



CY9008

- 50A @ 48-660 VAC
- SCR output for heavy industrial loads
- DC control
- Zero-crossing (resistive loads) output
- Input status LED
- Improved SEMS screw and washer
- Redesigned housing with anti-rotation barriers
- Direct Power Lead Frame
- EMC Compliant to Level 3
- Direct Bond Copper substrate
- Epoxy Free Design

CUSTOMER: CST EAP

OUTPUT SPECIFICATIONS (1)

Description

Operating Voltage (47-440Hz) [Vrms]	48-660
Transient Overvoltage [Vpk]	1200
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	1.0
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec]	500
Maximum Load Current [Arms] (2)	50
Minimum Load Current [mArms]	150
Maximum 1 Cycle Surge Current (50/60Hz) [Apk]	597/625
Maximum On-State Voltage Drop @ Rated Current [Vrms]	1.15
Thermal Resistance Junction to Case (Rjc) [°C/W]	0.45
Maximum 1/2 Cycle I ² t for Fusing (50/60Hz) [A ² sec]	1779/1621
Minimum Power Factor (at Maximum Load)	0.5

INPUT SPECIFICATIONS (1)

Description

	DC Control
Control Voltage Range	4-32 VDC
Minimum Turn-On Voltage (3)	4.0 VDC
Minimum Turn-Off Voltage	1.0 VDC
Minimum Input Current	7 mADC
Maximum Input Current	12 mADC
Nominal Input Impedance	Current Regulated
Maximum Turn-On Time [msec]	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

GENERAL SPECIFICATIONS (1)

