

GN Series

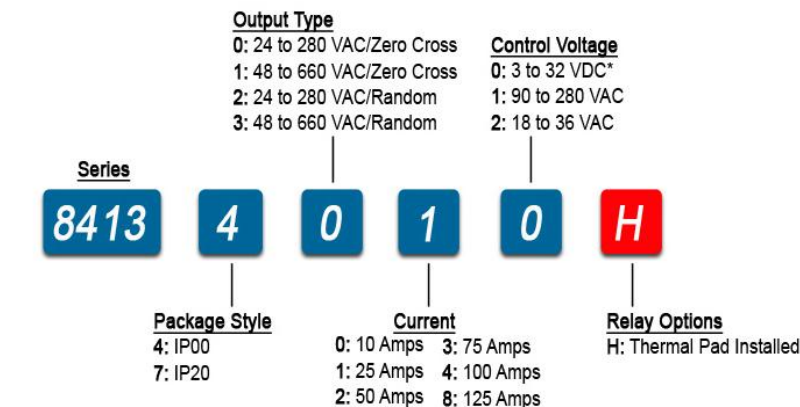


- Current ratings from 10 to 125 amps
- Output voltage 24-280 and 48-660 VAC
- Direct bond copper substrate
- LED input status indicator
- Available with IP20 "touch-safe" cover
- Transient protection built-in
- 100K cycle UL508 Endurance Rating (10-50A)
- UL/CSA/ TUV Approved, CE Compliant to EN60950-1

PRODUCT SELECTION

Control Voltage	10A	25A	50A	75A	100A	125A
3-32 VDC	84134000	84134010	84134020	84134030	84134040	84134080
18-36 VAC	84134002	84134012	84134022	84134032	84134042	84134082
90-280 VAC	84134001	84134011	84134021	84134031	84134041	84134081

AVAILABLE OPTIONS



■ Required for valid part number

■ For options only and not required for valid part number

*4 to 32 VDC for 48 to 660 VAC models

OUTPUT SPECIFICATIONS (Voltage) (1)

Description	280 VAC	660 VAC
Operating Voltage (47-63Hz) [Vrms]	24-280	48-660
Transient Overvoltage [Vpk, t = 1 min.]	600	1200
Maximum Off-State Leakage Current @ Rated Voltage [mAmps]	0.1	0.25
Static off-state dv/dt (V/μs, Ta = 25°C)	500	500

OUTPUT SPECIFICATIONS (Current) (1)

Description	10A	25A	50A	75A	100A	125A
Maximum Load Current (3) [Arms]	10A	25A	50A	75A	100A	125A
Minimum Load Current [mAmps]	50	50	100	100	100	100
1 cycle surge current (50Hz)	150	275	710	1050	1120	1600
1 cycle surge current (60Hz)	175	300	750	1100	1200	1700
1 second surge current (Apk, Ta = 25°C) 50/60 Hz	50	85	150	225	300	375
Forward Voltage Drop (Vpk @ Imax, Ta = 25°C)	1.35	1.35	1.35	1.3	1.3	1.3
I ² T (50Hz, 1/2 cycle)	110	380	2520	5500	6270	12800
I ² T (60Hz, 1/2 cycle)	120	370	2320	5000	6000	12050
Thermal Resistance Junction to baseplate (Rjb) [°C/W]	0.5	0.4	0.25	.0155	0.155	0.15
Minimum heat sink @ Ambient (for max current = °C/W & Ta)	3.0 @ 70°C	1.5 @ 50°C	1.0 @ 40°C	0.7 @ 40°C	0.5 @ 40°C	0.5 @ 40°C

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INPUT SPECIFICATIONS (1)

Description	8413xxx0	8413xxx2	8413xxx1
Input Voltage Range (2)	3-32 VDC	18-36 VAC	90-280 VAC (3)
Minimum Turn-On Voltage	3.0 VDC	18 Vrms	90 Vrms
Drop out Voltage	1.0 VDC	2 Vrms	10 Vrms
Maximum Input Current	14mA	20mA Arms	10mA Arms
Minimum input current (for on-state)	7mA	16mA Arms	5mA Arms
Input Resistance	Current Regulated		
Turn-on time (4)	8.33ms	20ms	20ms
Turn-off time	8.33ms	30ms	30ms

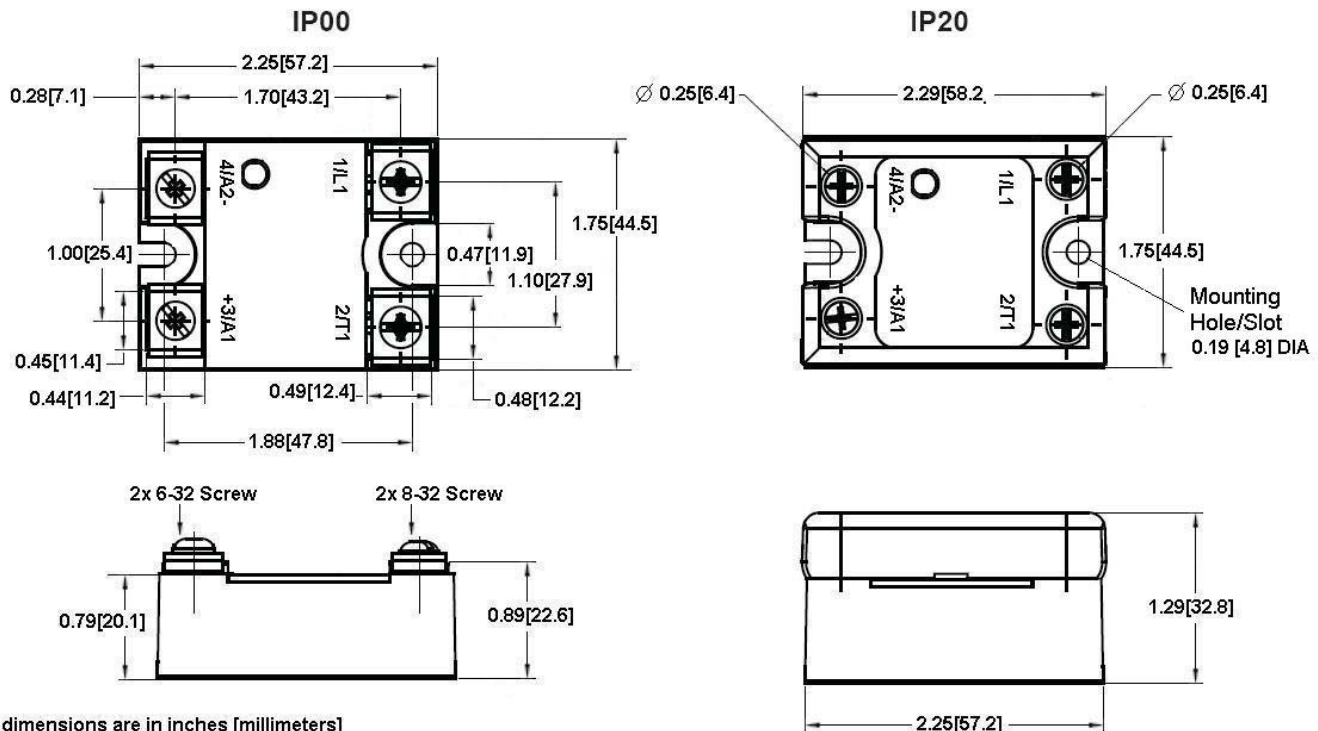
GENERAL SPECIFICATIONS

Description	Parameters
Ambient Operating Temperature Range (5)	-20 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to output isolation	4000 Vrms
Input/output to ground isolation	2500 Vrms
Input to output capacitance	8 pF
Housing Material	UL 94V0 (self extinguishing)
Status Indicating Display	Green LED
Weight (typical)	3.0 oz (86.5 g)
Input Terminal Screw Torque (6-32 screw) [in lbs/Nm]	8-10 / 0.9-1.1
Output Terminal Screw Torque (8-32 screw) [in lbs/Nm]	15-20 / 1.7-2.2

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) 4-32Vdc for 48-660Vac models
- 3) For ambient temperatures above 40°C the maximum control voltage must not exceed 250Vac.
- 4) Random turn-on time is 100µs (for DC control only).
- 5) Increase minimum input voltage by 1 Vdc for operation from -20° to -40°C

MECHANICAL SPECIFICATIONS

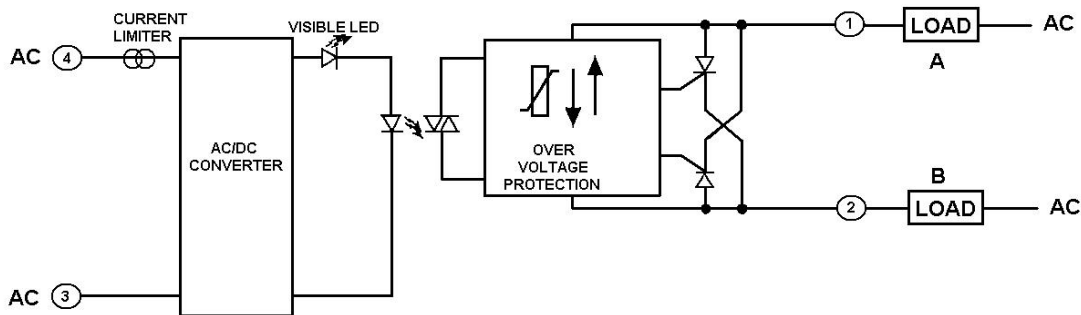
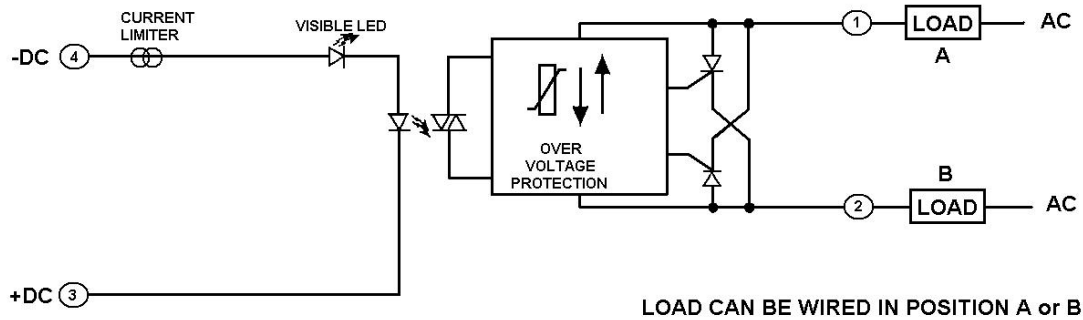


