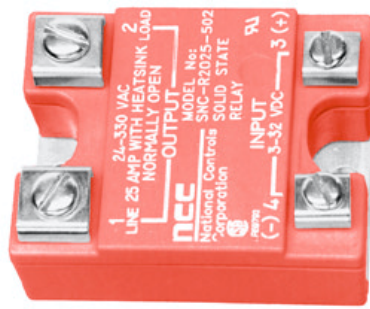


Phone 800-323-2593
630-231-5900
Fax 630-231-1377
Internet www.natcon.com
www.nationalcontrols.com

Features

- UL Recognized Component File #E164906
- CSA Certified File #LR701222
- 24 to 330 VAC Load Voltage
- 4000 Volt Isolation
- Optically Coupled
- Epoxy Filled
- Capable of Being Switched By a Single CMOS Gate
- Built In Snubber
- 100% Life and Surge Tested
- Capable of Switching Inductive Loads of 0.5 Power Factor
- Zero Crossing or Random Turn On Models Available
- Made in U.S.A.



Solid-State Relays

10 to 40 Amp R2010 thru R2040

General Description: The AMETEK NCC Series of Solid State Power Relays provide a highly reliable means of switching a variety of AC loads up to 40 Amps. Snubber circuitry is included with each unit for high dv/dt applica-

tions and inductive loads. Use of rugged output devices provides significant increases in turn-on surge capability. Two input control voltage ranges are available in either Form A (SPST-NO) or Form B (SPST-NC) output

Specifications

Specifications for 3 - 32 Volt Control Input Solid State Relays

Max. Load Current *	10 Amps	25 Amps	25 Amps	25 Amps	40 Amps
Part Number	SNC-R2010-502	SNC-R2025-502	SNC-R2025-507	SNC-R2025-517	SNC-R2040-502
Max. Surge Current	100 Apk,16.6 mS	250 Apk,16.6 mS	370 Arms,8.3 mS	370 Arms,8.3 mS	650 Apk,16.6 mS
Max. On State Voltage Drop	1.65 VAC (RMS)	1.65 VAC (RMS)	1.5 VAC (RMS)	1.5 VAC (RMS)	1.5 VAC (RMS)
Min. Off State dv/dt (static)	200 V/μS	200 V/μS	500 V/μS	500 V/μS	500 V/μS
Thermal Resistance Junction to Case (point A)	1.48 °C/Watt Tj max.=100 °C	1.05 °C/Watt Tj max.=100 °C	1.3 °C/Watt Tj max.=110 °C	1.3 °C/Watt Tj max.=110 °C	.65 °C/Watt Tj max.=100 °C
Input Impedance	1500 ohms ±5%	1500 ohms ±5%	1700 ohms ±5%	1700 ohms ±5%	1500 ohms ±5%
Turn Off Voltage	1 VDC min.	1 VDC min.	2 VAC/DC max.	3 VAC/DC min.	1 VDC min.
Turn On Voltage	3 VDC max.	3 VDC max.	3 VAC/DC min.	2 VAC/DC max.	3 VDC max.
Turn On Type	Zero Crossing	Zero Crossing	Random	Random	Zero Crossing
Output Form	S.P.S.T.- N.O.	S.P.S.T.- N.O.	S.P.S.T.- N.O.	S.P.S.T.- N.C.	S.P.S.T.- N.O.
Control Voltage Range	3 - 32 VDC	3 - 32 VDC	3 - 30 VAC/DC	3 - 30 VAC/DC	3 - 32 VDC

Specifications for 70 - 280 Volt Control Input Solid State Relays

Max. Load Current *	10 Amps	25 Amps	25 Amps	25 Amps	40 Amps
Part Number	SNC-R2010-505	SNC-R2025-505	SNC-R2025-501	SNC-R2025-511	SNC-R2040-505
Max. Surge Current	100 Apk,16.6 mS	250 Apk,16.6 mS	370 Arms,8.3 mS	370 Arms,8.3 mS	650 Apk,16.6 mS
Max. On State Voltage Drop	1.65 VAC (RMS)	1.65 VAC (RMS)	1.65 VAC (RMS)	1.65 VAC (RMS)	1.5 VAC (RMS)
Min. Off State dv/dt (static)	200 V/μS	200 V/μS	500 V/μS	500 V/μS	500 V/μS
Thermal Resistance Junction to Case (point A)	1.48 °C/Watt Tj max.=100 °C	1.05 °C/Watt Tj max.=100 °C	1.3 °C/Watt Tj max.=110 °C	1.3 °C/Watt Tj max.=110 °C	.65 °C/Watt Tj max.=100 °C
Input Impedance	40 Kohms ±5%	40 Kohms ±5%	56 Kohms ±5%	56 Kohms ±5%	40 Kohms ±5%
Turn Off Voltage	20 VAC min.	20 VAC min.	30 VAC max.	70 VAC min.	20 VAC min.
Turn On Voltage	90 VAC max.	90 VAC max.	70 VAC min.	30 VAC max.	90 VAC max.
Turn On Type	Zero Crossing	Zero Crossing	Random	Random	Zero Crossing
Output Form	SPST-NO	SPST-NO	SPST-NO	SPST-NC	SPST-NO
Control Voltage Range	90 - 280 VAC	90 - 280 VAC	70 - 140 VAC	70 - 140 VAC	90 - 280 VAC

