

## SMR48 -6 Series

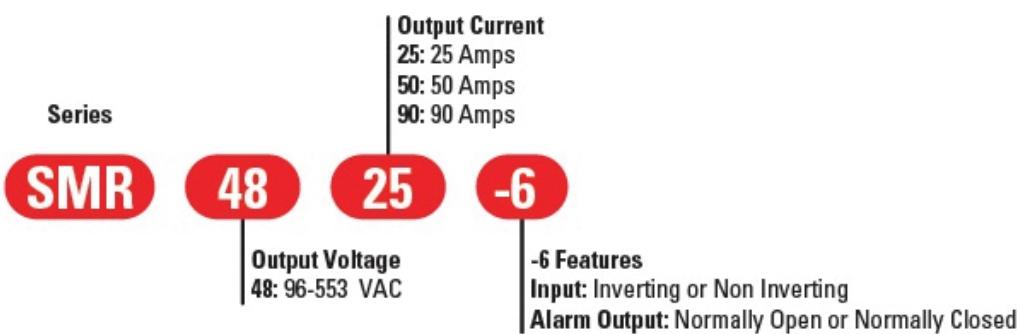


- System monitoring solid-state relay
- Ratings from 25A to 90A @ 60-280 V AC
- DC control
- LED status indicators
- Alarm output signal
- Inverting or non-inverting input
- Normally open or normally closed alarm output

## PRODUCT SELECTION

Control Voltage	25A SMR4825-6	50A SMR4850-6	90A SMR4890-6
8-32 VDC			

## AVAILABLE OPTIONS



## OUTPUT SPECIFICATIONS (1)

Description	SMR4825-6	SMR4850-6	SMR4890-6
Operating Voltage (47-63Hz) [Vrms]	96-530	96-530	96-530
Transient Overvoltage [Vpk]	1200	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mAmps]	10	10	10
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500	500
Maximum Load Current (3) [Amps]	25	50	90
Minimum Load Current [mAmps]	40	40	40
Maximum 1 Cycle Surge Current (50/60Hz) [Apk]	239/250	597/625	1145/1200
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Thermal Resistance Junction to Case (Rjc) [°C/W]	1.02	0.63	0.28
Maximum 1/2 Cycle I <sup>2</sup> t for Fusing (50/60 Hz) [A <sup>2</sup> sec]	285/259	1779/1621	6560/5976
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

## CONTROL SPECIFICATIONS (1)(4)

Description	INVERTING	NON-INVERTING
Logic Supply Voltage Range	8-32 VDC (pin 3)	8-32 VDC (pin 3)
Logic Supply Current @ 12	8 mA	14 mA (plus pin 8 loading)
Input-On Voltage Range	8-32 VDC (pin 6)	0-1.0 VDC (pin 5)
Input-Off Voltage Range	0-0.4 VDC (pin 6)	8-32 VDC (pin 5)
Input-On Current @ 12 VDC[Logic Supply]	6 mA	1.0 mA
Maximum Turn-On Time [msec]	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

## ALARM SPECIFICATIONS (1)(4)

Description	NORMALLY CLOSED	NORMALLY OPEN
Alarm-On Voltage	"Supply Voltage (with load) Open Col. NPN (pin 7)"	"Supply Voltage (minus 1.0 V) Active High PNP (pin 8)"
Alarm-Off Voltage	"1.5 VDC Active Low NPN (pin 7)"	"0.0 VDC (with load) Open Col. PNP (pin 8)"
Maximum Alarm Output Current	100 mA	100 mA
Alarm Delay (Min.-Max.)	30-100 msec	30-100 msec

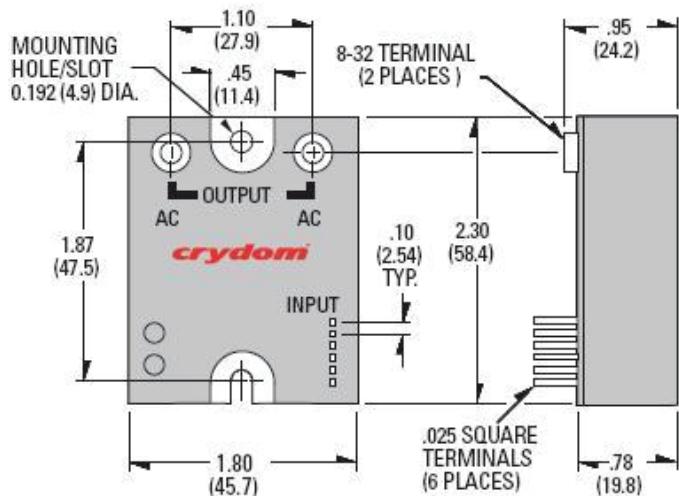
## GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 <sup>9</sup> Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125 °C
Weight (typical)	3.0 oz (86.5g)
Encapsulation	Thermally conductive Epoxy
Output Terminals:	Screws and Saddle Clamps Furnished, Unmounted
Input Connector (locking):	ITW Pancon No. MTSS100-6 or Equivalent
Mating Connector (supplied):	ITW Pancon No. CT100F22-6 or Equivalent
Recommended Terminal Screw Torque Range:	8-32 & 10-32 Screws - 20 in. lbs. (Screws dry without grease)