All dimensions are in inches [millimeters]

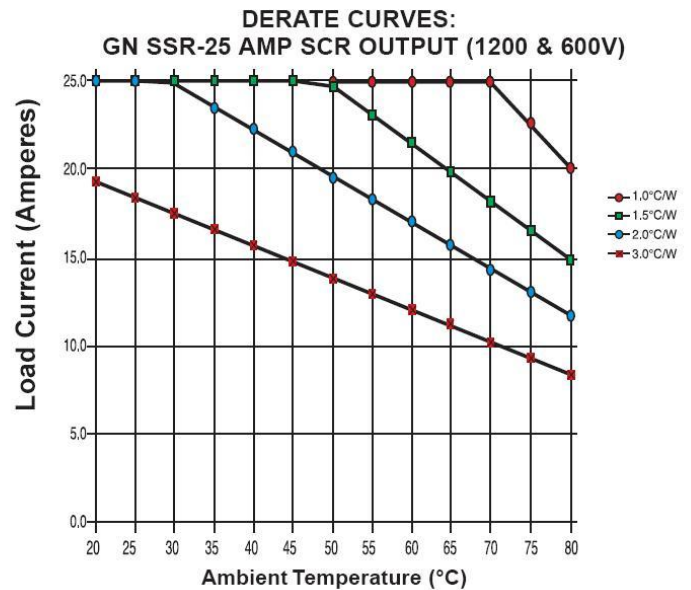
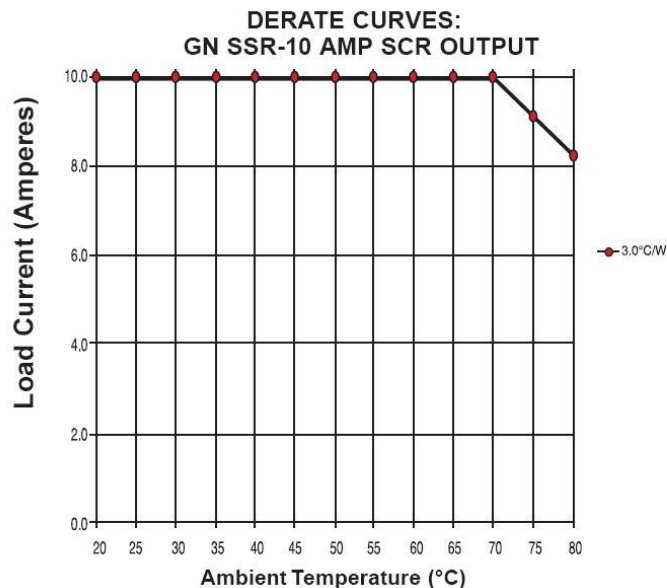
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WIRING DIAGRAM

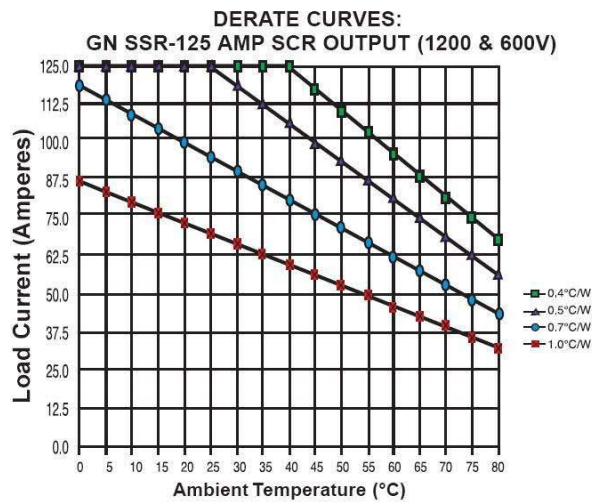
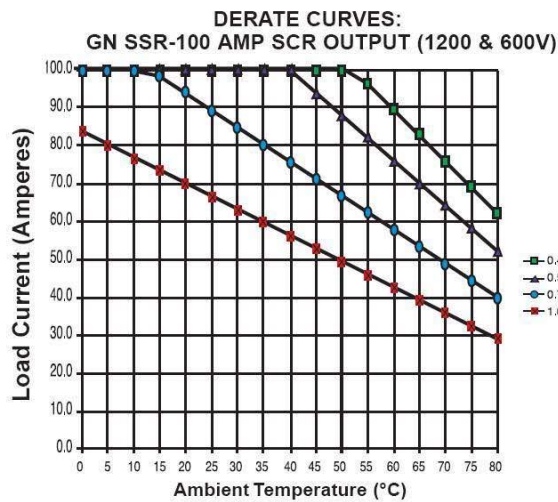
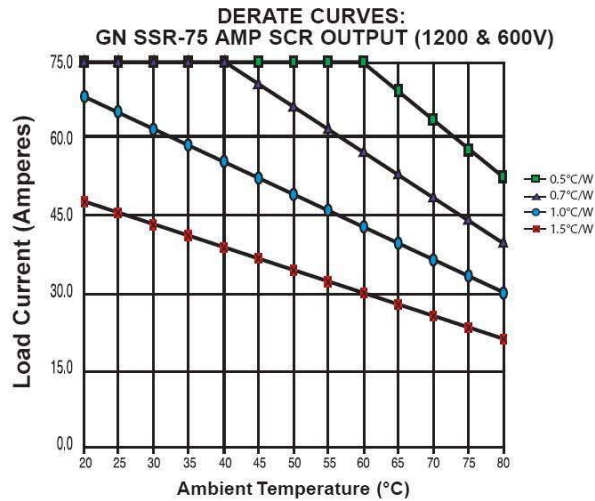
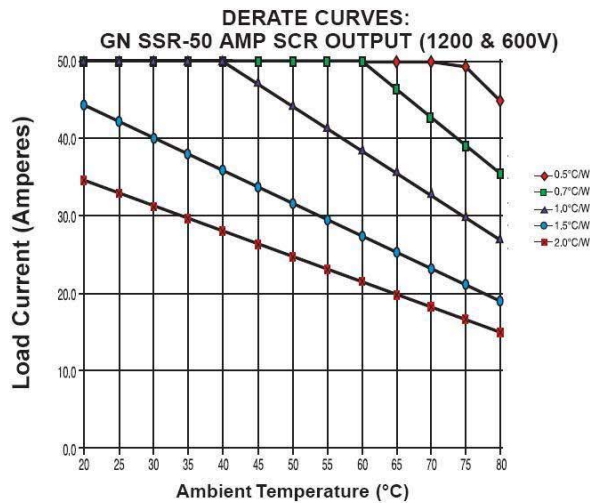


THERMAL DERATE INFORMATION



Heat sink part numbers corresponding to °C/W rating above: 3°C/W = HS301 1.5°C/W = HS151
2°C/W = HS201 1.0°C/W = HS103

THERMAL DERATE INFORMATION



Heat sink part numbers corresponding to °C/W rating above:

2°C/W = HS201	0.7°C/W = HS072
1.5°C/W = HS151	0.5°C/W = HS053
1.0°C/W = HS103	0.4°C/W = Consult Factory

AGENCY APPROVALS

EN60950 : Meets the requirements of sections 1.5: 1.7: 2.9: 2.10.5.3: 4.2: 4.5: 4.7:
 IEC 1000-4-2 : Electrostatic Discharge – Level 3
 IEC 1000-4-3 : Radiated Electromagnetic Noise – Level 3
 IEC 1000-4-4 : Electrically Fast Transients – Level 3
 IEC 1000-4-5 : Electrical Surges – Level 3
 IEC 1000-4-6 : Conducted Electromagnetic Noise – Level 3
 CISPIR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

UL E79183, **SP** LR38595

TÜV **CE** **RoHS**
Compliant

Rev. 072910

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 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar à morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

GNA5 Series

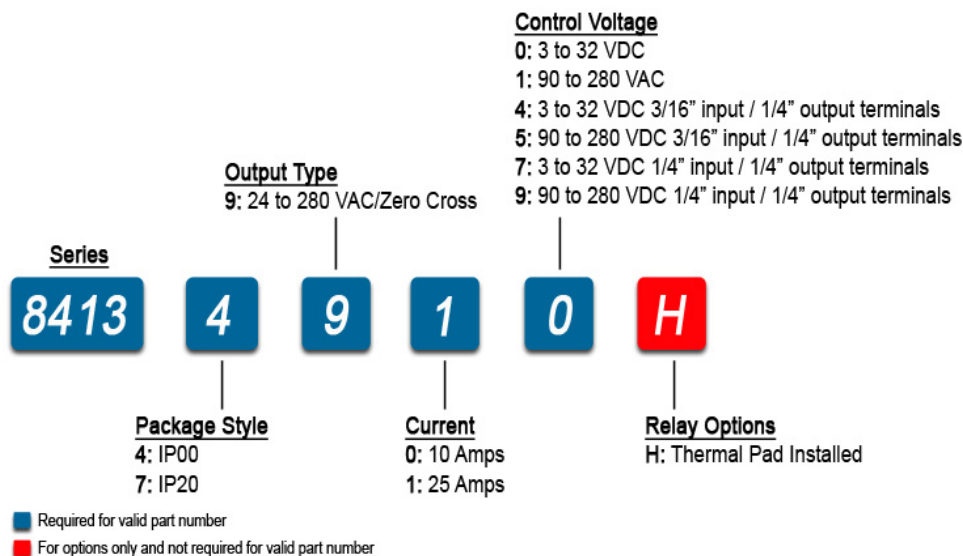


- Current ratings 10 and 25 amps
- Output voltage 24-280 VAC
- Triac Output
- LED input status indicator
- Available with or without IP20 "touch-safe" cover
- Screw or Fast-on Terminals

