DUSTRONIX™ Core-10/Expander-10 Dust Collector Controls
Models DNC-T2610-010/020

FEATURES

- *Communicates via 2 wire CANbus network*
- *Universal input voltage 100-240 VAC, 50/60 Hz*
- *10 outputs on-board, expands to 990 outputs (with expansion boards)*
- *Solenoid current sense:*
  – allows automatic system setup
  – senses 3 solenoids per output
  – monitor up to 2970 solenoids
- *Diagnostic/program LEDs for "at-a-glance" system status indication*
- *Settable to read 0-10, 0-15, and 0-25 inches of differential pressure*
- *Finger-safe terminations*

CORE-10 UNIQUE FEATURES

- *Simple one knob programming*
- *Non-volatile memory for program and status storage*
- *On-Demand operation:*
  – with external pressure switch (not included)
  – with external pressure sensor (not included)
  – source/sink 4 to 20 mA sensor input
- *3-digit, 7-segment alpha-numeric display*
- *Settable alarm output relay normally open or normally closed*

The Core-10 is the main control module in the DUSTRONIX line. The Core-10 is capable of operating as a standalone module controlling 1 to 10 solenoids, or in combination with the Expander-10 for up to 98 expansion modules for a total of 990 outputs. The Expander-10 is the expansion output board in the DUSTRONIX family. The Expander-10 operates in combination with the Core-10 Control Module.

The Expander-10 communicates with the Core-10 on a twisted pair of wires using CANbus architecture which provides robust noise immunity. Two rotary switches on the Expander-10 are used to set and provide visual indication of the address assigned.

The Core-10 can operate in On-Demand mode with input from an external pressure sensor (4 to 20 mA) or a pressure switch (not included), or it can operate in the Continuous mode by use of a jumper across the pressure switch input. A switch can also be connected to the pressure switch input to act as a bypass switch. Input for a cycle down switch is also provided to allow for end-of-operation cleaning.

A unique feature of the Core-10 is its simple one-button programming. This single push-button/encoder is used to select operating parameters. LEDs indicate program function. The push-button is also used to view alarm conditions and cancel the alarm output. Operating and programming information is displayed on a 3-digit 7-segment display. The compact size of the Core-10 and the Expander-10 allows mounting in enclosures as small as 8" x 6".

Programmable Parameters:

- *Solenoid ON-Time/OFF-Time*
- *Number of cycle down cycles*
- *Cycle down time delay*
- *Run/Standby: enable/disable outputs*
- *Differential pressure high setpoint/low setpoint*
- *Differential pressure high alarm setpoint/low alarm setpoint*
- *Alarm contact (normally open or normally closed)*
- *Differential Pressure Sensor Select: 10, 15, 25 in. w.c.*
- *Output: 1 to 990 manual or auto-configured*

Status LEDs: when illuminated
- *Differential Pressure: Display indicates Δ P*
- *Output: Display indicates current output*
- *Alarm (System Status): Δ P or Solenoid Fault*
- *Output Pulsing: Display indicates output being pulsed*
- *Cycle Down: Unit in cycle down mode*
- *Output Status: Unit pulsing solenoids*
- *CANbus Status: CANbus transmission activity*

DUSTRONIX "Kit" Configurations
1. *DNC-T2610-N4A: Includes Core-10, PS700, 3-position switch, NEMA 4 10"x8"x6" metal enclosure with cutouts, bulkhead fittings, mounting chassis, mounting*
2. *DNC-T2610-N4XA: Same as above but mounted in fiberglass enclosure*
3. *DNC-T2610-N4B: Same as Kit 1 but also includes Expander-10 module*
4. *DNC-T2610-N4XB: Same as Kit 3 but mounted in fiberglass enclosure*

ORDERING INFORMATION

INPUT VOLTAGE	PART NUMBER
100 to 240 VAC	DNC-T2610-010
100 to 240 VAC	DNC-T2610-020

ACCESSORY	DIMENSIONS	PART NUMBER
Enclosure for DNC-T2610-010	10" x 8" x 6"	BOX-A1008-CHSC
		BOX-A1008-CHNF

CORE-10

EXPANDER-10

SPECIFICATIONS

CORE-10

INPUTS

Supply: 100-240 VAC, 50/60Hz, 4 VA max. at 240VAC without loads

Fuse: 3A fast, 5x20 mm

Δ Pressure Sensor Input: 4 to 20 mA, sink/source, programmable 10.0", 15.0", 25.0" w.c.

Δ Pressure Switch Input: Dry contact, 4 mA at 13 VDC max.

Cycle Down Switch Input: Dry contact, 4 mA at 13 VDC max.

OUTPUTS

Solenoid Outputs: 10

Output Type: Triac

Output Rating: 150 VA (at max. ON, min. OFF, 1 output selected)

Timing Accuracy: -2mS, +10 mS or $\pm$1% (whichever is greater), ON-time synchronized to AC line

Alarm Relay: Form-A contact, 3A at 250 VAC/30 VDC, programmable normally open or normally closed

DISPLAY INDICATORS

3-digit 7-segment LED display, 0.56 in. red

Program Parameters/Display Status/CANbus Status: 17 green LEDs

Alarm: 1 red/yellow LED

Output Status: 1 red/green LED

PARAMETER RANGES

ON-Time: 0.050-600 sec.

