

# ***crydom***<sup>®</sup>

## Solid State Relays & Contactors



The Global Expert in **Solid State Switching** Technology

  
**Sensata**  
Technologies

***crydom***<sup>®</sup>

Crydom, global expert in solid state switching technology, combines technology and innovation to provide customers a wide range of standard Solid State Relays and Solid State Contactors, and specializes in custom designed solid state switching solutions for any load control application. Crydom is a brand of Sensata Technologies.

**[www.crydom.com](http://www.crydom.com)**



**Sensata Technologies** is one of the world's leading suppliers of sensing, electrical protection, control and power management solutions with operations and business centers in 13 countries. Sensata's products improve safety, efficiency and comfort for millions of people every day in automotive, appliance, aircraft, industrial, military, heavy vehicle, heating, air-conditioning and ventilation, data, telecommunications, recreational vehicle and marine applications. For more information please visit Sensata's website at:

**[www.sensata.com](http://www.sensata.com)**

# About this catalog...

Products included in this catalog are only part of the Crydom offer of Solid State Relays and Contactors. To facilitate the use of this catalog, products have been categorized into 6 product groups mainly defined by mounting type.

The following conditions are applicable to product families where specifically noted:

- A** All dimensions in drawings are in inches [millimeters] and are for reference only.
- B** Dimensional drawings shown are for illustrative purposes only. They do not represent the complete variety of products within each series. For complete dimensional drawings for a particular Crydom product visit the CAD Drawings section in the Crydom website.
- C** Part Number Nomenclature is color coded as follows:
  - Required for valid part number
  - For options only and not required for valid part number
- D** Not all part number combinations are available. Contact Crydom Sales Support for information on the availability of a specific part number.
- E** Safety agency approvals for SSR/Heat Sink Assemblies may vary depending upon selected SSR. Heat sinks do not require safety agency approval.
- F** The standard Crydom SSR/Heat Sink Assemblies are either DIN Rail or Panel Mounted depending upon model selected and are available with either one, two or three single or dual SSRs, or one three-phase SSR.
- G** Installing a CN Series SSR in a socket that does not have matching input/output specifications may result in non-operation or damage to either the SSR, socket or both. See socket-relay compatibility table available in CN Series SSR datasheet.
- H** In addition to the possible combinations shown in the part number nomenclature, any standard Crydom PCB Mount SIP type SSR with similar pin centers can be offered as an assembly.
- J** Listed agency approvals may not apply to all part numbers available within a series. To determine agency approvals for a specific part number contact Crydom Technical Support.
- K** Required external heat sink for all ratings.
- L** Heat sink includes the necessary hardware to mount the relay(s) onto the heat sink. The number of hardware kits (HK1 or HKM1) included depends upon the number and type of SSRs possible to install on each heat sink.



## Panel Mount

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AC

DC



## PCB Mount

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AC

DC



## DIN Rail Mount

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AC

DC



## Plug-In Mount

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AC

DC



## Assemblies

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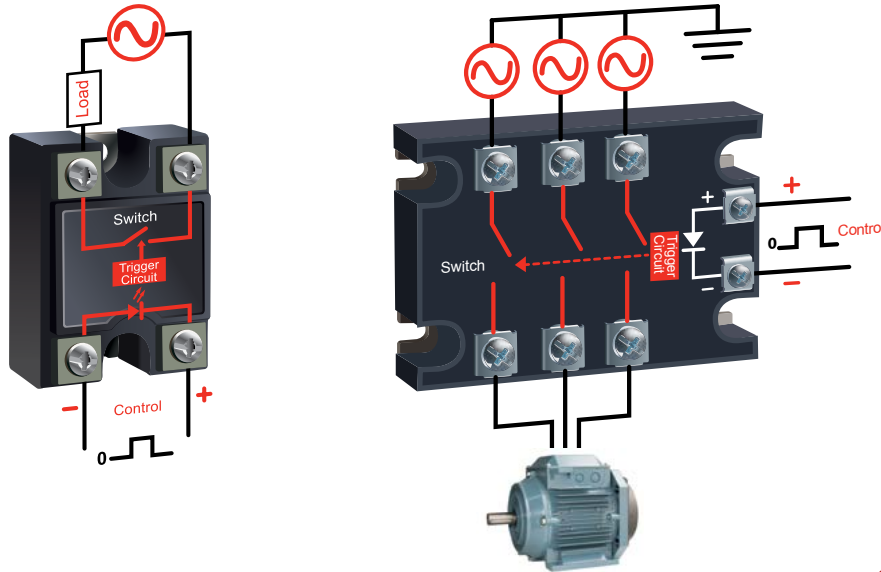


## Accessories

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# What is a Solid State Relay/Contactor?

A Solid State Relay or Contactor (SSR or SSC) is an electronic component that switches Power (AC or DC current) to a load circuit and provides electrical isolation between an application's control circuit and load circuit. It is a competitive technology to Electromechanical Relays (EMRs) and other switching technologies such as Mercury Displacement Relays (MDRs) and discrete component assemblies.



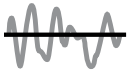
# Why use Solid State Switching Technology?



Long life



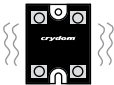
Quiet operation



Minimum electrical noise



Low power consumption



Shock & vibration resistant



Ideal for harsh environments



Compatibility with control systems



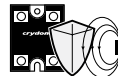
Fast switching



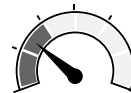
Position insensitive



Reduced weight



Magnetic noise immunity



Reduced energy cost

# Applications

Although there are literally thousands of individual uses for Solid State Relays and Contactors, most can be categorized into the following applications:

## **Motion Control**

Includes elevators, lifts, hoists, exercise equipment, conveyor systems, solar trackers, fans, solenoid and valve control.

**Benefits:** Endurance, shock & vibration resistance, Soft Start, reversing, no arcing, fast switching, long life, no maintenance, easy to interface, reduced parts count.

## **Heating Control**

This encompasses the largest segment of solid state relay users. Applications include, but are not limited to: professional food equipment, plastic molding/extrusion machinery, HVAC&R and soldering equipment.

**Benefits:** Long life, no maintenance, safe product, easy to interface, as well as enabling temperature accuracy. Suitable for heater, fan, blower and valve control.

## **Power Control**

Includes power supplies, transformers, regulators, inverters, converters, UPS systems, etc. as well as any load that is not specifically for heating, lighting or motion control.

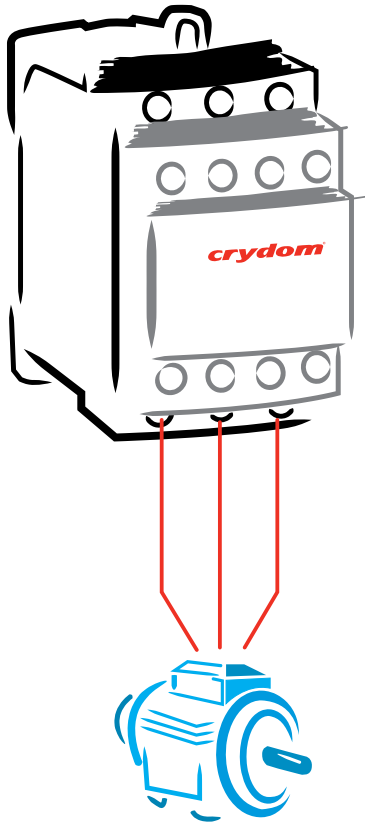
**Benefits:** Long life, silent operation, high speed switching, endurance, mechanical shock and vibration resistance, position insensitive, logic compatibility, arc and bounce free switching, and low electromagnetic emissions.

## **Lighting Control**

These applications are usually broken down into three categories: theatrical, warehouse and commercial. Many of the products used in this segment are custom designed.

**Benefits:** Dimming, silent operation, fast switching, long life, no maintenance, safe product, easy to interface, reduced parts count.

# Solid State Relays versus Solid State Contactors



Crydom has been well known for over 40 years as a supplier of Solid State Relays (SSRs). However, Crydom also designs, manufactures and markets Solid State Contactors (SSCs). **What is the difference between SSRs and SSCs?**

Remarkably, **there is very little actual difference.** They use similar power semiconductors and control circuits, and in some cases, even the same housings. SSRs, being considered as components, are applied in a large variety of applications and uses. SSCs, are generally applied in 3 phase AC heater and motor control applications although the SSCs themselves can be used successfully in almost any load control application. **Why then are they viewed and applied differently?**

There are two main reasons: **Tradition** and **Ratings.**

**Tradition** is that for most AC power control applications utilizing 3 phase AC power and some DC applications, traditional mechanical contactors are employed. (Note: mechanical contactors rated to switch AC loads are quite different from those rated for DC loads of similar currents due to the arcing and contact degradation associated with making and breaking a DC circuit). Therefore when the need arises to use solid state technology in these type applications rather than EMRs,

engineers immediately think of Solid State “Contactors”, not Solid State “Relays”. So they are disposed to consider SSCs rather than SSRs despite the fact that **SSRs can perform exactly the same switching function as a Contactor.**

**Ratings** of contactors, whether Solid State or Mechanical, always include allowed motor load ratings and allowed resistive load ratings. The reason for this is again tradition because for most mechanical contactors, the switching capabilities and life expectancy vary significantly for each type of load. Further, motor control requires consideration of such aspects as Locked Rotor Rating, Full Load Current Ratings and Horse Power Rating, while resistive load ratings must account for significant inrush current that also degrades mechanical contacts. SSRs and SSCs don’t suffer the same type degradation due to load characteristics as mechanical contacts do and therefore the motor and resistive load ratings are not as widely different. However the one significant differentiator is that **to be considered a contactor, the SSR or SSC must be evaluated to and carry ratings appropriate for motor control.**

So in summary, the major technical difference between an SSR and SSC has to do with the mandatory motor ratings required to be defined as a “Contactor”.



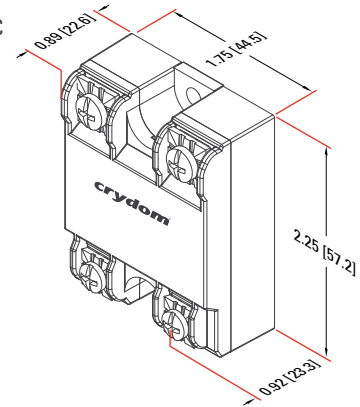


Series 1 • 10-125 Amps



- Crydom's Signature family of Solid State Relays
- Ratings from 10 to 125 Amps @ 24-280 VAC and from 25 to 90 Amps @ 80-530 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible 3-32 VDC, 18-36 VAC or 90-280 VAC Control Voltage
- Elective "ultra-low" input current draw (2-4 mAmps DC typical, "T" suffix option)
- Optional output R-C Snubber for additional dv/dt attenuation
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Elective Internal TVS ("P" suffix) eliminates the need for external Overvoltage Protection
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the "H" suffix
- Optional Normally Closed output ("B" suffix option)
- UL 508 overload endurance rated and 100 kA Short Circuit Current Rating (SCCR)

Notes: **A B C D J K**



<b>4</b>	<b>A</b>	<b>12</b>	<b>10</b>	<b>E</b>	<b>K</b>	<b>P</b>	<b>G</b>	<b>S</b>	<b>H</b>	<b>T</b>	<b>-10</b>	<b>-B</b>
<b>Output Frequency</b> Blank: 47-440 Hz 4: 400 Hz (12 & 24 suffixes only)	<b>Control Voltage</b> A: 90-280 VAC D: 3-32 VDC (4-32 VDC for 48 suffix) AxxxxE: 18-36 VAC (12 & 24 suffixes only)	<b>Operating Voltage</b> 12: 24-140 VAC 24: 24-280 VAC 48: 48-530 VAC	<b>Rated Load Current</b> 10: 10 Amp (12 & 24 suffixes only) 25: 25 Amp 40: 40 Amp (12 suffix only) 50: 50 Amp (24 & 48 suffixes only) 75: 75 Amp (24 & 48 suffixes only) 90: 90 Amp (24 & 48 suffixes only) 110: 110 Amp (24 suffix only) 125: 125 Amp (24 suffix only)	<b>Termination</b> Blank: Screw F: Quick Connect (Single pair [up to 25 Amp] Double pair [50 Amp]) K: Installed standoffs for PC Board mounting	<b>Overvoltage Protection (12 &amp; 24 suffixes only)</b> Blank: Not Included P: Included	<b>Input Status LED (12 &amp; 24 suffixes only)</b> Blank: Not Included G: Included	<b>Snubber</b> Blank: Not Included S: Included (Not needed with T suffix, included as standard)	<b>Thermal Pad</b> Blank: Not Included H: Included	<b>Blank: Phototriac</b> T: Low Current Phototransistor (Not needed with -B suffix, included as standard)	<b>Output Type</b> Blank: Normally Open -B: Normally Closed (12 & 24 suffixes only. Snubber included, not available with -10 option)	<b>Switching Type</b> Blank: Zero Voltage Turn-On -10: Instantaneous Turn-On	

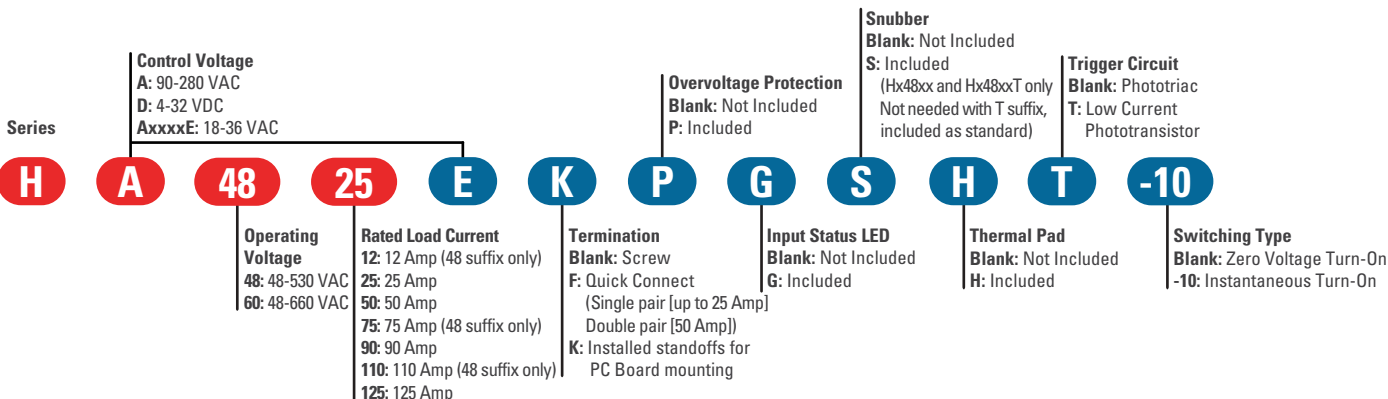
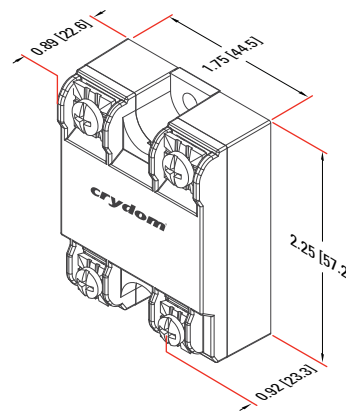
Complete specifications of these & other Crydom products available at: [www.crydom.com](http://www.crydom.com)

## HA/HD Series • 12-125 Amps



- Solid State Relay with ratings from 12 to 125 Amps @ 48-660 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible 4-32 VDC, 18-36 VAC or 90-280 VAC Control Voltage
- Elective “ultra-low” input current draw (2-4 mAmps DC typical, “T” suffix option)
- R-C Snubber network for additional dv/dt attenuation (for HA48/HD48 models only)
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Elective Internal TVS (“P” suffix) eliminates the need for external Overvoltage Protection
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the “H” suffix
- UL 508 overload endurance rated and 100 kA Short Circuit Current Rating (SCCR)

Notes: **A B C D J K**



Panel Mount

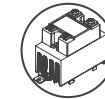
AC  
PCB Mount • DIN Rail Mount • Plug-In Mount • Assemblies • Accessories

Series H1 • 25-125 Amps

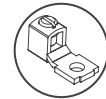


- Solid State Relay with ratings from 25 to 125 Amps @ 48-690 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible 4-32 VDC Control Voltage
- Low output off-state leakage current (2WD & 6WD suffixes only, snubberless)
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Elective Internal TVS ("P" suffix) eliminates the need for external Overvoltage Protection (2D & 2WD suffixes only)
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the "H" suffix
- UL 508 overload endurance rated and 100 kA Short Circuit Current Rating (SCCR)

