# series oneDR

## New 3 Amp models!

- GREATER POWER DENSITY
- GREATER SAFETY
- NO GROUNDING REQUIRED
- SUPERIOR AIR FLOW
- HIGHEST SURGE CURRENT & $I^2T$ FUSING RATINGS
- UL LISTED


AC/DC Output Single Channel 6 Amps

AC/DC Output Single Channel 12 Amps

Dual Channel 6 Amps per channel

New DIN Rail clip in all models for easier installation!

Single Function

Multifunction

Multi-Range

The functionality of a Timer... the control & reliability of a Solid State Relay

series oneDR TIMER

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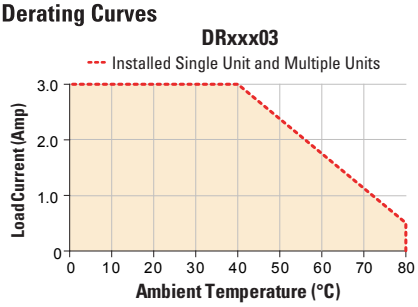
# SeriesOne DR Single Channel 3 Amps
## AC/DC Output

- 3 Amps output power rating
- 60 & 100 VDC, 24 to 600 VAC operating voltage ratings
- 4-32 VDC, 24, 120 & 230 VAC control input options available
- IP20 housing with unique integrated heat sink design
- AC Output versions with Zero Voltage Turn-On for resistive loads and Random Turn-On for inductive loads
- High power density for multiple units
- UL & cUL Listed
- CE & RoHS compliant

### Derating Curves




| OUTPUT SPECIFICATIONS (A) | DR06x03 | DR10x03 | DR24x03 | DR48x03 |
|---|---|---|---|---|
| Operating Voltage (47-63Hz AC Only) | 1-60 VDC | 1-100 VDC | 24-280 VAC | 48-600 VAC |
| General Use Current Rating (B) (Resistive Load) | 3 ADC | 3 ADC | 3 Arms | 3 Arms |
| UL Motor Controller Ratings @ 240 VAC [HP / FLA] | N/A | N/A | 1/4 / 2.9 | 1/4 / 2.9 |
| UL Motor Controller Ratings @ 380 VAC [HP / FLA] | N/A | N/A | N/A | 1/3 / 2.3 |
| UL Motor Controller Ratings @ 480 VAC [HP / FLA] | N/A | N/A | N/A | 1/2 / 2.5 |
| Min. Load Current | 2.5 mA DC | 2.5 mA DC | 0.15 Arms | 0.15 Arms |
| Max. Off-State Leakage Current @ Rated Voltage | 0.1 mADC | 0.1 mA DC | 0.1 mArms | 0.1 mArms |
| Max. Surge Current [Apk] (Duration in ms) | 60 (10) | 60 (10) | 300 (16.6) | 300 (16.6) |
| Max. Surge Current [Apk] (Duration in ms) | N/A | N/A | 285 (20) | 285 (20) |
| Transient Overvoltage [Vpk] | N/A | N/A | 600 | 1200 |
| Max. On-StateVoltage Drop @ Rated Current [Vpk] | 0.6 | 0.6 | 1.3 | 1.3 |
| On-State Resistence at rated load current [Ohm] | 0.1 | 0.1 | N/A | N/A |
| Max. I2t for Fusing (10/8.3 ms) [A2sec] | N/A | N/A | 410/375 | 410/375 |
| Min. Off-State dv/dt @ Max. Rated Voltage [V/µsec] (C) | N/A | N/A | 500 | 500 |
| Maximum Turn-On Time (D) | 600 (µsec) | 600 (µsec) | 1/2 cycle | 1/2 cycle |
| Maximum Turn-Off Time (E) | 300 (µsec) | 300 (µsec) | 1/2 cycle | 1/2 cycle |
| Power Factor (Minimum) with Maximum Load | N/A | N/A | 0.5 | 0.5 |

