

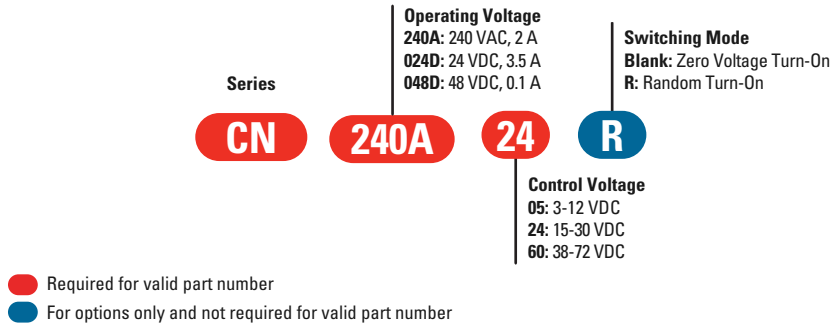
CN Series

- 5mm Mini SIP SSR
- Ratings 24 VDC @ 3.5 A, 48 VDC @ 100mA and 240 VAC @ 2 A
- DC Control, 5, 24 and 60 V
- UL & cUL recognized @ 40°C, 100K-Cycle Endurance Test
- CE & RoHS Compliant

PRODUCT SELECTION

Control Voltage	3.5 A	100mA	2 A
3-12 VDC	CN024D05	CN048D05	CN240A05
15-30 VDC	CN024D24	CN048D24	CN240A24
38-72 VDC	CN024D60	CN048D60	CN240A60

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	CN024Dxx	CN048Dxx	CN240Axx
Operating Voltage	0-24 VDC	0-48 VDC	24-280 VAC (47-63Hz)
Maximum Load Current @ 40°C (2)	3.5 A	100mA (3)	2 A
Minimum Load Current [mA]	1	1	70
Maximum Blocking Voltage	30 VDC	60 VDC	600 VDC
Maximum Surge Current [Apk]	9 (10ms)	0.3 mA (10ms)	115/120 (50/60 Hz, 1 cycle)
Maximum I^2t for fusing 50/60Hz (1/2 cycle) [A^2 sec]	N.A.	N.A.	66/60
Typical On-State Voltage Drop @ Rated Current (V)	0.4	1.0	1.1 (peak)
Maximum Off-State Leakage Current @ Rated Voltage [mA]	0.001	0.001	4.0
Maximum PWM (Hz) (4)	500	500	N.A.
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/µsec] (5)	N/A	N/A	500
Switch Configuration	N.O.	N.O.	N.O.

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INPUT SPECIFICATIONS FOR CN024 (1)

Description	CN024D05	CN024D24	CN024D60
Control Voltage Range	3.0-12 VDC	15-30 VDC	38-72 VDC
Must Turn On Voltage	3.0 VDC	15 VDC	38 VDC
Must Turn Off Voltage	1.0 VDC	5 VDC	5 VDC
Nominal Input Impedance	500 Ohm	3.5K Ohm	20K Ohm
Typical Input Current	10mA @ 5 VDC	7mA @ 24 VDC	3mA @ 60 VDC
Typical Turn-On Time [µsec]	120	350	400
Typical Turn-Off Time [µsec]	100	80	70

INPUT SPECIFICATIONS FOR CN048 (1)

Description	CN048D05	CN048D24	CN048D60
Control Voltage Range	3.0-12 VDC	16-30 VDC	38-72 VDC
Must Turn On Voltage	3.0 VDC	16 VDC	38 VDC
Must Turn Off Voltage	1.0 VDC	5 VDC	5 VDC
Nominal Input Impedance	1.25K Ohm	3.5K Ohm	20K Ohm
Typical Input Current	4mA @ 5 VDC	5mA @ 24 VDC	3mA @ 60 VDC
Typical Turn-On Time [µsec]	20	20	20
Typical Turn-Off Time [µsec]	130	130	130

INPUT SPECIFICATIONS FOR CN240 (1)

