

crydom

Panel Mount
DataSheet

PowerPlus DC

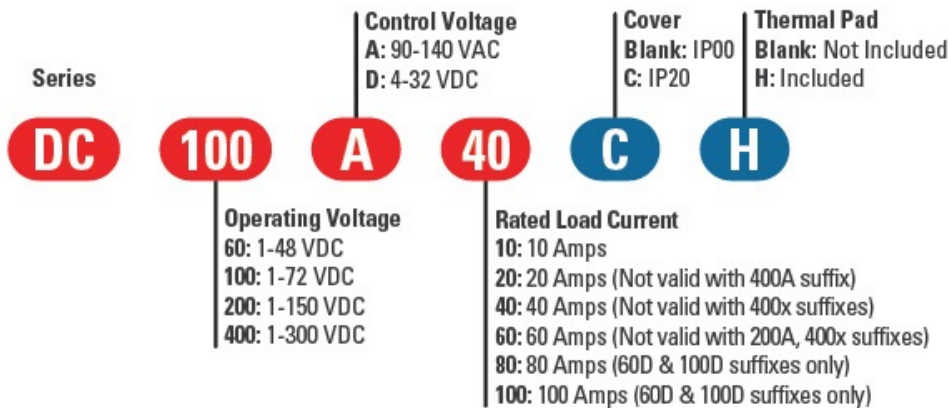


- Optically Isolated MOSFET output
- Ratings from 10A to 100A @ 72 VDC
- AC and DC control
- Relays are easily paralleled for higher-current applications
- LED Status Indicator
- Optional IP20 Cover
- UL Recognized, CE and RoHS Compliant

PRODUCT SELECTION

Control Voltage	10A	20A	40A	60A	80A	100A
4-32 VDC	DC100D10	DC100D20	DC100D40	DC100D60	DC100D80	DC100D100
90-140 VAC	DC100A10	DC100A20	DC100A40	DC100A60		

AVAILABLE OPTIONS



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

OUTPUT SPECIFICATIONS (1)

Description	10A	20A	40A	60A	80A	100A
Operating Voltage [Vdc] (2)	1-72 VDC	1-72 VDC	1-72 VDC	1-72 VDC	7-72 VDC	7-72 VDC
Blocking Voltage	100	100	100	100	100	100
Rated Load Current [Adc] (3)	10	20	40	60	80	100
Minimum Load Current [mA] (4)	2.5	2.5	2.5	2.5	2.5	2.5
Maximum Surge Current [Adc] (10ms)	66	91	136	167	215	272
Maximum On-State Voltage Drop @ Rated Current [Vdc]	0.32	0.34	0.6	0.6	0.72	0.56
Maximum Off-State Leakage Current @ Rated Voltage [mA]	0.15	0.15	0.15	0.15	0.15	0.15
Thermal Resistance Junction to Case (Rjc) [°C/W]	1.44	0.85	0.78	0.58	0.55	0.42
Maximum On-State Resistance @ Rated Current [RDS-ON][mOhms]	32	17	15	10	9	5.6
Maximum PWM [Hz] (5)	1K	1K	900	900	700	700

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INPUT SPECIFICATIONS (1)

Description	DCxxxDxx	DCxxxAxx
Control Voltage Range	4-32 VDC	90-140 VAC
Minimum Input Current @ min Control Voltage [mA]	11	11
Maximum Input Current @ max Control Voltage [mA]	12	13
Nominal Input Impedance	Current Regulated	Current Regulated
Maximum Turn-On Time [msec]	0.075	10
Maximum Turn-Off Time [msec]	0.32	10

