Future Design's 300 series controls set the standard for 1/16 through 1/4 DIN size controllers. Input sample rates of 5 scans per second and 3 Inputs (Universal, CT or analog input and event input) come standard on the 300 series.

18 bit A/D and 15 bit D/A offer the highest accuracy for industrial control applications. The 300 series can be supplied with multiple control/alarm outputs and communications (or analog retransmission). The 300 series can also be equipped with an isolated transmitter power supply when the second control output is not required.

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 300 series can go anywhere and get the job done.

**FDC-300 Series 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 ± .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: red LED, 4 digits
  - Setpoint Display: green LED, 4 digits
  - Status Indicator: Out1, Out2, ALM, °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 3.77” (W) x 2.08” (D) - 4300
    - 3.77” (H) x 1.88” (W) x 2.55” (D) - 8300
    - 1.99” (H) x 1.99” (W) x 3.46” (D) - 9300
  - Weight: 9.0 oz. (255 grams)
ORDERING INFORMATION

9300 = 1/6 DIN Controller
8300 = 1/8 DIN Controller
4300 = 1/4 DIN Controller

Enter a number in each box which corresponds to the specifications you want when ordering the 300 Series.

FDC-9300
FDC-8300
FDC-4300

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
C: SSR Drive rated at 40mA/14VDC
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
C: SSR Drive rated at 40mA/14VDC
A: Special Order

ALARM 1
0: None
1: Relay 2A/240VAC resistive ***
2: Form B Relay 2A/240VAC resistive (N.C) - 9300 only
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: 0-5/0-5VDC retransmission
5: 0-10VDC retransmission
9: Special Order

OPTIONS
0: None
1: Nema 4X

* Order CT94-1 if heater break function is required.
** Alternative between RS-232 and EI on 9300 Controller
   Both RS-232 and EI available on 8300/4300 Controllers
*** Form C Relay 2A/240VAC resistive (N.O/N.C - 8300/4300)
   Form A Relay 2A/240VAC resistive (N.O - 9300)

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