## GENERAL NOTES

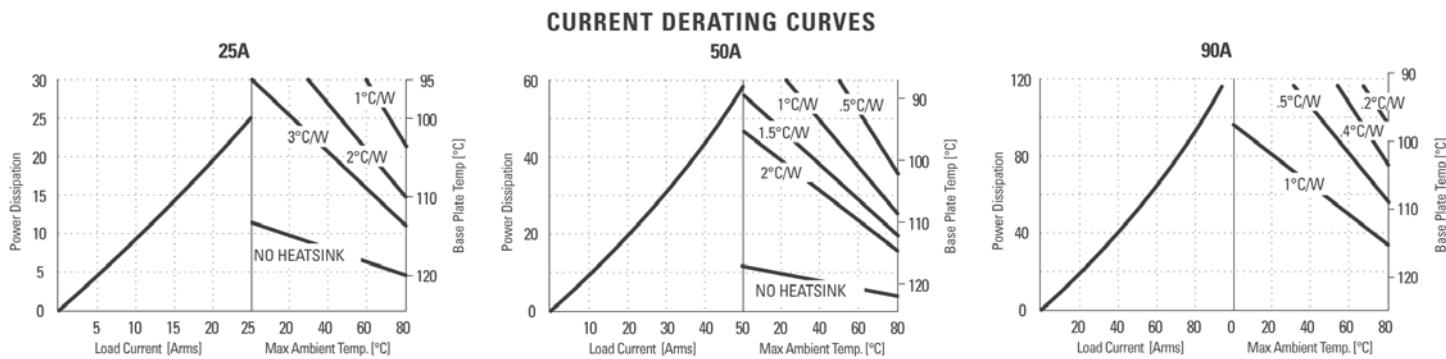
- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 3) Heat sinking required, for derating curves see page 2.
- 4) All voltages are positive in respect to common (pin 4)

## MECHANICAL SPECIFICATIONS



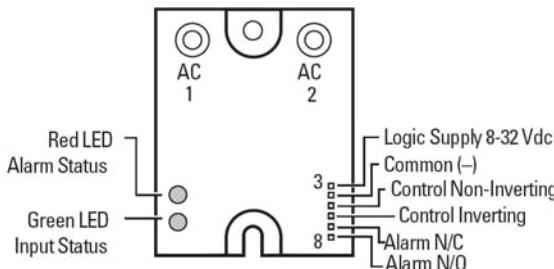
All dimensions are in inches (millimeters)

## THERMAL DERATE INFORMATION

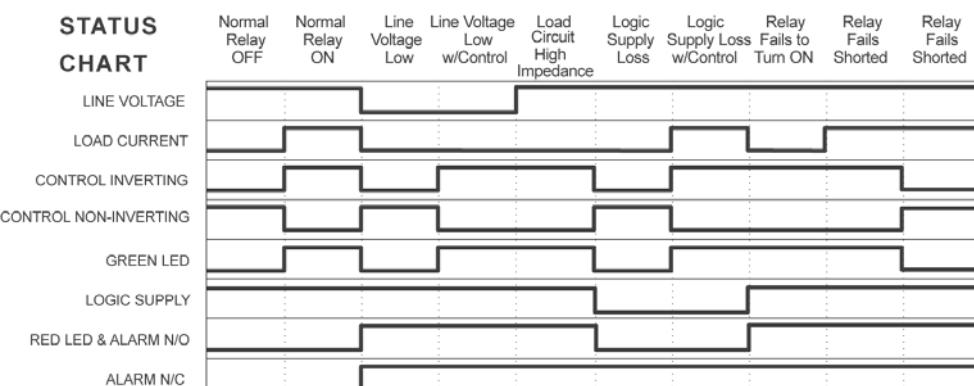


## WIRING DIAGRAM

## WIRING DIAGRAM



## STATUS CHART



## AGENCY APPROVALS

Designed in accordance with the requirements of IEC 62314



Rev. 120811

<b>⚠ DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO</b>					
<b>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.</b> <ul style="list-style-type: none"> <li>• Disconnect all power before installing or working with this equipment.</li> <li>• Verify all connections and replace all covers before turning on power.</li> </ul> <p><b>Failure to follow these instructions will result in death or serious injury.</b></p>	<b>RIESGO DE DESCARGA ELECTRICA O EXPLOSION.</b> <ul style="list-style-type: none"> <li>• Desconectar todos los suministros de energía a este equipo antes de trabajar con este equipo.</li> <li>• Verificar todas las conexiones y colocar todas las tapas antes de energizar el equipo.</li> </ul> <p><b>EI</b> Incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.</p>	<b>RISQUE DE DESCHARGE ELECTRIQUE OU EXPLOSION</b> <ul style="list-style-type: none"> <li>• Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil</li> <li>• Vérifier tous les connexions, et remettre tous les couverts en place avant de mettre sous tension.</li> </ul> <p><b>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.</b></p>	<b>GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION.</b> <ul style="list-style-type: none"> <li>• Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen</li> <li>• Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren.</li> </ul> <p><b>Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.</b></p>	<b>RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.</b> <ul style="list-style-type: none"> <li>• Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavoro a questa apparecchiatura</li> <li>• Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione</li> </ul> <p><b>L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie</b></p>	<b>RISCO DE DESCARGA ELÉTRICA OU EXPLOSÃO</b> <ul style="list-style-type: none"> <li>• Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento</li> <li>• Verificar todas as conexões e recolocar todas as tampas antes de ligar o equipamento</li> </ul> <p><b>O não cumprimento destas instruções pode levar à morte ou lesões sérias.</b></p>