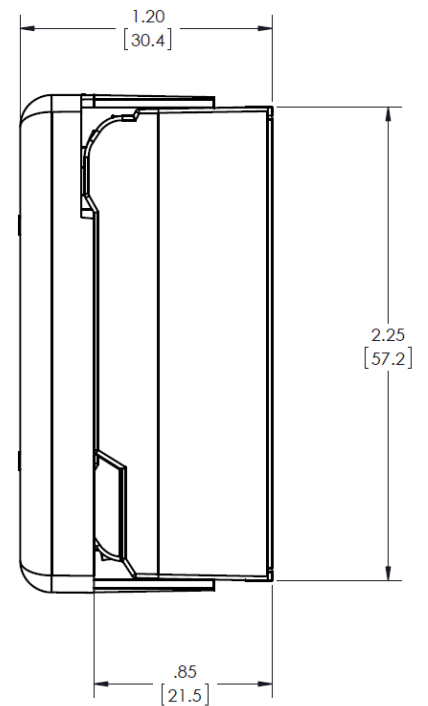
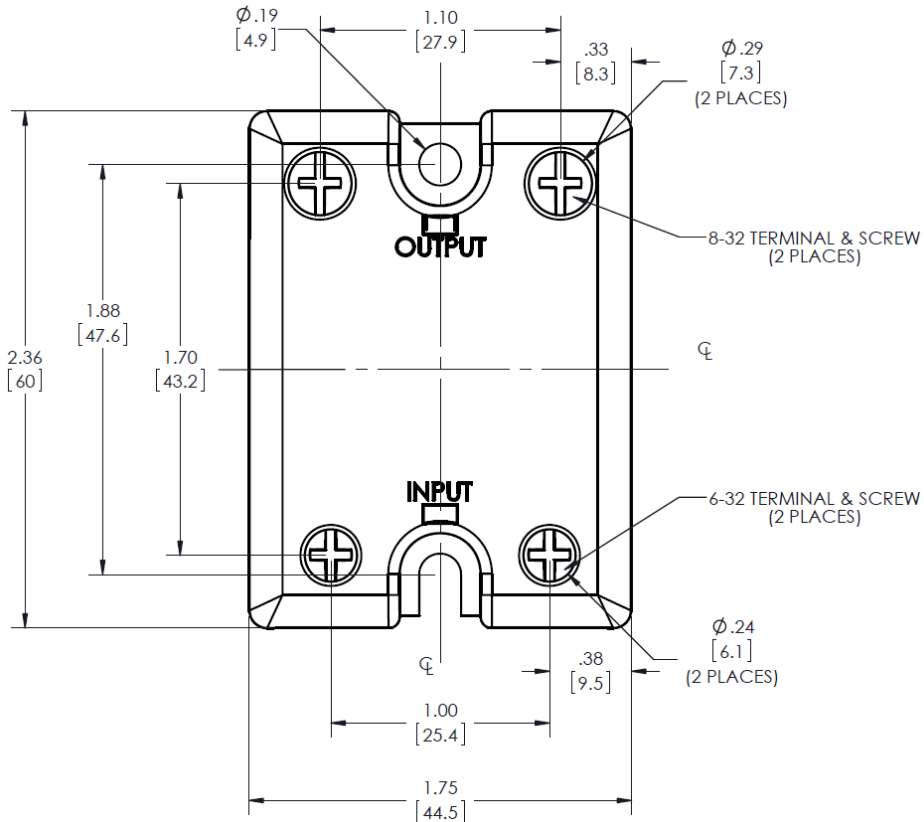
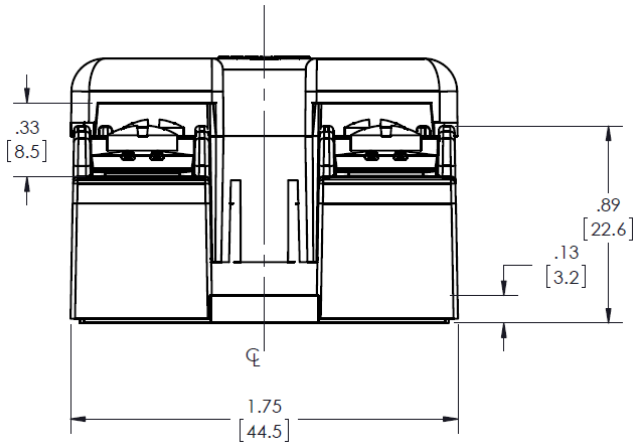
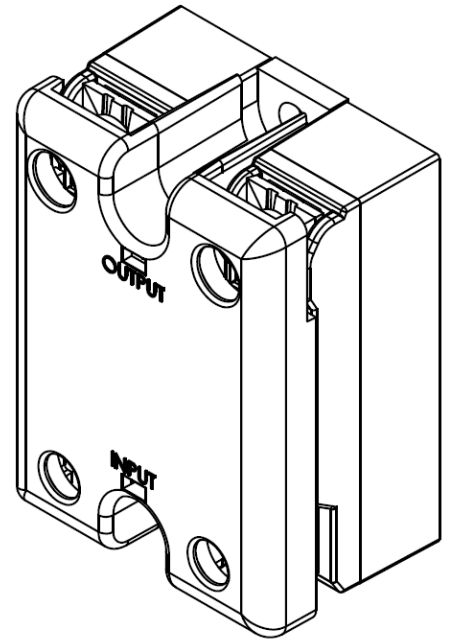
Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80 °C
Ambient Storage Temperature Range	-40 to 125 °C
Weight (typical)	2.6 oz (74.9 g)
Housing Material	94 V-0
Baseplate Material	Aluminum
Input Terminal Screw Torque Range (in-lbs/Nm)	13-15 / 1.5-1.7
Load Terminal Screw Torque Range (in-lbs/Nm)	18-20 / 2.0-2.2
SSR Mounting Screw Torque Range (in-lbs/Nm)	18-20 / 2.0-2.2
Humidity	85% non-condensing
LED Input Status Indicator	Green

GENERAL NOTES

- (1) All parameters at 25°C and per section unless otherwise specified.
- (2) Heat sinking required, for derating curves see thermal derate information.
- (3) Increase minimum voltage by 1V for operations from -20 to -40°C.
- (4) Load can be wired to either SSR output terminal 1 or 2.
- (5) Overvoltage Protection.