PRODUCT SELECTION

Control Voltage	10A	25A
3-32 VDC	84134900	84134910
90-280 VAC	84134901	84134911

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (Voltage) (1)

Description	280 VAC
Operating Voltage (47-63Hz) [Vrms]	24-280
Transient Overvoltage [Vpk, t = 1 min.]	600
Maximum Off-State Leakage Current @ Rated Voltage [mAmps]	0.1
Static off-state dv/dt (V/μs, Ta = 25°C)	500

OUTPUT SPECIFICATIONS (Current) (1)

Description	10A	25A
Maximum Load Current (3) [Arms]	10A	25A
Minimum Load Current [mAmps]	100	100
1 cycle surge current (50Hz)	90	230
1 cycle surge current (60Hz)	100	250
1 second surge current (Apk, Ta = 25°C) 50/60 Hz	30	75
Forward Voltage Drop (Vpk @ Imax, Ta = 25°C)	1.5	1.3
I²T (50Hz, 1/2 cycle)	40	260
I²T (60Hz, 1/2 cycle)	40	250
Thermal Resistance Junction to baseplate (Rjb) [°C/W]	2.2	1.7
Minimum heat sink @ Ambient (for max current = °C/W & Ta)	3.0 @ 40°C	1.0 @ 40°C

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INPUT SPECIFICATIONS (1)

Description	8413x9x0	8413x9x1
Input Voltage Range (2)	3-32 VDC	90-280 VAC
Minimum Turn-On Voltage	3.0 VDC	90 Vrms
Drop out Voltage	1.0 VDC	10 Vrms
Maximum Input Current	14mA	8.5mA
Minimum input current (for on-state)	9.5mA	5mA
Input Resistance	Current Regulated	Current Regulated
Turn-on time	8.33ms	20ms
Turn-off time	8.33ms	30ms

GENERAL SPECIFICATIONS

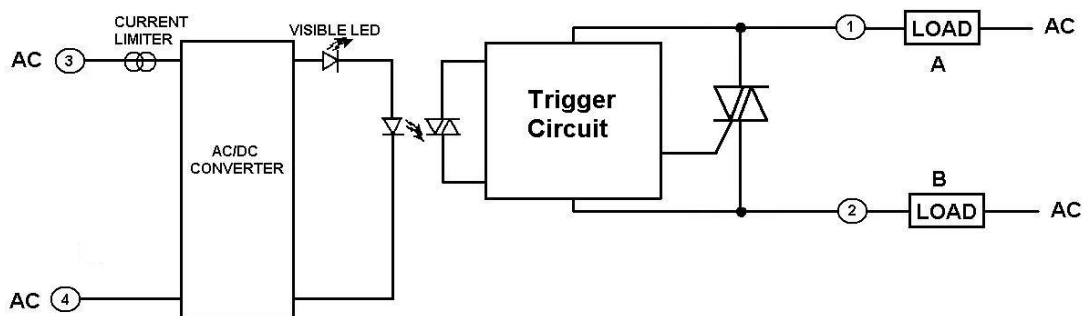
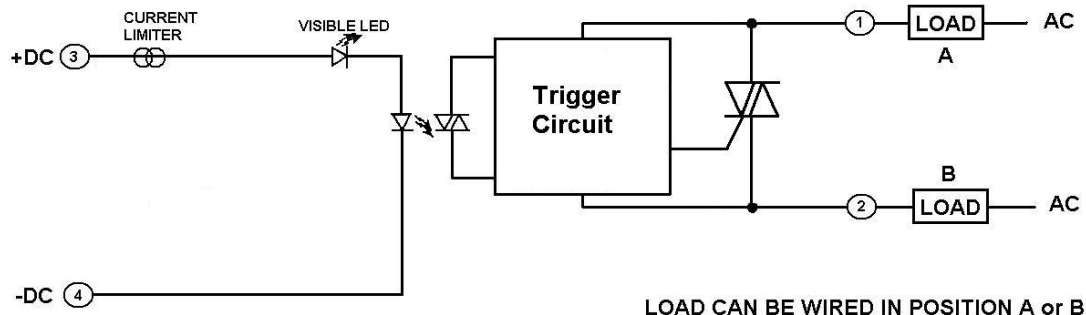
Description	Parameters
Ambient Operating Temperature Range	-20 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to output isolation	4000 Vrms
Input/output to ground isolation	2500 Vrms
Input to output capacitance	8 pF
Housing Material	UL 94V0 (self extinguishing)
Status Indicating Display	Green LED
Weight (typical)	3.0 oz (86.5 g)

GENERAL NOTES

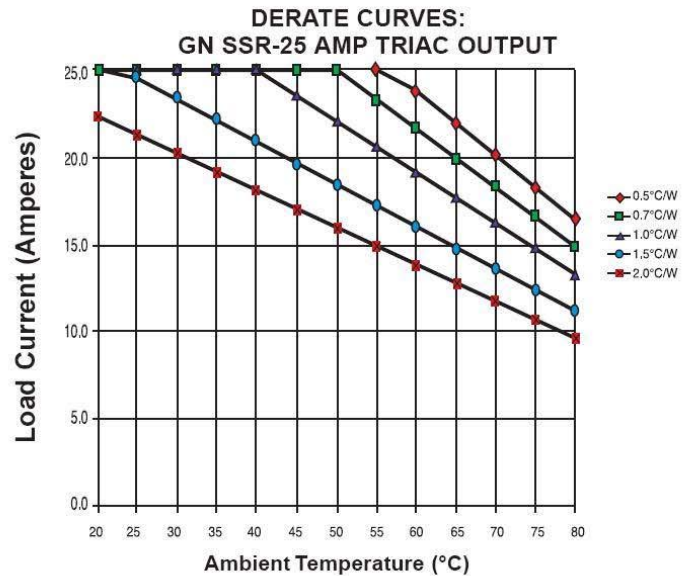
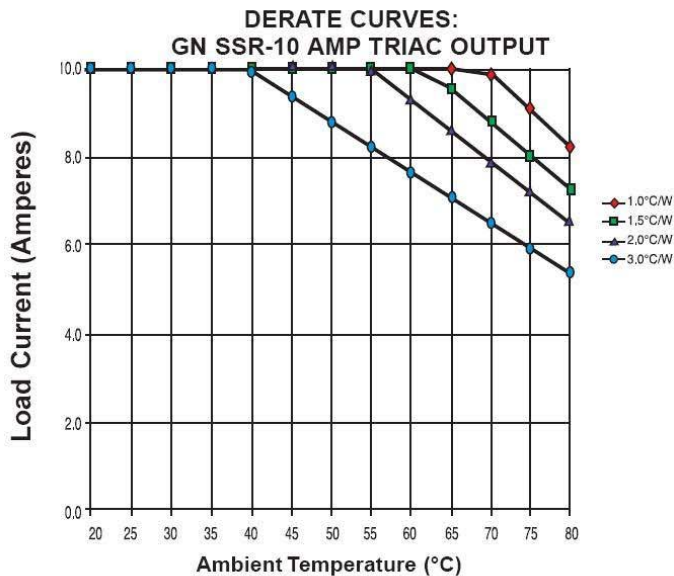
- 1) All parameters at 25°C unless otherwise specified.
- 2) For ambient temperatures above 40°C the maximum control voltage must not exceed 250Vac.

MECHANICAL SPECIFICATIONS

WIRING DIAGRAM



THERMAL DERATE INFORMATION



Heat sink part numbers corresponding to °C/W rating above:

3.0°C/W = HS301	1.0°C/W = HS103
2.0°C/W = HS201	0.7°C/W = HS072
1.5°C/W = HS151	0.5°C/W = HS053

AGENCY APPROVALS

IEC 1000-4-2 : Electrostatic Discharge – Level 3
 IEC 1000-4-3 : Radiated Electromagnetic Noise – Level 3
 IEC 1000-4-4 : Electrically Fast Transients – Level 3
 IEC 1000-4-5 : Electrical Surges – Level 3
 IEC 1000-4-6 : Conducted Electromagnetic Noise – Level 3
 CISPIR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

UL E79183, **SP** LR38595

TÜV **CE** **RoHS**
Compliant

Rev. 083110

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar à morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

280 VOLT DUAL SOLID STATE RELAYS

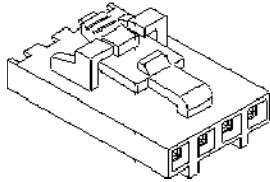
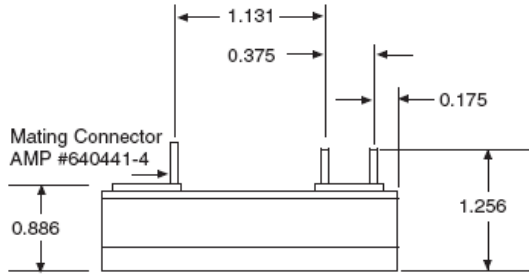
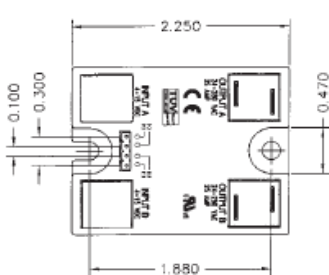


- 40 amp dual AC output relays
- Output voltage from 24 to 280 Vac
- Direct bond copper substrate
- Back to back dual SCR output
- 4000 Vac optical isolation
- Zero crossing or random turn on
- UL/cUL Recognized, CE Compliant