Description	CN240A05	CN240A24	CN240A60
Control Voltage Range	3.0-12 VDC	15-30 VDC	38-72 VDC
Must Turn On Voltage	3.0 VDC	15 VDC	38 VDC
Must Turn Off Voltage	1.0 VDC	5 VDC (6)	5 VDC
Nominal Input Impedance	240 Ohm	3.5K Ohm	20K Ohm
Typical Input Current	15mA @ 5 VDC	6mA @ 24 VDC	4mA @ 60 VDC
Typical Turn-On Time [µsec] (6)	1/2 Cycle	1/2 Cycle	1/2 Cycle
Typical Turn-Off Time [µsec]	1/2 Cycle	1/2 Cycle	1/2 Cycle

GENERAL SPECIFICATIONS (1)

Description	Parameters
Dielectric Strength, Input/Output (50/60Hz) (7)	2.5KV
Maximum Capacitance, Input/Output	1.5 pF
Ambient Operating Temperature Range	-20 to 80°C
Ambient Storage Temperature Range	-20 to 100°C
Weight (typical)	0.14 oz. (4.05g)
Housing Material	UL 94 V0
Overvoltage Category	III
Polution Degree	2
Degree of protection (Encapsulation)	IP67

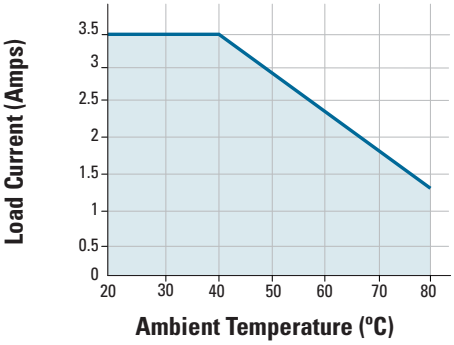
GENERAL NOTES

(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) Turn-On time for random turn-on versions is 0.01 msec (DC control Models).
(4) Operating frequency above 500Hz will damage the SSR (DC output only).
(5) Off-state dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
(6) Turn-on time for random turn-on version is 0.1msec.
(7) 3.75KV for CN048Dxx

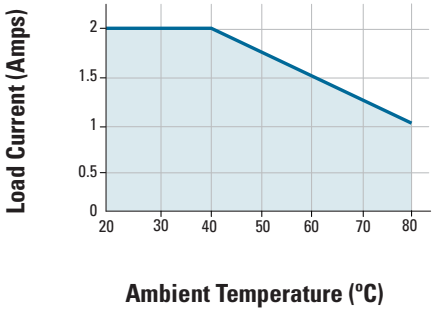
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THERMAL DERATE INFORMATION