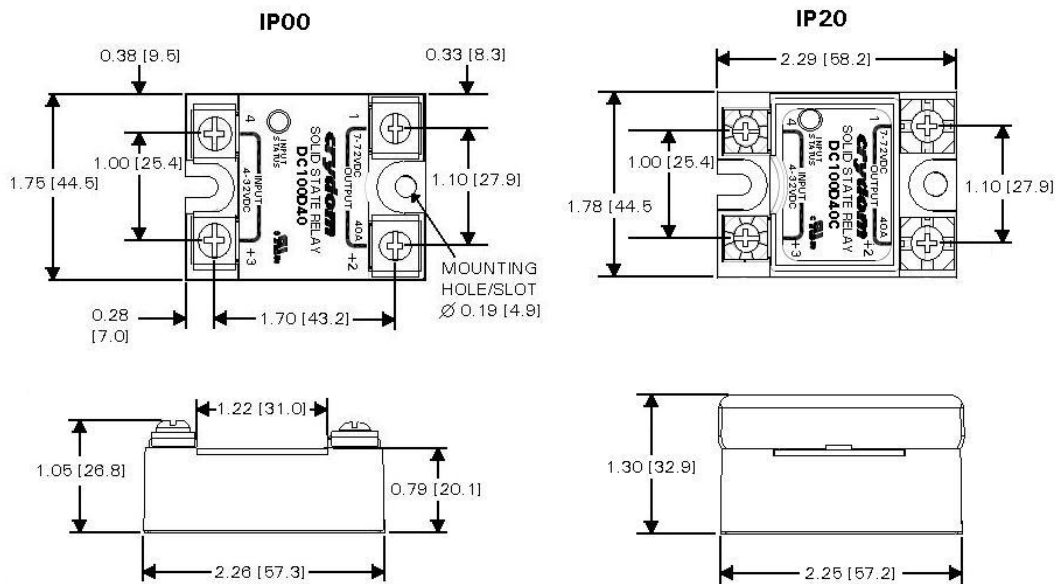
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range (6)	-30 to 80°C
Ambient Storage Temperature Range	-40 to 125 °C
Housing Material	Valox 420 SEO Black, UL 94 V-0
Weight (typical) (7)	2.65 oz (75g)
Encapsulation (8)	Epoxy Free
Terminal Finish	Electroless Nickel
Recommended Terminal Screw Torque (6-32) [in lbs/Nm]	10/1.1
Recommended Terminal Screw Torque (8-32) [in lbs/Nm]	20/2.2

GENERAL NOTES

- 1) All parameters at 40°C and per section unless otherwise specified.
- 2) Maximum voltage is 100VDC
- 3) Heat sinking required, see derating curves.
- 4) Low current loads and high ambient temperature can affect turn-on time.
- 5) @ a minimum of 8VDC control. See PWM Derating Information page 3.
- 6) Maximum Ambient Operating Temperature for the AC control relays is 65°C.
- 7) Typical weight for the AC control relays is 2.99 oz/85g.
- 8) AC controlled relays contain thermal conductive epoxy.

MECHANICAL SPECIFICATIONS

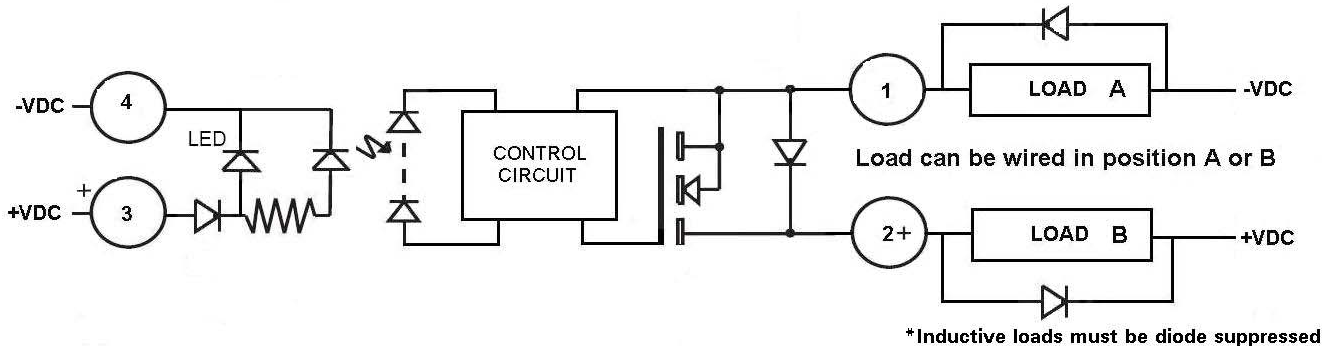


Tolerances: ±0.02 in / 0.5 mm
All dimensions are in: inches [millimeters]