Output Specifications		
Voltage range (Vrms)	24-280Vac	
Peak Voltage (Vpk , t = 1 min.)	550	
Off-state leakage mArms	0.1	
(@ max. line voltage & Ta = 25°C)		
Output Current (Mounted on proper heat sink, see deratings)	25	40
Minimum Current (mArms)	100	100
1 cycle surge current 50-60 Hz (Apk, Ta = 25°C)	275-300	710-750
1 second surge current 50/60 Hz (Apk, Ta = 25°C)	85	150
Forward voltage drop (Vpk @ Imax, Ta = 25°C)	1.4	1.3
I ² T (50-60Hz, ½ cycle)	380-370	2520-2320
Rjb (thermal res. Junction to baseplate, °C/W)	0.6	0.4
Static off-state dv/dt (Vµs, Ta = 25°C)	500	500
Input Specifications		
Input voltage	4-15Vdc	17-32Vdc
Drop out voltage	1Vdc	1Vdc
Min. input current (for on-state)	7.5mA	13mA
Maximum input current	34mA	24mA
Input Resistance (Ohms)	500	1500
Turn-on time*	8.33msec	8.33msec
Turn-off time	8.33msec	8.33msec
* Random SSR's turn on in less than 100µs		
General Characteristics		
Operating Temperature (°C)	-40 to + 80	
Storage Temperature (°C)	-40 to + 100	
Input to output isolation	4000Vrms	
Input/output to ground isolation	2500Vrms	
Input to output capacitance	8pF (typical)	
Operating Frequency	47 to 63 Hz	
Housing Material	UL 94V0 (self extinguishing)	
Standards of Compliance		
CE Compliant with the LVD 73/23/EEC		
UL / cUL Recognized per UL 508 and CSA C22.2 no. 14-M91		

Part Numbers			1/4" Quick Connect	
Zero Crossing Output				
QC, Standard Input Pins	Rating	Output	Input	Part Number
	25 Amp	24-280Vac	4-15Vdc	84140000
	25 Amp	24-280Vac	17-32Vdc	84140010
	40 Amp	24-280Vac	4-15Vdc	84140200
	40 Amp	24-280Vac	17-32Vdc	84140210
	Random Fire Output			
	Rating	Output	Input	Part Number
	25 Amp	24-280Vac	4-15Vdc	84140100
	25 Amp	24-280Vac	17-32Vdc	84140110
	40 Amp	24-280Vac	4-15Vdc	84140300
40 Amp	24-280Vac	17-32Vdc	84140310	
Part Numbers			Locking Connector	
Zero Crossing Output				
QC, Mated/Locking Input	Rating	Output	Input	Part Number
	25 Amp	24-280Vac	4-15Vdc	84140800
	25 Amp	24-280Vac	17-32Vdc	84140810
	40 Amp	24-280Vac	4-15Vdc	84140900
	40 Amp	24-280Vac	17-32Vdc	84140910
	Random Fire Output			
	Rating	Output	Input	Part Number
	25 Amp	24-280Vac	4-15Vdc	84140801
	25 Amp	24-280Vac	17-32Vdc	84140811
	40 Amp	24-280Vac	4-15Vdc	84140901
40 Amp	24-280Vac	17-32Vdc	84140911	
Mating Connector: Molex # 14-56-2042				
Part Numbers			Screw Terminals	
Zero Crossing Output				
Standard Input Pins	Rating	Output	Input	Part Number
	25 Amp	24-280Vac	4-15Vdc	84140003
	25 Amp	24-280Vac	17-32Vdc	84140013
	40 Amp	24-280Vac	4-15Vdc	84140203
	40 Amp	24-280Vac	17-32Vdc	84140213
	Random Fire Output			
	Rating	Output	Input	Part Number
	25 Amp	24-280Vac	4-15Vdc	84140103
	25 Amp	24-280Vac	17-32Vdc	84140113
	40 Amp	24-280Vac	4-15Vdc	84140303
40 Amp	24-280Vac	17-32Vdc	84140313	



Mating Connector for 841408xxx and 841409xxx
Molex # 50-57-9404 without pins
Crimp Pins Molex # 16-02-0103

660 VOLT DUAL SOLID STATE RELAYS



- ▶ 40 amp dual AC output relays
- ▶ Output voltage from 48 to 660 Vac
- ▶ Direct bond copper substrate
- ▶ Back to back dual SCR output
- ▶ 4000 Vac optical isolation
- ▶ Zero crossing or random turn on
- ▶ UL/cUL Recognized, CE Compliant



Output Specifications

48-660Vac	
Voltage range (Vrms)	
Peak Voltage (Vpk , t = 1 min.)	1000
Off-state leakage mArms	0.25
(@ max. line voltage & Ta = 25°C)	
Output Current (Mounted on proper heat sink, see deratings)	2540
Minimum Current (mArms)	100100
1 cycle surge current 50-60 Hz (Apk, Ta = 25°C)	275-300710-750
1 second surge current 50/60 Hz (Apk, Ta = 25°C)	85150
Forward voltage drop (Vpk @ Imax, Ta = 25°C)	1.41.3
I ² T (50-60Hz, ½ cycle)	380-3702520-2320
Rjb (thermal res. Junction to baseplate, °C/W)	0.60.4
Static off-state dv/dt (Vµs, Ta = 25°C)	500500

Input Specifications

	4-15Vdc	17-32Vdc
Input voltage	4-15Vdc	17-32Vdc
Drop out voltage	1Vdc	1Vdc
Min. input current (for on-state)	7.5mA	13mA
Maximum input current	34mA	24mA
Input Resistance (Ohms)	500	1500
Turn-on time*	8.33msec	8.33msec
Turn-off time	8.33msec	8.33msec

* Random SSR's turn on in less than 100µs

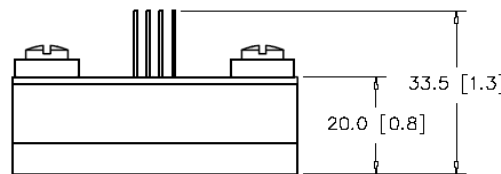
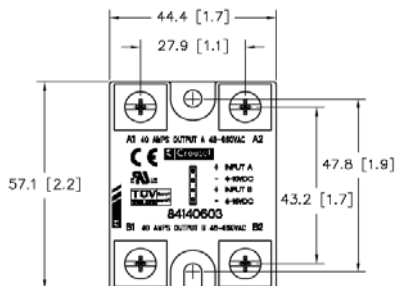
General Characteristics

Operating Temperature (°C)	-40 to + 80
Storage Temperature (°C)	-40 to + 100
Input to output isolation	4000Vrms
Input/output to ground isolation	2500Vrms
Input to output capacitance	8pF (typical)
Operating Frequency	47 to 63 Hz
Housing Material	UL 94V0 (self extinguishing)

Standards of Compliance

CE Compliant with the LVD 73/23/EEC

UL / cUL Recognized per UL 508 and CSA C22.2 no. 14-M91



Part Numbers 1/4" Quick Connect

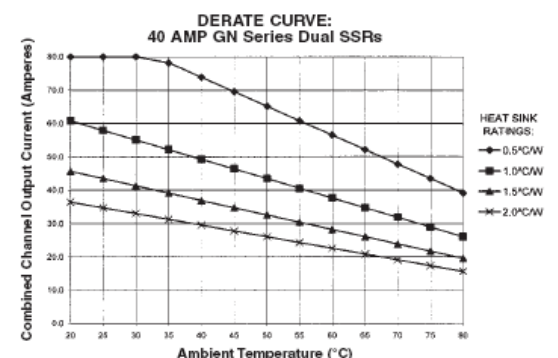
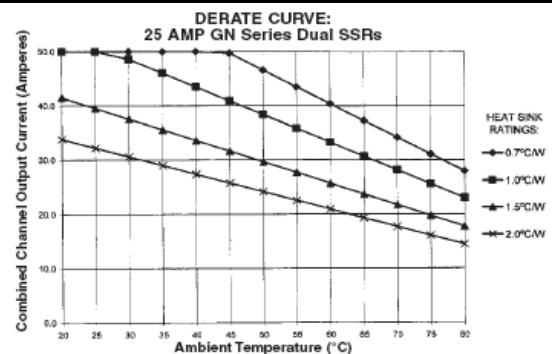
		Zero Crossing Output	
Rating	Output	Input	Part Number
25 Amp	48-660Vac	4-15Vdc	84140500
25 Amp	48-660Vac	17-32Vdc	84140510
40 Amp	48-660Vac	4-15Vdc	84140600
40 Amp	48-660Vac	17-32Vdc	84140610

		Random Fire Output	
Rating	Output	Input	Part Number
25 Amp	48-660Vac	4-15Vdc	84140501
25 Amp	48-660Vac	17-32Vdc	84140511
40 Amp	48-660Vac	4-15Vdc	84140601
40 Amp	48-660Vac	17-32Vdc	84140611

Part Numbers Screw Terminals

		Zero Crossing Output	
Rating	Output	Input	Part Number
25 Amp	48-660Vac	4-15Vdc	84140503
25 Amp	48-660Vac	17-32Vdc	84140513
40 Amp	48-660Vac	4-15Vdc	84140603
40 Amp	48-660Vac	17-32Vdc	84140613

		Random Fire Output	
Rating	Output	Input	Part Number
25 Amp	48-660Vac	4-15Vdc	84140530
25 Amp	48-660Vac	17-32Vdc	84140531
40 Amp	48-660Vac	4-15Vdc	84140630
40 Amp	48-660Vac	17-32Vdc	84140631



Products and specifications subject to change without notice

Order/Technical Support - Tel: (877) 502-5500 / Fax: (619) 710-8540 / www.crouzet-usa.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370

Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com

GNA3 Series

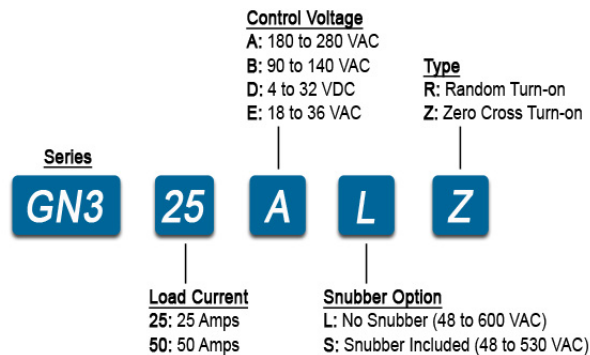


- Current ratings of 25 and 50 amps
- Output voltage 48-600 VAC
- Direct bond copper substrate
- LED input status indicator
- IP20 "touch-safe" cover
- Transient protection built-in
- 100K-Cycle UL508 endurance rating for enhanced reliability
- UL/CSA/TUV Approved, CE & RoHS Compliant

PRODUCT SELECTION

Control Voltage	25A	50A
4-32 VDC	GN325DLZ	GN350DLZ
18-36 VAC	GN325ELZ	GN350ELZ
90-140 VAC	GN325BLZ	GN350BLZ
180-280 VAC	GN325ALZ	GN350ALZ

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	25A	50A
Operating Voltage (47-63Hz) [Vrms]	48-600	48-600
Transient Overvoltage [Vpk, t = 1 min.]	1200	1200
Static off-state dv/dt (V μ s, Ta = 25°C) (2)	500	500
Maximum Load Current [Arms] (3)	25A	50A
Minimum Load Current [mArms]	100	100
Maximum Off-State Leakage Current [mArms] (4)	0.06	0.06
1 cycle surge current (50Hz)	275	710
1 cycle surge current (60Hz)	300	750
1 second surge current (Apk, Ta = 25°C) 50/60 Hz	85	150
Forward Voltage Drop (Vpk @ I _{max} , Ta = 25°C)	1.35	1.35
I ² T (50Hz, 1/2 cycle)	380	2520
I ² T (60Hz, 1/2 cycle)	370	2320
Thermal Resistance Junction to baseplate (R _{jb}) [°C/W]	0.24	0.12
HP Ratings at 120V / FLC	0.75 / 6.4A	1.5 / 12A
HP Ratings at 240V / FLC	1 / 4.2A	3 / 9.6A
HP Ratings at 480V / FLC	3 / 4.8A	7.5 / 11A
HP Ratings at 600V / FLC	5 / 6.1A	10 / 11A
Min/Max wire size [AWG]	16/8	16/8
Screw Torque Range [in lbs/Nm]	18-20 / 2.03-2.26	18-20 / 2.03-2.26

INPUT SPECIFICATIONS (1)

Description	GN3xxDx	GN3xxEx	GN3xxBx	GN3xxAx
Input Voltage Range (5)	4-32 VDC	18-36 VAC	90-140 VAC	180-280 VAC
Minimum Turn-On Voltage	4.0 VDC	18 Vrms	90 Vrms	180 Vrms
Drop out Voltage	1.0 VDC	10 Vrms	10 Vrms	10 Vrms
Maximum Input Current	35mA	20mA Arms	16mA Arms	16mA Arms
Minimum input current (for on-state)	24mA	15mA Arms	7mA Arms	7mA Arms
Input Resistance	Current Regulated			
Turn-on time (5)	8.33ms	20ms	20ms	20ms
Turn-off time	8.33ms	30ms	30ms	30ms
Min/Max wire size [AWG]	24/14			
Screw Torque Range [in lbs/Nm]	8-10 / 0.9-1.13			

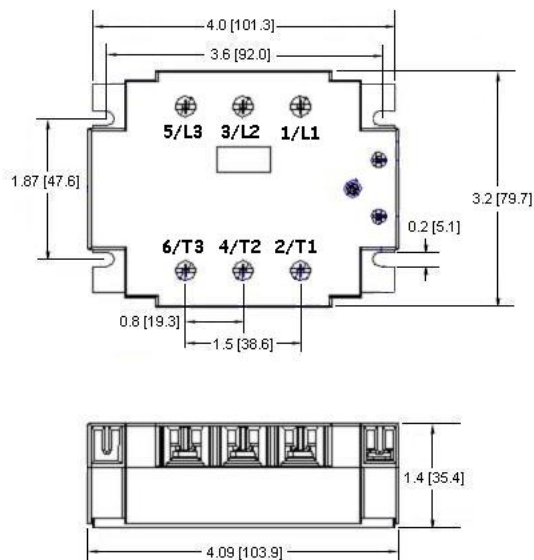
GENERAL SPECIFICATIONS

Description	Parameters
Ambient Operating Temperature Range (5)	-40 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to output isolation	4000 Vrms
Input/output to ground isolation	2500 Vrms
Input to output capacitance	8 pF
Housing Material	UL 94V0 (self extinguishing)
Status Indicating Display	Green LED
Weight (typical)	0.79 lbs (360 g)

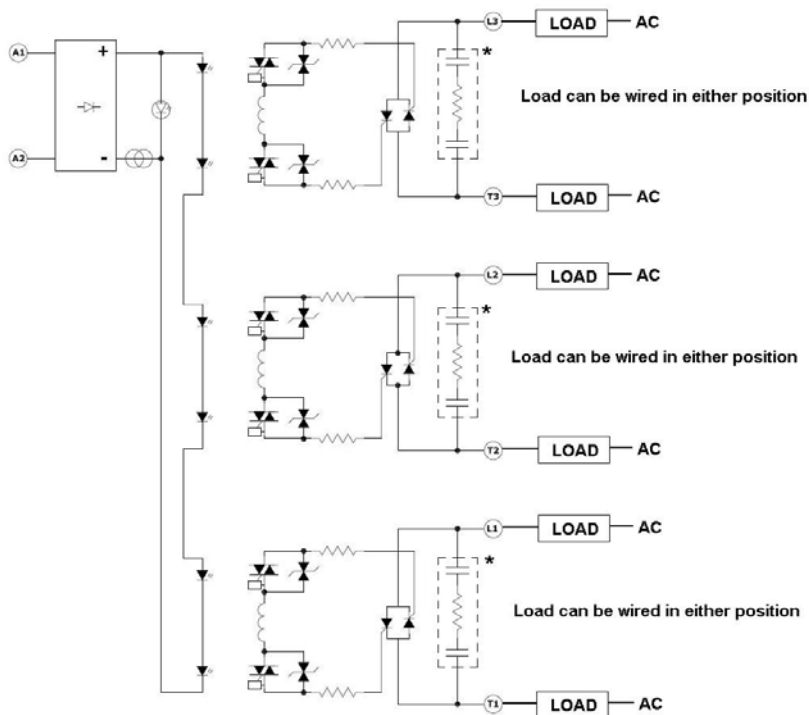
GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) When mounted to the proper size heat sink (see derating curves)
- 3) Measured between 1/L1 and 2/T1 or 3/L2 and 4/T2
- 4) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.1.1.1

MECHANICAL SPECIFICATIONS



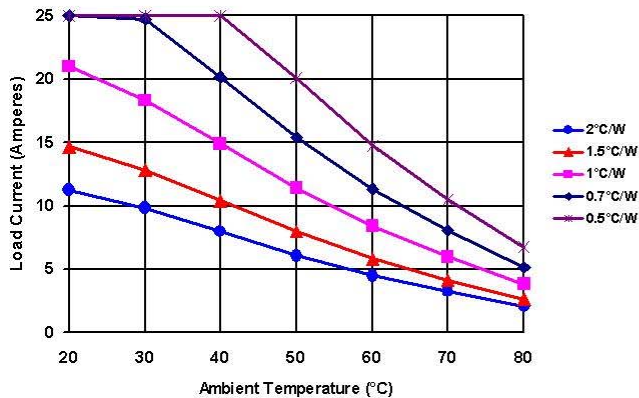
WIRING DIAGRAM



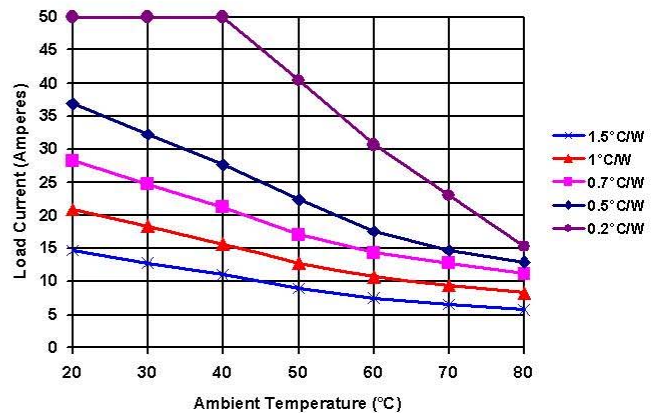
* Snubber not included in all models.

