National Controls Corp.

Phone 800-323-2593 630-231-5900 Fax 630-231-1377

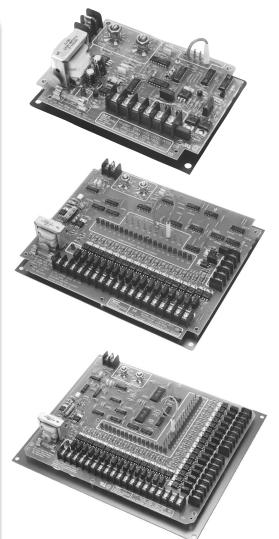
Fax 630-231-1377 Internet www.natcon.com www.nationalcontrols.com

Features

- **51** File #E65038
- Digital Timing Circuitry: Allows for stable timing from -40°F to 150°F temperature

range

- Pulse Time: Line synchronized to eliminate 8 millisecond triac turn off variation
- 10 Amp-400/600V Output Triacs: For maximum protection against output shorts. 200 VA load rating.
- RTV Coating: Conformally coated for protection against vibration, humidity and contamiination
- 2 Modes of Operation: Can be operated continuously or "on demand" via external pressure switch
- Field Selectable: For numbers of outputs required
- LED Indicators: For compartment being cleaned indication
- Rugged Timing
 Adjustments: Large stable
 potentiometers are used
 for "on" and "off" time
 adjustments
- Metal Chassis Provided:
 For mounting directly into
 NEMA-4 box
- Timer Life Tested for 24 Hours: To eliminate field failures
- Input Protection: 30 joule metal oxide varistor
- One Year Warranty:
 Warranted to be free from
 defects in materials or
 workmanship for One
 Year from date of purchase
- Made in USA



Dust Collector Controls

AC Input, Pulse Cleaning of Bag House Dust Collectors

Models DNC-T2003 thru DNC-T2032

Operating Logic: The control can function in 2 modes:

Continuous Mode: The pressure switch terminals are shorted. Upon application of input voltage, the control activates output #1 after the preset off time. It will continue to activate outputs sequentially until input voltage is removed.

On Demand Mode: The pressure switch terminals are connected to an isolated set of contacts of a differential pressure switch. The control will activate the outputs sequentially whenever the pressure switch contacts are closed. When the pressure switch contacts open, the output sequencing stops. Re-closing of the contacts will cause the control to resume activating the outputs.

Program wire allows the user to select the maximum number of outputs to be activated.

Note: Controls are shipped with jumper across pressure switch terminals

Specifications

Time Delay

On-Time: Adjustable from 50 to 500 milliseconds

Off-Time: Range A - adjustable from 1.5 to 30 seconds; Range B - adjustable from 8.5 to 180 seconds

Note: Range S designates customer specified time range. Consult factory for parameters

Repeatability: ± 3% over temperature and voltage ranges

Input

Operating Voltage:

 $120 \pm 10\%$, $220 \pm 10\%$ VAC

Frequency: 50/60 Hz

Power Consumption: 2 VA Max.

Wiring diagram to Facilitate Expanded Output Mode

To expand the number of outputs in "continuous cleaning mode", any two timers can be connected via a dual coil alternate action latch relay as shown in the diagram to the right.

The output pulse from the last compartment of Timer No. 1 activates the latch coil opening the reset contacts connected to pressure switch terminals of Timer No. 1, causing Timer No 1 to stop sequencing. At the same time, the latch contacts connected to pressure switch Timer No. 2 close which will cause Timer No. 2 to start sequencing until the last output activation causes the reset coil to unlatch the relay and Timer No. 1 begins sequencing. This cycle will continue until voltage is removed from the system.

Output

Type: Solid-state switch (Triac)

Switch Rating: 200 VA maximum per output

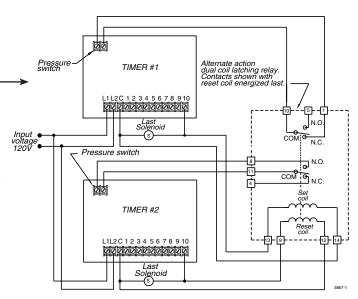
Protection

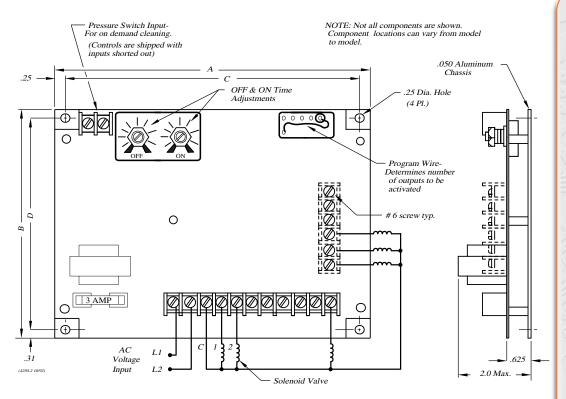
Transient Voltage: 30 joule metal oxide varistor