Notes: **A B C D J K**

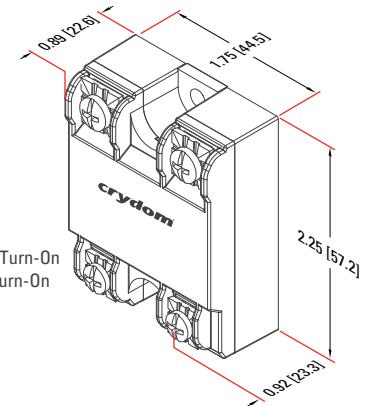


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Series	<b>Transient Overvoltage</b> 2D: 1200 Vpk (with Snubber) 2WD: 1200 Vpk (without Snubber) 6WD: 1600 Vpk (without Snubber)	<b>Rated Load Current</b> 25: 25 Amp 50: 50 Amp 75: 75 Amp 90: 90 Amp 125: 125 Amp (2D & 2WD suffixes only)	<b>Overvoltage Protection (2D &amp; 2WD suffixes only)</b> Blank: Not Included P: Included	<b>Thermal Pad</b> Blank: Not Included H: Included
<b>H1</b>	<b>2WD</b>	<b>48</b>	<b>25</b>	<b>K</b>
	<b>Operating Voltage</b> 48: 48-530 VAC (2D suffix only) 48-660 VAC (2WD suffix only) 60: 48-690 VAC (6WD suffix only)	<b>Termination</b> Blank: Screw F: Quick Connect (Single pair [25 Amp] Double pair [50 Amp]) K: Installed standoffs for PC Board mounting	<b>Input Status LED</b> Blank: Not Included G: Included	<b>Switching Type</b> Blank: Zero Voltage Turn-On -10: Instantaneous Turn-On
			<b>P</b>	<b>G</b>
				<b>H</b>
				<b>-10</b>

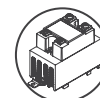


## CW Series • 10-125 Amps

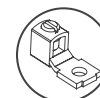


- Heavy duty Solid State Relay with ratings from 10 to 125 Amps @ 24-280 VAC or 48-660 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- EMC compliant (LEVEL 3) for reliable operation in harsh electrical environments
- Flexible 3-32 VDC, 18-36 VAC or 90-280 VAC Control Voltage and universal AC/DC control of 20-280 VAC and 20-48 VDC
- LED indicator for easy identification of control status
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- IP20 "touch safe" Cover provides additional user protection
- Elective Internal TVS ("P" suffix) eliminates the need for external Overvoltage Protection
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the "H" suffix
- UL 508 overload endurance rated and 100 kA Short Circuit Current Rating (SCCR)

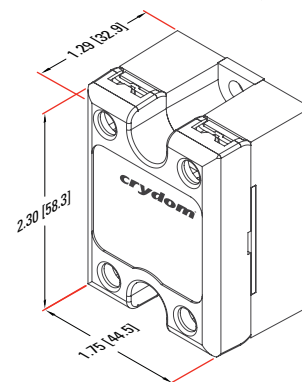
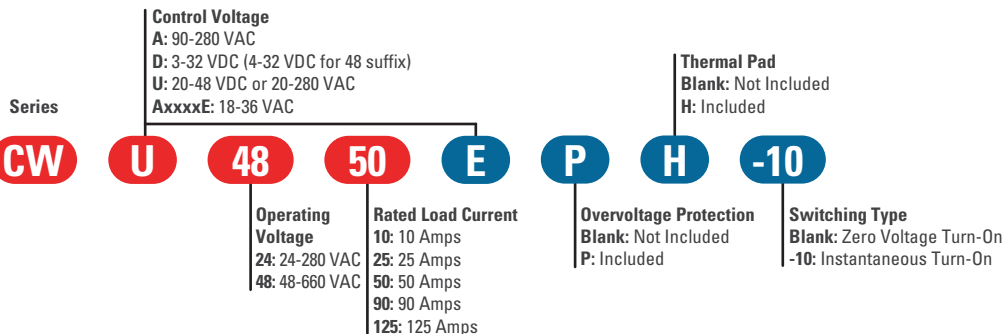
Notes: **A B C D J K**



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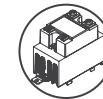
Panel Mount  
AC  
PCB Mount • DIN Rail Mount • Plug-In Mount • Assemblies • Accessories

CSW Series • 10-90 Amps

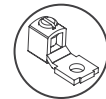


- Heavy duty Solid State Relay with ratings from 10 to 90 Amps @ 24-280 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- EMC compliant (LEVEL 3) for reliable operation in harsh electrical environments
- Flexible 3-32 VDC Control Voltage
- Low output off-state leakage current (without option "S")
- Elective R-C Snubber network for additional dv/dt attenuation (option "S")
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase-control or inductive loads) output
- Elective Internal TVS ("P" suffix) eliminates the need for external Overvoltage Protection
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the "H" suffix
- UL 508 overload endurance rated and 100 kA Short Circuit Current Rating (SCCR)

Notes: **A B C D J K**

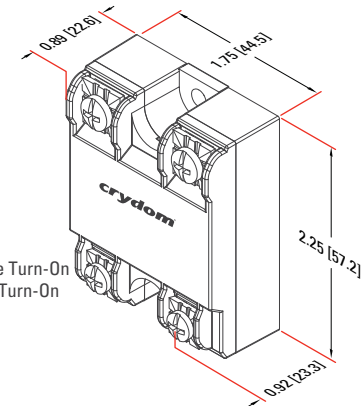


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<b>Series</b>	<b>Operating Voltage</b> 24: 24-280 VAC	<b>Termination</b> Blank: Screw F: Quick Connect (Single pair (up to 25 Amp) Double pair (50 Amp)) K: Installed standoffs for PC Board mounting	<b>Input Status LED</b> Blank: Not Included G: Included	<b>Thermal Pad</b> Blank: Not Included H: Included
<b>CSW</b>	<b>24</b>	<b>10</b>	<b>K</b>	<b>P</b>
		<b>Rated Load Current</b> 10: 10 Amp 25: 25 Amp 50: 50 Amp 75: 75 Amp 90: 90 Amp	<b>Overvoltage Protection</b> Blank: Not Included P: Included	<b>Snubber</b> Blank: Not Included S: Included
			<b>Blank</b>	<b>S</b>
				<b>H</b>
				<b>-10</b>
				<b>Switching Type</b> Blank: Zero Voltage Turn-On -10: Instantaneous Turn-On

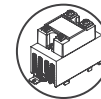


## CL Series • 5-10 Amps

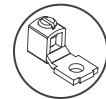


- Economical Solid State Relay with ratings of 5 or 10 Amps @ 24-280 VAC
- Optional IP20 “touch safe” Cover for additional user protection
- Economical Triac based construction
- LED indicator for easy identification of control status
- Regulated AC or DC Control Voltage
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output

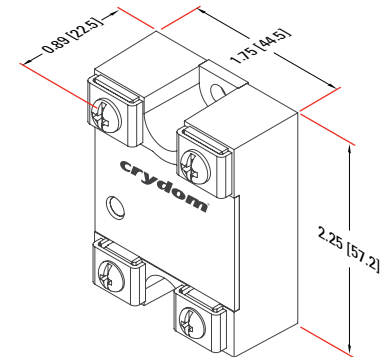
Notes: **A B C D J K**



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Series

**CL**

**240**

**A**

**10**

**R**

**C**

**H**

Control Voltage

**A:** 90-250 VAC  
**D:** 3-32 VDC

Switching Type

**Blank:** Zero Voltage  
Turn-On  
**R:** Instantaneous Turn-On

Thermal Pad  
**Blank:** Not Included  
**H:** Included

Load Voltage  
**240:** 24-280 VAC

Rated Load Current  
**05:** 5 Amps  
**10:** 10 Amps

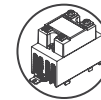
Cover  
**Blank:** Not Included (IP00)  
**C:** Included (IP20)

EL Series • 5-20 Amps

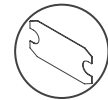


- Mini-puck Solid State Relay to maximize panel space
- Ratings up to 20 Amps @ 24-280 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Quick Connect control & output termination for easy installation
- 3.75k VAC optical isolation

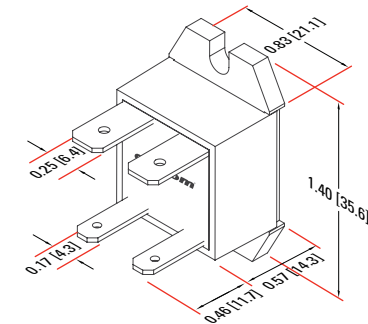
Notes: **A B C D J K**



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Thermal Pad  
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Series

**EL**

**240A**

**5**

**R**

**05**

Output Voltage  
240 A: 24-280 VAC

Rated Load Current  
5: 5 Amps  
10: 10 Amps  
20: 20 Amps

Control Voltage  
05: 4-8 VDC  
12: 10-14 VDC  
24: 21-27 VDC

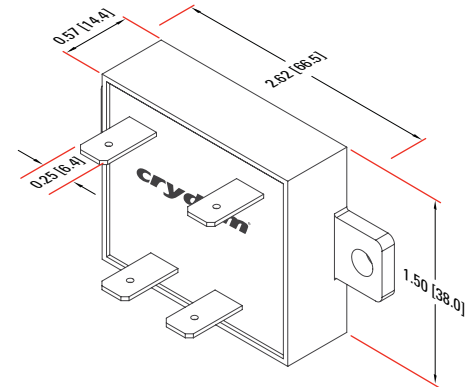
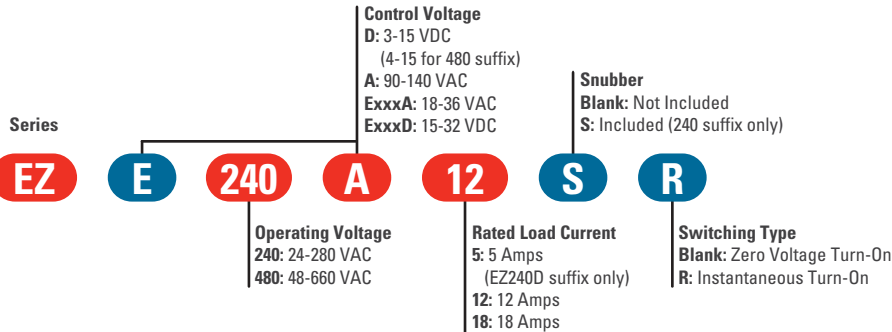
Switching Type  
Blank: Zero Voltage Turn-On  
R: Instantaneous Turn-On

## EZ Series • 5-18 Amps



- Low profile Solid State Relay
- Ratings from 5 to 18 Amps @ 24-280 VAC or 48-660 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Elective R-C Snubber network (240 VAC models) for additional dv/dt attenuation
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- AC or DC Control Voltage options
- Quick Connect control & output termination for easy installation

Notes: **A B C D J K**



Specifications are subject to change without prior notice

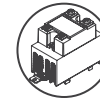


MCBC Series • 25-90 Amps

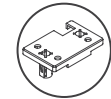


- Microprocessor based burst fire controller / SSR
- Ratings from 25 to 90 Amps @ 48-530 VAC
- R-C Snubber network for additional dv/dt attenuation
- Industry standard analogue input (voltage or current) or potentiometer control
- LED indicator for easy identification of output status
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Two time-base periods available (10 & 20 cycles)
- Designed to provide proportional AC power to a wide range of resistive loads

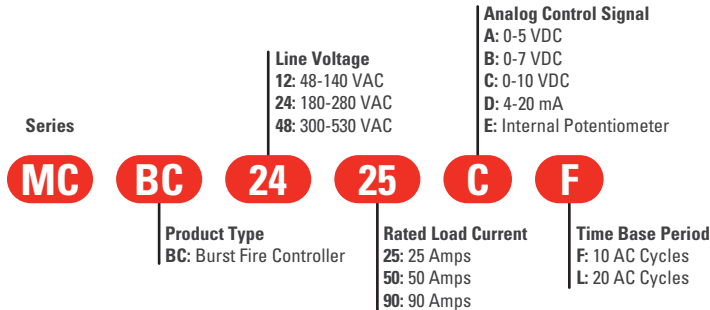
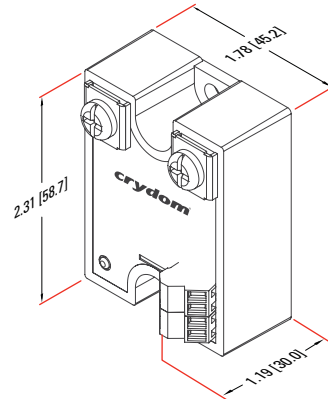
Notes: **A B D J K**



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Protective Cover  
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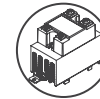


## MCPC Series • 25-90 Amps

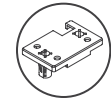


- Microprocessor based phase angle controller / SSR
- Ratings from 25 to 90 Amps @ 48-530 VAC
- R-C Snubber network for additional dv/dt attenuation
- Industry standard analogue input (voltage or current) or potentiometer control for setpoint
- LED indicator for easy identification of output status
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Designed to provide proportional AC power to a wide range of resistive loads

Notes: **A B D J K**



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Protective Cover  
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Series

**MC**

**PC**

**24**

**25**

**C**

Line Voltage

- 12: 48-140 VAC
- 24: 180-280 VAC
- 48: 300-530 VAC

Analog Control Signal

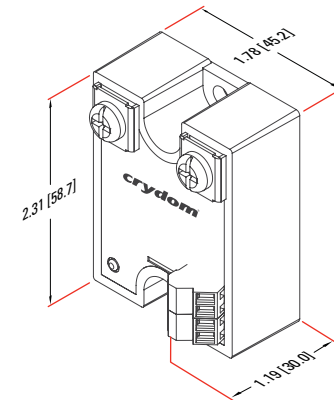
- A: 0-5 VDC
- B: 0-7 VDC
- C: 0-10 VDC
- D: 4-20 mA
- E: Internal Potentiometer

Product Type

PC: Phase-Angle Controller

Rated Load Current

- 25: 25 Amps
- 50: 50 Amps
- 90: 90 Amps



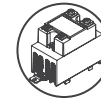
Specifications are subject to change without prior notice

PCV Series • 15-90 Amps

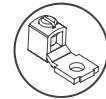


- Easy to use proportional (phase angle) controller
- Ratings from 15 to 90 Amps @ 100-240 VAC
- Simple 2-7 VDC or 2-10 VDC analogue Control Voltage
- Designed to provide proportional AC power to a wide range of resistive loads

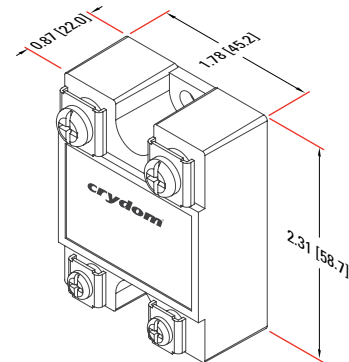
Notes: **A B D J K**



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Series

Operating Voltage  
24: 100-240 VAC

**10**

**PCV**

**24**

**25**

Control Voltage  
7: 2-7 VDC  
10: 2-10 VDC

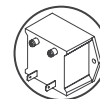
Rated Load Current  
15: 15 Amps  
25: 25 Amps  
50: 50 Amps (10 prefix only)  
75: 75 Amps (10 prefix only)  
90: 90 Amps (10 prefix only)

## LPCV Series • 15-110 Amps



- Easy to use linear proportional (phase angle) controller
- Ratings from 15 to 110 Amps @ 20-300 VAC
- Simple 0-5 VDC, 0-10 VDC or 4-20 mAmps analogue Control Voltage
- Included 12 VDC source for use with external potentiometer control
- Requires accessory power supply PS120 or PS240 to provide 20 VAC for internal logic circuit
- Designed to provide proportional AC power to a wide range of resistive loads

Notes: **A B D J K**



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Accessories  
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Series

Operating Voltage  
24: 20-300 VAC

**10**

**LPCV**

**24**

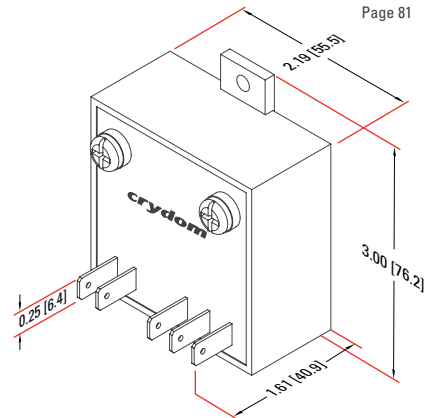
**25**

Control Voltage

- 5: 0-5 VDC
- 10: 0-10 VDC
- 20: 4-20 mAmps

Rated Load Current

- 15: 15 Amps
- 25: 25 Amps
- 40: 40 Amps
- 75: 75 Amps
- 110: 110 Amps



Specifications are subject to change without prior notice

SMR-6 Series • 25-90 Amps

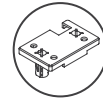


- Solid State Relay with built-in current monitoring & diagnostics circuit
- Ratings from 25 to 90 Amps @ 60-280 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Inverting or non-inverting Control Voltage (flexible 8-32 VDC)
- Normally Open or Normally Closed alarm output
- Wide range of built-in fault condition monitoring alarms
- Zero Voltage Turn-On (resistive loads) output
- UL 508 overload endurance rated

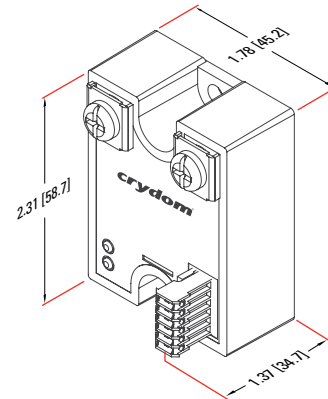
Notes: **A B D J K**



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Series

**SMR**

**24**

**25**

**-6**

**Operating Voltage**  
24: 60-280 VAC  
48: 96-553 VAC

**Rated Load Current**  
25: 25 Amps  
50: 50 Amps  
90: 90 Amps

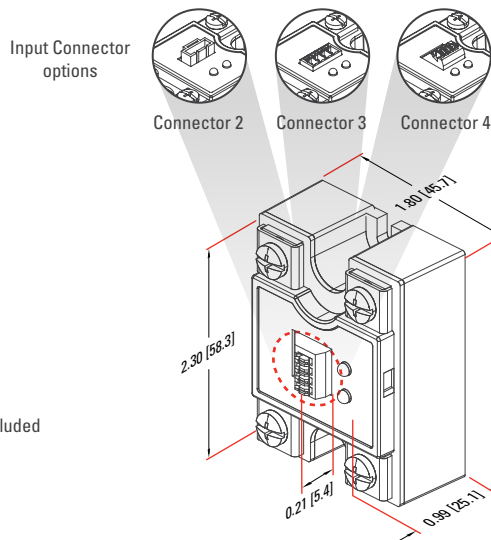
**Features**  
**Input:** Inverting or Non Inverting  
**Alarm Output:** Normally Open or Normally Closed

