



Control over power

# Series NTD/NTA

10-25Amp • 120/240 Vac • AC OUTPUT

- Panel Mount
- Zero Voltage or Random Turn-On Switching
- Wide Control Voltage Range
- DC Control, AC Control

The Series NTD is available featuring zero-voltage or random switching and a broadened operating range (24-280Vac). This wide range permits optimum performance at both 120Vac and 240Vac line voltages. Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

| OUTPUT SPECIFICATIONS ①   | DC Control (NTD) |           |           | AC Control (NTA) ⑥ |         |
|---|------------------|-----------|-----------|--------------------|---------|
|   | NTD2405          | NTD2410   | NTD2425   | NTA2410            | NTA2425 |
| Operating Voltage (47-63 Hz) [Vrms]                                   | 24-280           | 24-280    | 24-280    | 24-280             | 24-280  |
| Load Current Range ③ [Arms]   | 0.15-5           | 0.15-10   | 0.15-25   | 0.15-10            | 0.15-25 |
| Transient Overvoltage [Vpk]   | 600              | 600       | 600       | 600                | 600     |
| Max. Surge Current, (16.6ms) [Apk]                                    | 40               | 120       | 250       | 120                | 250     |
| Max. On-State Voltage Drop @ Rated Current [Vpk]                      | 1.6              | 1.6       | 1.6       | 1.6                | 1.6     |
| Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]        | 4.5              | 1.48      | 1.02      | 1.48               | 1.02    |
| Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec] | 7.0              | 60        | 260       | 60                 | 260     |
| Max. Off-State Leakage Current @ Rated Voltage [mA]                   | .01              | 10        | 10        | 10                 | 10      |
| Min. Off-State dv/dt @ Max. Rated Voltage [V/ μsec] ②                 | 200              | 200       | 200       | 200                | 200     |
| Max. Turn-On Time ④   | 1/2 Cycle        | 1/2 Cycle | 1/2 Cycle | 10 ms              | 10 ms   |
| Max. Turn-Off Time  | 1/2 Cycle        | 1/2 Cycle | 1/2 Cycle | 40 ms              | 40 ms   |
| Power Factor (Min.) with Max. Load                                    | 0.5              | 0.5       | 0.5       | 0.5                | 0.5     |

## INPUT SPECIFICATIONS ①

|  |          |            |            |             |             |
|--|----------|------------|------------|-------------|-------------|
| Control Voltage Range                              | 4-15 Vdc | 3-32 Vdc   | 3-32 Vdc   | 90-140 Vrms | 90-140 Vrms |
| Max. Turn-On Voltage                               | 4.0 Vdc  | 3.0 Vdc    | 3.0 Vdc    | 90 Vrms     | 90 Vrms     |
| Min. Turn-Off Voltage                              | 1.0 Vdc  | 1.0 Vdc    | 1.0 Vdc    | 10 Vrms     | 10 Vrms     |
| Nominal Input Impedance                            | 300 ohms | See note ⑤ | See note ⑤ | 10.6 kOhm   | 10.6 kOhm   |
| Typical Input Current @ 5 Vdc (@ 120 Vrms for NTA) | 13 mAdc  | 10 mAdc    | 10 mAdc    | 10 mArms    | 10 mArms    |

## GENERAL NOTES

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- ① All parameters at 25°C unless otherwise specified.
- ② Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- ③ Heat sinking required, for derating curves see page 2.
- ④ Turn-On time for random turn-on versions is 0.02 msec. (DC control models)
- ⑤ Input circuitry incorporates active current limiter.
- ⑥ 24 Vac Control Version Available (use suffix E)