THERMAL DERATE INFORMATION

DERATE CURVES:
GN3 3 Phase SSR 25A



DERATE CURVES:
GN3 3 Phase SSR 50A



Heat Sink part numbers corresponding to °C/W ratings above: 1.0°C/W = HS103 0.5°C/W = HS051
All others consult factory

AGENCY APPROVALS

IEC 62314

IEC 60068-2-6 35mm / 10-55Hz

IEC 60068-2-27 15G / 11ms

IEC 1000-4-2 : Electrostatic Discharge – Level 3

IEC 1000-4-3 : Radiated Electromagnetic Noise – Level 3

IEC 1000-4-4 : Electrically Fast Transients – Level 3

IEC 1000-4-5 : Electrical Surges – Level 3

IEC 1000-4-6 : Conducted Electromagnetic Noise – Level 3

CISPIR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments



E79183,



LR38595



Rev. 061310

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar à morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

GN0 Series



- Three-phase Motor Reversing solid-state relay
- Ratings from 25A and 50A per phase @ 48-530 VAC
- SCR output for heavy industrial loads
- DC control
- LED input status indicator
- 100K cycle UL508 Endurance Rating
- UL/CSA/ TUV Approved, CE Compliant to EN60950-1

PRODUCT SELECTION

Control Voltage	25A	50A
4-32 VDC	GN025DSR	GN050DSR

AVAILABLE OPTIONS

OUTPUT SPECIFICATIONS (1)

Description	25A	50A
Operating Voltage (47-63Hz) [Vrms]	48-530	48-530
Maximum Load Current [Arms] (2)	25	50
Transient Overvoltage [Vpk]	1100	1100
Maximum Off-State Leakage Current @ Rated Voltage [mArms] (3)	6	6
Minimum Load Current [Arms]	0.1	0.1
Maximum Surge Current 50/60 Hz (1 cycle) [Apk]	475/500	710/750
1 Second Surge Current 50/60 Hz [Apk]	100	150
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.35	1.35
Maximum I ² T for Fusing (50/60 Hz, 1/2 cycle) [A ² sec]	1130/1030	2520/2320
Thermal Resistance Junction to Case (Rjc) [°C/W]	0.26	0.25
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (4)	500	500
HP Ratings at 120V / FLC	0.75 / 6.4A	1.5 / 12A
HP Ratings at 240V / FLC	1 / 4.2A	3 / 9.6A
HP Ratings at 480V / FLC	3 / 4.8A	7.5 / 11A
HP Ratings at 600V / FLC	5 / 6.1A	10 / 11A

INPUT SPECIFICATIONS (1)

Description	Parameters
Control Voltage Range	4-32 VDC
Minimum Turn-On Voltage	4.0 VDC
Minimum Turn-Off Voltage	1.0 VDC
Minimum Input Current (for on-state)	17mA
Maximum Input Current	25mA
Input Resistance	Current Regulated
Maximum Turn-On Time [msec]	150
Maximum Turn-Off Time [msec]	1/2 Cycle
Interlocking Time [msec]	100

GENERAL SPECIFICATIONS

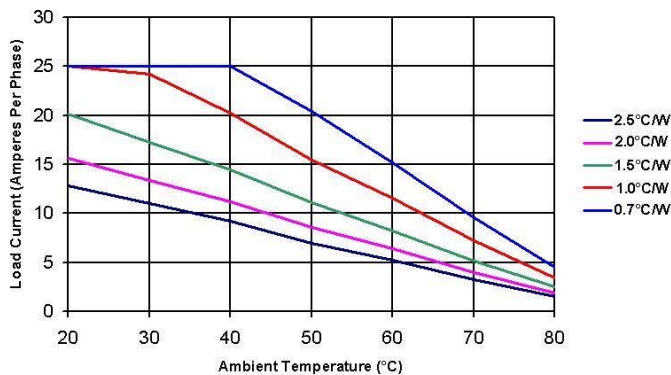
Description	Parameters
Input to Output Isolation	4000 Vrms
Input/ Output to Ground Isolation	2500 Vrms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 100 °C
Weight (typical)	13.1 oz (370g)
Housing Material	UL 94V0 (self extinguishing)
Input Terminal Screw Torque Range:[in lbs/Nm]	16.8/1.9
Output Terminal Screw Torque Range:[in lbs/Nm]	21.2/2.4

GENERAL NOTES

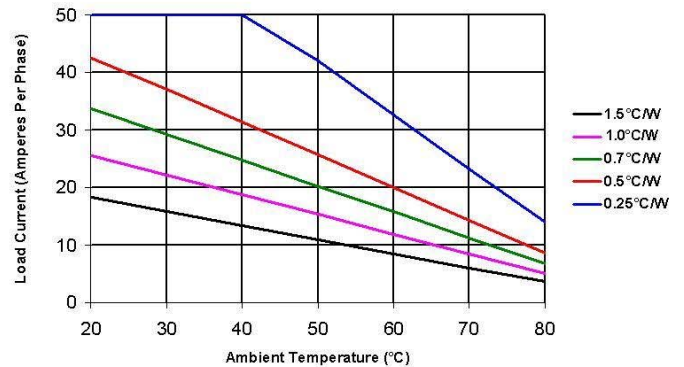
- 1) All parameters at 25°C unless otherwise specified.
- 2) When mounted to the proper size heat sink (see derating curves)
- 3) Measured between 1/L1 and 2/T1 or 3/L2 and 4/T2
- 4) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1

THERMAL DERATE INFORMATION

DERATING CURVES:
GN0 - 25AMP

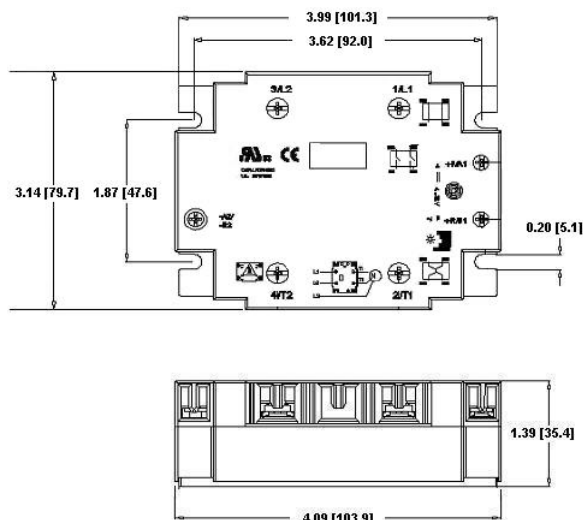


DERATING CURVES:
GN0 - 50AMPS



Heat Sink part numbers corresponding to °C/W ratings above: 1.0°C/W = HS103 0.5°C/W = HS051
All others consult factory

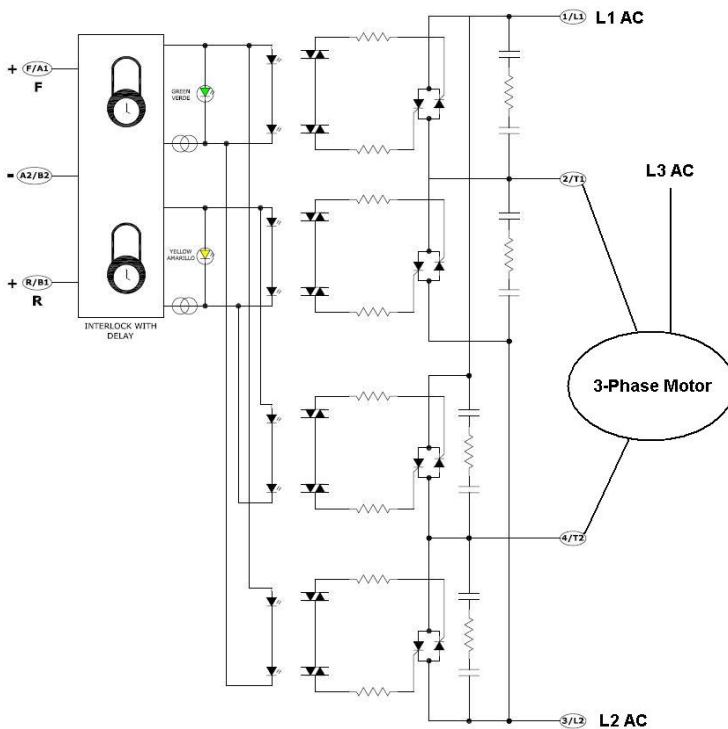
MECHANICAL SPECIFICATIONS



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WIRING DIAGRAM



AGENCY APPROVALS

EN60950 : Meets the requirements of sections 1.5: 1.7: 2.9: 2.10.5.3: 4.2: 4.5: 4.7:
IEC 62314

IEC 60068-2-6 35mm / 10-55Hz

IEC 60068-2-27 15G / 11ms

IEC 1000-4-2 : Electrostatic Discharge – Level 3

IEC 1000-4-3 : Radiated Electromagnetic Noise – Level 3

IEC 1000-4-4 : Electrically Fast Transients – Level 3

IEC 1000-4-5 : Electrical Surges – Level 3

IEC 1000-4-6 : Conducted Electromagnetic Noise – Level 3

CISPR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments



Rev. 061810

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar à morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

GNR 22.5MM Series

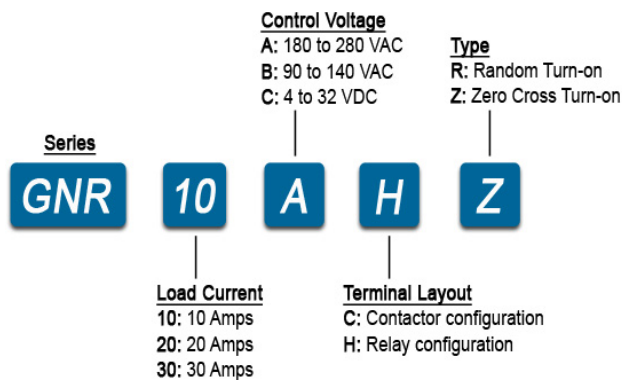


- Current ratings 10, 20 and 30 amps
- Output voltage 24-280 and 48-600 VAC
- Direct Bond Copper (DBC) Substrate
- LED input status indicator
- 100K cycle UL508 Endurance Rating
- UL / CSA / TUV Approved, CE Compliant
- EMC Compliant Level 3
- DIN-RAIL or Panel Mount
- Zero-Crossing or Random Turn-on

PRODUCT SELECTION

Control Voltage	10A	20A	30A
4-32 VDC	GNR10DHz	GNR20DHz	GNR30DHz
90-140 VAC	GNR10BHz	GNR20BHz	GNR30BHz
1800-280 VAC	GNR10AHz	GNR20AHz	GNR30AHz

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (Voltage) (1)

Description	GNR10	GNR20/30
Operating Voltage (47-63Hz) [Vrms]	24-280	48-600
Transient Overvoltage [Vpk, t = 1 min.]	600	1100
Maximum Off-State Leakage Current @ Rated Voltage [mAmps]	0.1	0.1
Static off-state dv/dt (V/μs, Ta = 25°C) (2)	500	500

OUTPUT SPECIFICATIONS (Current) (1)