Short Circuit Protection: 3 Amp. fuse

Environmental

Operating Temperature: -40°C to 66°C Storage Temperature: -40°C to 70°C





DNC-T2003 THRU T2032 WIRING DIAGRAM

Ordering Information

DNC-T2003 through DNC-T2032 120VAC Input Voltage

Maximum No. of	Dimensions				Size of NEMA-4 Encls.	Programmable No. of	Off Time In	Part Number
Outputs	A	В	C	D	Required	Outputs	Seconds	Number
3	63/4"	47/0"	61/4"	41/4"	8" x 6" x 31/ ₉ "	1 - 3	1.5 - 30	DNC-T2003-A10
3	0-74	4.78	0-74	4-74	0 X 0 X 3-7 ₂		8.5 - 180	DNC-T2003-B10
6	83/4"	67/2"	81/4"	61/4"	10" x 8" x 4"	2 - 6	1.5 - 30	DNC-T2006-A10
	8574	0.78	O-7 ₄	0.74	10 x 6 x 4		8.5 - 180	DNC-T2006-B10
10	83/,"	67/2"	81/4"	61/4"	10" x 8" x 4" 3 - 10	3 - 10	1.5 - 30	DNC-T2010-A10
10	8º7 ₄	0.78	O-7 ₄	0.74	10 x 6 x 4	3 - 10	8.5 - 180	DNC-T2010-B10
20	103/4" 87	87/2"	101/ "	81/4"	12" x 10" x 5"	5" 11 - 20	1.5 - 30	DNC-T2020-A10
20	100/4	6,78	10-74	0·/ ₄	12 x 10 x 3		8.5 - 180	DNC-T2020-B10
32	123/4"	107/2"	121/4"	101/ "	14" x 12" x 6"	17 - 32	1.5 - 30	DNC-T2032-A10
32	120/4	10//8	121/4	10-74	14 X 12 X 0	17 - 32	8.5 - 180	DNC-T2032-B10

DNC-T2006 through DNC-T2032 220VAC Input Voltage

Maximum No. of		Dim	ensions	1	Size of NEMA-4 Encls.	Programmable No. of	Off Time In	Part Number
Outputs	A	В	C	D	Required	Outputs	Seconds	
6	83/4"	67/8"	81/4"	61/4"	10" x 8" x 4"	2 - 6	1.5 - 30	DNC-T2006-A220
0	0-74	0.78	0-74	0-74	10 X 6 X 4		8.5 - 180	DNC-T2006-B220
10	83/4"	67/8"	81/4"	61/4"	10" x 8" x 4"	3 - 10	1.5 - 30	DNC-T2010-A220
10	6-74	0.78	0-74	0-74	10 x 6 x 4		8.5 - 180	DNC-T2010-B220
20	103/4" 87/	97/ "	87/8" 101/4"	81/4"	12" x 10" x 5"	11 - 20	1.5 - 30	DNC-T2020-A220
		0.78					8.5 - 180	DNC-T2020-B220
32	123/4"	107/8"	191/ "	101/4"	14" x 12" x 6"	17 - 32	1.5 - 30	DNC-T2032-A220
			12-74				8.5 - 180	DNC-T2032-B220

Note: Special time ranges are availabale with the following maximum to minimum time ratio restrictions: ON Time - 10:1; Off Time - 20:1

Accessories:

Enclosure For:	Dimensions	Part Number
DNC-T2003	8" x 6" x 3 ¹ / ₂ "	BOX-A0806-CHNF
DNC-T2006	10" x 8" x 4"	BOX-A1008-CHNF
DNC-T2010	10" x 8" x 4"	BOX-A1008-CHNF
DNC-T2020	12" x 10" x 5"	BOX-A1210-CHNF
DNC-T2032	14" x 12" x 6"	BOX-A1412-CHNF

Pilot Lamp	NEMA-4 Rated Red Light	ASL-00RED-NEMA4	
On/Off Switch	NEMA-4 Rated w/Legend Plate	MSW-0DPST-011	
Alternate Action Dual Coil Latch Relay		KDD-LATCH-120AC	
Socket For Latch Relay		MSO-0D11P-012	

AMETEK NCC offers NEMA 4 type enclosures for mounting our controls. These enclosures are made of heavy gauge steel and have a continuous hinge cover. All seams are continuously welded. The finish is gray hammer-tone enamel inside and out, over phosphatized surfaces.

Note. In order to keep abreast of the latest technology, AMETEK NCC reserves the right to change components and/or design of controls without notice

AMETEK NCC

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Important Notice to Users:

Our timers are capable of use in a wide array of devices and in various applications. Any device or system incorporating a timer should be so designed that, in the event of failure, malfunction or normal wear-out of the timer, the system will become inoperative in a manner which will prevent property damage or bodily Injury.

Caution:

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