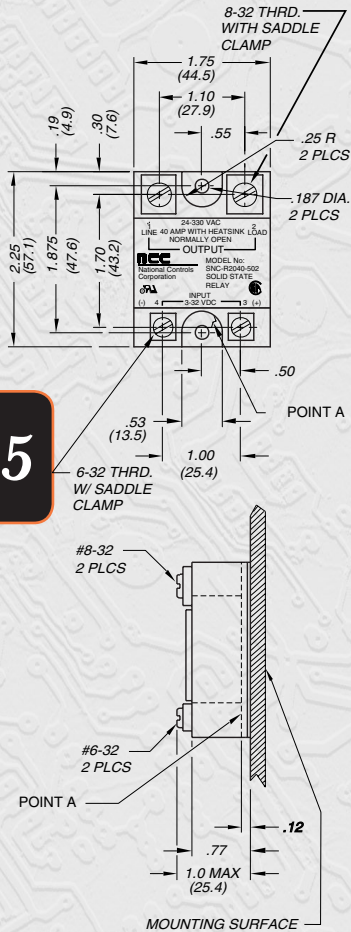
General Specifications - Solid State Relays

Max. Load Current *	10 Amps	25 Amps	25 Amps	25 Amps	40 Amps
Model Numbers	SNC-R2010-502 SNC-R2010-505	SNC-R2025-502 SNC-R2025-505	SNC-R2025-501 SNC-R2025-507	SNC-R2025-511 SNC-R2025-517	SNC-R2040-502 SNC-R2040-505
Max. Peak Transient Voltage	600 Vpk	600 Vpk	600 Vpk	600 Vpk	600 Vpk
Output Voltage Range	24-330 VAC	24-330 VAC	48-300 VAC	48-300 VAC	24-330 VAC
Max. Off State Leakage Current	8 mA	8 mA	72 mA	72 mA	8 mA
Operating Temp. Range	-40 to 100 °C	-40 to 100 °C	-40 to 80 °C	-40 to 80 °C	-40 to 100 °C
Storage Temp. Range	-40 to 100 °C	-40 to 100 °C	-40 to 65 °C	-40 to 65 °C	-40 to 100 °C
Dielectric Strength @60 Hz	4000 VAC (RMS) 4000 VAC (RMS) 4000 VAC (RMS)	4000 VAC (RMS) 4000 VAC (RMS) 4000 VAC (RMS)	4000 VAC (RMS) 2500 VAC (RMS) 2500 VAC (RMS)	4000 VAC (RMS) 2500 VAC (RMS) 2500 VAC (RMS)	4000 VAC (RMS) 4000 VAC (RMS) 4000 VAC (RMS)

Ordering Information

Input Voltage Range	Output Configuration	Part Number
3 - 32 VDC	Normally Open - 10 Amps	SNC-R2010-502
90- 280 VAC	Normally Open - 10 Amps	SNC-R2010-505
3 - 32 VDC	Normally Open - 25 Amps	SNC-R2025-502
90- 280 VAC	Normally Open - 25 Amps	SNC-R2025-505
3- 30 VAC/DC	Normally Open - 25 Amps	SNC-R2025-507
70- 140 VAC	Normally Open - 25 Amps	SNC-R2025-501
3- 30 VAC/DC	Normally Closed - 25 Amps	SNC-R2025-517
70- 140 VAC	Normally Closed - 25 Amps	SNC-R2025-511
3 - 32 VDC	Normally Open - 40 Amps	SNC-R2040-502
90- 280 VAC	Normally Open - 40 Amps	SNC-R2040-505

Description	Part Number
Heatsink - .9 °C / Watt, supplied with Thermal Compound and Mounting Hardware	ASY-HS25A-011



* See derating curves for proper heat sink requirements

Solid-State Relay Heat Sink Data

AMETEK NCC

National Controls Corp.