OFF-Time: 1-999 sec.

Timing Accuracy: -2 ms, +10 ms or $\pm$1% (whichever is greater), ON-time synchronized to AC line

Cycle Down Cycles: 1-20, none

Cycle Down Delay: 60-600 sec.

Δ P High Setpoint: 0-10/15/25" w.c., none

Δ P Low Setpoint: 0-10/15/25" w.c., none

Δ P High Alarm: 0-10/15/25" w.c., none

Δ P Low Alarm: 0-10/15/25" w.c., none
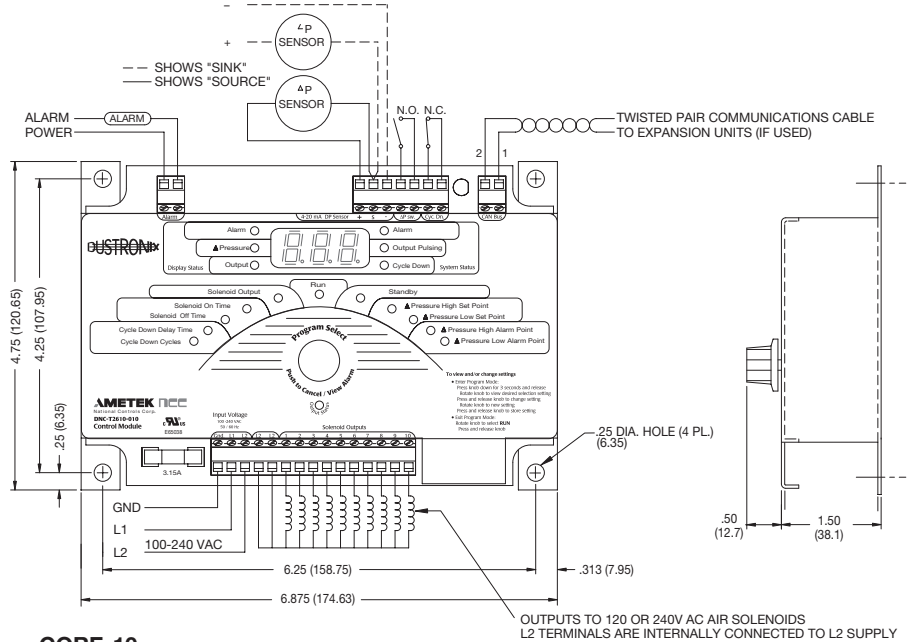
COMMUNICATIONS

Type: CANbus architecture

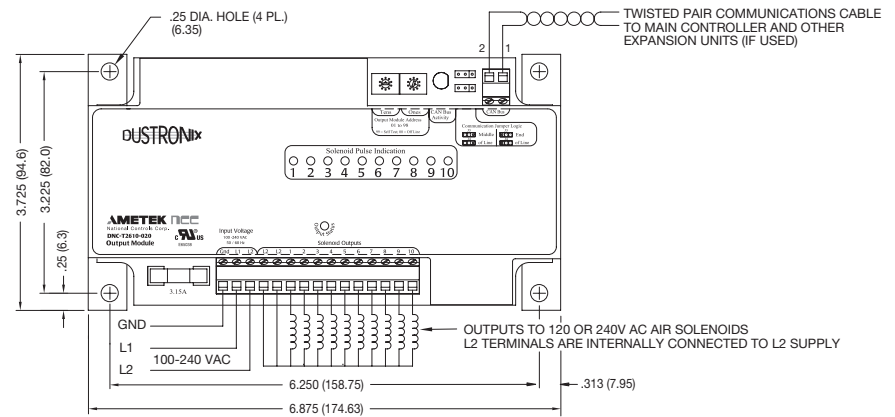**Terminations:** Screw terminals, #12 to #28 AWG, finger safe

ENVIRONMENTAL

Operating Temperature: -40°F to +150°F (-40°C to +65°C)

Environmental Protection: Conformal coating for humidity and vibration

EXPANDER-10 SPECIFICATIONS

INDICATORS

Solenoid Pulse Indication: 10 green LEDs

CANbus Status: 1 green LED

Output Status1: 1 red/green LED

OUTPUTS

Solenoids: 10 per Expansion Module

Output Type: Triac

Output Rating: 150 VA (at max. ON, min. OFF, 1 output selected)

Timing Accuracy: -2 ms, +10 ms or $\pm$1% (whichever is greater), ON-time synchronized to AC line

Caution:

1. Do not mount controls in high vibration areas without shock mounts.

2. Do not mount controls in areas of high dust or corrosive atmospheres without a protective enclosure.

3 Do not use a converter or inverter for the power source.

4. Do not mount control in high transient voltage areas without an isolation transformer.

5. Do not leave control box open.

6. Do not allow a local repair shop to repair the controls, as we employ some very sophisticated components that could be further damaged. For service, call us directly: 800-323-2593.