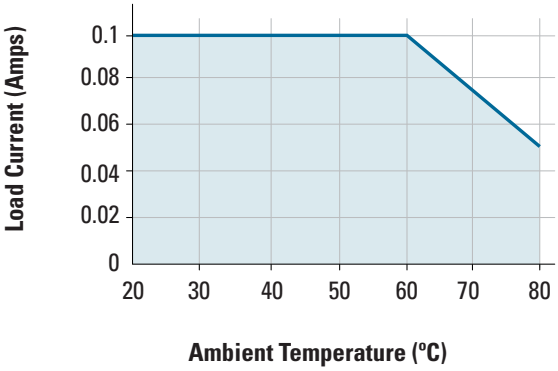
DERATE CURVES:
CN024D - 3.5 A



DERATE CURVES:
CN024 A - 2 AMP

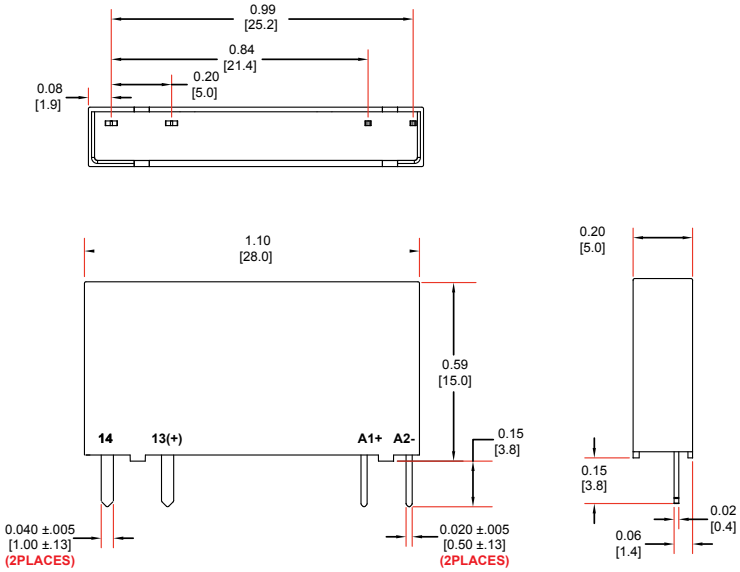


DERATE CURVES:
CN048D - 100mA



MECHANICAL SPECIFICATIONS

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



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AGENCY APPROVALS

Designed in accordance with the requirements of IEC 62314

c UL us E116950 CE RoHS

ACCESSORIES

DRSCN Series DIN Rail Mountable Sockets
DRSCN05, DRSCN24



- Sockets are fully compatible with CN series SSRs
- 6.2 mm wide
- LED status indicator
- Socket clip fits all standard 35 mm DIN rail profiles
- UL & cUL recognized, CE & RoHS compliant

RELAY/SOCKET COMPATIBILITY (G, H)

SSR PN	DR Socket PN	Socket Input Voltage
CN024D05 CN048D05 CN240A05	DRSCN05	3-12 VDC
CN024D24 CN048D24 CN240A24	DRSCN24	15-30 VDC

(G) Installing a CN Series solid state relay in a socket that does not have matching input/output specifications may result in non-operation or damage to either the relay, socket or both.

(H) Maximum output rating for DRSCN Series sockets is 250 V / 6 Amps regardless of chosen SSR.

ID Marker Strips
CNLB, CNLN, CNL2

Blank Strips
Part no.: CNLB
A package of 10 plastic strips comprising 10 individual unprinted markers which can be placed on sockets' terminal block for easy identification during the use of multiple units.



Numbered 1 to 10 Strips
Part no.: CNLN
A package of 10 plastic strips comprising 10 markers printed individually from 1 to 10 which can be placed on sockets' terminal block for easy identification during the use of multiple units.



Numbered 11 to 20 Strips
Part no.: CNL2
A package of 10 plastic strips comprising 10 markers printed individually from 11 to 20 which can be placed on sockets' terminal block for easy identification during the use of multiple units.

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

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.

- Disconnect all power before installing or working with this equipment.
- Verify all connections and replace all covers before turning on power.

Failure to follow these instructions will result in death or serious injury.

RIESGO DE DESCARGA ELECTRICA O EXPLOSION.

- 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 energizer el equipo.

El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.

RISQUE DE DESCHARGE ELECTRIQUE OU EXPLOSION

- Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil
- Vérifier tous connections, et remettre tous couverts en olace avant de mettre sous

De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.

GEFAHR EINES ELEKTRISCHE N SCHLAGES ODER EINER EXPLOSION.

- 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.

Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.

RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.

- Spenga tutta l'alimentazione che fornisce questa apparecchiatura prima di lavorare a questa apparecchiatura
- Verificare tutti i collegamenti e sostituire tutte le coperture prima dell'accensione

L'omissione di queste istruzioni provocherà la morte o lesioni serie

存在电击、爆炸或电弧闪烁危险

- 在操作此设备之前请先关闭电源。

若不遵守这些说明，可能会导致严重的人身伤害甚至死亡。

⚠ WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / 警告

RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- 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.

Failure to follow these instructions can result in serious injury, or equipment damage.

RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER

- 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.

Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.

GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG

- 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.

Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.

RIESGO DE DAÑOS MATERIALES Y DE SOBRECALENTAMIENTO DE LA UNIDAD

- 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.

Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.

RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO

- 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.

La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.

材料损坏和高温外壳的危险性

- 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。

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。

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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	O	O	O	O	O
Solder	X	O	O	O	O	O

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/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



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