## Evolution Dual Series • 25-50 Amps



- Independently controlled dual output Solid State Relay
- Ratings of 25 & 50 Amps @ 24-280 VAC or 48-600 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Optional IP20 "touch safe" Cover for additional user protection
- Flexible 4-32 VDC Control Voltage
- Three Input Connector options for additional assembly flexibility
- LED indicator for each output channel for easy identification of control status
- Zero Voltage Turn-On (resistive loads) output

Notes: **A B C D J K**



Series

**C**    **D**    **24**    **25**    **W**    **2**    **V**    **H**

**Cover**  
**C:** Included  
**D:** Not Included

**Rated Load Current**  
**25:** 25 Amps  
**50:** 50 Amps

**Input Connector**  
**2:** Key Locking Connector  
**3:** 4 Pin Connector  
 accepting Screw Terminals  
**4:** 4 Pin Spring Terminal \*

**Thermal Pad**  
**Blank:** Not Included  
**H:** Included

**Output Terminal Orientation**

**U:** A channel top,  
 B channel bottom  
**V:** A channel on left,  
 B channel on right

**Operating Voltage**  
**24:** 24-280 VAC  
**48:** 48-660 VAC

**Control Voltage**  
**W:** 4-32 VDC

\* Drawing shown on the right

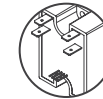
Specifications are subject to change without prior notice

## Series 1 Duals • 25-40 Amps

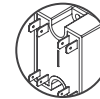


- Independently controlled dual output Solid State Relay
- Ratings of 25 Amps & 40 Amps @ 24-280 VAC or 48-530 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- 4-15 VDC or 15-32 VDC Control Voltage
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Quick Connect termination; 120/240 V models (D24) include pin control termination
- UL 508 overload endurance rated

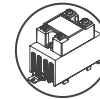
Notes: **A B C D J K**



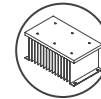
120/240 V Model (D24)



480 V Model (H12D48)

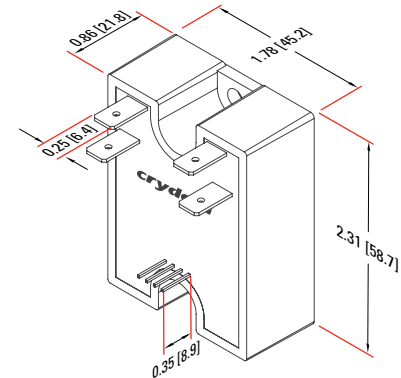


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Series	Rated Load Current	Thermal Pad
	25: 25 Amps 40: 40 Amps	Blank: Not Included H: Included
<b>H12D48</b>	<b>25</b>	<b>D</b>
Operating Voltage D24: 24-280 VAC H12D48: 48-530 VAC	<b>D</b>	<b>H</b>
Control Voltage D: 4-15 VDC DE: 15-32 VDC	<b>H</b>	<b>-10</b>
	<b>-10</b>	Switching Type Blank: Zero Voltage Turn-On -10: Instantaneous Turn-On

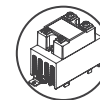


## 53TP Series • 25-50 Amps

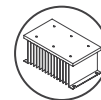


- 3 Phase Solid State Contactor with ratings of 25 & 50 Amps per phase @ 48-530 VAC
- Up to 7.5 HP / 5.5 kW Motor Controller ratings
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- EMC compliant (LEVEL 3) for reliable operation in harsh electrical environments
- Direct Bond Copper (DBC) substrate for superior thermal performance
- R-C Snubber network for additional dv/dt attenuation
- Flexible 4-32 VDC, 18-36 VAC or 90-140 VAC / 180-280 VAC Control Voltage
- LED indicator for easy identification of control status
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Optional IP20 "touch safe" Cover (shown) provides additional user protection
- Internal TVS eliminates the need for external Overvoltage Protection
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the "H" suffix
- UL 508 overload endurance rated

Notes: **A B C D J K**

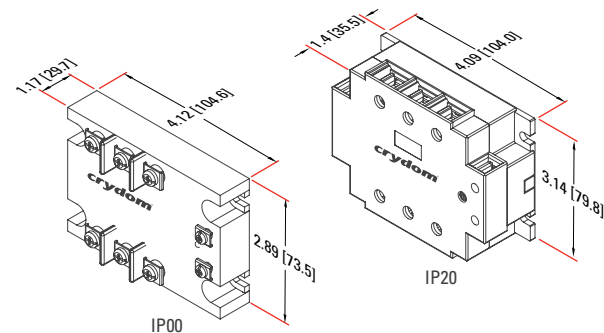


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other Accessories  
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Series	Rated Load Current	Thermal Pad
A	25: 25 Amps 50: 50 Amps	Blank: Not Included H: Included
<b>53TP</b>		
25		
D	Cover	Switching Type
H	D: Not Included (IP00) C: Included (IP20)	Blank: Zero Voltage Turn-On -10: Instantaneous Turn-On
-10		
Control Voltage		
A: 90-280 VAC (without IP20 cover)		
B: 90-140 VAC (with IP20 cover)		
C: 180-280 VAC (with IP20 cover)		
D: 4-32 VDC		
E: 18-36 VAC (with IP20 cover)		



Other Crydom Motion Control solutions available at: [motion.crydom.com](http://motion.crydom.com)

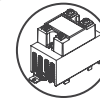


53RV Series • 25-50 Amps

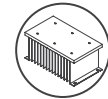


- Motor Reversing Contactor with ratings of 25 & 50 Amps per phase @ 48-530 VAC
- Up to 7.5 HP / 5.5 kW Motor Controller ratings
- Built-in interlock circuit protects the relay/load if both Forward & Reverse inputs are simultaneously actuated
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- EMC compliant (LEVEL 3) for reliable operation in harsh electrical environments
- Direct Bond Copper (DBC) substrate for superior thermal performance
- R-C Snubber network for additional dv/dt attenuation
- Flexible 4-32 VDC Control Voltage
- LED indicators for easy identification of the Forward / Reverse control status
- IP20 "touch safe" Cover provides additional user protection
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the "H" suffix
- UL 508 overload endurance rated

Notes: **A B C D J K**

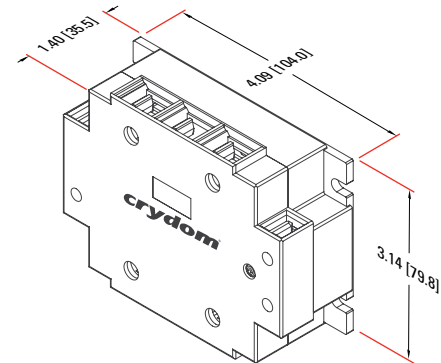


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Heat Sinks &  
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Series	Type	Cover
<b>D</b>	<b>RV</b>	<b>C</b>
Control Voltage D: 4-32 VDC	RV: 3 Phase Motor Reversing SSR	C: Included
<b>53</b>	<b>25</b>	<b>H</b>
	Rated Load Current/phase 25: 25 Amps 50: 50 Amps	Thermal Pad Blank: Not Included H: Included

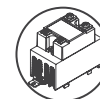


## DC60 Series • 3-7 Amps

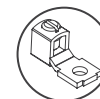


- Economical bipolar transistor output Solid State Relay
- Ratings up to 7 Amps @ 60 VDC
- Available with either a Normally Open (standard) or Normally Closed ("-B" option) output
- Flexible 3.5-32 VDC or 90-280 VAC/DC Control Voltage
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

Notes: **A B C D J K**



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Series

**DC60**

**SA**

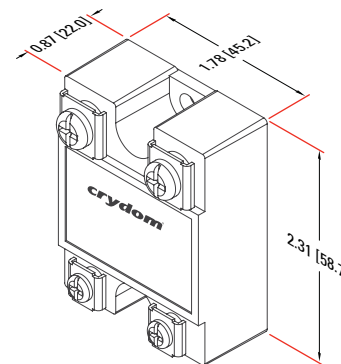
**3**

**-B**

**Control Voltage**  
S: 3.5-32 VDC  
SA: 90-280 VAC/DC

**Output Type**  
Blank: Normally Open  
-B: Normally Closed

**Rated Load Current**  
3: 3 Amps  
5: 5 Amps  
7: 7 Amps



Specifications are subject to change without prior notice

D06D Series • 60-100 Amps



- Solid State Relay with low impedance MOSFET output to minimize total power dissipation
- Ratings from 60 to 100 Amps @ 60 VDC
- Easily paralleled for high current applications
- Flexible 3.5-32 VDC Control Voltage
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

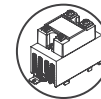
Notes: **A B D J K**

Series

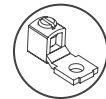
Operating Voltage  
06D: 0-60 VDC

**D**   **06D**   **60**

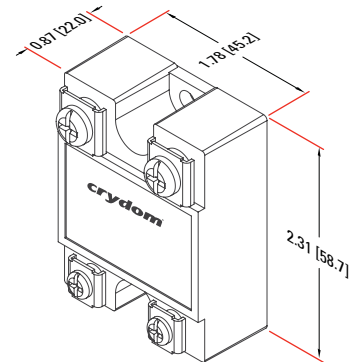
Rated Load Current  
60: 60 Amps  
80: 80 Amps  
100: 100 Amps



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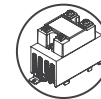
## PowerPlus DC Series • 10-100 Amps



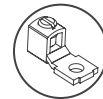
- Solid State Relay with ratings up to 100 Amps @ 60 VDC, 100 Amps @ 100 VDC, 60 Amps @ 200 VDC and 20 Amps @ 400 VDC
- Flexible 4-32 VDC or 90-140 VAC Control Voltage
- Optional IP20 “touch safe” Cover for additional user protection (option “C”) & thermal interface pad (option “H”)
- Optically isolated high speed trigger circuit for enhanced switching
- Easily paralleled for high current applications
- Low impedance MOSFET output minimizes total power dissipation
- LED indicator for easy identification of control status
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)
- UL General Use (resistive) ratings



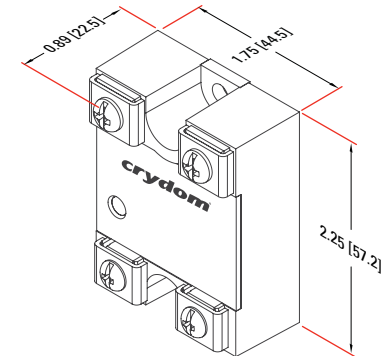
Notes: **A B C D J K**



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Series

**DC**

**100**

**A**

**40**

**C**

**H**

**Control Voltage**  
A: 90-140 VAC  
D: 4-32 VDC

**Cover**  
Blank: Not Included  
C: Included

**Thermal Pad**  
Blank: Not Included  
H: Included

**Operating Voltage**  
60: 7-48 VDC  
100: 7-72 VDC  
200: 7-150 VDC  
400: 7-300 VDC

**Rated Load Current**  
10: 10 Amps  
20: 20 Amps (Not valid with 400A suffix)  
40: 40 Amps (Not valid with 400x suffixes)  
60: 60 Amps (Not valid with 200A, 400x suffixes)  
80: 80 Amps (60D & 100D suffixes only)  
100: 100 Amps (60D & 100D suffixes only)

Series 1 DC • 7-100 Amps



- Solid State Relay with low impedance MOSFET output to minimize total power dissipation
- Ratings up to 100 Amps @ 100 VDC, 40 Amps @ 200 VDC, 12 Amps @ 400 VDC, and 10 Amps @ 500 VDC
- Easily paralleled for high current applications
- Flexible 3.5-32 VDC Control Voltage
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

Notes: **A B D J K**

Series

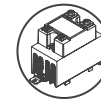
- D**
- 1D**
- 07**

Operating Voltage

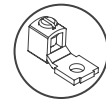
- 1D: 0-100 VDC
- 2D: 0-200 VDC
- 4D: 0-400 VDC
- 5D: 0-500 VDC

Rated Load Current

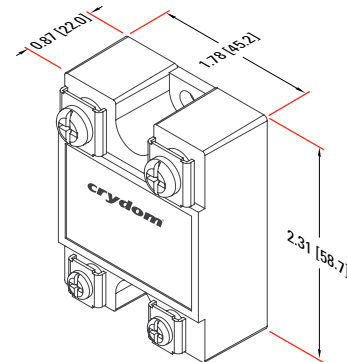
- 07: 7 Amps
- 10: 10 Amps (500 VDC only)
- 12: 12 Amps (not for 500 VDC)
- 20: 20 Amps (100 VDC only)
- 40: 40 Amps (100 & 200 VDC only)
- 60: 60 Amps (100 VDC only)
- 80: 80 Amps (100 VDC only)
- 100: 100 Amps (100 VDC only)



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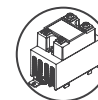


## EL Series • 5-10 Amps



- Mini-puck Solid State Relay to maximize panel space
- Ratings of 5 & 10 Amps @ 3-100 VDC
- Easily paralleled for high current applications
- Low impedance MOSFET output minimizes total power dissipation
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)
- Quick Connect control & output termination for easy installation

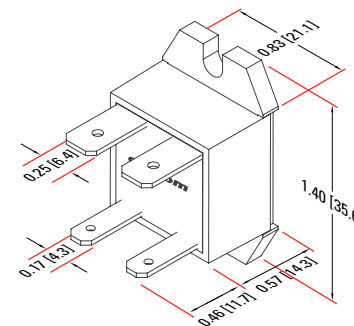
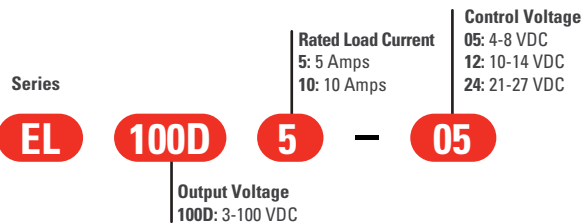
Notes: **A B D J K**



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Thermal Pad  
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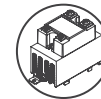


SSC Series • 25 Amps

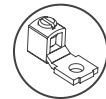


- Solid State Relay with ratings of 25 Amps @ up to 1k VDC
- High voltage IGBT output
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

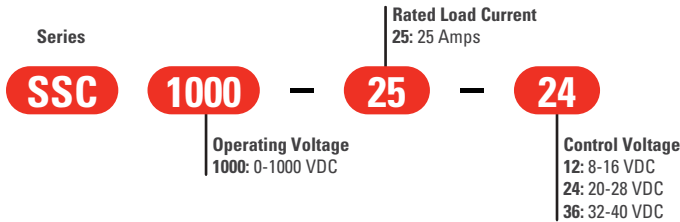
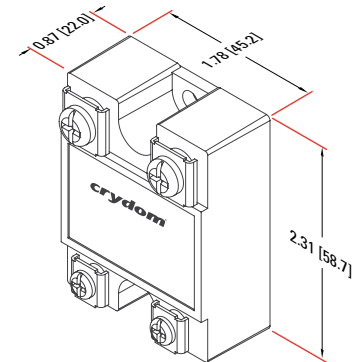
Notes: **A B D J K**



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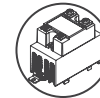


## LVD Series • 40-100 Amps

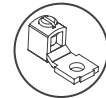


- Low Voltage Disconnect with ratings up to 100 Amps @ 3-75 VDC
- Monitors and automatically disconnects battery systems from loads at low voltage conditions to prevent deep discharge of the batteries
- Low impedance MOSFET output minimizes total power dissipation
- Six DC control ranges available for a variety of 12 VDC and 24 VDC battery systems

Notes: **A B C D J K**



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Accessories  
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Series

Operating Voltage  
75: 3-75 VDC

Rated Load Current

40: 40 Amps

60: 60 Amps

80: 80 Amps

100: 100 Amps

Thermal Pad

Blank: Not Included

H: Included

**LVD**

**75**

**A**

**40**

**H**

Control Voltage Code

**A:** 36 VDC max., Hysteresis 11.0-11.5 VDC

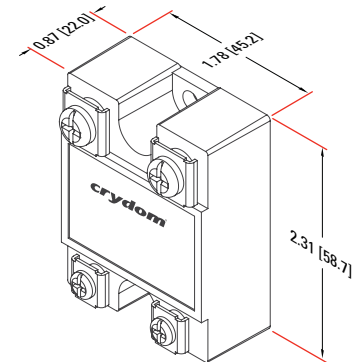
**B:** 36 VDC max., Hysteresis 11.5-12.0 VDC