Phone 800-323-2593

630-231-5900

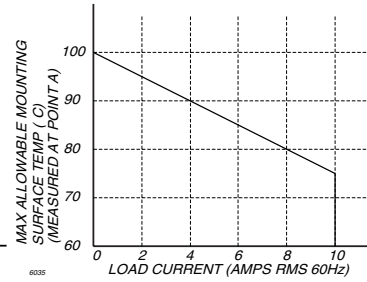
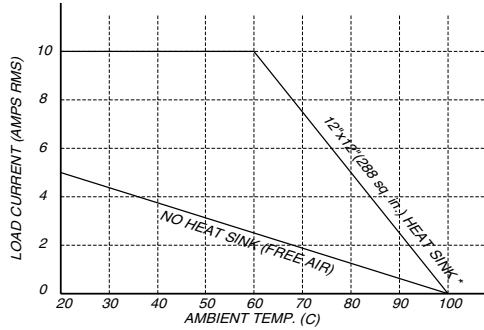
Fax 630-231-1377

Internet www.natcon.com

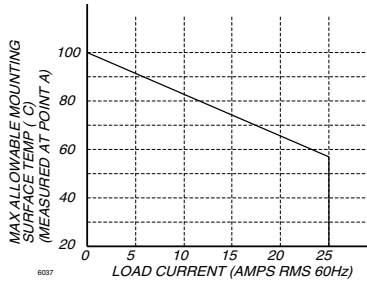
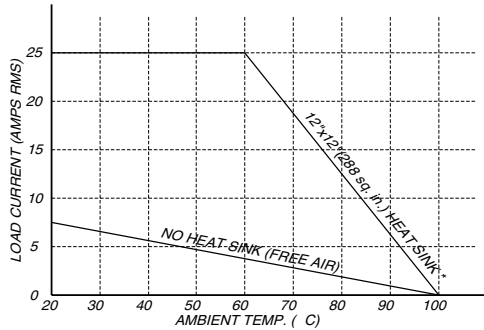
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Model Numbers	Load Current vs. Ambient Temperature	Max Mounting Surface Temp. vs Load Current
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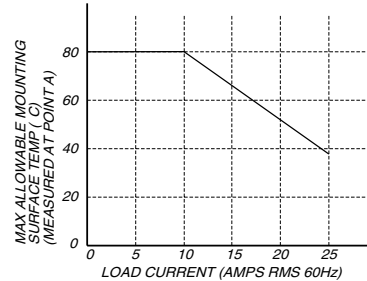
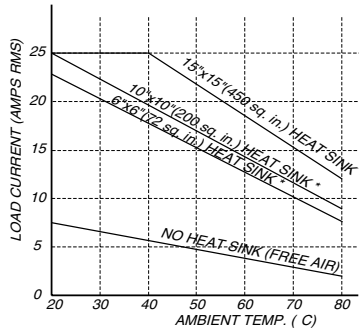
SNC-R2010-502
SNC-R2010-505



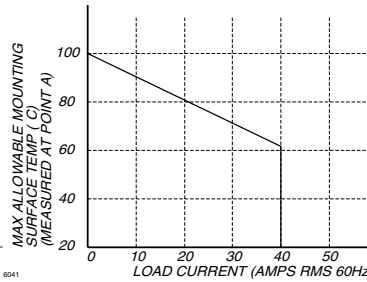
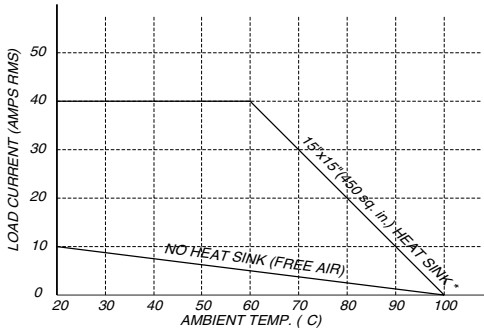
SNC-R2025-502
SNC-R2025-505



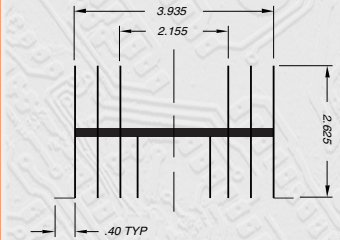
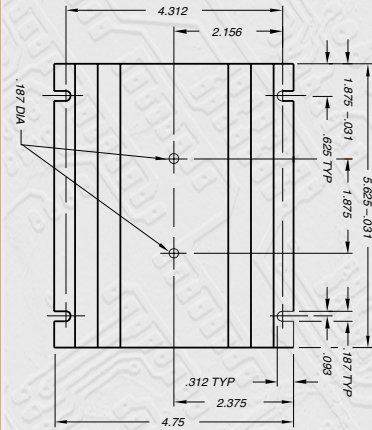
SNC-R2025-501
SNC-R2025-507
SNC-R2025-511
SNC-R2025-517



SNC-R2040-502
SNC-R2040-505



Note:
Heat sinks for derating curves are 1/8" thick aluminum with thermal compound between the mounting surface and solid state relay mounting plate.



Accessory Heat Sink
Part No. ASY-HS25A-011