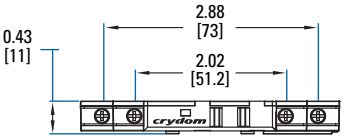
| INPUT SPECIFICATIONS (A) | DRxxD03 | DRxxE03 | DRxxB03 | DRxxA03 |
|---|---|---|---|---|
| Control Voltage Range | 4-32 VDC | 18-36 VAC | 90-140 VAC | 200-265 VAC |
| Minimum Turn-On Voltage | 4 VDC | 18 VAC | 90 VAC | 200 VAC |
| Minimum Turn-Off Voltage | 1 VDC | 4 VAC | 10 VAC | 90 VAC |
| Reverse Polarity Protection | Yes | N/A | N/A | N/A |
| Typical Input Current | 10 mA @ 24 VDC (F) | 6 mA @ 24 VAC | 5 mA @ 120 VAC | 3 mA @ 230 VAC |

| GENERAL SPECIFICATIONS (A) | DRxxx03 |
|---|---|
| Dielectric Strength, Input to Output. AC Output Versions (50/60Hz) [Vrms] | 4000 |
| Dielectric Strength, Input to Output. DC Output Versions [Vrms] | 2500 |
| Dielectric Strength, Input-Output to Case (50/60Hz) [Vrms] | 2500 |
| Minimum Insulation Resistance (@ 500 VDC) [Ohm] | $10^9$ |
| Maximum Capacitance, Input/Output [pF] | 10 |
| Ambient Operating Temperature Range [°C] | -30 to 80 |
| Ambient Storage Temperature Range [°C] | -40 to125 |
| Weight (typical) [oz] (gr) | 1.76 (50) |
| Housing Material | UL 94 V0 Self-extinguishing |

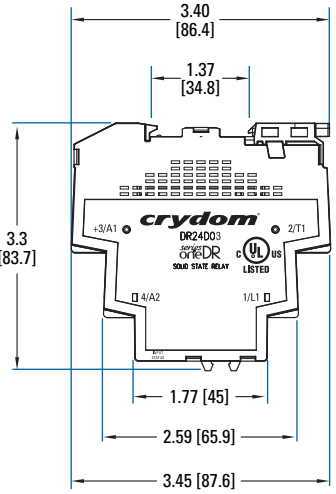
### Mechanical Dimensions

Tolerances: ± 0.02 in / 0.5 mm
All dimensions are in: inches [millimeters]

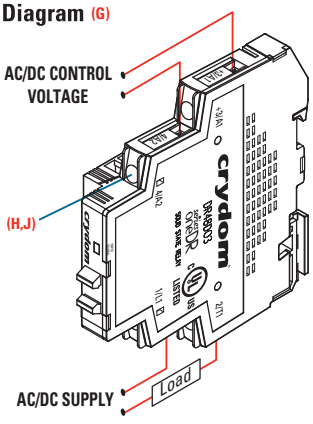
**FRONT VIEW**




**SIDE VIEW**




### Wiring Diagram (G)




### Part Number Nomenclature

**Series:** DR

**Operating Voltage:**
- **06:** 1-60 VDC
- **10:** 1-100 VDC
- **24:** 24-280 VAC
- **48:** 48-600 VAC

**Control Voltage:**
- **D:** 4-32 VDC
- **A:** 208-265 VAC
- **B:** 90-140 VAC
- **E:** 18-36 VAC

(A, B, E: AC Output Only)

**Rated Load Current:**
- **03:** 3 Amps
- **06:** 6 Amps
- **12:** 12 Amps

**Switching Type:**
- **Blank:** Zero Voltage Turn-On (AC Output Only)
- **R:** Random Turn-On (AC Output Only)

Required for valid part number
For options only and not required for valid part number

**General Notes**

(A) All parameters at 25°C unless otherwise specified
(B) Minimum spacing required between devices (see derating curves)
(C) Off-State dv/dt test method per EIA/NAR< standard RS-433, paragraph 13.11.1
(D) Turn-On time for Random-type AC output is 0.1 ms for DC control models and 20 ms for AC control models
(E) Turn-Off time for AC Ootput versions with AC control is 30 ms
(F) Input circuit incorporates active current limitation
(G) No grounding wire required. DC inductive loads must be diode suppressed.
(H) 4 Terminal screws Pozidrive #1, 3/16 in (4.8 mm).
(J) Minimum wire insulation strip length 0.20 in (5.1 mm), maximum 0.28 in (7.1 mm).

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HO/CR/SO/EN Rev.102416