**C:** 36 VDC max., Hysteresis 12.0-12.5 VDC

**D:** 36 VDC max., Hysteresis 23.0-24.0 VDC

**E:** 36 VDC max., Hysteresis 24.0-25.0 VDC

**F:** 36 VDC max., Hysteresis 25.6-26.6 VDC



Specifications are subject to change without prior notice

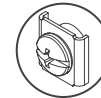


DP Series • 20-60 Amps

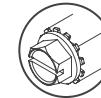


- Motor Reversing Contactor with ratings up to 60 Amps @ 48 VDC
- Low impedance MOSFET switches in an H-Bridge configuration for motor reversing
- Control features to combine Soft Start/Ramp Up, Soft Stop/Ramp Down & Braking functions on each polarity
- Built-in interlock circuit protects the relay/load if both Forward & Reverse inputs are simultaneously actuated
- UL & IEC General Use & Motor Controller ratings
- LED indicators for easy identification of the Forward / Reverse control status

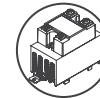
Notes: **A B C D J K**



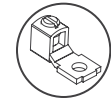
20 Amps Model



40 & 60 Amps Model

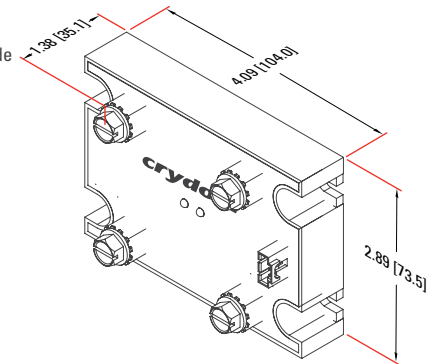


Assemblies Page 71



Compatible Accessories Page 73

<p>Series</p> <p><b>DP</b></p>	<p><b>4R</b></p> <p>Function 4R: 4 Channel DC Reversing</p>	<p><b>SB</b></p> <p>Start Mode Blank: Instant Start SA: Soft Start/Ramp Up, 0.2 sec SB: Soft Start/Ramp Up, 0.5 sec SC: Soft Start/Ramp Up, 1 sec</p>	<p><b>60</b></p> <p>Operating Voltage 60: 48 VDC</p>	<p><b>D</b></p> <p>Control Voltage D: 4.5-15 VDC E: 18-32 VDC</p>	<p><b>40</b></p> <p>Load Rated Current 20: 20 Amps 40: 40 Amps 60: 60 Amps</p>	<p><b>B</b></p> <p>Stop Mode Blank: Stop Mode matches Start Mode B2: Dynamic Brake, 0.2 sec B5: Dynamic Brake, 0.5 sec B8: Dynamic Brake, 0.8 sec B: Dynamic Brake, Continuous</p>	<p><b>H</b></p> <p>Thermal Pad Blank: Not Included H: Included</p>
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## HDC Series • 120-160 Amps

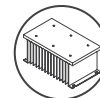


- High current solid state contactor with rating up to 160 Amps @ 150 VDC
- Single Pole Single Throw Normally Open Operation (SPST/N.O.)
- Flexible 4.5-32 VDC or 90-140 VAC Control Voltage
- Low impedance MOSFET output minimizes total power dissipation
- LED Input Status indicator standard
- 5/16 inch diameter output terminal studs for large diameter wires and lugs
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)
- A pre-attached Thermal Pad can be ordered to eliminate the need for thermal compound using the "H" suffix
- UL 508 overload endurance rated

Notes: **A B C D J K**



Assemblies  
Page 71



Heat Sinks &  
other Accessories  
Page 78

Series

**HDC**

**100**

**A**

**120**

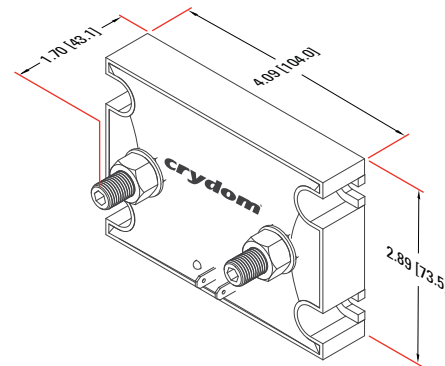
**H**

Control Voltage  
A: 90-140 VAC  
D: 4.5-32 VDC

Thermal Pad  
Blank: Not Included  
H: Included

Operating Voltage  
60: 7-48 VDC  
100: 7-72 VDC  
200: 7-150 VDC

Rated Load Current  
120: 120 Amps  
160: 160 Amps



# PCB Mount

Crydom offers an extensive line of PCB Mount Solid State Relays including the **popular industry standard footprint SIP, Mini SIP and DIP configurations** and most Crydom SIP type SSRs are also offered as DIN Rail mountable Assemblies.

Models are available for applications requiring ratings from **1 to 25 Amps at 24 to 660 VAC** or **1 to 20 Amps at 1 to 200 VDC**. Inputs are available covering 24 to 140 VAC or 3 to 32 VDC depending upon model. Excepting some AC output models rated greater than 10 Amps where forced air is used for improved output ratings (forced air is not required for DC output), all Crydom PCB Mount Relay output ratings are based upon free air and 40 °C ambient.

See the product pages for a summary of **available package size and pin out, ratings, features and Safety Agency approvals**. Visit the SSR Assemblies section of the catalog or the Crydom website for additional information on Crydom PCB Mount SSRs and Assemblies.

## AC Output

Page	Series	Description	Rating Amps												
			1	1.5	2	3	4	5	8	12	25				
													<b>Solid State Relays</b>		
36	ASO	Mini SIP		■	■										
37	MP	SIP				■	■								
38	CX	SIP							■						
39	MCX	SIP							■						
40	LS	SIP							■	■					
41	PF	SIP													■
42	DPA	DIP	■												
43	SDV	DIP		■											

## DC Output

Page	Series	Description	Rating Amps								
			3	5	6	10	20				
							<b>Solid State Relays</b>				
44	DMO	Mini SIP				■					
45	CMX	SIP		■	■	■	■	■	■	■	
46	MP	SIP		■							



ASO Series • 1.5-2 Amps



- Compact design Solid State Relay ideally suited for high density PCB applications
- Ratings up to 2 Amps @ 12-280 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Solderable 0.015" x 0.030" [0.4 mm x 0.8 mm] pins can also plug fit SIP type IC socket

Notes: **A B C D J**

Series

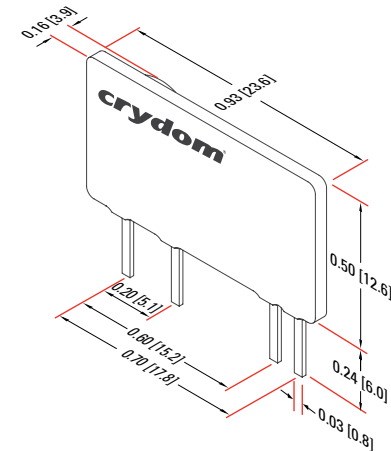
**ASO**

**241**

**R**

Rated Load Current  
241: 1.5 Amps  
242: 2 Amps

Switching Type  
**Blank:** Zero Voltage Turn-On  
**R:** Instantaneous Turn-On



Specifications are subject to change without prior notice

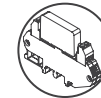
MP Series • 3-4 Amps



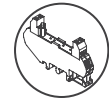
- SIP Solid State Relay ideally suited for high density PCB applications
- Ratings up to 4 Amps @ 24-280 VAC
- Control Voltage of 3-32 VDC
- 10 mm plastic housing allows for operation at -40°C

Notes: **A B D J**

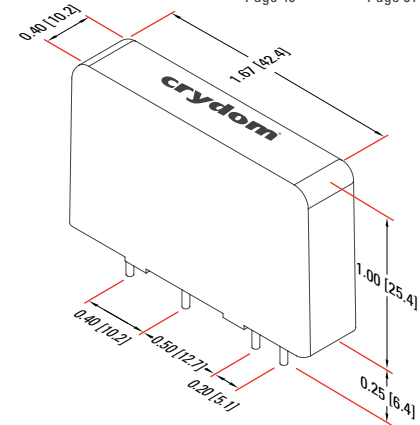
Series	Operating Voltage 120: 12-140 VAC 240: 24-280 VAC	Rated Load Current 3: 3 Amps 4: 4 Amps (240 suffix only)
<b>MP</b>	<b>240</b>	<b>3</b>
	Control Voltage D: 3-32 VDC	
	<b>D</b>	



DIN Rail Model  
Page 49



Sockets  
Page 81



## CX Series • 5 Amps



- SIP Solid State Relay ideally suited for high density PCB applications
- Ratings up to 5 Amps @ 48-660 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- High surge current rating
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- AC or DC Control Voltage options
- UL 508 overload endurance rated

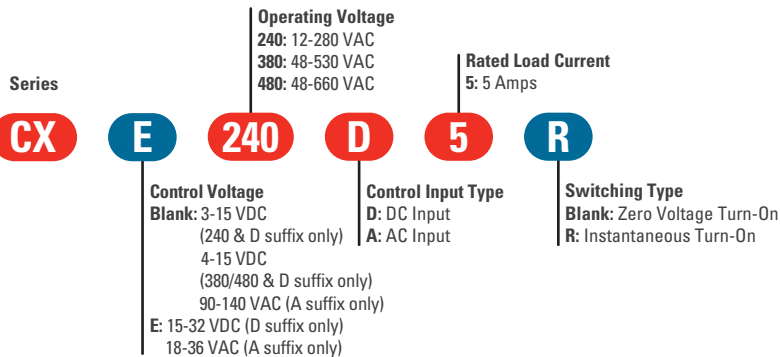
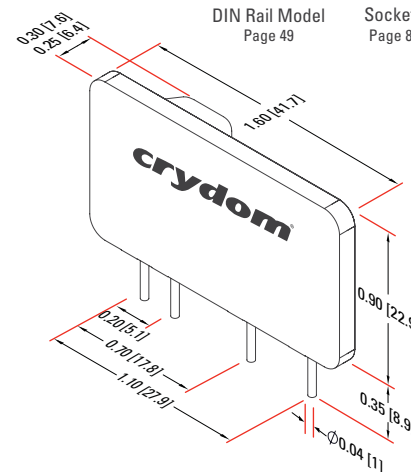
Notes: **A B C D J**



DIN Rail Model  
Page 49



Sockets  
Page 81



Panel Mount

AC

PCB Mount

DIN Rail Mount

Plug-In Mount

Assemblies

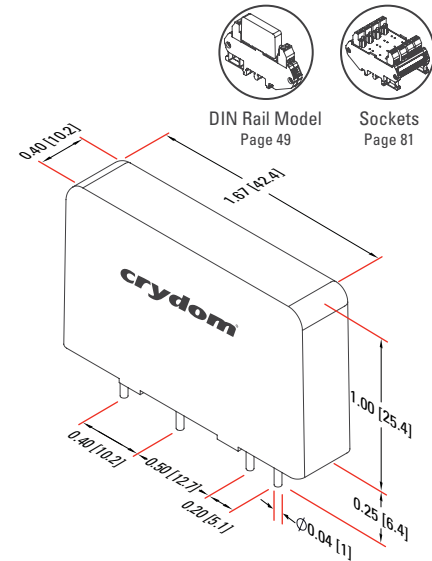
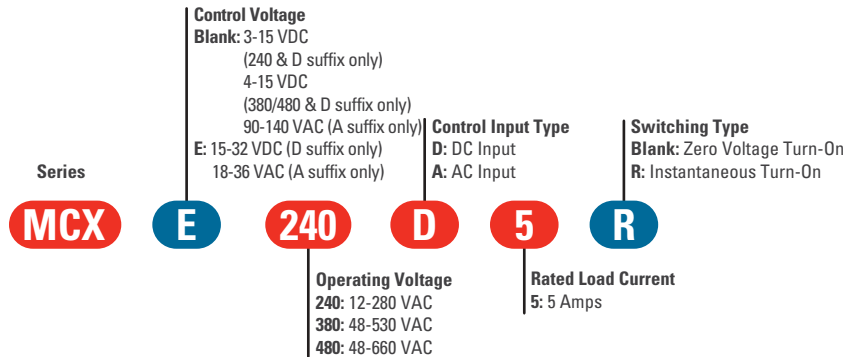
Accessories

MCX Series • 5 Amps



- SIP Solid State Relay ideally suited for high density PCB applications
- Ratings up to 5 Amps @ 48-660 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- High surge current rating
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- AC or DC Control Voltage options
- 10 mm plastic housing allows for operation at -40°C

Notes: **A B C D J**

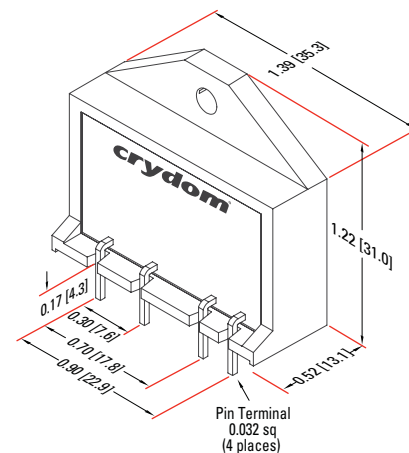
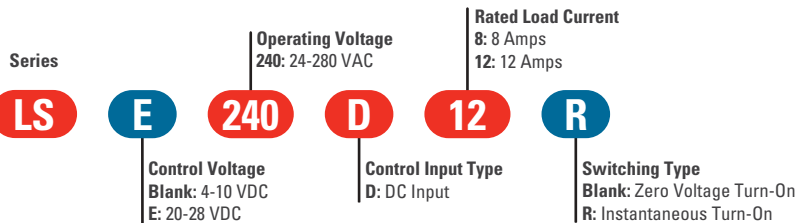


## LS Series • 8-12 Amps



- SIP Solid State Relay ideally suited for high density PCB applications
- Ratings up to 12 Amps @ 24-280 VAC with external heat sink
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output

Notes: **A B C D J**



Specifications are subject to change without prior notice



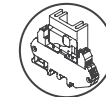
PF Series • 25 Amps



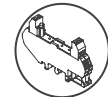
- SIP Solid State Relay ideally suited for high density PCB applications
- Ratings up to 10 Amps (convection) or 25 Amps (forced air flow) @ 48-660 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- AC or DC Control Voltage options

Notes: **A B C D J**

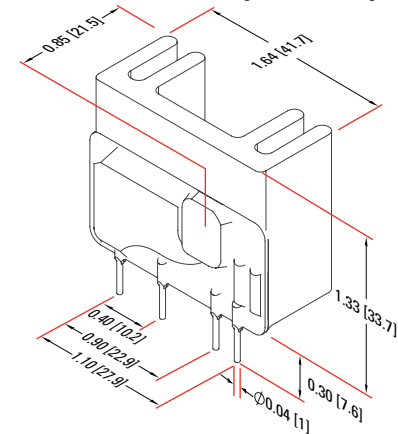
<p>Series</p> <p><b>PF</b></p>	<p><b>E</b></p> <p><b>Control Voltage</b>                  Blank: 3-15 VDC                  (240 &amp; D suffix only)                  4-15 VDC                  (380/480 D suffix only)                  90-140 VAC (A suffix only)                  E: 15-32 VDC (D suffix only)                  18-36 VAC (A suffix only)</p>	<p><b>240</b></p> <p><b>Operating Voltage</b>                  240: 12-280 VAC                  380: 48-530 VAC                  480: 48-660 VAC</p>	<p><b>D</b></p> <p><b>Control Input Type</b>                  D: DC Input                  A: AC Input</p>	<p><b>25</b></p> <p><b>Rated Load Current</b>                  25: 25 Amps</p>	<p><b>R</b></p> <p><b>Switching Type</b>                  Blank: Zero Voltage Turn-On                  R: Instantaneous Turn-On</p>
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DIN Rail Model  
Page 49



Sockets  
Page 81



## DPA Series • 1 Amp



- DIP Solid State Relay ideally suited for high density PCB applications
- Ratings to 1 Amp @ 280 VAC
- Control options include 3.5-10 VDC or 10-35 mAmps DC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Solderable Pin layout fits IC grid pattern and pluggable IC DIP type sockets

Notes: **A B D J**

Series

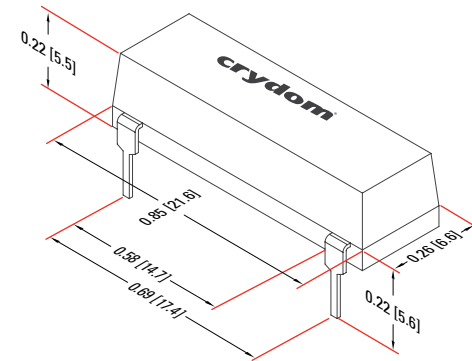
Operating Voltage  
 41: 20-140 VAC  
 61: 20-280 VAC

**DPA**

**41**

**19**

Control Voltage  
 11: 10-35 mA DC  
 19: 3.5-10 VDC

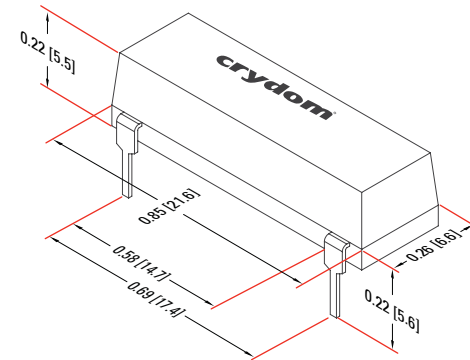
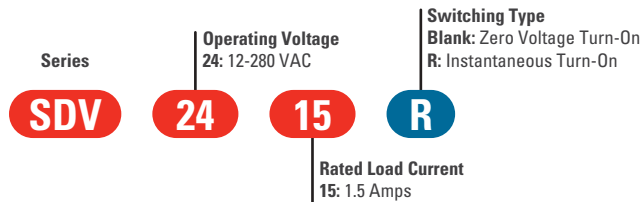


