



## Evolution Dual Relays AC Output



25-50 Amp  
280/600 VAC

- 25A & 50A Output rating per channel @ 40°C
- 120/240 & 480VAC Operating voltage rating
- 4-15, 15-32 & 4-32VDC Control input options
- Four input termination options available
- Top-bottom or left-right output screw connections available
- Zero voltage or random turn-on available
- SCR output for heavy industrial loads
- Industry standard panel mount package
- IP20 Protective cover available
- Input status LED indicators for each channel
- CE & RoHS compliant, UL & cUL recognized

### OUTPUT SPECIFICATIONS ①

	CX2425XXXX	CX2450XXXX	CX4825XXXX	CX4850XXXX
Operating Voltage (47-63 Hz) [Vrms]	24-280	24-280	48-600	48-600
Load Current Range [Arms] ②	0.15-25	0.15-50	0.15-25	0.15-50
Maximum Surge Current (1 cycle) [Apk] @ 60 Hz	300	750	300	750
Maximum Surge Current (1 cycle) [Apk] @ 50 Hz	275	710	275	710
Transient Overvoltage [Vpk]	600	600	1200	1200
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.3	1.3	1.3	1.3
Thermal Resistance Junction to Case (RqJC) [°C/W]	0.65	0.33	0.65	0.33
Maximum I <sup>2</sup> t for Fusing (8.3 msec.) [A <sup>2</sup> sec]	370	2320	370	2320
Maximum I <sup>2</sup> t for Fusing (10 msec.) [A <sup>2</sup> sec]	380	2520	380	2520
Minimum Off-State dv/dt @ Max. Rated Voltage [V/μsec] ③	500	500	500	500
Off-state leakage [mA] (at max. line voltage & Ta = 25°C)	0.1	0.1	0.25	0.25
Maximum Turn-On Time ④	1/2 cycle	1/2 cycle	1/2 cycle	1/2 cycle
Maximum Turn-Off Time	1/2 cycle	1/2 cycle	1/2 cycle	1/2 cycle
Power Factor (Minimum) with Maximum Load	0.5	0.5	0.5	0.5

### INPUT SPECIFICATIONS ①

	CXXXDXXX	CXXXEXXX	CXXXWXXX
Control Voltage Range [VDC]	4-15	15-32	4-32
Minimum Turn-On Voltage [VDC]	4	15	4
Minimum Turn-Off Voltage [VDC]	1	1	1
Nominal Input Impedance [Ohms]	300	1500	See note 5
Typical Input Current [mA]	16 @ 5 VDC	18 @ 24 VDC	10 @ 12 VDC

### GENERAL SPECIFICATIONS

Dielectric Strength 50/60Hz Input/Output [Vrms]	4000
Dielectric Strength 50/60Hz Input/Output/Baseplate [Vrms]	2500
Insulation Resistance (Min.) @ 500 VDC [Ohms]	10 <sup>9</sup>
Maximum Capacitance Input/Output [pF]	10
Ambient Operating Temperature Range [°C]	-40 to 80
Ambient Storage Temperature Range [°C]	-40 to 125

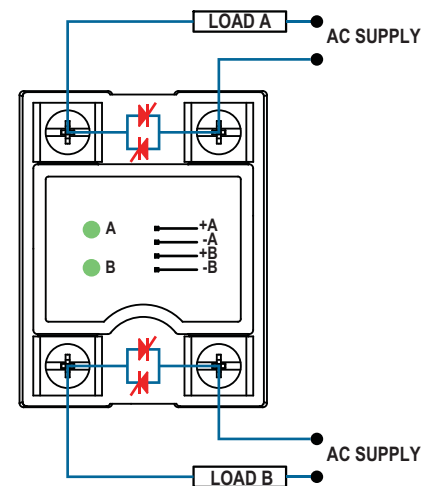
### MECHANICAL SPECIFICATIONS

Weight (Typical)	0.25 lb (100 grs)
Encapsulation	Thermally Conductive Epoxy
Terminals	Screw Type Output: 8-32
Maximum Torque (Output Terminals)	20 in lbs (2.2 Nm)
Maximum Wire Size (Output Terminals)	AWG #8 with terminals. AWG #10 Stranded

