

crydom

The Global Expert in
Solid State Switching
Technology

CW SERIES UNIVERSAL AC/DC INPUT



CW Series AC Output high performance Solid State Relays

Now available with a Universal
AC/DC Input affording greater
flexibility ideal for OEM equipment
applications!

- IP20 "Touch safe" cover for additional user protection
- LED indicator for easy identification of control status
- Back-to-back SCR output provides added reliability

A classic made better!

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Sensata
Technologies



CW Series
AC Output Solid State Relays

- Heavy duty Solid State Relay with ratings from 10 to 125 Amps @ 12-280 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
- 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 Random Turn-On (phase control or inductive loads) output
- IP20 "touch safe" Cover provides additional user protection



Output Specifications (A)	CWU24xx		CWU48xx		
Operating Voltage (47-440Hz) [Vrms]	24-280		48-660		
Transient Overvoltage [Vpk]	600		1200		

Output Specifications (A)	10A	25A	50A	90A	125A
Maximum Off-State Leakage Current @ Rated Voltage [mA rms]	1				
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (B)	500				
Maximum Load Current [Arms] (C)	10	25	50	90	125
Minimum Load Current [Arms]	0.15	0.15	0.15	0.25	0.25
Maximum 1 Cycle Surge Current (50/60) [A pk]	380/400	570/600	810/850	1290/1350	1900/2000
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.3	1.3	1.3	1.3	1.25
Thermal Resistance Junction to Case [Rjc] [°C/W]	0.35	0.35	0.2	0.14	0.13
Maximum I ² t for Fusing 50/60Hz (1/2 cycle) [A ² sec]	720/660	1620/1500	3280/3000	8320/7560	18000/16600
Minimum Power Factor (with Maximum Load)	0.5				
HP Ratings: 120 VAC @ FLA	0.5 @ 9.8A	1 @ 16A	2 @ 24A	3 @ 34A	5 @ 56A
240 VAC @ FLA	1.5 @ 10A	3 @ 17A	5 @ 28A	7.5 @ 40A	10 @ 50A
480 VAC @ FLA (for CWU48xx only)	3 @ 8.5A	5 @ 14A	10 @ 21A	10 @ 26A	15 @ 34A
Wire Size min (solid/strand) [AWG/ IECmm ²]	20 / 0.518				
Wire Size max (solid/strand) [AWG/ IECmm ²]	2 x 10 / 5.3				
Load Terminal Screw Torque Range (min,max) in lbs/Nm	18-20 / 2.0-2.2				

Input Specifications (A)	AC Input	DC Input
Control Voltage Range	20 - 280 VAC	20 - 48 VDC
Minimum Turn-On Voltage		19 V AC/DC
Must Turn-Off Voltage		5 V AC/DC
Minimum Input Current @ Minimum Voltage (for on-state)	13 mA AC @ 20 VAC	7 mA @ 20 VDC
Maximum Input Current @ Maximum Voltage	19 mA AC @ 280 VAC	11 mA @ 48 VDC
Nominal Input Impedance	Input circuit incorporates active current limiter	
Maximum Turn-On Time [msec] (ZC and Random) (C)	<17 ms	
Maximum Turn-Off Time [msec]	<30 ms	
Wire Size min (solid/strand) [AWG/ IECmm ²]	24 / 0.2	
Wire Size max (solid/strand) [AWG/ IECmm ²]	2 x 12 / 3.3	
Input Terminal Screw Torque Range (min,max) in lbs/Nm	8-10 / 0.9-1.1	
Status Indicator Display	GREEN	

General Specifications (A)	CWUxxxx
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 (oz [gr])	3.0 [86.5]
SSR Mounting Torque (min,max), in lbs/Nm	18-20 / 2.0-2.2
Housing Material	PC 10% GFR, UL94 V-0
Baseplate Material	Aluminum

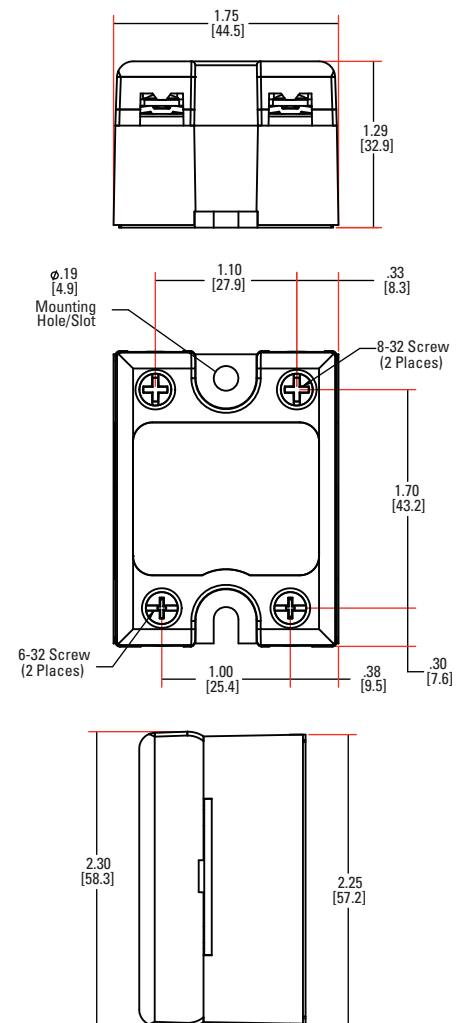
General Notes

- (A) All parameters at 25°C unless otherwise specified.
 (B) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1.
 (C) Turn-on time for random version 7 msec.

Designed in accordance with the requirements of IEC 62314
 IEC 61000-4-2: Electrostatic Discharge – Level 3 (Level 4 with "P" option)
 IEC 61000-4-3: Radiated Electromagnetic Noise – Level 3
 IEC 61000-4-4: Electrically Fast Transients – Level 3 [Criteria B]
 IEC 61000-4-5: Electrical Surges – Level 3 [Criteria A] [Level 4 [Criteria B] with "P" option]
 IEC 61000-4-6: Conducted Electromagnetic Noise – Level 3

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

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



Series	Control Voltage	Thermal Pad
CW	A: 90-280 VAC	Blank: Not Included
U	D: 4-32 VDC	H: Included
48	U: 20-48 VDC or 20-280 VAC	
50	AxxxxE: 18-36 VAC	
E		
P	Operating Voltage	Overvoltage Protection
H	24: 24-280 VAC	Blank: Not Included
-10	48: 48-660 VAC	P: Included*
	Rated Load Current	Switching Type
	10: 10 Amps	Blank: Zero Voltage Turn-On
	25: 25 Amps	-10: Random Turn-On
	50: 50 Amps	
	90: 90 Amps	
	125: 125 Amps	

* Relay will self trigger between 900-1200Vpk. Not suitable for Capacitive Loads.