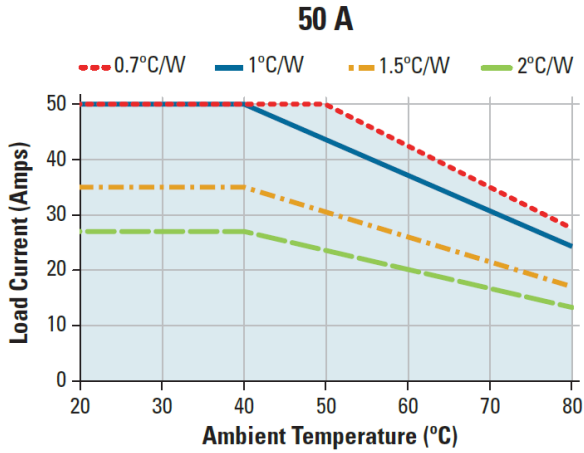


MECHANICAL SPECIFICATIONS

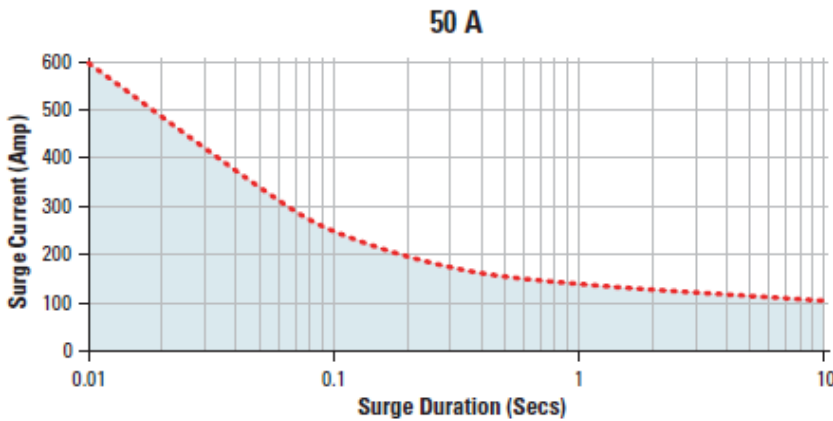


Tolerances: ± 0.02 in/0.5 mm. All dimensions are in: inches [millimeters]

THERMAL DERATE INFORMATION



SURGE CURRENT INFORMATION



Non repetitive peak surge current at Tj initial 40°C.

AGENCY APPROVALS

- Designed in accordance with the requirements of IEC 62314
- IEC 61000-4-2 : Electrostatic Discharge – Level 3
- IEC 61000-4-4 : Electrically Fast Transients – Level 3
- IEC 61000-4-5 : Electrical Surges – Level 3
- IEC 600068-2-6: Vibration 0.33mm and 0.75mm Amplitude over 10-55 Hz
- IEC 600068-2-27: Shock Resistance 15g/11ms



Rev. 111113

PRELIMINARY DATASHEET
CY9008

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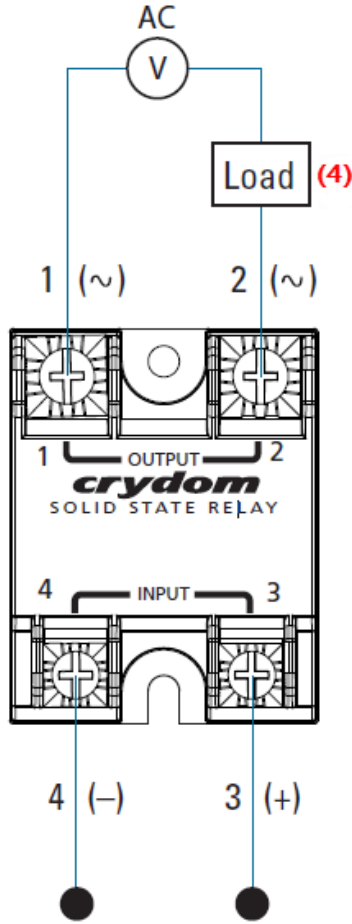