Description	GNR10x	GNR20x	GNR30x
Maximum Load Current [Amps]	10A	20A	30A
Minimum Load Current [mAmps]	100	100	100
1 cycle surge current (50Hz)	190	275	710
1 cycle surge current (60Hz)	200	300	750
1 second surge current (Apk, Ta = 25°C) 50/60 Hz	65	85	150
Forward Voltage Drop (Vpk @ Imax, Ta = 25°C)	1.5	1.35	1.35
I ² T (50Hz, 1/2 cycle)	180	380	2520
I ² T (60Hz, 1/2 cycle)	160	370	2320
HP Ratings at 120V / FLC	NA	1/2 / 9.8A	3/4 / 13.8A
HP Ratings at 240V / FLC	NA	1 / 8A	1 / 8A
Min/Max stranded wire	16/8 AWG	16/8 AWG	16/8 AWG
Min/Max solid wire	16/10 AWG	16/10 AWG	16/10 AWG

INPUT SPECIFICATIONS (1)

Description	GNRxxDx	GNRxxBx	GNRxxAx
Input Voltage Range (3)	4-32 VDC	90-140VAC	180-280VAC
Minimum Turn-On Voltage	4.0 VDC	90 Vrms	180Vrms
Drop out Voltage	1.0 VDC	10 Vrms	10 Vrms
Maximum Input Current	19mA	23mA rms	23mA rms
Minimum input current (for on-state)	16mA	6mA rms	8mA rms
Input Resistance	Current Regulated	Current Regulated	Current Regulated
Turn-on time (4)	8.33ms	20ms	20ms
Turn-off time	8.33ms	30ms	30ms
Min/Max stranded/solid wire	24/16AWG	24/16AWG	24/16AWG

GENERAL SPECIFICATIONS

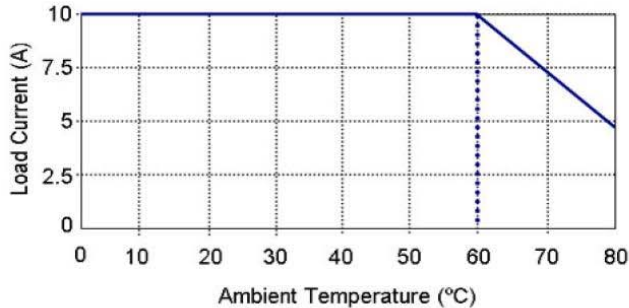
Description	Parameters
Ambient Operating Temperature Range (3)	-20 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to output isolation	4000 Vrms
Input/output to ground isolation	2500 Vrms
Input to output capacitance	8 pF
Housing Material	UL 94V0 (self extinguishing)
Status Indicating Display	Green LED
Weight (typical)	0.5lbs (225 g)

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-433, paragraph 13.11.1
- 3) For 180-280VAC control, maximum Ambient operating temperature is 60°C
- 4) Random turn-on time R suffix is 100µs (for DC control only).

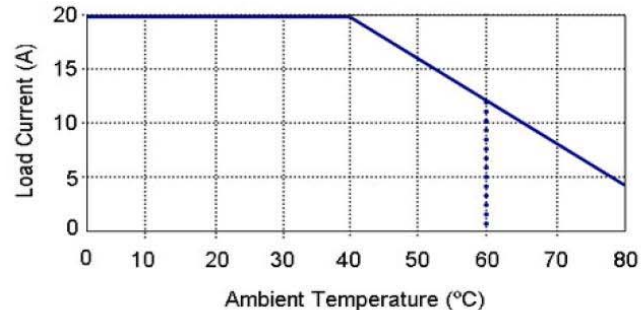
THERMAL DERATE INFORMATION

CURRENT v. TEMP DERATE CURVE
GNR10xxx 22.5MM SSR



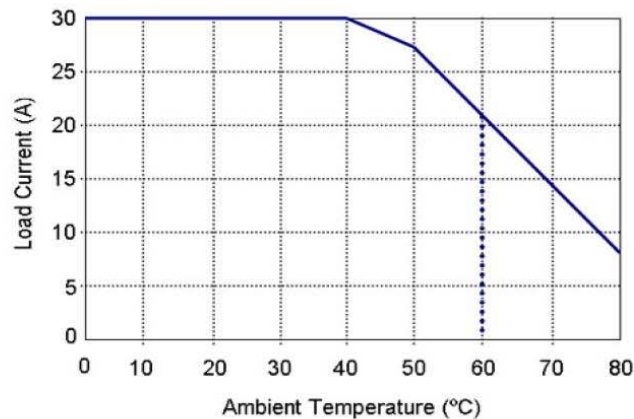
*GNR10A Series rated to 60°C max ambient

CURRENT v. TEMP DERATE CURVE
GNR20xxx 22.5MM SSR



*GNR20A Series rated to 60°C max ambient

CURRENT v. TEMP DERATE CURVE
GNR30xxx 22.5MM SSR



*GNR30A Series rated to 60°C max ambient

AGENCY APPROVALS

IEC 62314
IEC 60068-2-6 : 35mm/10-55Hz
IEC 60068-2-27 : 15G/11ms
IEC 61000-4-2 : Electrostatic Discharge – Level 3
IEC 61000-4-3 : Radiated Electromagnetic Noise – Level 3
IEC 61000-4-4 : Electrically Fast Transients – Level 3
IEC 61000-4-5 : Electrical Surges – Level 3
IEC 61000-4-6 : Conducted Electromagnetic Noise – Level 3
CISPR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

UL E79183, **SP** LR38595

TÜV **CE** **RoHS**
Compliant

Rev. 061310


DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO

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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. • Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen • Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. • Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura • Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO • Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento • Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar à morte ou lesões sérias.
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ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

 WARNING / AVERTISSEMENT / WARNUNG / ADVERTENCIA / AVVERTENZA / AVISO		
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

GNR 45MM Series

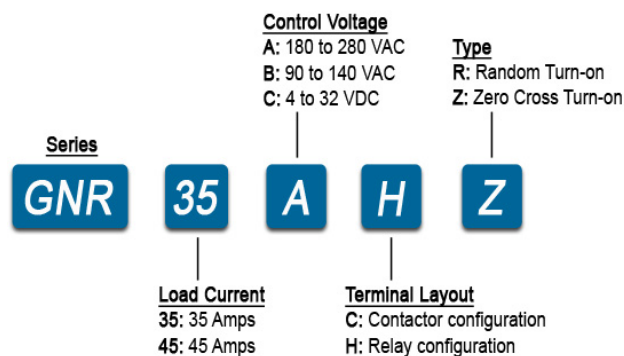


- Current ratings 35 and 45 amps
- Output voltage 48-600 VAC
- Direct Bond Copper (DBC) Substrate
- LED input status indicator
- 100K cycle UL508 Endurance Rating
- UL / CSA / TUV Approved, CE Compliant
- EMC Compliant Level 3
- DIN-RAIL or Panel Mount
- Zero-Crossing or Random Turn-on

PRODUCT SELECTION

Control Voltage	35A	45A
4-32 VDC	GNR35DHZ	GNR45DHZ
90-140 VAC	GNR35BHZ	GNR45BHZ
180-280 VAC	GNR35AHZ	GNR45AHZ

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (Voltage) (1)

Description	GNR35	GNR45
Operating Voltage (47-63Hz) [Vrms]	48-600	48-600
Transient Overvoltage [Vpk, t = 1 min.]	1100	1100
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.25	0.25
Static off-state dv/dt (V μ s, Ta = 25°C) (2)	500	500

OUTPUT SPECIFICATIONS (Current) (1)

Description	GNR35	GNR45
Maximum Load Current [Arms]	35A	45A
Minimum Load Current [mArms]	100	100
1 cycle surge current (50Hz)	655	710
1 cycle surge current (60Hz)	700	750
1 second surge current (Apk, Ta = 25°C) 50/60 Hz	130	150
Forward Voltage Drop (Vpk @ Imax, Ta = 25°C)	1.35	1.35
I ² T (50Hz, 1/2 cycle)	2230	2520
I ² T (60Hz, 1/2 cycle)	2020	2320
HP Ratings at 120V / FLC	1 / 16A	1 / 16A
HP Ratings at 240V / FLC	1 / 8A	1 / 8A
HP Ratings at 480V / FLC	1 / 4A	1 / 4A
Min/Max stranded wire	16/8 AWG	16/8 AWG
Min/Max solid wire	16/10 AWG	16/10 AWG

INPUT SPECIFICATIONS (1)

Description	GNRxxDx	GNRxxBx	GNRxxAx
Input Voltage Range (3)	4-32 VDC	90-140VAC	180-280VAC
Minimum Turn-On Voltage	4.0 VDC	90 Vrms	180Vrms
Drop out Voltage	1.0 VDC	10 Vrms	10 Vrms
Maximum Input Current	19mA	5mA _{rms}	6mA _{rms}
Minimum input current (for on-state)	16mA	6mA _{rms}	8mA _{rms}
Input Resistance	Current Regulated	Current Regulated	Current Regulated
Turn-on time (4)	8.33ms	20ms	20ms
Turn-off time	8.33ms	30ms	30ms
Min/Max stranded/solid wire	24/16AWG	24/16AWG	24/16AWG

