

Future Design's 4120 series 1/4 DIN controllers take advantage of the latest 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 4120 offers a wide variety of options to meet your control needs.

Manual control of the output is standard with offset and shift functions to allow process values to be corrected for intrinsic offsets and in-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
- UL/CSA/CE
- Timer Function
- Nema 12
- 3 scans/second


**FDC-4120 1/4 DIN CONTROLLER**

## FDC-4120 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:** 60 dB  
**Common Mode Rejection:** 120 dB  
**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:** 0.56" red LED, 4 digits  
**Setpoint Display:** 0.4" green LED, 4 digits  
**Status Indicator:** Out1, ALM1, ALM2, °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/s<sup>2</sup> (20G)  
**Weight:** 8.46 oz. (240 grams)  
**Dimensions:** 3.77" (H) x 3.77" (W) x 2.08" (D)

# ORDERING INFORMATION

Enter a number in each box which corresponds to the specifications you want when ordering the FDC-4120.

**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

- 0: None

## ALARM OPTION

- 0: None
- 2: Dual Relays 2A/240VAC resistive
- 9: Other

## COMMUNICATIONS

- 0: None