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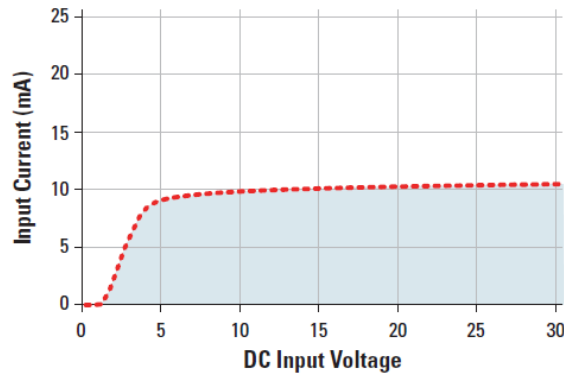


WIRING DIAGRAM

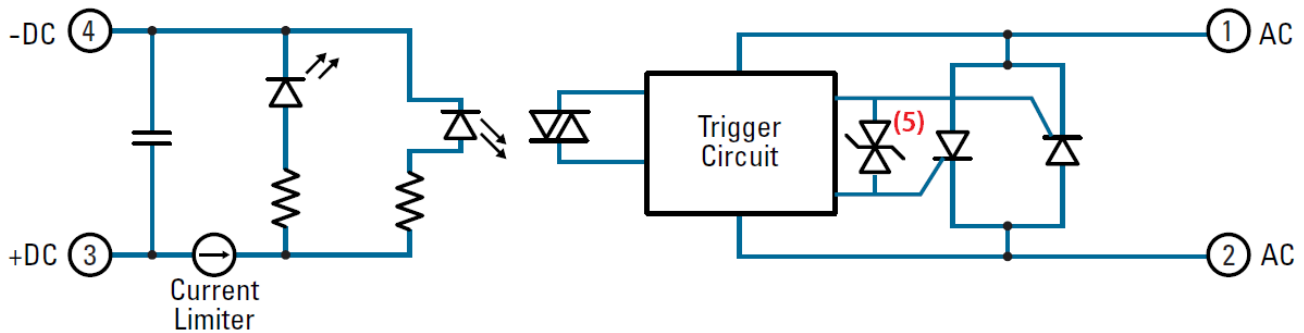


Recommended Wire Sizes		
Terminals	Wire Size (Solid / Stranded)	Wire Pull-Out Strength (lbs)[N]
Input	24 AWG (0.2 mm ²) / 0.2 [minimum]	10 [44.5]
	2 x 12 AWG (3.3 mm ²) / 3.3 [maximum]	90 [400]
Output	20 AWG (0.5 mm ²) / 0.518 [minimum]	30 [133]
	2 x 10 AWG (5.3 mm ²) / 5.3	110 [490]
	2 x 8 AWG (8.4 mm ²) / 8.4 [maximum]	90 [400]

Input Current vs Input Voltage
Standard Regulated "DC" Inputs



EQUIVALENT CIRCUIT BLOCK DIAGRAM



ACCESORIES

New Accessories! Protective Cover & Hardware Kits

Protective Cover Part number: KS101



Clear plastic cover compatible with all new S1 designs. Safety covers provide added protection from electric shock when installing or checking equipment.

Hardware Kit Part number: HK3



Bag with 2 threaded standoffs, 2 screws 8-32 x 1/4, and 2 lockwashers M8 for output, and 2 threaded standoffs, 2 screws 6-32 x 3/16, and 2 lockwashers M6 for input.

Standoff screws provide additional mounting options such as "dead bug" mounting, using lug terminals or wire terminals to the side of the relay.

Hardware Kit Part number: HK4



Bag with 2 square brass accessories and 2 screw 8-32 x 5/8 for output. Used to mount TMR1 lug terminals.

