FUTUREDESIGN CONTROLS

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 Controllers

- Fuzzy Logic PID Temperature Control
- Three Inputs Standard
- Fast Input Scan Rates
- Variety of Alarm modes
- Transmitter Power Supply
- SEL Function to arrange user menu
- Nema 4X/IP65 protection available
- FREE Data Acquisition Software – Multiview
  CFR21 Part 11 Features!

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/s^2 (20G)
Vibration: 10-55Hz, 10m/s^2 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)

P.O. Box 1196 • Bridgeview, IL 60455
888.751.5444 • 888.307.8014 Fax
www.futuredesigncontrols.com

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

8300/4300 only. Leave Digit Blank on 9300.

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

8300/4300 only. Leave Digit Blank on 9300.

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)
UL, cUL FILE# E197216 - QUYX/QUYX7 (includes 9300 Nema 4X)
CE, ROHS

August 2024