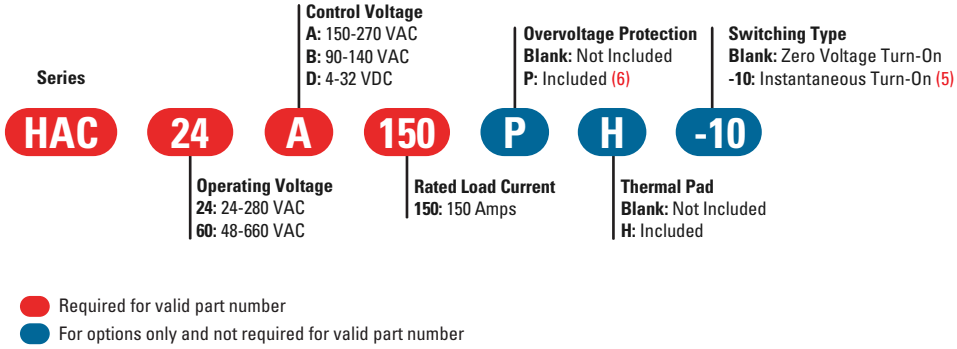
HAC Series

- Load Voltage range 24 to 660 VAC
- Output rating up to 150 Arms
- Zero Voltage or Instantaneous Turn-on options
- AC or DC input control options
- Locking Input Connector
- Optional Transient Protection & installed Thermal Pad

PRODUCT SELECTION

Control Voltage	150 A
3-32 VDC	HAC24D150 ,HAC60D150
90-140 VAC	HAC24B150 ,HAC60B150
150-270 VAC	HAC24A150 ,HAC60A150

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	HAC24x150	HAC60x150
Operating Voltage (47-63Hz) [Vrms]	24-280	48-660
Transient Overvoltage [Vpk]	600	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA]	1	1
Maximum Off-State dv/dt @ Maximum Rated Voltage [V/µSec]	500	500
Maximum Load Current [Arms](2)	150	150
Minimum Load Current [Arms]	0.15	0.15
Maximum Surge Current [Apk] 1 Cycle 50/60 Hz	1670/1750	1670/1750
Maximum I^2t for fusing (10msec)/(8.33msec)[A^2sec]	13950/12709	13950/12709
Maximum On-State Voltage Drop @ Rated Current [Vrms]	1.15	1.15
Thermal Resistance Juncti on to Case (Rjc) [°C/W]	0.15	0.15
Minimum Power Factor (with Maximum load)	0.5	0.5
Wire Size max (solid/stranded) [AWG/ IEC mm^2] (3)	2/0 / 67.4	2/0 / 67.4
Output Terminal Nut Torque Range [in lb (Nm)	225-300 (25.4-33.9)	225-300 (25.4-33.9)
HP Rating UL 508/IEC60957 [HP (KW)]: 240 VAC	10 (7.5)	N/A
HP Rating UL 508/IEC60947 [HP (KW)]: 480 VAC	N/A	25 (18.75)

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INPUT SPECIFICATIONS (1)

Description	HACxxD150	HACxxA150	HACxxB150
Control Voltage Range	4-32 VDC (10)	150-270 VAC	90-140 VAC
Minimum Turn-Off Voltage	4 VDC	150 VAC	90 VAC
Must Turn-Off Voltage	1 VDC	10 VAC	10 VAC
Minimum Input Current (for on-state) [mA]	9	6	7
Maximum Input Current [mA]	15	10	12
Nominal Input Impedance [Ohms]	Current Regulated	Current Regulated	Current Regulated
Maximum Turn-On Time [msec] (4)	½ Cycle	20	20
Maximum Turn-Off Time [msec]	½ Cycle	30	30

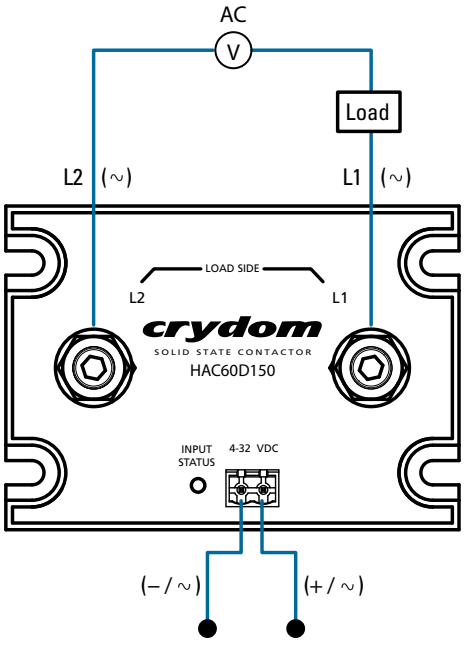
GENERAL SPECIFICATIONS (1)