SDV Series • 1.5 Amps



- DIP Solid State Relay ideally suited for high density PCB applications
- Ratings to 1.5 Amps @ 280 VAC
- Control Voltage of 3.5-10 VDC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Solderable Pin layout fits IC grid pattern and pluggable IC DIP type sockets

Notes: **A B C D J**



DMO Series • 3 Amps



- Compact design Solid State Relay ideally suited for high density PCB applications
- Ratings up to 3 Amps @ 60 VDC
- 3-10 VDC Control Voltage
- Low impedance MOSFET output minimizes total power dissipation
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)
- Solderable 0.015" x 0.030" [0.4 mm x 0.8 mm] pins can also plug fit SIP type IC socket
- Easily paralleled for high current applications

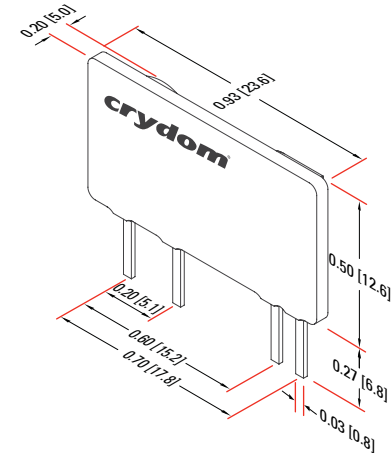
Notes: **A B D J**

Series

Rated Load Current  
063: 3 Amps

**DMO**

**063**



Specifications are subject to change without prior notice

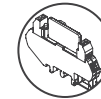
CMX Series • 3-20 Amps



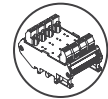
- SIP Solid State Relay ideally suited for high density PCB applications
- Low impedance MOSFET output minimizes total power dissipation
- Ratings up to 20 Amps @ 60 VDC, 10 Amps @ 100 VDC or 3 Amps @ 200 VDC
- Easily paralleled for high current applications
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

Notes: **A B C D J**

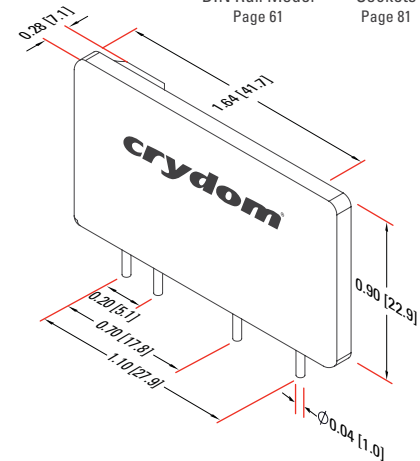
<p>Series</p> <p><b>CMX</b></p> <p><b>E</b></p> <p><b>200</b></p> <p><b>D</b></p> <p><b>5</b></p> <p>Control Voltage Blank: 3-10 VDC E: 20-28 VDC</p>	<p>Operating Voltage 60: 0-60 VDC 100: 0-100 VDC 200: 0-200 VDC</p>	<p>Rated Load Current 3: 3 Amps (200 VDC only) 5: 5 Amps (60 VDC only) 6: 6 Amps (100 VDC only) 10: 10 Amps (60 &amp; 100 VDC only) 20: 20 Amps (60 VDC only)</p>
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DIN Rail Model  
Page 61



Sockets  
Page 81

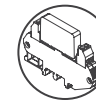


## MP Series • 3 Amps

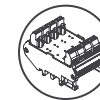


- SIP Solid State Relay ideally suited for high density PCB applications
- Ratings up to 3 Amps @ 60 VDC
- 10 mm plastic housing allows for operation at -40°C
- Normally Closed version available ("-B" suffix option)
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

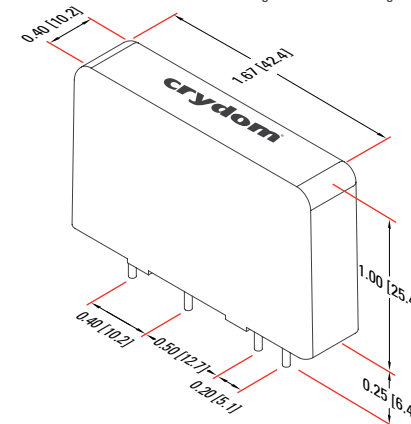
Notes: **A B C D J**



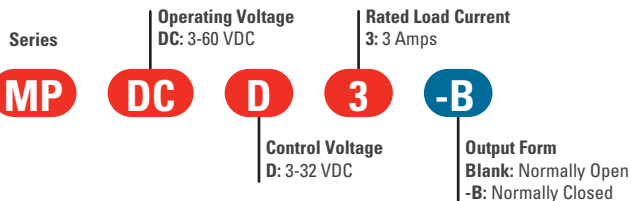
DIN Rail Model  
Page 61



Sockets  
Page 81



Specifications are subject to change without prior notice



# DIN Rail Mount

Crydom DIN Rail Mounted Solid State Relays and Contactors are available with single, dual and 3 phase outputs. Industry standard 22.5 mm and 45 mm single phase packages are available from **10 to 65 Amps**. Slim 6 to 18 mm high power density packages are available from **0.1 to 12 Amps** for space restricted panels. Inputs cover the range of **24 to 280 VAC** or **3 to 32 VDC** and feature LED input status indicator.

Crydom DIN Rail mounted SSRs and Contactors are “ready-to-use” and carry Safety Agency approvals as noted on each catalog sheet. Visit the DIN Rail SSR and Contactors section of the catalog or Crydom website for additional information on Crydom DIN Rail Mount SSRs and Contactors.



## AC Output

Page	Series	Description	Rating Amps																		
			2	2.4	3	4	4.2	4.8	5	6	7.6	8	10	12	20	25	30	35	45	55	65
<b>Solid State Relays</b>																					
48	DRA-CN	6 mm	■																		
49	DRA	10/54 mm	■		■	■				■		■									
50	SeriesOne DR	11 mm			■								■								
51	CKR	22.5 mm											■		■			■			
52	CMR	45 mm																	■	■	■
53	SeriesOne DR Dual	18 mm											■								
<b>Solid State Relay Timers</b>																					
54	SeriesOne DR Timer	Timer											■								
<b>Solid State Contactors</b>																					
55	DRA3P	3 Phase		■			■														
56	DRA3R	Reversing		■			■														
57	CTR	3 Phase																	■		
58	DRC3P	3 Phase											■								
59	DRC3R	Reversing																			■

## DC Output

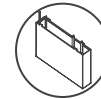
Page	Series	Description	Rating Amps																	
			0.1	3	3.5	5	6	8	10	12	20	30								
<b>Solid State Relays</b>																				
60	DRA-CN	6 mm							■		■		■		■					
61	DRA	10/54 mm									■		■	■	■	■				
62	SeriesOne DR	11/18 mm									■				■					
63	CKM	22.5 mm																	■	■
<b>Solid State Relay Timers</b>																				
64	SeriesOne DR Timer	Timer													■					
<b>Solid State Contactors</b>																				
65	DRA4D	Reversing													■					■

## DRA-CN Series • 2 Amps

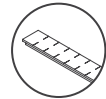


- Thin 6.2 mm DIN Rail mount Solid State Relay
- Replaceable CN Series SSR with ratings of 2 Amps @ 240 VAC
- LED indicator for easy identification of control status
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output

Notes: **A B C D J**



Plug-In Mount  
Relays  
Page 67



ID Marker Strips  
Page 80

Series

**DRA-CN**

**240A**

**24**

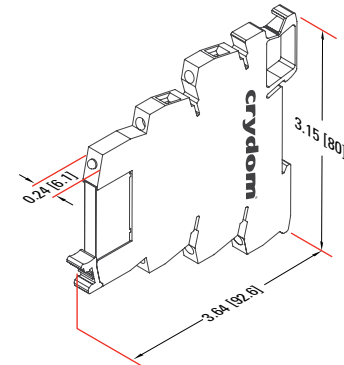
**R**

Operating Voltage  
240A: 24-250 VAC, 2 Amps

Switching Type

Blank: Zero Voltage Turn-On  
R: Instantaneous Turn-On

Assembly Input Voltage  
05: 3-12 VDC  
24: 15-30 VDC



Specifications are subject to change without prior notice

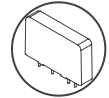


DRA Series • 3-10 Amps



- Ready-to-use DIN Rail mountable Solid State Relays assemblies using standard Crydom SIP SSRs
- Slim 10 mm (single channel) & 54 mm (four channels) packages
- Ratings from 3 to 10 Amps
- Operating Voltage of 12-380 VAC with back-to-back SCR output for added reliability in commercial and heavy industrial applications
- Fits standard 35 mm DIN Rail profiles
- Cage style screw termination for easy and reliable wire connection
- AC & DC Control Voltage versions available depending upon selected SSR
- Available with Normally Closed output
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- LED indicator for easy identification of control status

Notes: **A B D H J**



PCB Mount Relays  
Page 35

Series

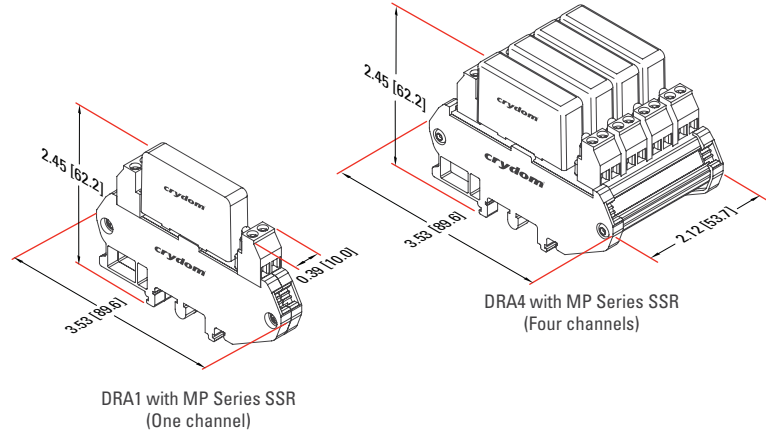
**DRA**

**1**

**CXE240D5**

Number of Channels  
1: One N.O. Channel  
4: Four N.O. Channels

Standard Crydom SSR p/n including the following series:  
CX/CXE  
MCX/MCXE  
MP (One Channel only)  
PF (One Channel only)



# DIN RAIL MOUNT • AC Output • Relays

## SeriesOne DR • 3-12 Amps



- DIN Rail mount 11 mm (3 & 6 Amps) or 18 mm (12 Amps) wide Solid State Relay
- Operating Voltage of 24-280 VAC and 48-600 VAC
- Fits standard 35 mm DIN Rail profiles
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible Control Voltage of 4-32 VDC, 18-36 VAC, 90-140 VAC, 200-265 VAC
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- IP20 housing for greater safety
- LED indicator for easy identification of control status
- UL & cUL listed
- UL 508 overload endurance rated

Notes: **A B C D J**



ID Marker Strips  
Page 80



Series

**DR**

**24**

**A**

**12**

**R**

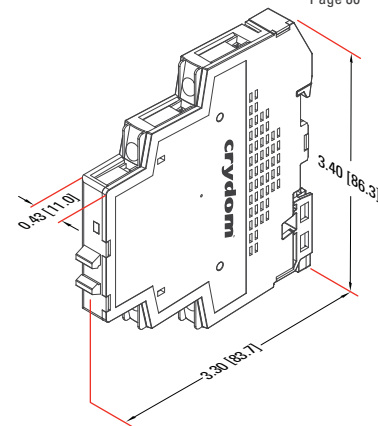
**Operating Voltage**  
24: 24-280 VAC  
48: 48-600 VAC

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

**Control Voltage**  
A: 200-265 VAC  
B: 90-140 VAC  
D: 4-32 VDC  
E: 18-36 VAC

**Switching Type**  
Blank: Zero Voltage Turn-On  
R: Instantaneous Turn-On  
(D suffix only)

\* Drawing shown on the right

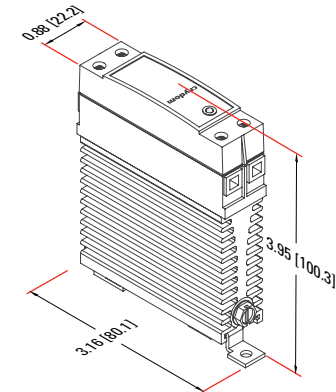
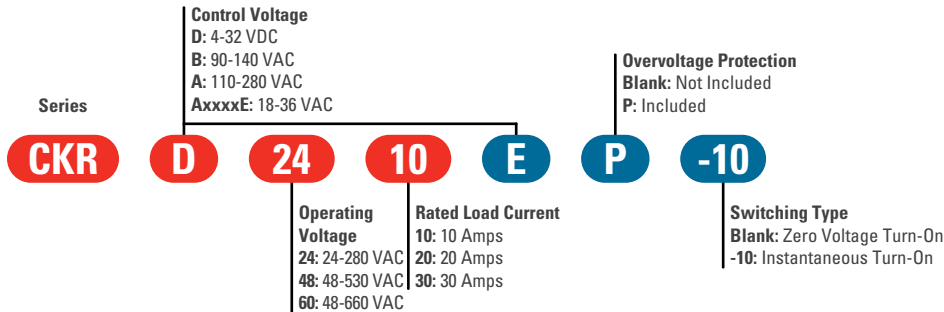


## CKR Series • 10-30 Amps



- Solid State Relay with ratings from 10 to 30 Amps
- Operating Voltage of 24-660 VAC
- Fits standard 35 mm DIN Rail profiles
- Slim 22.5 mm (width) package
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible Control Voltage of 4-32 VDC, 18-36 VAC, 90-140 VAC, 110-280 VAC
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- LED indicator for easy identification of control status
- Elective Internal TVS ("P" suffix) eliminates the need for external Overvoltage Protection
- Enhanced surge current ratings for the 30 Amps (facilitates the use of circuit breakers instead of fuse protection)

Notes: **A B C D J**

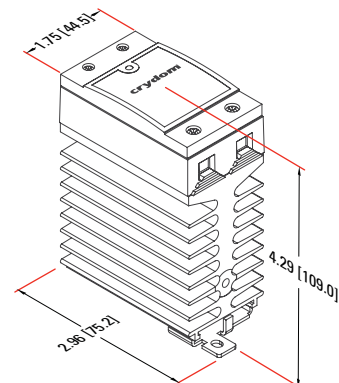
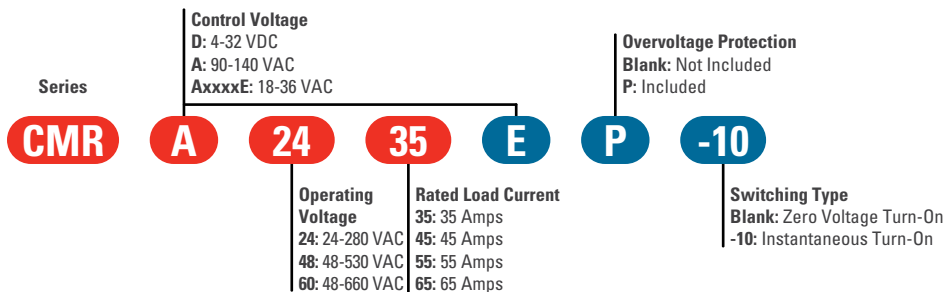


## CMR Series • 35-65 Amps



- Solid State Relay with ratings from 35 to 65 Amps
- Operating Voltage of 24-660 VAC
- Fits standard 35 mm DIN Rail profiles
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible Control Voltage of 4-32 VDC, 18-36 VAC, 90-140 VAC
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- LED indicator for easy identification of control status
- Elective Internal TVS ("P" suffix) eliminates the need for external Overvoltage Protection

Notes: **A B C D J**



Panel Mount • PCB Mount

AC  
DIN Rail Mount

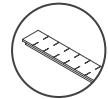
Plug-In Mount • Assemblies • Accessories

## SeriesOne DR Dual • 6 Amps

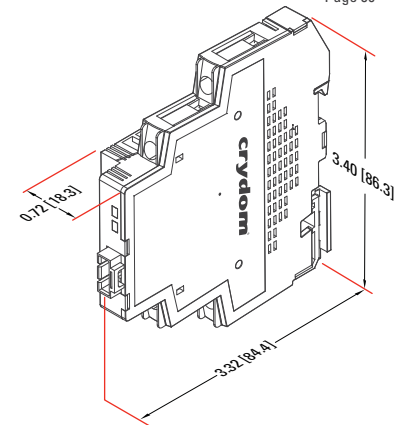
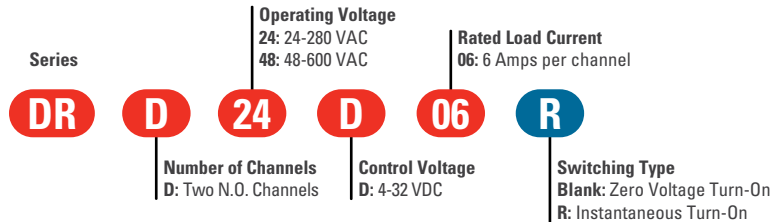


- DIN Rail mount 18 mm wide Solid State Dual Relay
- Two independent channels (6 Amps)
- Operating Voltage of 24-280 VAC and 48-600 VAC
- Fits standard 35 mm DIN Rail profiles
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible Control Voltage of 4-32 VDC
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- IP20 housing for greater safety
- LED indicator for easy identification of control status
- UL & cUL listed
- UL 508 overload endurance rated

