

Future Design's analog series controllers provide low cost on/off or proportional control for 1/16 DIN through 1/4 DIN requirements. Built in "Laser Trim" ASIC technology offers reliable and repeatable control for industrial applications. A wide selection of control outputs and input ranges make the FDC analog series a perfect choice for low cost applications.

DIN	MODEL	SETPOINT METHOD	DISPLAY INDICATION
1/16	FDC 901/902	ANALOG POTENTIOMETER	NONE
1/16	FDC 905	THUMBWHEEL	DIGITAL DISPLAY
1/8	FDC 805	THUMBWHEEL	DIGITAL DISPLAY
1/4	FDC 401	ANALOG POTENTIOMETER	NONE
1/4	FDC 402	ANALOG POTENTIOMETER	DEVIATION METER
1/4	FDC 404	ANALOG POTENTIOMETER	DIGITAL DISPLAY
1/4	FDC 405	THUMBWHEEL	DIGITAL DISPLAY
72MM	FDC 705	THUMBWHEEL	DIGITAL DISPLAY


FDC ANALOG CONTROLLERS

ANALOG SPECIFICATIONS

POWER

Models 901/902/401/402: 110 or 220VAC, 50/60Hz. +15%
Models 404/405/705/805/905: 90-264VAC, 50/60Hz.

INPUT

Type J or K or RTD DIN (.385)
Upscale sensor break protection
Input Accuracy: 2% of scale (901/902/401/402 models)
Input Accuracy: 1% of scale (404/405/705/805/905 models)
Sample Rate: 3 scans per second (all models)

OUTPUTS

Relay: SPDT 3 amps@120VAC Resistive (N.O/N.C)
SSR Driver: 3-32VDC@20mA max
Milliamp: 4/20 mA into 500 ohm load
Deviation Alarm Relay: SPST (N.O) 2 amps @240VAC Resistive
Note: Dev alarm available on models 404/405/705/805 only

CONTROL MODE

On/Off: Hysteresis set at 1.0% of scale.
Proportional Band: fixed at 2.2% of scale.
Relay cycle time: fixed at 20 seconds
SSR driver cycle time: fixed at 1 second
Man Reset: 0 to 2.6% of scale (Models 404/405/705/805/905)
Dev Alm: +- 10%of scale (Models 404/405/705/805 only)

PROCESS INDICATION

Models 901/902/401/402: None
Models 705/805/905: 1/2" Red LED
Models 404/405: 5/8" Red LED

DISPLAY ACCURACY

Models 404/405/705/805/905:
 +- 1%of span for T/C inputs +- .03 deg C for RTD

SETPOINT METHOD

Models 901/902/401/402/404: Analog Potentiometer
Models 905/805/405/705: Thumbwheel Setting

SETPOINT ACCURACY/RESOLUTION

Models 901/902/401/402/404:
 Accuracy: +- 2% of scale - Resolution: +- 0.2% of scale
Models 905/805/405/705:
 Accuracy: +- 1% of scale - Resolution: +- 1 least significant digit

WIRING

Screw terminal on rear of unit

ENVIRONMENTAL AND PHYSICAL

Operating Temperature: 14 to 22F(-10 to 50C)
Humidity: 0-90% RH (non-condensing)
Common Mode Rejection: 120 dB
Insulation: 20M ohms minimum (500VDC)
Dielectric Strength: 2000VAC, 50/60Hz for 1 minute
Shock Resistance: (20G)
Vibration: 10-55Hz, 10m/s² for 2 hours

DIMENSIONS AND WEIGHT

Models 901/902/905: 1-7/8" X 1-7/8" X 3-3/4"(9 oz.)
Models 805: 3-3/4" X 1-7/8" X 3-1/8"(8 oz.)
Models 401/402/404/405: 3-3/4" X 3-3/4" X 3-1/8"(10 oz.)
Models 705: 2-3/16" X 2-3/16" X 3.0"(8 oz.)

ORDERING INFORMATION

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

1/16 DIN: FDC-901/902/905
1/8 DIN: FDC-805
1/4 DIN: FDC-401/402/404/405
72MM: FDC-705



POWER



INPUT



RANGE



CONTROL



OUT1



OUT2



ALARM



OPTION

POWER INPUT

- 1: 100-130VAC, 50/60HZ (901/902 ONLY)
- 2: 200-230VAC, 50/60HZ (901/902 ONLY)
- 3: 100-130VAC/200-240VAC, 50/60HZ (401/402 ONLY)
- 4: 90-240VAC, 50/60HZ (404/405/705/805/905 ONLY)

SIGNAL INPUT

- 1: Type J Thermocouple
- 2: Type K Thermocouple
- 3: RTD, PT100 Ohm (DIN)
- 9: Special Order

TEMPERATURE RANGE

MODELS FDC-905/805/705

V: 0 TO 999F

MODELS FDC-901/902/401/402/404

B: 50 TO 850F

E: 50 TO 400F

ADDITIONAL RANGES AVAILABLE: CONSULT FACTORY

CONTROL TYPE

- 1: ON-OFF
- 2: PROPORTIONAL

OUTPUT 1 TYPE

- 0: None
- 1: Relay rated 3 amps@240VAC resistive, (N.O./N.C)
- 2: SSR Drive 3-32 VDC rated at 5V @ 30mA
- 3: 4-20mA linear, isolated, max load 500 ohms
- 4: 0-20mA linear, isolated, max load 500 ohms
- 5: 0-10VDC linear, isolated, max impedance 10K Ohms
- 9: Special Order

OUTPUT 2 TYPE

- 0: None

ALARM OUTPUT

- 0: None (use for models 901/902/905/401/402)
- 1: Relay 2 amps@240VAC Resistive (N.O./N.C.)
Relay is for deviation alarm only on models 404/405/805/705

OPTIONS

- 0: None

Agency Approvals:

UL Recognized: Models 901/902/905/805/404/405

CSA: Models 404/805

CE: Models 901/902/905/805/401/402/405

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