - 1.89" (H) x 1.89" (W) x 3.70" (D)
 8120 - 3.77" (H) x 1.88" (W) x 2.55" (D)
 8130 - 3.77" (H) x 1.88" (W) x 2.55" (D)
 4120 - 3.77" (H) x 3.77" (W) x 2.08" (D)

FDC-9090 is 1/16 DIN
 FDC-8120 is 1/8 DIN
 FDC-8130 is 1/8 DIN
 FDC-4120 is 1/4 DIN

ORDERING INFORMATION

Enter a number in each box which corresponds to the specifications you want when ordering the FDC-90 series.

FDC-9090
 FDC-8120
 FDC-8130
 FDC-4120

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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
- 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

(OUTPUT 2 OPTIONS APPLY TO 8130 ONLY. NA ON 9090, 8120, 4120)

- 0: None
- 1: Relay 3A/240VAC resistive
- 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

ALARM OPTION

- 0: None
- 1: Relay 2A/240VAC resistive (9090 only)
- 2: Dual Relays 2A/240VAC resistive (8120/8130/4120 only)
- 9: Other

COMMUNICATIONS

- 0: None

UL FILE# E196206
 CE,CSA