Notes: **A B C D J**



ID Marker Strips  
Page 80



## SeriesOne DR Timer • 6 Amps



- DIN Rail mount 11 mm (6 Amps) Solid State Relay Timer
- Operating Voltage of 24-280 VAC
- Fits standard 35 mm DIN Rail
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Universal Control Voltage of 12-24, 90-140 & 180-240 VAC/DC
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- IP20 housing for greater safety
- LED indicator for easy identification of control status
- UL listed & cUL recognized
- UL 508 overload endurance rated

Notes: **A** **B** **C** **D** **J**

Series

**DRT**

**A**

**24**

**B**

**06**

**R**

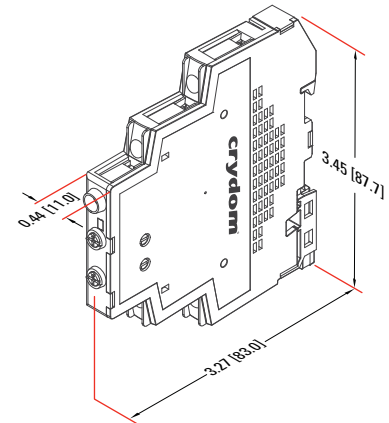
Operating Voltage  
24: 24-280 VAC

Rated Load Current  
06: 6 Amps

**Timing Function**  
**A:** A/At, Delay on Make  
**B:** Single Shot  
**C:** Delay on Break  
**H:** H/Ht, Interval  
**L:** L/Li, Repeat Cycle  
**U:** Multifunction  
 (A/At, H/Ht, D/Di,  
 B, C, Ac & Bw)

**Control Voltage**  
**A:** 180-240 VAC/DC  
**B:** 90-140 VAC/DC  
**D:** 12-24 VAC/DC

**Switching Type**  
**Blank:** Zero Voltage Turn-On  
**R:** Instantaneous Turn-On



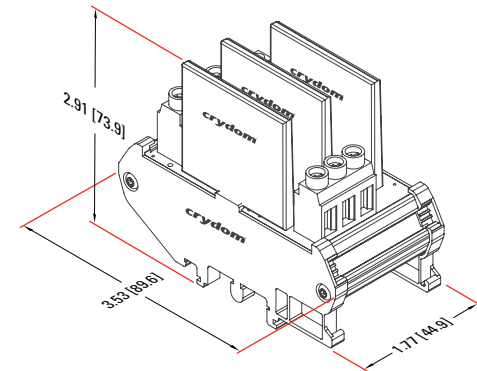
## DRA3P Series • 2.4-4.2 Amps



- 2.4 & 4.2 Amp rated 3 phase Solid State Contactor
- Operating Voltage of 48-510 VAC, 3-Phase
- Fits standard 35 mm DIN Rail profiles
- No heat sink required & cage style screw terminals for easy installation & reliable wire connection
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Wide range of Control Voltage of 5 VDC, 24 VDC, 48 VAC, 115 VAC, 230 VAC
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- LED indicator for easy identification of control status
- Overvoltage Protection included
- HP & kW (IEC) rated
- UL 508 overload endurance rated

Notes: **A B C D J**

<p>Series</p> <p><b>DRA</b></p>	<p>Function</p> <p><b>3P</b></p> <p>3P: 3 Phase</p>	<p>Operating Voltage</p> <p><b>48</b></p> <p>48: 48-510 VAC</p>	<p>Control Voltage</p> <p><b>D</b></p> <p>D: 4-6 VDC E: 18-28 VDC A: 200-265 VAC B: 90-140 VAC C: 36-60 VAC</p>	<p>Rated Load Current</p> <p><b>4</b></p> <p>2: 2.4 Amp/ 1HP @ 480 VAC 4: 4.2 Amp/ 2HP @ 480 VAC</p>	<p>Switching Type</p> <p><b>R</b></p> <p>Blank: Zero Voltage Turn-On R: Instantaneous Turn-On</p>	<p>Controlled Legs</p> <p><b>2</b></p> <p>Blank: 3 Legs 2: 2 Legs</p>
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## DRA3R Series • 2.4-4.2 Amps



- 2.4 & 4.2 Amps rated Motor Reversing Solid State Contactor
- Operating Voltage 48-510 VAC, 3 phase
- Protective Forward/Reverse interlock built-in function
- Fits standard 35 mm DIN Rail profiles
- No heat sink required & cage style screw terminals for easy installation & reliable wire connection
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Wide range of Control Voltage of 5 VDC, 24 VDC, 48 VAC, 115 VAC, 230 VAC
- Input status LED, Forward (green), Reverse (yellow)
- Overvoltage Protection included
- HP & kW (IEC) rated
- UL 508 overload endurance rated

Notes: **A B D J**

Series

**DRA**

**3R**

**48**

**D**

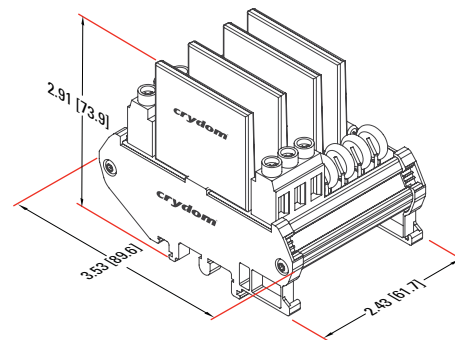
**4**

**Operating Voltage**  
40: 48-415 VAC  
48: 48-510 VAC

**Rated Load Current**  
2: 2.4 Amps/1HP @ 480 VAC  
4: 4.2 Amps/2HP @ 480 VAC

**Function**  
3R: Motor Reverser

**Control Voltage**  
D: 4-6 VDC  
E: 18-28 VDC  
A: 200-265 VAC  
B: 90-140 VAC  
C: 36-60 VAC



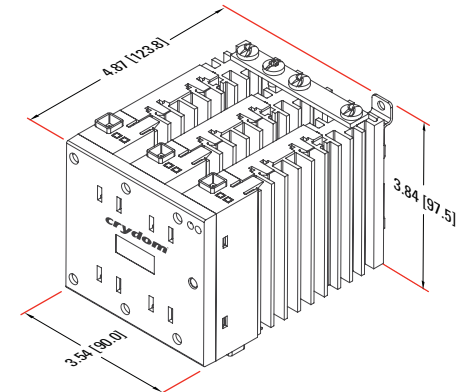
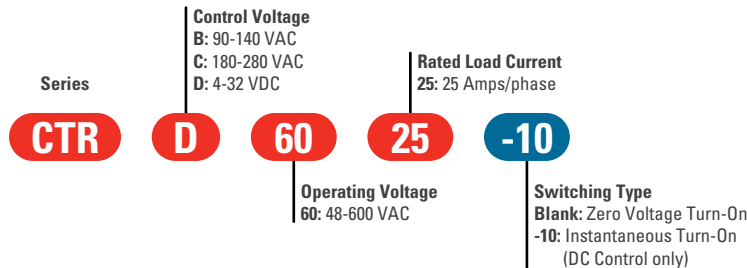


## CTR Series • 25 Amps



- 3 Phase Solid State Contactor with ratings 25 Amps per phase @ 600 VAC
- Fits standard 35 mm DIN Rail profiles
- 90 mm width package
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Flexible Control Voltage of 4-32 VDC, 90-140 VAC, 180-280 VAC
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (inductive loads) output
- LED indicator for easy identification of control status
- Internal TVS eliminates the need for external Overvoltage Protection
- UL 508 overload endurance rated

Notes: **A B C D J**



## SOLICON DRC3P Series • 7.6 Amps



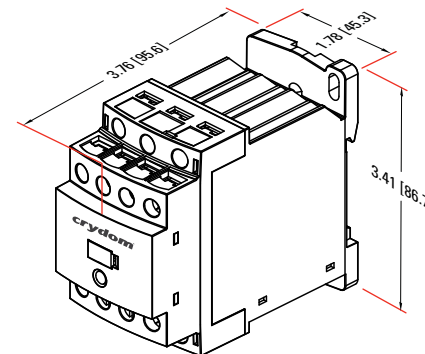
- 3 Phase Solid State Contactor with ratings of 4.8 & 7.6 Amps per phase @ 480 VAC
- Up to 5 HP / 3.7 kW Motor Controller ratings
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- EMC compliant (LEVEL 3) for reliable operation in harsh electrical environments
- Ultra-efficient thermal management design (Patented)
- Flexible 18-30 VAC/DC, 36-55 VAC/DC, 90-140 VAC or 208-265 VAC Control Voltage
- LED indicator for easy identification of control status
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- Internal TVS eliminates the need for external Overvoltage Protection

Notes: **A B C D J**



ID Marker Strips  
Page 80

<p>Series</p> <p><b>DRC</b></p>	<p>Function</p> <p><b>3P</b>: Contactor</p>	<p>Operating Voltage</p> <p><b>48</b>: 480 VAC</p>	<p>Control Voltage</p> <p><b>A</b>: 208-265 VAC <b>B</b>: 90-140 VAC <b>C</b>: 36-55 VAC/DC <b>D</b>: 18-30 VAC/DC</p>	<p>Load Current per Phase / HP Ratings</p> <p><b>4</b>: 7.6 Amp FLA (x2 Controlled Legs); 4.8 Amp FLA (x3 Controlled Legs)</p>	<p>Switching Mode</p> <p><b>Blank</b>: Zero Voltage Turn-On <b>R</b>: Instantaneous Turn-On</p>	<p>Auxiliary Contacts, <b>N.O. - N.C.</b></p> <p><b>00</b>: Not included <b>11</b>: 1 Solid State Auxiliary Contact, Normally Open; 1 Solid State Auxiliary Contact, Normally Closed <b>20</b>: 2 Solid State Auxiliary Contacts, Normally Open</p>	<p>Controlled Legs</p> <p><b>Blank</b>: 3 Controlled Legs <b>2</b>: 2 Controlled Legs</p>
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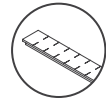


## SOLICON DRC3R Series • 7.6 Amps



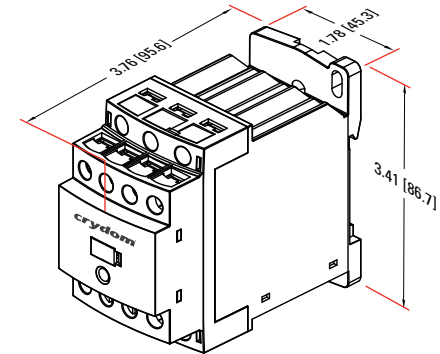
- Motor Reversing Contactor with rating of 7.6 Amps per phase @ 400-480 VAC
- Up to 5 HP / 3.7 kW Motor Controller ratings
- Built-in interlock circuit protects the relay/load if both Forward & Reverse inputs are simultaneously actuated
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- EMC compliant (LEVEL 3) for reliable operation in harsh electrical environments
- Ultra-efficient thermal management design (Patented)
- Flexible 18-30 VAC/DC, 36-55 VAC/DC, 90-140 VAC or 208-265 VAC Control Voltage
- LED indicator for easy identification of control status and direction (2 colors)

Notes: **A B D J**



ID Marker Strips  
Page 80

Series	Operating Voltage	Load Current per Phase
<b>DRC</b>	40: 400 VAC 48: 480 VAC	4: 7.6 Amp FLA
<b>3R</b>	Function	Auxiliary Contacts, N.O. - N.C.
<b>48</b>	3R: Reversing Contactor	00: Not included
<b>D</b>	Control Voltage	20: 2 Solid State Auxiliary Contacts, Normally Open (1 contact for each direction)
<b>4</b>	A: 208-265 VAC B: 90-140 VAC C: 36-55 VAC/DC D: 18-30 VAC/DC	
<b>00</b>		

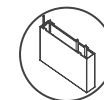


## DRA-CN Series • 0.1-3.5 Amps

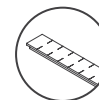


- Thin 6.2 mm DIN Rail mount Solid State Relay
- Replaceable CN Series SSR with ratings of 3.5 Amps @ 24 VDC or 100 mAmps @ 48 VDC available
- LED indicator for easy identification of control status
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

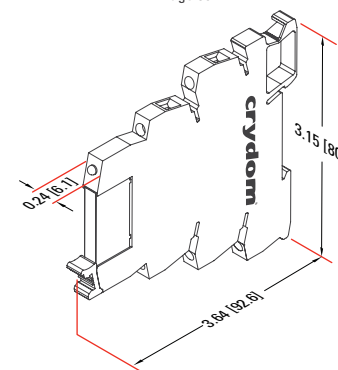
Notes: **A B D J**



Plug-In Mount  
Relays  
Page 69



ID Marker Strips  
Page 80



Series

**DRA-CN**

**024D**

**24**

Operating Voltage  
024D: 0-24 VDC, 3.5 Amps  
048D: 0-48 VDC, 0.1 Amps

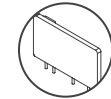
Assembly Input Voltage  
05: 3-12 VDC  
24: 15-30 VDC

## DRA Series • 3-10 Amps



- Ready-to-use DIN Rail mountable Solid State Relay assemblies using standard Crydom SIP SSRs
- Slim 10 mm (single channel) & 54 mm (four channels) packages
- Ratings from 3 to 10 Amps per channel
- Operating Voltage of 1-200 VDC with high efficiency FETs
- Fits standard 35 mm DIN Rail profiles
- Cage style screw termination for easy and reliable wire connection
- Available with Normally Closed output
- LED indicator for easy identification of control status

Notes: **A B D H J**



PCB Mount Relays  
Page 35

Series

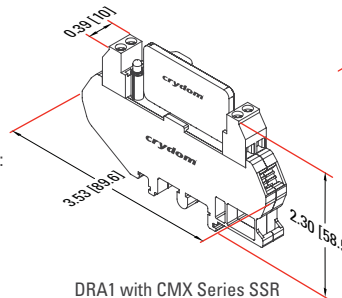
**DRA**

**4**

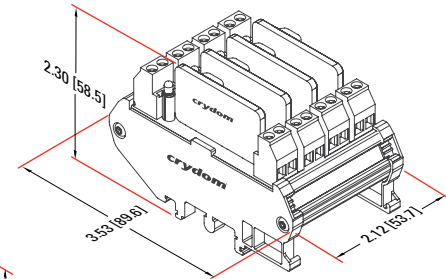
**CMX100D10**

Number of Channels  
1: One N.O. Channel  
4: Four N.O. Channels

Standard Crydom SSR p/n including the following series:  
CMX/CMXE  
MP (One Channel only)



DRA1 with CMX Series SSR  
(One channel)



DRA4 with CMX Series SSR  
(Four channels)

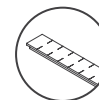
## SeriesOne DR • 3-12 Amps



- DIN Rail mount 11 mm (3 & 6 Amps) or 18 mm (12 Amps) wide Solid State Relay
- 3, 6 & 12 Amps Rated Load Current
- Operating Voltage of 1-60 VDC and 1-100 VDC
- Fits standard 35 mm DIN Rail profiles

- MOSFET output provides added reliability in commercial and heavy industrial applications
- Flexible Control Voltage 4-32 VDC
- IP20 housing for greater safety
- LED indicator for easy identification of control status
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)
- UL & cUL listed including General Purpose & Motor Controller ratings
- UL 508 overload endurance rated

Notes: **A B D J**

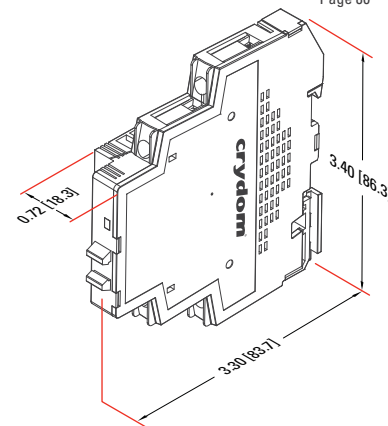


ID Marker Strips  
Page 80



	<b>Operating Voltage</b>	<b>Rated Load Current</b>
	06: 1-60 VDC	03: 3 Amps
	10: 1-100 VDC	06: 6 Amps
		12: 12 Amps *
<b>Series</b>		
<b>DR</b>	<b>06</b>	<b>D</b>
		<b>12</b>
	<b>Control Voltage</b>	
	D: 4-32 VDC	

\* Drawing shown on the right



Specifications are subject to change without prior notice

## CKM Series • 10-30 Amps



- Solid State Relay with ratings from 10 to 30 Amps @ 60 VDC
- Fits standard 35 mm DIN Rail profiles
- Slim 22.5 mm (width) package
- Low leakage MOSFET output provides added reliability in commercial and heavy industrial applications
- Flexible Control Voltage 4-32 VDC
- LED indicator for easy identification of control status
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)

Notes: **A B D J**

Series

Operating Voltage  
06: 0-60 VDC

**CKM**

**06**

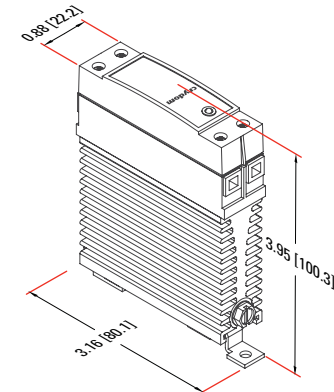
**10**

Rated Load Current

10: 10 Amps

20: 20 Amps

30: 30 Amps



## SeriesOne DR Timer • 6 Amps



- DIN Rail mount 11 mm (6 Amps) Solid State Relay Timer
- Operating Voltage of 1-60 VDC
- Fits standard 35 mm DIN Rail
- Power FET output provides added reliability in commercial and heavy industrial applications
- Universal Control Voltage of 12-24 VAC/DC
- IP20 housing for greater safety
- LED indicator for easy identification of control status
- UL listed & cUL recognized
- UL 508 overload endurance rated