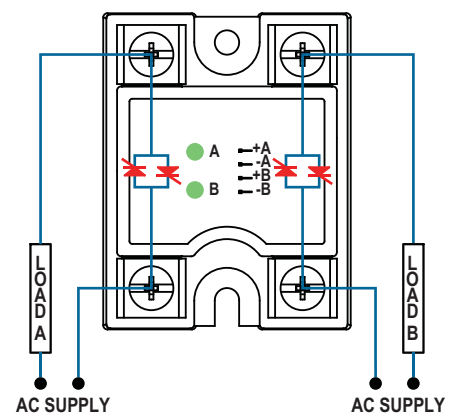
- ① All parameters at 25°C and per channel unless otherwise specified.  
 ② Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1  
 ③ Heat sinking required, see derating curves.  
 ④ Turn-On time for random turn-on (R) versions is 0.1 msec.  
 ⑤ Input circuit incorporates active current limitation.

### Wiring Diagrams

#### SSR Output Configuration "U" Option Top-Bottom Line/Load Connections



#### Contactor Output Configuration "V" Option Left-Right Line/Load Connections



Questions? Call or e-mail

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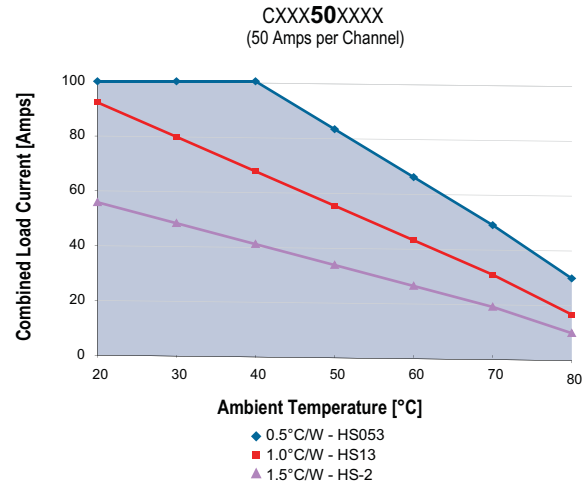
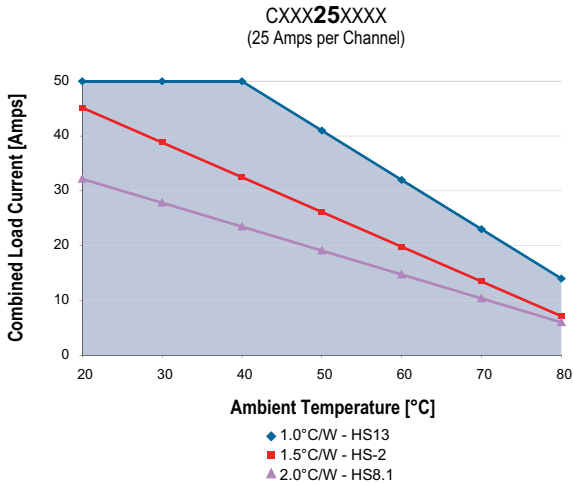
Europe +44 (0) 1202 606030 [sales-europe@crydom.com](mailto:sales-europe@crydom.com)

