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^2t 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

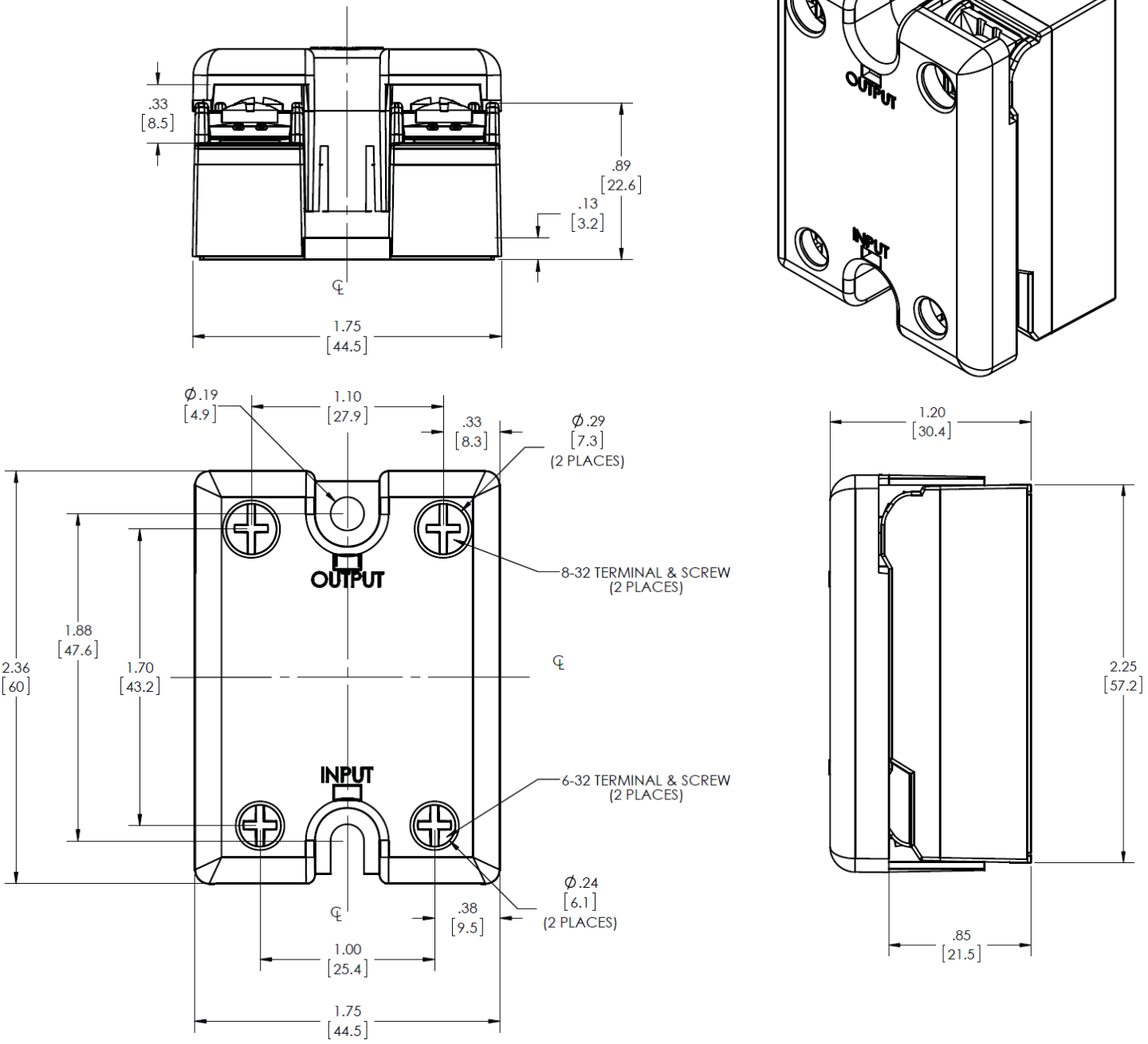
GENERAL SPECIFICATIONS (1)

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

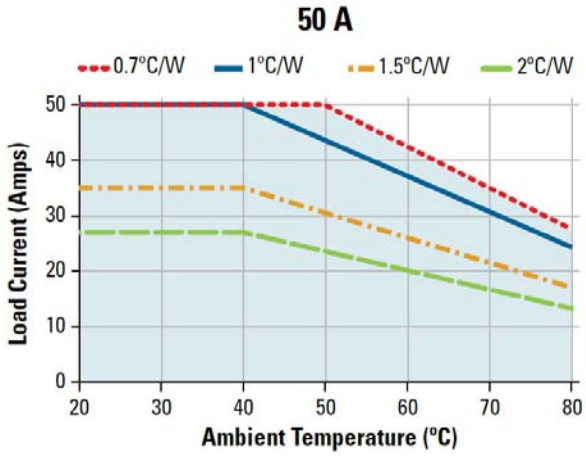
(1) All parameters at 25°C and per section unless otherwise specified.
(2) Heat sinking required, for derating curves see thermal derate information.
(3) Increase minimum voltage by 1V for operations from -20 to -40°C.
(4) Load can be wired to either SSR output terminal 1 or 2.
(5) Overvoltage Protection.