Notes: **A B C D J**

Series

**DRT**

**A**

**06**

**D**

**06**

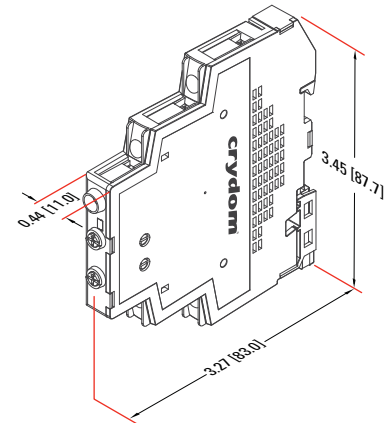
Operating Voltage  
06: 60 VDC

Rated Load Current  
06: 6 Amps

Timing Function

- A: A/At, Delay on Make
- B: Single Shot
- C: Delay on Break
- H: H/Ht, Interval
- L: L/Li, Repeat Cycle
- U: Multifunction (A/At, H/Ht, D/Di, B, C, Ac & Bw)

Control Voltage  
D: 12-24 VAC/DC





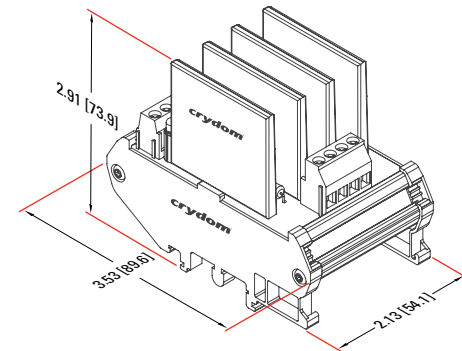
## DRA4D Series • 6-12 Amps



- DC Motor/Polarity Reversing Solid State Contactor
- 6 & 12 Amps ratings
- Operating Voltage of 1-100 VDC & 1-250 VDC
- Protective Forward/Reverse interlock built-in function
- Fits standard 35 mm DIN Rail profiles
- No heat sink required & cage style screw terminals for easy installation & reliable wire connection
- Convenient FET switches in H-Bridge configuration
- DC Control Voltage options
- Input Status LED, Forward (green), Reverse (yellow)
- HP & kW (IEC) rated

Notes: **A** **B** **D** **J**

<p>Series</p> <p><b>DRA</b></p>	<p><b>4D</b></p> <p>Function 4D: Motor Reverser</p>	<p><b>100</b></p> <p>Operating Voltage 100: 1-100 VDC 250: 1-250 VDC</p>	<p><b>D</b></p> <p>Control Voltage D: 5-15 VDC E: 15-32 VDC</p>	<p><b>6</b></p> <p>Rated Load Current 6: 6 Amps / 1/4 HP, 2 FLA @ 180 VDC 12: 12 Amps / 1/4 HP, 4 FLA @ 90 VDC</p>
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# Plug-In Mount

Crydom Plug-In Relays are designed to install in industry standard relay sockets. They can also be soldered directly on PCB assemblies if so desired. Available for applications requiring from **2 to 5 Amps at 24 to 280 VAC** or **0.1 to 5 Amps at 1 to 100 VDC** with inputs covering the range of 24 to 140 VAC or 2 to 32 VDC, these Single Pole Single Throw Normally Open (SPST) relays offer the **speed and dependability of Solid State switching in a traditional mechanical relay format**. Visit the Accessories and Assemblies sections of the catalog for information on compatible sockets and "ready-to-use" Assemblies. Visit the Plug-In SSR section of the catalog or Crydom web site for additional information on Crydom Plug-In Mount SSRs.

## AC Output

Page	Series	Description	Rating Amps		
			2	3	5
<b>Solid State Relays</b>					
67	CN	280 V / 2 A	■		
68	ED	280 V / 5 A		■	■

## DC Output

Page	Series	Description	Rating Amps		
			0.1	3.5	5
<b>Solid State Relays</b>					
69	CN	1-60 V	■	■	
70	ED	1-100 V			■

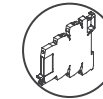


CN Series • 2 Amps

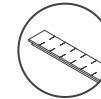


- Thin (5 mm) Solid State Relay ideally suited for high density PCB applications
- Ratings up to 2 Amps @ 24-280 VAC
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- R-C Snubber network for additional dv/dt attenuation
- Pluggable into industry standard relay sockets or solderable
- DIN Rail mountable using DRSCN series sockets
- UL 508 overload endurance rated
- UL pilot duty rated

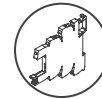
Notes: **A B C D G J**



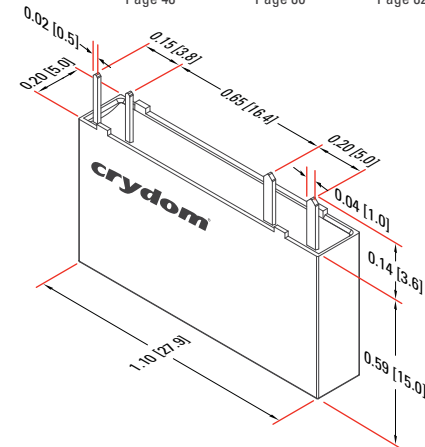
DIN Rail Model  
Page 48



ID Marker Strips  
Page 80



Sockets  
Page 82



Series

**CN**

Operating Voltage  
240A: 24-280 VAC, 2 Amps

**240A**

**24**

Control Voltage  
05: 3-12 VDC  
24: 15-30 VDC  
60: 38-72 VDC

**R**

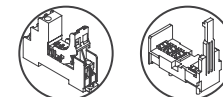
Switching Type  
Blank: Zero Voltage Turn-On  
R: Instantaneous Turn-On

## ED Series • 3-5 Amps

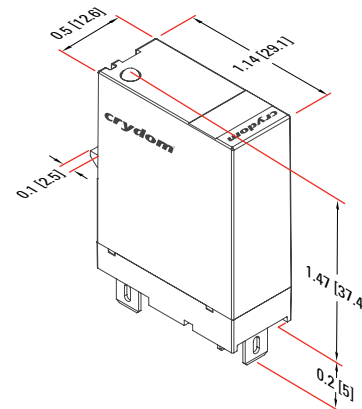


- AC Output Solid State Relay in an industry standard EMR plug-in package
- Ratings of 3 & 5 Amps
- Operating Voltage of 24-280 VAC
- No moving parts eliminates arcing & contact bounce, significantly increasing the life expectancy over equivalent rated electromechanical relays and contactors
- Back-to-back SCR output provides added reliability in commercial and heavy industrial applications
- Available with Zero Voltage Turn-On (resistive loads) or Instantaneous Turn-On (phase control or inductive loads) output
- LED indicator for easy identification of control status
- Wide range of AC or DC Control Voltage options
- Quick Connect termination for easy installation in sockets or on boards
- DIN Rail & PCB mountable sockets available
- Silent operation (no acoustical switching noise)
- UL & IEC General Use & Motor Controller Ratings available

Notes: **A B C D J**



DIN Rail Sockets Page 82    PCB Sockets Page 82



<b>Series</b>	<b>Operating Voltage</b> 24: 24-280 VAC	<b>Rated Load Current</b> 3: 3 Amps (not available with B & E suffixes) 5: 5 Amps*
<b>ED</b>	<b>24</b>	<b>3</b>
	<b>C</b>	<b>R</b>
	<b>Control Voltage</b> B: 100-140 VAC C: 18-32 VDC D: 3-15 VDC E: 18-36 VAC F: 48-72 VDC	<b>Switching Type</b> Blank: Zero Voltage Turn-On R: Instantaneous Turn-On

\* Drawing shown on the right

Panel Mount • PCB Mount • DIN Rail Mount

AC Plug-in Mount

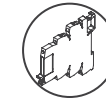
Assemblies • Accessories

CN Series • 0.1-3.5 Amps

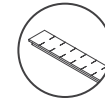


- Thin (5 mm) Solid State Relay ideally suited for high density PCB applications
- Ratings of 0.1 Amps @ 48 VDC or 3.5 Amps @ 48 VDC
- Pluggable into industry standard relay sockets or solderable
- DIN Rail mountable using DRSCN series sockets
- UL 508 overload endurance rated

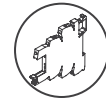
Notes: **A B D G J**



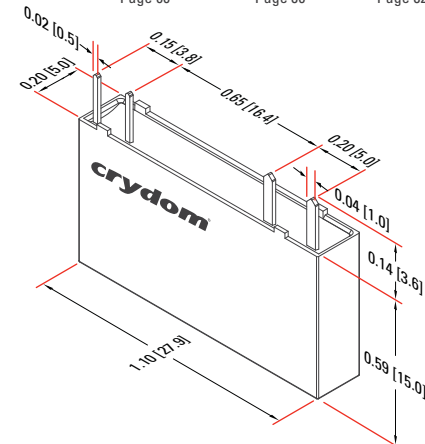
DIN Rail Model  
Page 60



ID Marker Strips  
Page 80



Sockets  
Page 82



Series

**CN**

**024D**

**24**

**Operating Voltage**  
**024D:** 0-24 VDC, 3.5 Amps  
**048D:** 0-48 VDC, 0.1 Amps

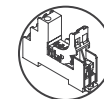
**Control Voltage**  
**05:** 3-12 VDC  
**24:** 15-30 VDC  
**60:** 38-72 VDC

## ED Series • 5 Amps

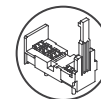


- DC output Solid State Relay in an Industry standard EMR plug-in package
- 5 Amps rated
- Operating Voltage of 1-48 VDC and 1-80 VDC
- No moving parts eliminates arcing & contact bounce, significantly increasing the life expectancy over equivalent rated electromechanical relays and contactors
- LED indicator for easy identification of control status
- Wide range of AC or DC Control Voltage options
- Quick Connect termination for easy installation in sockets or on boards
- DIN Rail & PCB mountable sockets available
- Silent operation (no acoustical switching noise)
- Ideally suited for both resistive and inductive loads (inductive loads such as motors and EMR/solenoid coils must be diode suppressed)
- UL & IEC General Use & Motor Controller Ratings available

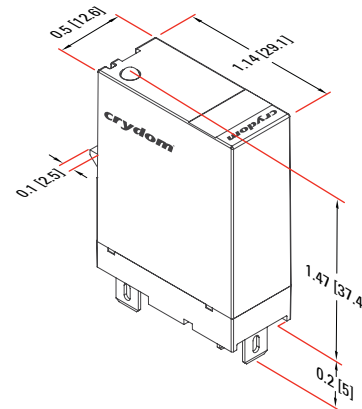
Notes: **A B D J**



DIN Rail Sockets  
Page 82



PCB Sockets  
Page 82



Series	Operating Voltage	Rated Load Current
<b>ED</b>	<b>06:</b> 1-48 VDC	<b>5:</b> 5 Amps
<b>06</b>	<b>10:</b> 1-80 VDC	
<b>C</b>		
<b>5</b>		
	Control Voltage	
	<b>B:</b> 90-140 VAC *	
	<b>C:</b> 18-32 VDC	
	<b>D:</b> 5-15 VDC	
	<b>E:</b> 18-36 VAC *	
	<b>F:</b> 48-72 VDC	

\* Drawing shown on the right

Panel Mount • PCB Mount • DIN Rail Mount

Plug-In Mount

DC

Assemblies • Accessories

# Assemblies

Crydom offers a **variety of “ready-to-use” assemblies** featuring proven Crydom Solid State Relays and Contactors installed in DIN Rail Sockets or on Panel or DIN Rail mounted Heat Sinks. Assemblies are **available for applications ranging from 1 to more than 80 Amps in both AC or DC output versions**. Any standard Crydom Panel Mount or SIP type PCB Mount SSR or Contactor can be offered as a “ready-to-use” Assembly. Contact the nearest Crydom Distributor, Representative or local Crydom Sales Office if you don't locate your exact needed Assembly in the catalog or in the Crydom website.



## Heat Sink / SSR Assemblies



- Standard single, dual and 3 phase SSRs mounted on high efficiency HS Series heat sinks
- Ready-to-use assemblies with optimum SSR / thermal pad / heat sink combination simplifying selection, ordering and installation
- Thermal efficiency ratings from 5.0°C/W to 0.25°C/W @ 40°C ambient
- Full SSR assembly ratings up to 82.5 Amps (single phase) or 27.5 Amps per phase (three phase) in a 40°C ambient
- DIN Rail and Panel mountable versions available for both stand-alone heat sinks and SSR assemblies (most models)
- Customized solutions available using single, dual and 3 phase SSRs
- Wide variety of accessories available

Notes: **A B C D E F**

### Total Number of Accepted Standard SSRs

- 1: 1 SSR (50, 30, 25, 20, 15 & 10 suffix only)
- 2: 1 or 2 SSRs (20, 17, 12 & 07 suffix only)
- 3: 1-3 SSRs or one 3phase (10, 07, 05, 03 & 02 suffix only)

### Standard Crydom SSR p/n

Series

**HS**

**17**

**2**

**DR**

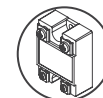
**2**

**D2450**

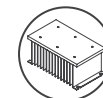
**Thermal Resistance**  
 50: 5.0 °C/W (DR suffix only)  
 30: 3.0 °C/W  
 25: 2.5 °C/W  
 20: 2.0 °C/W  
 17: 1.7 °C/W  
 15: 1.5 °C/W  
 12: 1.2 °C/W  
 10: 1.0 °C/W  
 07: 0.7 °C/W  
 05: 0.5 °C/W  
 03: 0.36 °C/W  
 02: 0.25 °C/W

**DIN Rail Bracket**  
 Blank: Not included  
 DR: Included  
 (50, 30, 20, 15, 12 & 10 suffix only)

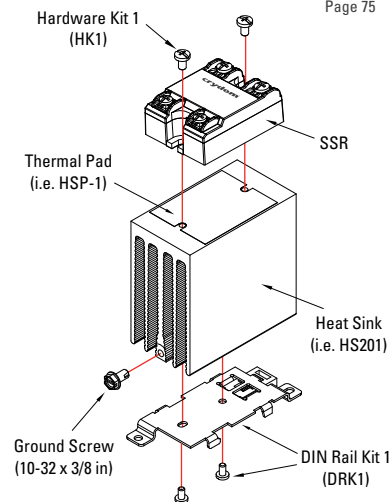
**Number of Mounted SSRs**  
 Blank: 1  
 2: 2  
 3: 3



Panel Mount Relays  
Page 8



Heat Sinks & other Accessories  
Page 75
























































































Specifications are subject to change without prior notice

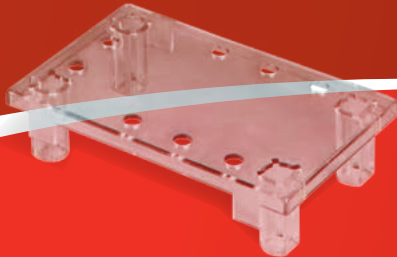


# Accessories

Crydom supports its extensive SSR and Contactor product lines with a comprehensive offer of accessories including **Heat Sinks, Thermal Pads, Protective Covers, Sockets, Terminal Lugs, Hardware Kits, Marker Strips and DIN Rail Kits** to make it easy to employ Crydom SSRs and Contactors in any application. Crydom can also create **special configuration SSRs or Contactors** that include installed accessories if so desired. Visit the catalog or Crydom website for additional information on Crydom SSR accessories.

## Heat Sink/Accessories Compatibility

Page	Part number	HK1	HK2	HKM1	HSP-1 HSP-2	HSP-3 HSP-5	KS100	KS101	KS300	DRK1
75	HS501DR									
76	HS301									
76	HS251									
76	HS202									
77	HS201									
77	HS172									
77	HS151									
78	HS122									
78	HS103									
78	HS101									
79	HS073									
79	HS072									
79	HS053									
80	HS033									
80	HS023									



## Covers • Hockey Puck



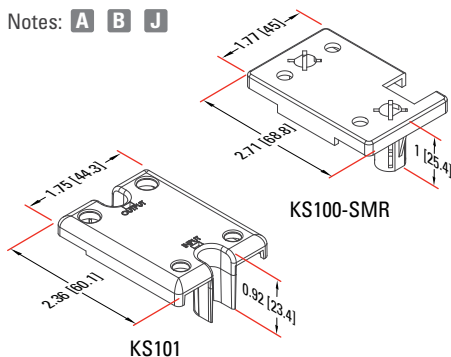
Part no.: KS100, KS100-SMR

Clear plastic cover for Generation 3 standard hockey puck package SSRs (2.25 x 1.75 in). Clear plastic cover with cut out window for SMR-6 and MC Series.

Part no.: KS101

Clear plastic cover for Generation 4 standard hockey puck package SSRs (2.25 x 1.75 in). Safety covers provide added protection from electric shock when installing or checking equipment.

Notes: **A B J**



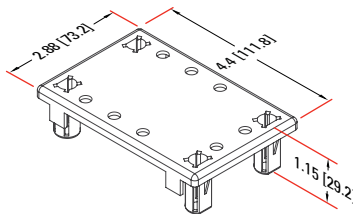
## Covers • Large Puck



Part no.: KS300

Clear plastic cover large puck panel mount SSRs (4 x 2.9 in). Safety covers provide added protection from electric shock when installing or checking equipment.