# Series NTD/NTA

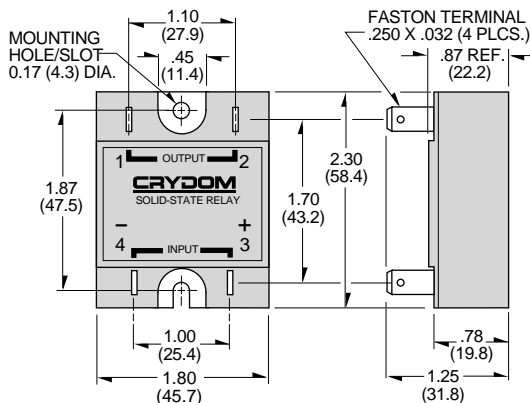
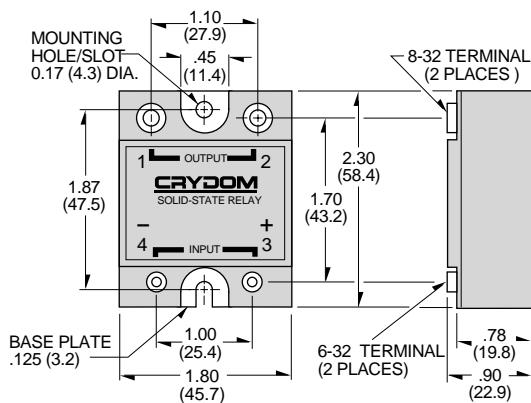
10-25Amp • 120/240 Vac • AC OUTPUT

## GENERAL SPECIFICATIONS

|  |                     |
|--|---------------------|
| Dielectric Strength 50/60Hz, Input/Output/Base | 3750 Vrms           |
| Insulation Resistance (Min.) @ 500 Vdc         | 10 <sup>9</sup> Ohm |
| Max. Capacitance Input/Output                  | 10 pF               |
| Ambient Operating Temperature Range            | -40 to 80°C         |
| Ambient Storage Temperature Range              | -40 to 125°C        |

## MECHANICAL SPECIFICATIONS

|                   |   |
|-------------------|---|
| Weight: (typical) | 3.0 oz. (86.5g)                               |
| Encapsulation:    | Thermally Conductive Epoxy                    |
| Terminals:        | Screws and Saddle Clamps Furnished, Unmounted |



All dimensions are in inches (millimeters)

### Screw Torque Requirements:

6-32 Screws - 10 in./lbs.,  
 8-32 and 10-32 Screws - 20in./lbs.  
 (Screws dry without grease.)

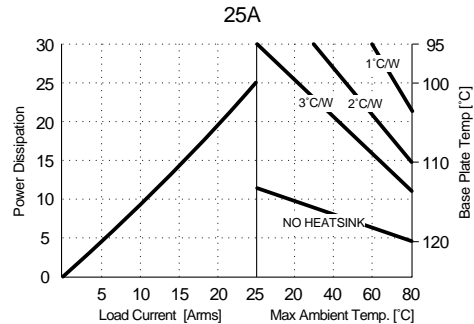
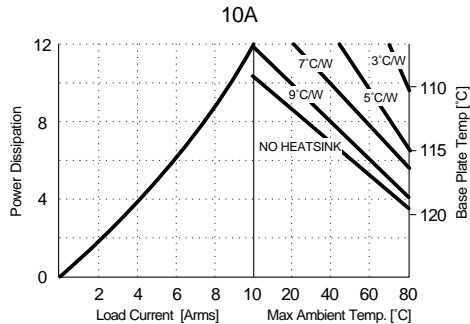
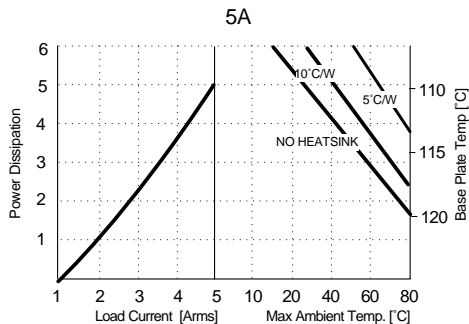
**Terminal Hardware Furnished:**  
 4 Screws and 4 Saddle Clamps

**Crydom Heat Sinks** offer excellent thermal management and are perfectly matched to the load current ratings of Crydom panel mount relays. Request Crydom's Heat Sink specification sheet for all the details.

## AVAILABLE OPTIONS

- 10 Random Turn-On Phase Controllable  
Example: **NTD2425-10**
- F Faston Terminals  
.250 x .032 Faston Terminals  
(Shown above)  
Example: **NTD2425F**
- E 24 Vac Control  
Example: **NTA2425E**

## CURRENT DERATING CURVES



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## APPROVALS

UL E116950  
 CSA PENDING  
 TUV PENDING

FastFax Document No. 176  
 SERIES NTD/NTA  
 Rev. 041702  
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