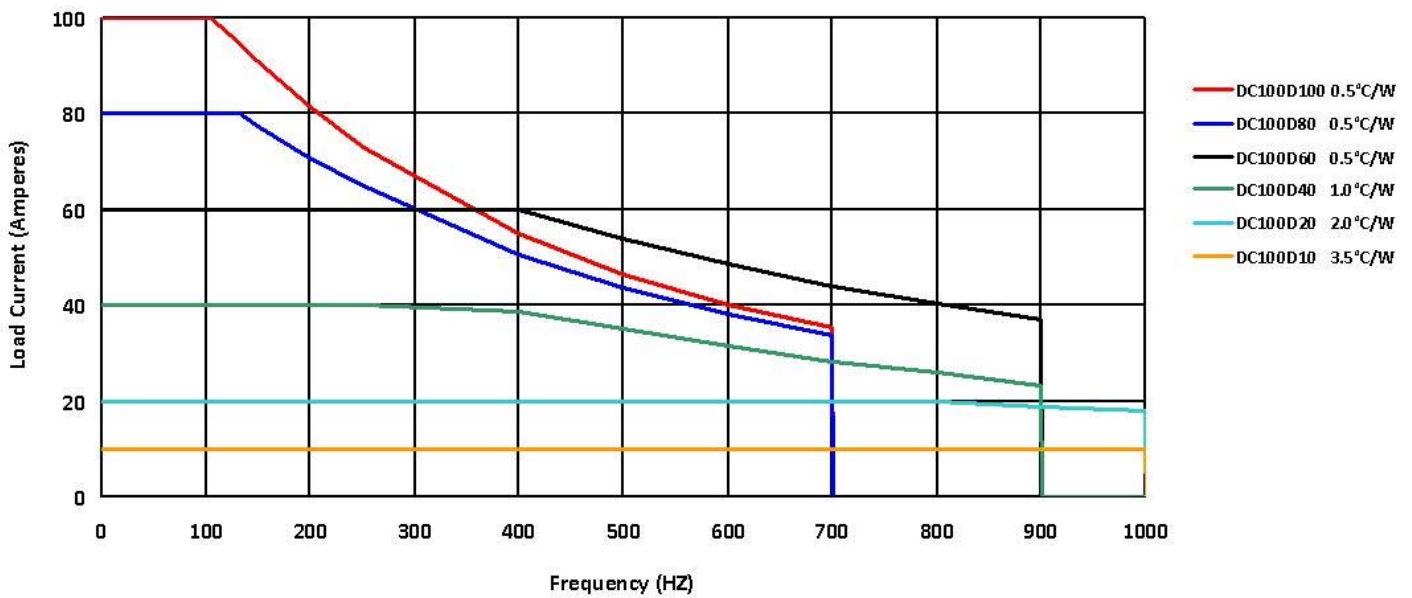
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WIRING DIAGRAM



PWM DERATE INFORMATION

PWM frequency vs. Load Current DC100DXXX



AGENCY APPROVALS

IEC 61000-4-2 Electrostatic Discharge Level 3, Criteria A
 IEC 61000-4-4 Electrically Fast Transients Level 3, Criteria A
 IEC 61000-4-5 Electrical Surges Level 3, Criteria A

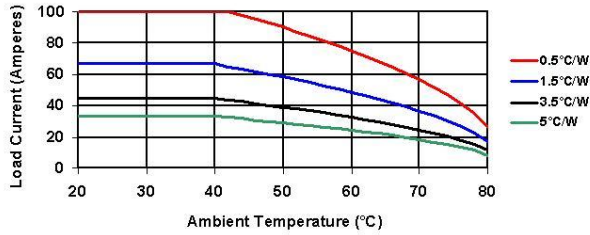




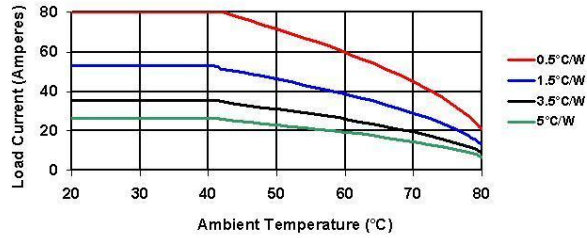
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THERMAL DERATE INFORMATION