## Part Number Nomenclature

<p><b>Cover Option</b>  <b>C:</b> IP20  <b>D:</b> IP00 (No cover)</p>	<p><b>Output Current Rating per Channel</b>  <b>25:</b> 25 Amps rms  <b>50:</b> 50 Amps rms                  @ Ta= 40°C</p>	<p><b>Input Connector Options</b>                  1, 2, 3, or 4</p>	<p><b>Options</b>  <b>Blank:</b> Zero Turn On  <b>R:</b> Random Turn On  <b>H:</b> TP- 01 thermal pad installed on relay</p>
<p><b>C</b> <b>D</b> <b>24</b> <b>25</b> <b>D</b> <b>1</b> <b>V</b> <b>R</b></p>			
<p><b>Evolution Dual Series</b></p>	<p><b>Output Voltage @ 50/60 Hz</b>  <b>24:</b> 24-280 VAC  <b>48:</b> 48-600 VAC</p>	<p><b>Input Control</b>  <b>D:</b> 4-15 VDC  <b>E:</b> 15-32 VDC  <b>W:</b> 4-32 VDC</p>	<p><b>Output Terminal Orientation</b>  <b>U:</b> A channel on top/ B on bottom (SSR output configurations)  <b>V:</b> A channel on left/ B on right (Contactor output configurations)                  (See wiring diagrams)</p>

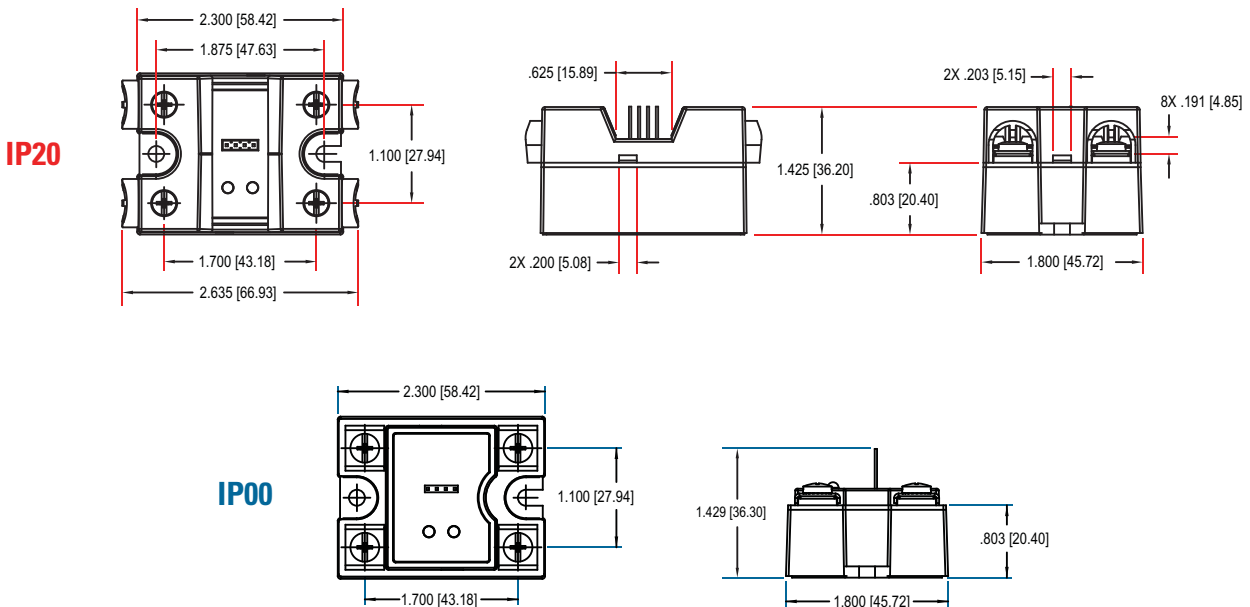
● Required for valid part number  
● For options only and not required for valid part number

## Derating Curves


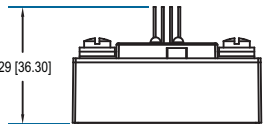
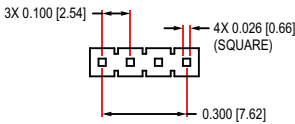

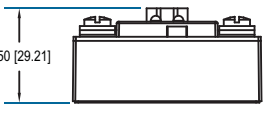
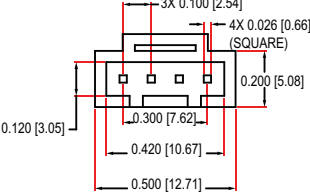