MECHANICAL SPECIFICATIONS

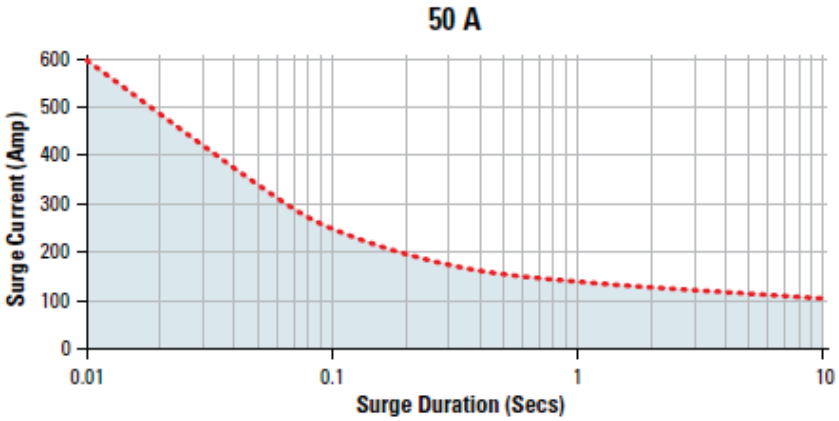


Tolerances: ±0.02 in/0.5 mm. All dimensions are in: inches [millimeters]

THERMAL DERATE INFORMATION



SURGE CURRENT INFORMATION



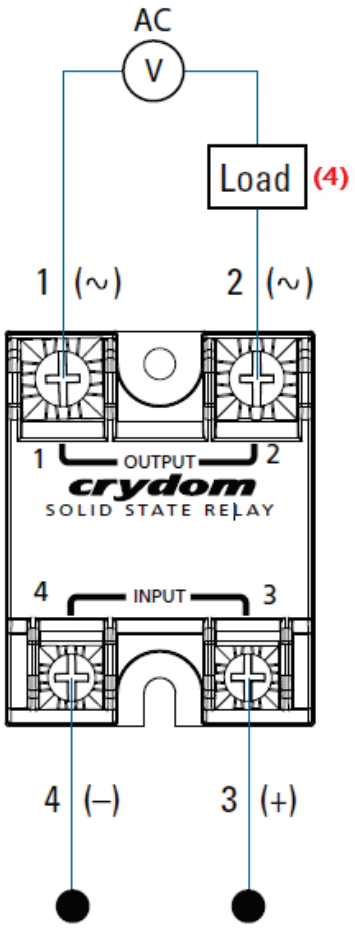
Non repetitive peak surge current at Tj initial 40°C.

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

CE RoHS PEP eco PASS PORT®

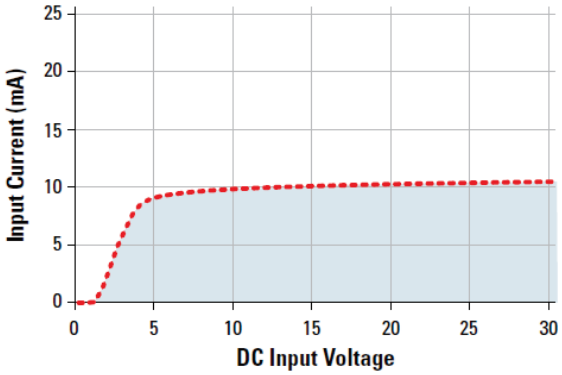
WIRING DIAGRAM



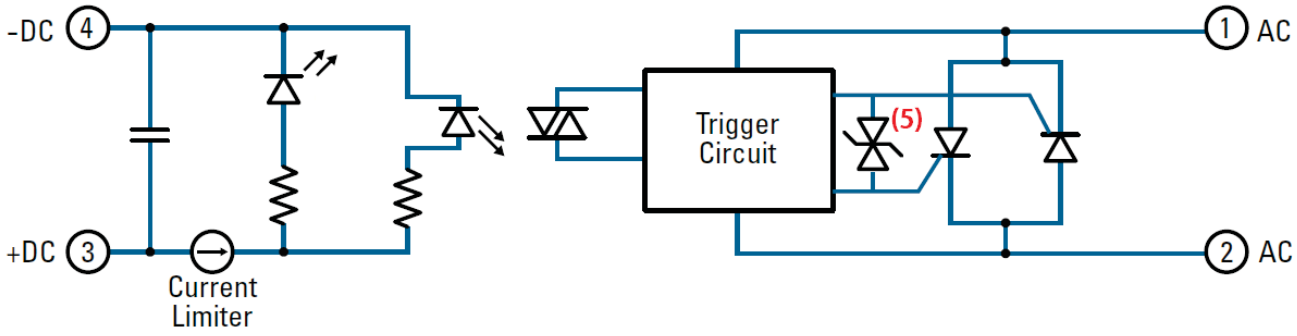
Recommended Wire Sizes

Terminals	Wire Size (Solid / Stranded)	Wire Pull-Out Strength (lbs)[N]
Input	24 AWG (0.2 mm²) / 0.2 [minimum]	10 [44.5]
	2 x 12 AWG (3.3 mm²) / 3.3 [maximum]	90 [400]
Output	20 AWG (0.5 mm²) / 0.518 [minimum]	30 [133]
	2 x 10 AWG (5.3 mm²) / 5.3	110 [490]
	2 x 8 AWG (8.4 mm²) / 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 Part No.	Thermal Resistance [°C/W]	Lug Terminal	Thermal Pad
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		