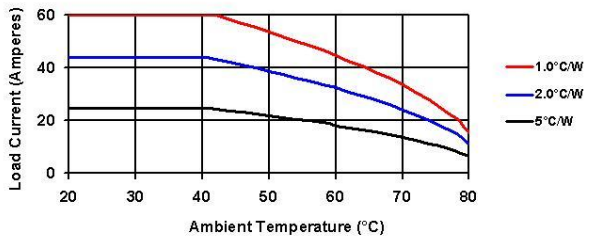
Derating Curve: DC100D100



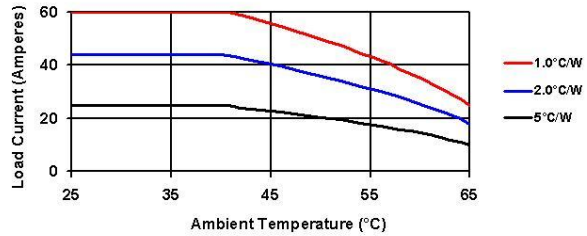
Derating Curve: DC100D80



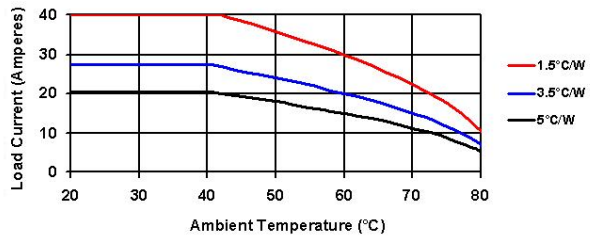
Derating Curve: DC100D60



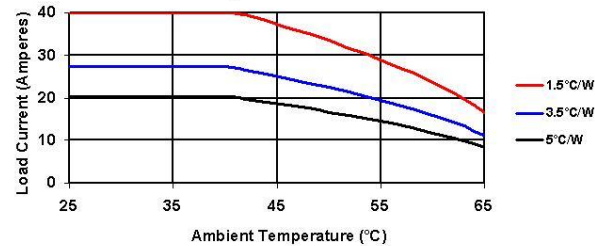
Derating Curve: DC100A60



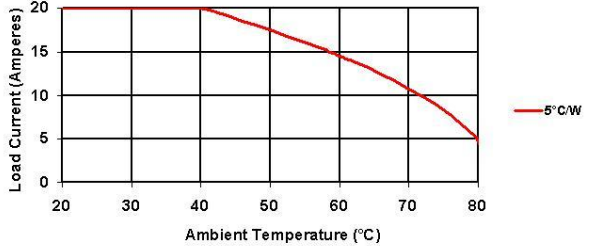
Derating Curve: DC100D40



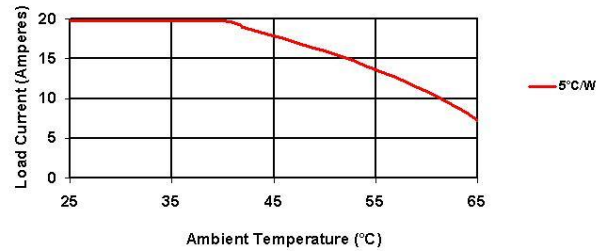
Derating Curve: DC100A40



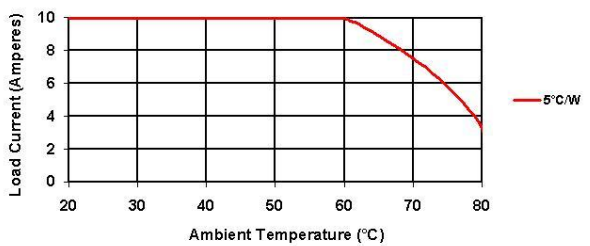
Derating Curve: DC100D20



Derating Curve: DC100A20



Derating Curve: DC100D10



Derating Curve: DC100A10