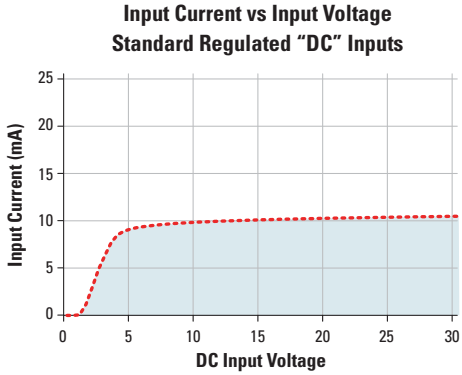
Description	Parameters
Dielectric Strength, Input/Output (50/60Hz)	3750 Vrms
Dielectric Strength, Input/Output/Base (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10^9 Ohm
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range	-30 to 80 °C
Ambient Storage Temperature Range	-40 to 125 °C
Weight (typical) lbs/grams	0.75/340.2
Housing Material	PBT 30% GF, UL 94 V-0
SSR Mounting Torque Range [in lbs/Nm]	18-20 (2-2.2)
LED Input Status Indicator (color)	YES (Green)
Humidity	85% non-condensing
Input Terminal (7)	Detachable barrier strip

GENERAL NOTES

(1) All parameters at 25°C unless otherwise specified.
(2) Heat sinking required, see derating curves.
(3) TRM3/0 lug terminal must be used.
(4) Turn-on time for Instantaneous turn-on versions is 0.02 msec.
(5) Instantaneous turn-on version is not recommended for capacitive loads. Use zero turn-on only.
(6) Output will self-trigger (450-600Vpk for HAC24 and 900-1200Vpk for HAC60), not suitable for capacitive loads.
(7) Connector/Plug Not included. See Suggested Mating Connectors/Plugs
(8) Elective Overvoltage Protection, "P" option.
(9) Load can be wired to either SSR output terminal 1 or 2.
(10) Increase minimum voltage by 1V for operations from -20 to -30°C

WIRING DIAGRAM





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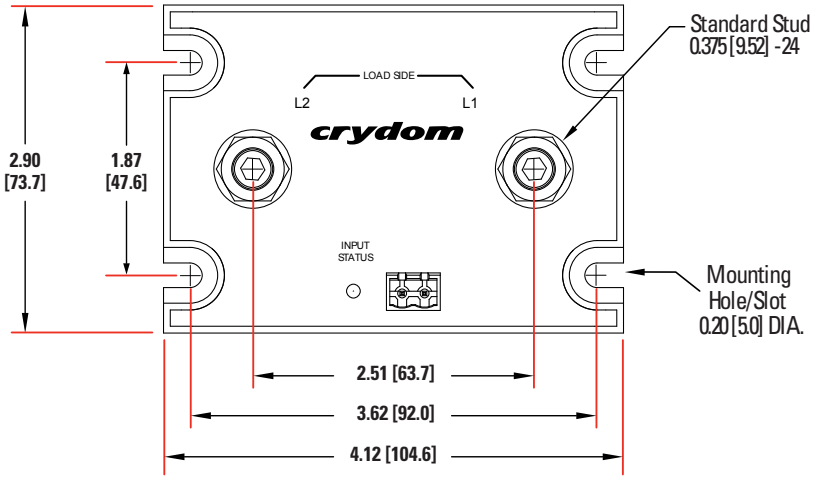
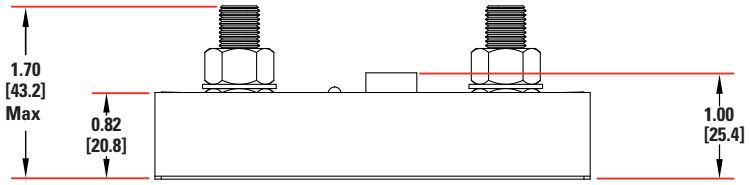
MECHANICAL SPECIFICATIONS

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





SUGGESTED MATING CONNECTORS/PLUGS (7)