Notes: **A B J**



## DIN Rail Bracket

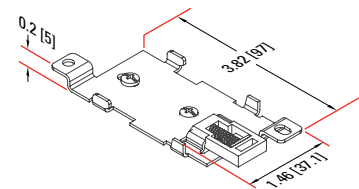


**DIN Rail Kit 1**

Part no.: DRK1

Spring, retaining clip, 45 mm DIN Rail bracket and 2 screws 6-32 x 1/4 in.

Notes: **A B J**



Specifications are subject to change without prior notice

## Filters • AC Filters

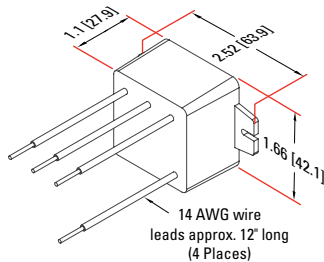


Part no.: 1F25  
EMI noise suppression filter for SSR in AC single phase systems

Part no.: 3F20 (shown above)  
EMI noise suppression filters for SSR in three phase systems

Part no.: 3F20-4 (shown below)  
EMI noise suppression filters with neutral for SSR in three phase systems

Notes: **A B J**



## Hardware Kits



HK1



HKM1



HK2

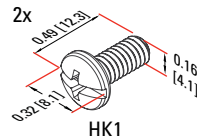


Part no.: HK1  
Bag with 2 SSR mounting screws 8-32 x 3/8 in.

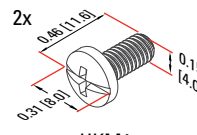
Part no.: HK2  
Bag with 1 ground screw 10-32 x 3/8 in and 2 bracket screws 6-32 x 1/4 in.

Part no.: HKM1  
Bag with 2 SSR mounting screws M4 x 9mm.

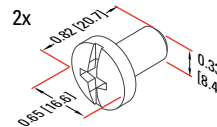
Notes: **A B J**



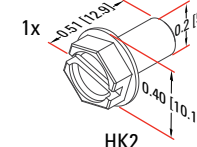
HK1



HKM1



HK2

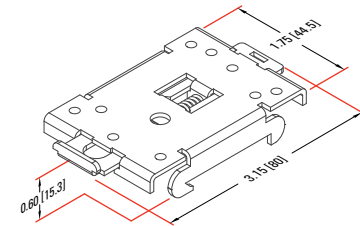


## Heat Sinks • HS501DR



- 5.0°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- DIN Rail mountable
- Heat sink material is steel with clear zinc plating surface finish

Notes: **A B J L**



HS501DR includes

- DIN Rail Mounting Bracket
- M4 Mounting Screws
- Latch Release

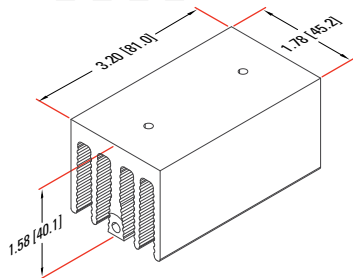
## Heat Sinks • HS301



- 3.0°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- Panel mountable or DIN Rail mountable version available as HS301DR

- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



### HS301DR includes

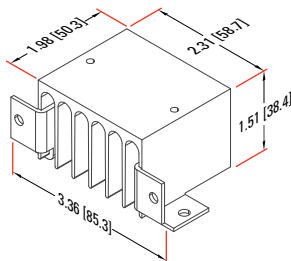
- Ground Screw (10-32 x 3/8 in)
- DIN Rail Kit 1 (DRK1)
- Heat Sink (HS301)
- One Hardware Kit 1 (HK1)

## Heat Sinks • HS251



- 2.5°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- Panel mountable
- Heat sink material is aluminum with natural finish

Notes: **A B J L**



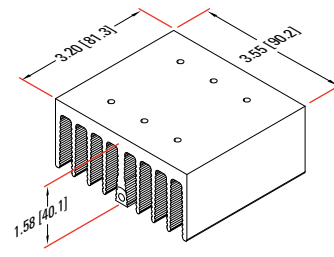
## Heat Sinks • HS202



- 2.0°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSR
- Panel mountable or DIN Rail mountable version available as HS202DR

- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



### HS202DR includes

- Ground Screw (10-32 x 3/8 in)
- DIN Rail Kit 1 (DRK1)
- Heat Sink (HS202)
- One Hardware Kit 1 (HK1)

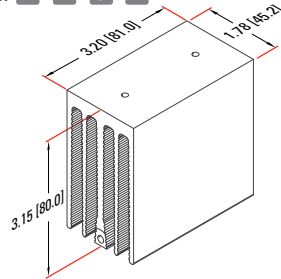
Specifications are subject to change without prior notice

## Heat Sinks • HS201



- 2.0°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- Panel mountable or DIN Rail mountable version available as HS201DR
- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



### HS201DR includes

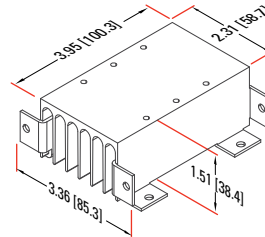
- Ground Screw (10-32 x 3/8 in)
- DIN Rail Kit 1 (DRK1)
- Heat Sink (HS201)
- One Hardware Kit 1 (HK1)

## Heat Sinks • HS172



- 1.7°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSRs
- Panel mountable
- Heat sink material is aluminum with natural finish

Notes: **A B J L**

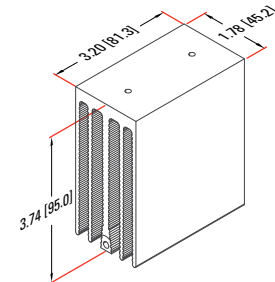


## Heat Sinks • HS151



- 1.5°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- Panel mountable or DIN Rail mountable version available as HS151DR
- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



### HS151DR includes

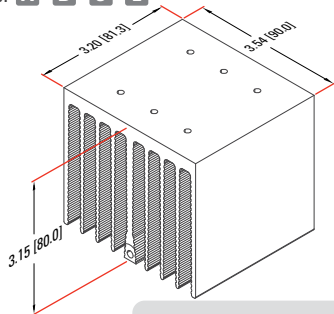
- Ground Screw (10-32 x 3/8 in)
- DIN Rail Kit 1 (DRK1)
- Heat Sink (HS151)
- One Hardware Kit 1 (HK1)

## Heat Sinks • HS122



- 1.2°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSRs
- Panel mountable or DIN Rail mountable version available as HS122DR
- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



### HS122DR includes

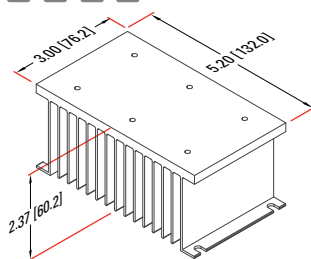
- Ground Screw (10-32 x 3/8 in)
- DIN Rail Kit 1 (DRK1)
- Heat Sink (HS122)
- Two Hardware Kits 1 (HK1)

## Heat Sinks • HS103



- 1.0°C/W Thermal resistance
- Suitable for 1, 2 or 3 single or dual SSRs; one 3 phase SSR
- Panel mountable or DIN Rail mountable version available as HS103DR
- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



### HS103DR includes

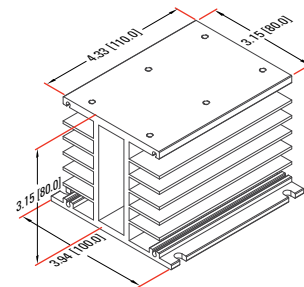
- Heat Sink (HS103)
- Extruded DIN Rail Bracket
- Fasteners
- Three Hardware Kits 1 (HK1)

## Heat Sinks • HS101



- 1.0°C/W Thermal resistance
- Suitable for 1 single or dual SSRs; one 3 phase SSR
- Panel mountable
- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



Specifications are subject to change without prior notice

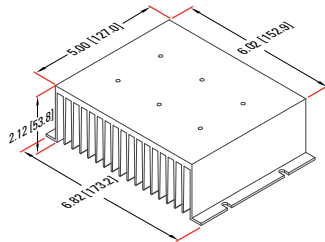
## Heat Sinks • HS073



- 0.7°C/W Thermal resistance
- Suitable for 1, 2 or 3 single or dual SSRs; one 3 phase SSR
- Panel mountable

- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**

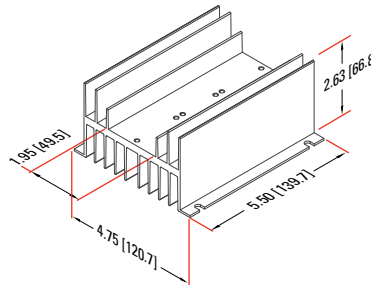


## Heat Sinks • HS072



- 0.7°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSRs
- Panel mountable
- Heat sink material is aluminum with natural finish

Notes: **A B J L**



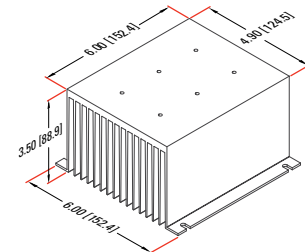
## Heat Sinks • HS053



- 0.5°C/W Thermal resistance
- Suitable for 1, 2 or 3 single or dual SSRs; one 3 phase SSR
- Panel mountable

- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**

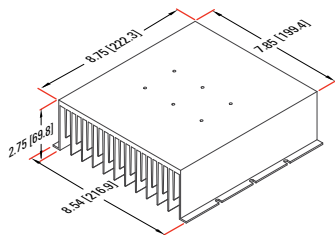


## Heat Sinks • HS033



- 0.36°C/W Thermal resistance
- Suitable for 1, 2 or 3 single or dual SSRs; one 3 phase SSR
- Panel mountable
- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**

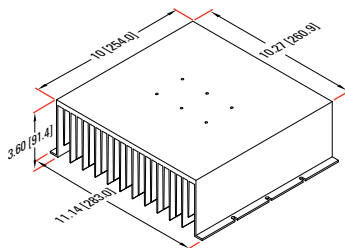


## Heat Sinks • HS023

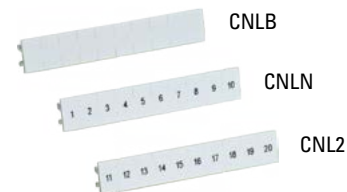


- 0.25°C/W Thermal resistance
- Suitable for 1, 2 or 3 single or dual SSRs; one 3 phase SSR
- Panel mountable
- Heat sink material is aluminum with black anodized finish

Notes: **A B J L**



## ID Marker Strips



Part no.: CNLB

A package of 10 plastic strips comprising 10 individual unprinted markers.

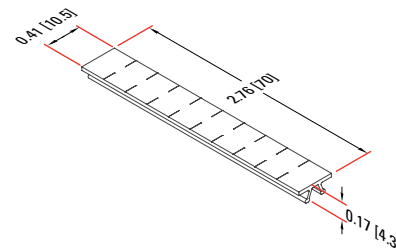
Part no.: CNLN

A package of 10 plastic strips comprising 10 markers printed individually from 1 to 10.

Part no.: CNL2

A package of 10 plastic strips comprising 10 markers printed individually from 11 to 20.

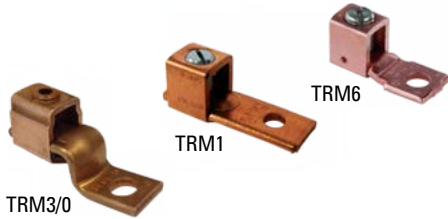
Notes: **A B J**



Specifications are subject to change without prior notice



## Lug Terminals



TRM3/0

TRM1

TRM6



Part no.: TRM3/0

Copper wire lug for AWG 4 (21.2 mm<sup>2</sup>) to AWG 3/0 (85 mm<sup>2</sup>) wire size. Mounts with 3/8" bolt/stud.

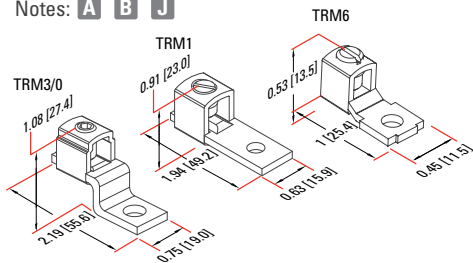
Part no.: TRM1

Copper wire lug for AWG 6 (13.3 mm<sup>2</sup>) to AWG 0 (53.5 mm<sup>2</sup>) wire size. Mounts with #8, #10, M4 or M5 screws. (Not compatible with IP20 covers)

Part no.: TRM6

Copper wire lug for AWG 14 (2.1 mm<sup>2</sup>) to AWG 6 (13.3 mm<sup>2</sup>) wire size. Mounts with #8, #10, M4 or M5 screws.

Notes: **A B J**



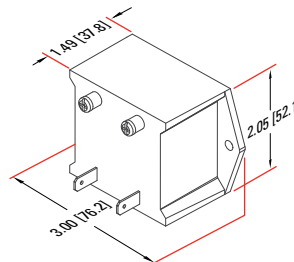
## Power Supply • 20 VAC



Part no.: PS120, PS240

The PS120 and PS240 power supplies are specifically designed to supply the 20 VAC supply voltage used by the Crydom LPCV series linear proportional controls, from a 120 or 240 VAC 50/60 Hz nominal AC voltage main supply.

Notes: **A B J**



## Sockets • DRS Socket



DRS4

DRS1



**DRS Series DIN Rail Mountable Sockets**

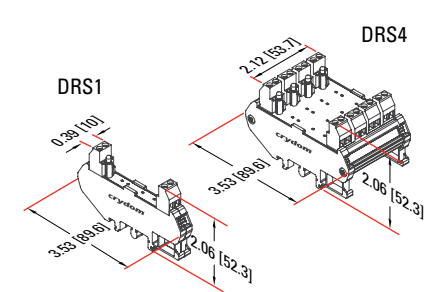
Part no.: DRS1

10 mm single channel DIN Rail mountable socket to mount 1 Crydom PCB mount relay onto standard 35 mm DIN Rail profiles.

Part no.: DRS4

54 mm four channel DIN Rail mountable socket to mount up to 4 Crydom PCB mount relays onto standard 35 mm DIN Rail profiles.

Notes: **A B J**



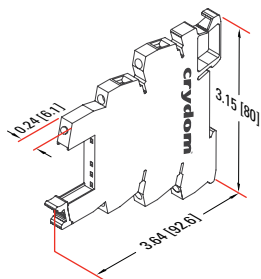
## Sockets • DRS-CN Sockets



**CN Series DIN Rail Mountable Sockets**  
Part no.: DRSCN05, DRSCN24

DIN Rail mountable socket to mount CN Series relays onto standard 35 mm DIN Rail profiles. Maximum output rating for DRSCN sockets is 250 V, 6 Amps regardless of selected SSR. DRS-CN sockets are 6 mm wide and include input status LED.

Notes: **A B G J**



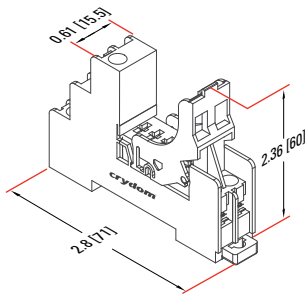
## Sockets • DRSED Socket



**ED Series DIN Rail Mountable Socket**  
Part no.: DRSED

Finger safe IP10 DIN Rail mountable socket to mount ED Series relays onto standard 35 mm DIN Rail profiles. Rated at 250 V AC/DC, 12 Amps. The DRSED includes M3 Combo screws.

Notes: **A B J**



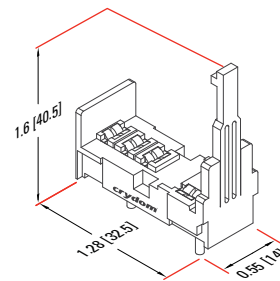
## Sockets • PCBSED Socket



**ED Series PCB Mountable Socket**  
Part no.: PCBSED

PC Board mountable socket for ED series relays. Rated at 250 V AC/DC, 12 Amps. Suggested Pin-out hole diameter: 1.0 mm

Notes: **A B J**



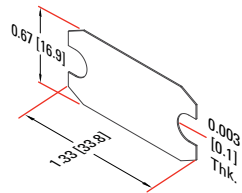
Specifications are subject to change without prior notice

## Thermal Pads • Mini-Puck



Part no.: HSP-6  
Thermal pad for mini-puck panel mount SSRs.  
Includes adhesive on one side.

Notes: **A B J**



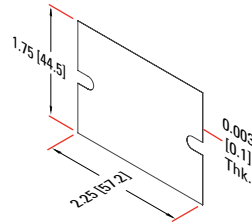
## Thermal Pads • Hockey Puck



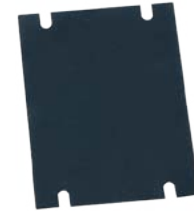
Part no.: HSP-1  
25 pack of non-adhesive thermal pads for standard hockey puck package SSRs (2.25 x 1.75 in).

Part no.: HSP-2 (shown above)  
Thermal pad for standard hockey puck package SSRs (2.25 x 1.75 in). Includes adhesive on one side.

Notes: **A B J**



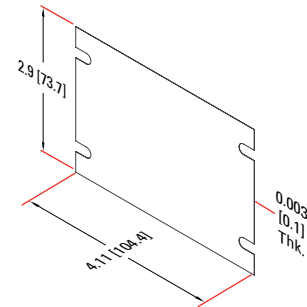
## Thermal Pads • Large Puck



Part no.: HSP-3  
Thermal pad for large puck panel mount SSRs (4 x 2.9 in).

Part no.: HSP-5 (shown above)  
Thermal pad for large puck panel mount SSRs (4 x 2.9 in).  
Includes adhesive on one side.

Notes: **A B J**





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