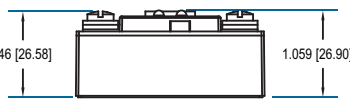
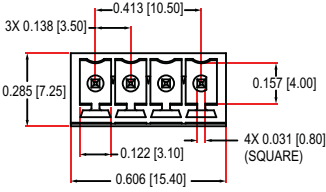

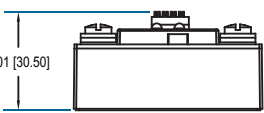


## Mechanical Dimensions

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

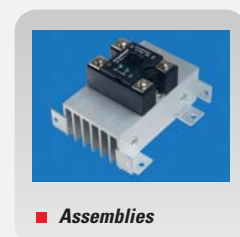


## Available Input Connector Options

	MECHANICAL DIMENSIONS (shown without IP20 cover)	INPUT CONNECTOR DIMENSIONS	SUGGESTED MATING CONNECTORS/PLUGS
 <p><b>Four Pin Standard</b></p>	 <p>1.429 [36.30]</p> <p>INPUT CONNECTOR OPTION 1</p>	 <p>3X 0.100 [2.54]      4X 0.026 [0.66] (SQUARE)</p> <p>0.300 [7.62]</p>	<p><b>Pin Connector</b> TYCO 3-640440-4</p> <p>Accepts wires: AWG #22</p>
 <p><b>Locking Connector</b></p>	 <p>1.150 [29.21]</p> <p>INPUT CONNECTOR OPTION 2</p>	 <p>3X 0.100 [2.54]      4X 0.026 [0.66] (SQUARE)</p> <p>0.120 [3.05]      0.200 [5.08]</p> <p>0.300 [7.62]      0.420 [10.67]</p> <p>0.500 [12.71]</p>	<p><b>Crimp Housing, Positive Latch</b> Molex 050579404</p> <p>Accepts wires: AWG #24, 0.2 mm<sup>2</sup></p>
 <p><b>Detachable Barriers w/Screws</b></p>	 <p>1.046 [26.58]      1.059 [26.90]</p> <p>INPUT CONNECTOR OPTION 3</p>	 <p>3X 0.138 [3.50]      0.413 [10.50]</p> <p>0.285 [7.25]      0.157 [4.00]</p> <p>0.122 [3.10]      4X 0.031 [0.80] (SQUARE)</p> <p>0.606 [15.40]</p>	<p><b>Vertical Plug, Top Wire entry</b> Molex 039500-0004 Phoenix 1840382 Dinkle EC350V-04P</p> <p><b>Vertical Plug, Rear Wire entry</b> Molex 39503-2004 Phoenix 1862878 Dinkle EC350RL-04P</p> <p><b>Vertical Plug, Front Wire entry</b> Molex 39503-3004 Phoenix 1863178 Dinkle EC350R-04P</p> <p><b>Vertical Spring Cage Plug, top Wire E</b> Phoenix 1939934 Dinkle 0221-2004</p> <p>All 4 options accept wires: AWG #16 to 24</p>
 <p><b>Direct Wire</b></p>	 <p>1.201 [30.50]</p> <p>INPUT CONNECTOR OPTION 4</p>	<p>N/A</p>	<p>Accepts wires: AWG #16 to 24</p>

### Accessories

- A large variety of **Heat Sinks** rated from .25 to 5.0 C/W specially engineered to match the heat dissipation requirements of Crydom SSRs.
- **Heat Transfer Pads** (Thermal Pads) for single, dual and 3 phase SSRs to maximize thermal conductivity.
- **Assemblies** of Crydom SSRs on Crydom heat sinks are also available.
- SSR mounting **Hardware Kits** (English and Metric threads).



For more information about these and other accessories please ask your Crydom authorized distributor or visit [www.crydom.com/en/accessories](http://www.crydom.com/en/accessories)