FRONT WIRE ENTRY
Molex: 0395332002
Phoenix: MVSTBW 2,5/ 2 -ST-5,08

RIGHT ANGLE
Molex: 0395300002
Phoenix: MSTB 2,5/ 2 -ST-5,08

REAR WIRE ENTRY
Molex: 39533 -3002
Phoenix: MVSTBR 2,5/ 2 -ST-5,08

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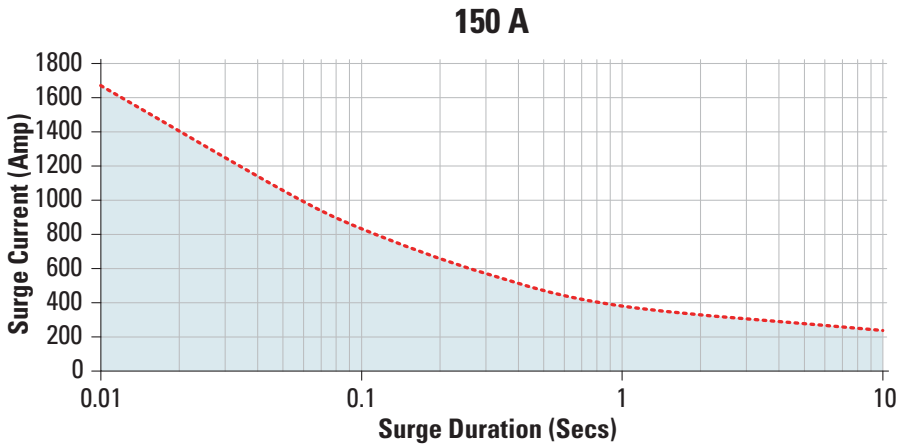
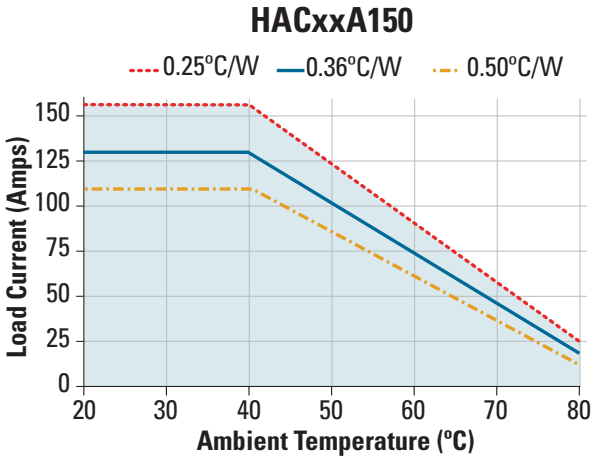
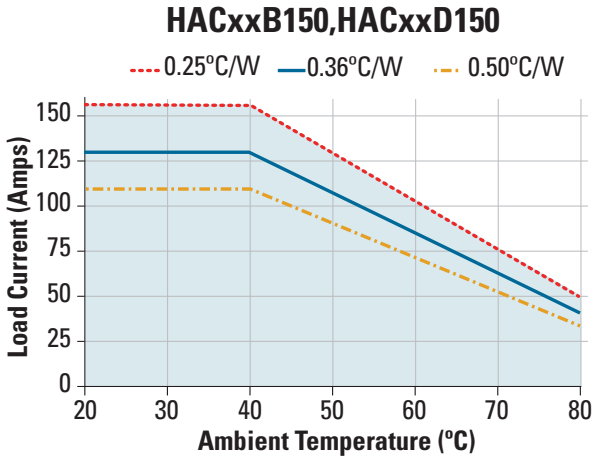
SURGE CURRENT INFORMATION



Non repetitive peak surge current at Tj initial 40°C

THERMAL DERATE INFORMATION (2)





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EQUIVALENT CIRCUIT BLOCK DIAGRAM

Diagram: HAC AC control

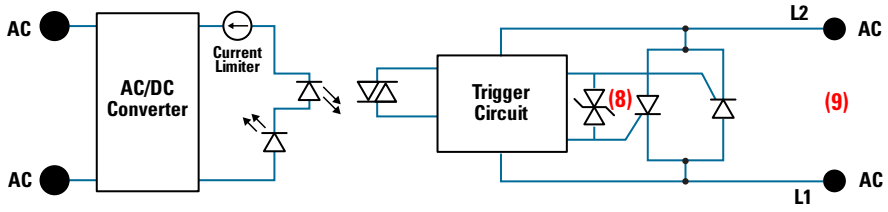
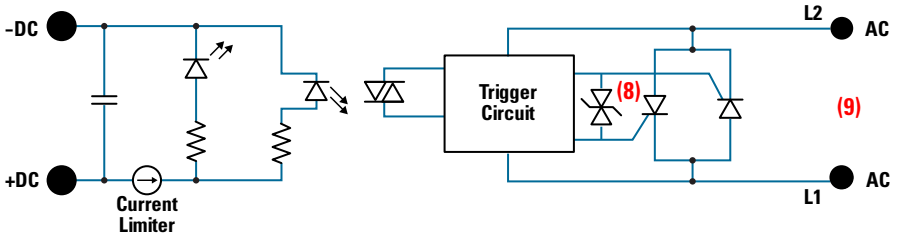


Diagram: HAC DC control



ACCESSORIES

Recommended Accessories

Hardware Kit	Heat Sink Part No.	Thermal Resistance [°C/W]	Lug Terminal	Thermal Pad
HK1	HS053	0.5	TRM3/0	HSP-5
	HS033	0.36		
	HS023	0.25		

AGENCY APPROVALS

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 : Electricsl Surges: Level 3

CE RoHS c UL us E116949

Rev. 091316

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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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