Recommended Accessories

Cover	Hardware Kit	Heat Sink		Lug Terminal	Thermal Pad
		Part No.	Thermal Resistance [°C/W]		
KS101	HK1	HS501DR	5.0	TRM1	HSP-1
	HK3	HS301 / HS301DR	3.0	TRM6	HSP-2
	HK4	HS251	2.5		
		HS201 / HS201DR	2.0		
		HS172	1.7		
		HS151 / HS151DR	1.5		
		HS103 / HS103DR	1.0		
		HS072	0.7		
		HS053	0.5		

⚠ DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / 危险

<p>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.</p> <ul style="list-style-type: none"> • Disconnect all power before installing or working with this equipment. • Verify all connections and replace all covers before turning on power. <p>Failure to follow these instructions will result in death or serious injury.</p>	<p>RIESGO DE DESCARGA ELECTRICA O EXPLOSION.</p> <ul style="list-style-type: none"> • Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo. • Verificar todas las conexiones y colocar todas las tapas antes de energizar el equipo. <p>El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.</p>	<p>RISQUE DE DESCARGE ELECTRIQUE OU EXPLOSION</p> <ul style="list-style-type: none"> • Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil • Vérifier tous connections, et remettre tous couverts en place avant de mettre sous <p>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.</p>	<p>GEFAHR EINES ELEKTRISCHE N SCHLAGES ODER EINER EXPLOSION.</p> <ul style="list-style-type: none"> • Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen • Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. <p>Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.</p>	<p>RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.</p> <ul style="list-style-type: none"> • Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura • Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione <p>L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie</p>	<p>存在电击、爆炸或电弧闪烁危险</p> <ul style="list-style-type: none"> • 在操作此设备之前请先关闭电源。 <p>若不遵守这些说明，可能会导致严重的人身伤害甚至死亡。</p>
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⚠ WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / 警告

<p>RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE</p> <ul style="list-style-type: none"> • The product's side panels may be hot, allow the product to cool before touching. • Follow proper mounting instructions including torque values. • Do not allow liquids or foreign objects to enter this product. <p>Failure to follow these instructions can result in serious injury, or equipment damage.</p>	<p>RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER</p> <ul style="list-style-type: none"> • Les panneaux latéraux du produit peuvent être chauds. Laisser le produit refroidir avant de le toucher. • Respecter les consignes de montage, et notamment les couples de serrage. • Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit. <p>Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.</p>	<p>GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG</p> <ul style="list-style-type: none"> • Die Seitenwände können heiß sein. Lassen Sie das Produkt abkühlen, bevor Sie es berühren. • Beachten Sie die Montageanweisungen, • Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein. <p>Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.</p>
<p>RIESGO DE DAÑOS MATERIALES Y DE SOBRECIENTAMIENTO DE LA UNIDAD</p> <ul style="list-style-type: none"> • Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo. • Respetar las instrucciones de montaje, y en particular los pares de apretado. • No dejar que penetren líquidos o cuerpos extraños en el producto. <p>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</p>	<p>RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO</p> <ul style="list-style-type: none"> • I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo. • Seguire le istruzioni di montaggio corrette. • Non far entrare liquidi o oggetti estranei in questo apparecchio. <p>La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.</p>	<p>材料损坏和高温外壳的危险性</p> <ul style="list-style-type: none"> • 产品的一侧面板可能很热。在其冷却前请不要触碰。 • 遵照正确的安装说明，包括扭矩值。 • 请勿让液体及其他异物进入本产品。 <p>如不能正确执行这些操作说明，极有可能造成严重人体伤害或者设备的损坏。</p>



ANNEX – ENVIROMENTAL 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	○	○	○	○	○
Solder	X	○	○	○	○	○

附件 - 环保信息

此附件所标示的包括电子信息产品污染图标的环保信息符合中华人民共和国电子行业标准 SJ/T 11364 - 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	○	○	○	○	○
焊接点	X	○	○	○	○	○

