



Certificate Number: 0220041-2

Date: 2008-08-20

UL CONDITIONS OF ACCEPTABILITY

Company Name: FUTURE DESIGN CONTROLS INC

File-CCN: E197216-QUYX2

Product Description: Temperature Controllers

Models: FDC-4100

Conditions Of Acceptability:

When installed in the end-product, consideration shall be given to the following:

1. This component has been judged on the basis of the required spacings in The Standard for Process Control Equipment, UL 61010C-1, First Edition, which would cover the component itself if submitted for Listing.
2. The products were tested on a 20 A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.
3. The terminals are suitable for factory wiring copper conductors only.
4. The device is intended for panel mounting. The suitability of the mounting means and electrical/fire enclosure shall be determined in the end-use equipment evaluation.
5. When installed in the end-use equipment, the device is intended to be used with an external fuse rated 2 A, 250 V.
6. A switch or circuit-breaker acting as the disconnect device shall be included in the end-use equipment or the building installation.

Ratings:

Voltage: Minimum 90, Maximum 250 V ac or Minimum 11, Maximum 26 V ac/dc, SELV, Limited Energy

Frequency: 47-63 Hz

Power: 12 VA

Outputs: See NOMENCLATURE for details

Nomenclature:

FDC-4100	X	X	X	X	X	X	X
I	II	III	IV	V	VI	VII	VIII

I – Basic System

FDC-4100

II – Power Input

4: 90-250 V ac, 47-63 Hz

5: 11-26 V ac/dc, SELV, Limited Energy

III – Signal Input

1: Standard Input
Thermocouple: J, K, T, E, B, R, S, N, L
RTD: PT100 DIN, PT100 JIS

2: 0 – 60 mV

3: 0 – 1 V

4: 0 – 5 V

5: 1 – 5 V

6: 4 – 20 mA

7: 0 – 20 mA

8: 0 – 10 V

IV – Output 1

0: None

1: Relay rated 2 A / 240 V ac

2: Pulsed voltage to drive SSR, 5 V / 30 mA

3: Isolated 4-20 mA / 0-20 mA

4: Isolated 1-5 V / 0-5 V

5: Isolated 0-10 V

6: Triac output 1 A / 240 V ac, SSR

C: Pulsed voltage to drive SSR, 14 V/40 mA

V – Output 2

- 0: None
- 1: Form A relay 2 A /240 V ac
- 2: Pulsed voltage to drive SSR, 5 V / 30 mA
- 3: Isolated 4-20 mA / 0-20 mA
- 4: Isolated 1-5 V / 0-5 V
- 5: Isolated 0-10 V
- 6: Triac output 1 A / 240 V ac, SSR
- 7: Isolated 20 V / 25 mA transducer power supply
- 8: Isolated 12 V / 40 mA transducer power supply
- 9: Isolated 5 V / 80 mA transducer power supply
- C: Pulsed voltage to drive SSR, 14 V/40 mA

VI – Alarm

- 0: None
- 1: Form C relay 2 A / 240 V ac

VII – Communications

- 0: None
- 1: RS-485 interface
- 2: RS-232 interface
- 3: Retransmit 4-20 mA/0-20 mA
- 4: Retransmit 1-5 V/0-5 V
- 5: Retransmit 0-10 V

VIII – Options

- 0: Panel mount IP50 standard
- 1: Panel mount IP65 water resistant rubber installed
- 2: DIN rail mount with IP50
- 3: DIN rail mount with IP65