<b>⚠ WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO</b>			
<b>RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE</b> <ul style="list-style-type: none"> <li>• The product's side panels may be hot, allow the product to cool before touching.</li> <li>• Follow proper mounting instructions including torque values.</li> <li>• Do not allow liquids or foreign objects to enter this product.</li> </ul> <p><b>Failure to follow these instructions can result in serious injury, or equipment damage.</b></p>	<b>RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER</b> <ul style="list-style-type: none"> <li>• Les panneaux latéraux du produit peuvent être chauds. Laisser le produit refroidir avant de le toucher.</li> <li>• Respecter les consignes de montage, et notamment les couples de serrage.</li> <li>• Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit.</li> </ul> <p><b>Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.</b></p>	<b>GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG</b> <ul style="list-style-type: none"> <li>• Die Seitenwände können heiß sein. Lassen Sie das Produkt abkühlen, bevor Sie es berühren.</li> <li>• Beachten Sie die Montageanweisungen,</li> <li>• Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein.</li> </ul> <p><b>Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.</b></p>	<b>RIESGO DE DAÑOS MATERIALES Y DE SOBRECALENTAMIENTO DE LA UNIDAD</b> <ul style="list-style-type: none"> <li>• Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo.</li> <li>• Respetar las instrucciones de montaje, y en particular los pares de apretado.</li> <li>• No dejar que penetren líquidos o cuerpos extraños en el producto.</li> </ul> <p><b>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</b></p>
<b>RIESGO DE DAÑOS MATERIALES Y DE SOBRECALENTAMIENTO DE LA UNIDAD</b> <ul style="list-style-type: none"> <li>• Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo.</li> <li>• Respetar las instrucciones de montaje, y en particular los pares de apretado.</li> <li>• No dejar que penetren líquidos o cuerpos extraños en el producto.</li> </ul> <p><b>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</b></p>	<b>RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO</b> <ul style="list-style-type: none"> <li>• I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo.</li> <li>• Seguire le istruzioni di montaggio corrette.</li> <li>• Non far entrare liquidi o oggetti estranei in questo apparecchio.</li> </ul> <p><b>La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.</b></p>	<b>RISCO DE DANO MATERIAL E DE AQUECIMENTO</b> <ul style="list-style-type: none"> <li>• Os painéis laterais do produto podem estar quentes; deixá-lo tempo ao produto para arrefecer antes de lhe tocar.</li> <li>• Siga devidamente as instruções de montagem.</li> <li>• Não permita a entrada de líquidos e de objectos estranhos no produto.</li> </ul> <p><b>A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.</b></p>	

## ANNEX - ENVIRONMENTAL INFORMATION

The environmental information disclosed in this annex including the EIP Pollution logo are in compliance with People's Republic of China Electronic Industry Standard SJ/T11364 – 2006, Marking for Control of Pollution Caused by Electronic Information Products.

Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

此附件所标示的包括电子信息产品污染图标环保信息  
符合中华人民共和国电子行业标准 SJ/T11364 - 2006,  
电子信息产品污染控制标识要求



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

---

Datasheets provided by Sensata Technologies, Inc., its subsidiaries and/or affiliates ("Sensata") are solely intended to assist third parties ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, valuation, and judgment in designing Buyer's systems and products. Sensata datasheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular datasheet. Sensata may make corrections, enhancements, improvements, and other changes to its datasheets or components without notice.

Buyers are authorized to use Sensata datasheets with the Sensata component(s) identified in each particular datasheet. **HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA Datasheets ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATASHEETS OR USE OF THE DATASHEETS, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATASHEETS OR USE THEREOF.**

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://www.sensata.com). SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY, AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

## CONTACT US

### Regional head offices:

#### United States of America

Sensata Technologies  
Attleboro, MA

**Phone:** 508-236-3800

**E-mail:** [support@sensata.com](mailto:support@sensata.com)

#### Netherlands

Sensata Technologies Holland B.V.  
Hengelo

**Phone:** +31 74 357 8000

**E-mail:** [support@sensata.com](mailto:support@sensata.com)

#### China

Sensata Technologies China Co., Ltd.  
Shanghai

**Phone:** +8621 2306 1500

**E-mail:** [support@sensata.com](mailto:support@sensata.com)

Copyright © 2023 Sensata Technologies, Inc.