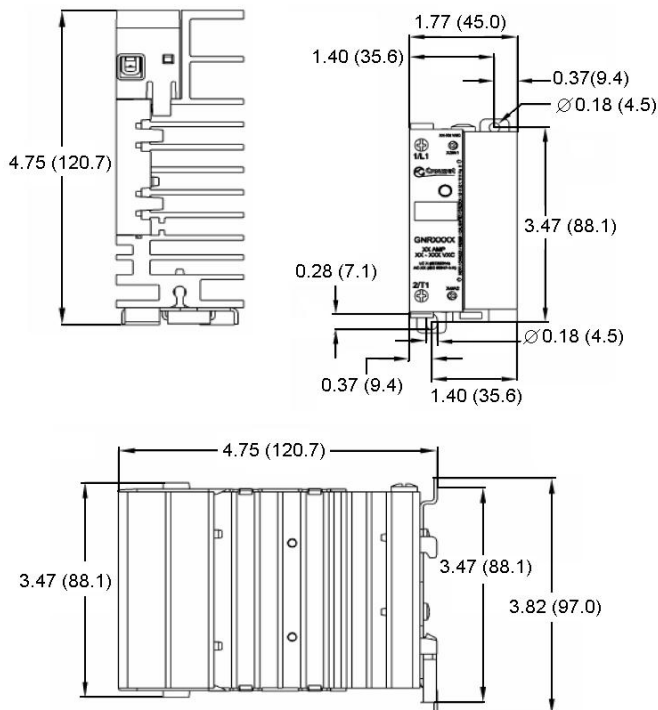
GENERAL SPECIFICATIONS

Description	Parameters
Ambient Operating Temperature Range (3)	-20 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to output isolation	4000 Vrms
Input/output to ground isolation	2500 Vrms
Input to output capacitance	8 pF
Housing Material	UL 94V0 (self extinguishing)
Status Indicating Display	Green LED
Weight (typical)	0.88lbs (400g)

GENERAL NOTES

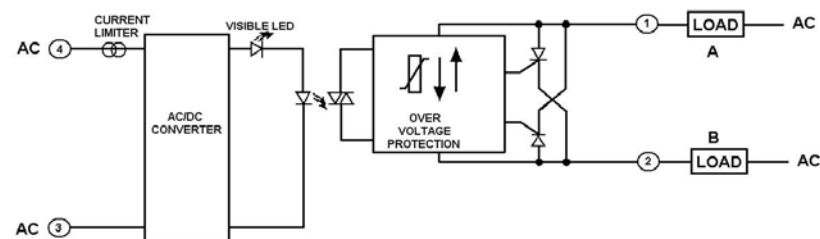
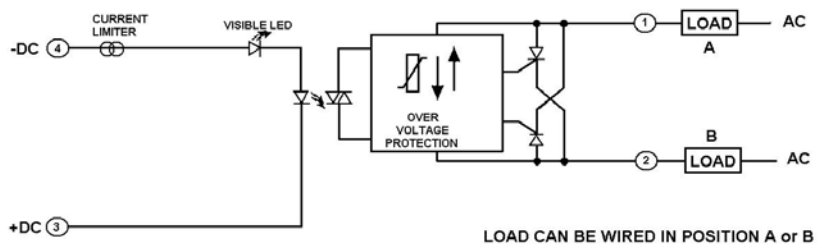
- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-433, paragraph 13.11.1
- 3) For 180-280VAC control, maximum Ambient operating temperature is 60°C
- 4) Random turn-on time R suffix is 100µs (for DC control only).

MECHANICAL SPECIFICATIONS



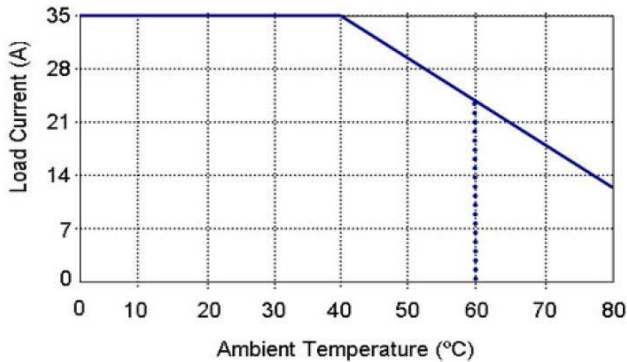
Dimensions in inches (millimeters)

WIRING DIAGRAM

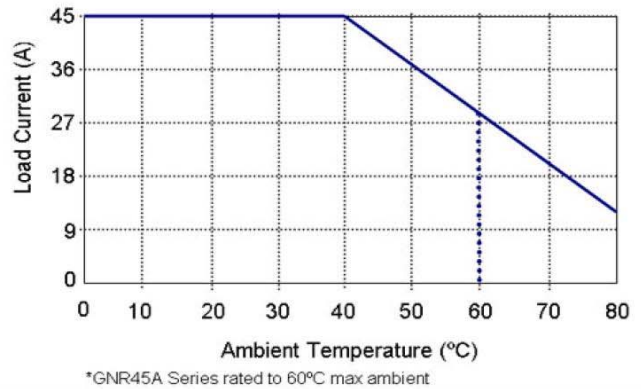


THERMAL DERATE INFORMATION

CURRENT v. TEMP DERATE CURVE
GNR35xxx 45MM SSR



CURRENT v. TEMP DERATE CURVE
GNR45xxx 45MM SSR



AGENCY APPROVALS

IEC 62314
 IEC 60068-2-6 : 35mm/10-55Hz
 IEC 60068-2-27 : 15G/11ms
 IEC 61000-4-2 : Electrostatic Discharge – Level 3
 IEC 61000-4-3 : Radiated Electromagnetic Noise – Level 3
 IEC 61000-4-4 : Electrically Fast Transients – Level 3
 IEC 61000-4-5 : Electrical Surges – Level 3
 IEC 61000-4-6 : Conducted Electromagnetic Noise – Level 3
 CISPIR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

UL E79183, **SP** LR38595

TÜV **CE** **RoHS**
Compliant

Rev. 061310

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 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

GNR 90MM Series



- Current rating 25 amps
- Output voltage 48-600 VAC
- Direct Bond Copper (DBC) Substrate
- LED input status indicator
- 100K cycle UL508 Endurance Rating
- UL / CSA / TUV Approved, CE Compliant
- EMC Compliant Level 3
- DIN-RAIL or Panel Mount
- Zero-Crossing or Random Turn-on

PRODUCT SELECTION

Control Voltage	25A
4-32 VDC	GNR25DCZ
90-140 VAC	GNR25BCZ
1800-280 VAC	GNR25ACZ

AVAILABLE OPTIONS

OUTPUT SPECIFICATIONS (Voltage) (1)

Description	GNR25
Operating Voltage (47-63Hz) [Vrms]	48-600
Transient Overvoltage [Vpk, t = 1 min.]	1100
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.25
Static off-state dv/dt (V μ s, Ta = 25°C) (2)	500

OUTPUT SPECIFICATIONS (Current) (1)

Description	GNR25
Maximum Load Current [Arms]	25A
Minimum Load Current [mArms]	100
1 cycle surge current (50Hz)	655
1 cycle surge current (60Hz)	700
1 second surge current (Apk, Ta = 25°C) 50/60 Hz	130
Forward Voltage Drop (Vpk @ Imax, Ta = 25°C)	1.35
I ² T (50Hz, 1/2 cycle)	2230
I ² T (60Hz, 1/2 cycle)	2020
HP Ratings at 480V / FLC	1 / 2.1A
Min/Max stranded wire	16/8 AWG
Min/Max solid wire	16/10 AWG

INPUT SPECIFICATIONS (1)

Description	GNRxxDx	GNRxxBx	GNRxxAx
Input Voltage Range (3)	4-32 VDC	90-140VAC	180-280VAC
Minimum Turn-On Voltage	4.0 VDC	90 Vrms	180Vrms
Drop out Voltage	1.0 VDC	10 Vrms	10 Vrms
Maximum Input Current	19mA	5mArms	6mArms
Minimum input current (for on-state)	16mA	6mArms	8mArms
Input Resistance	Current Regulated	Current Regulated	Current Regulated
Turn-on time (4)	8.33ms	20ms	20ms
Turn-off time	8.33ms	30ms	30ms
Min/Max stranded/solid wire	24/16AWG	24/16AWG	24/16AWG

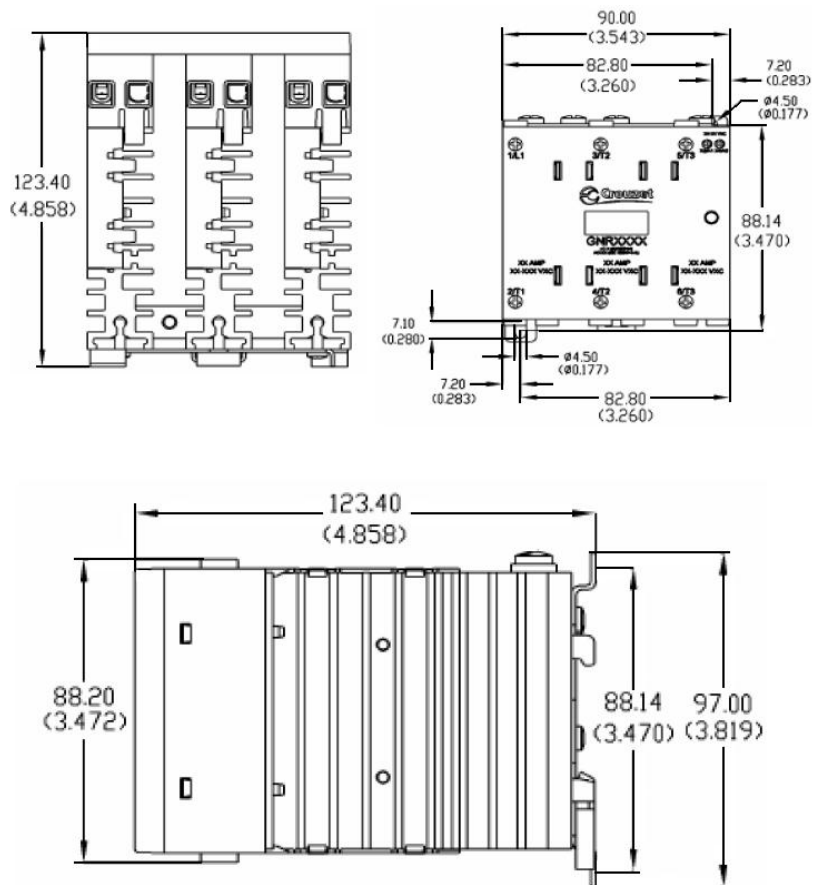
GENERAL SPECIFICATIONS

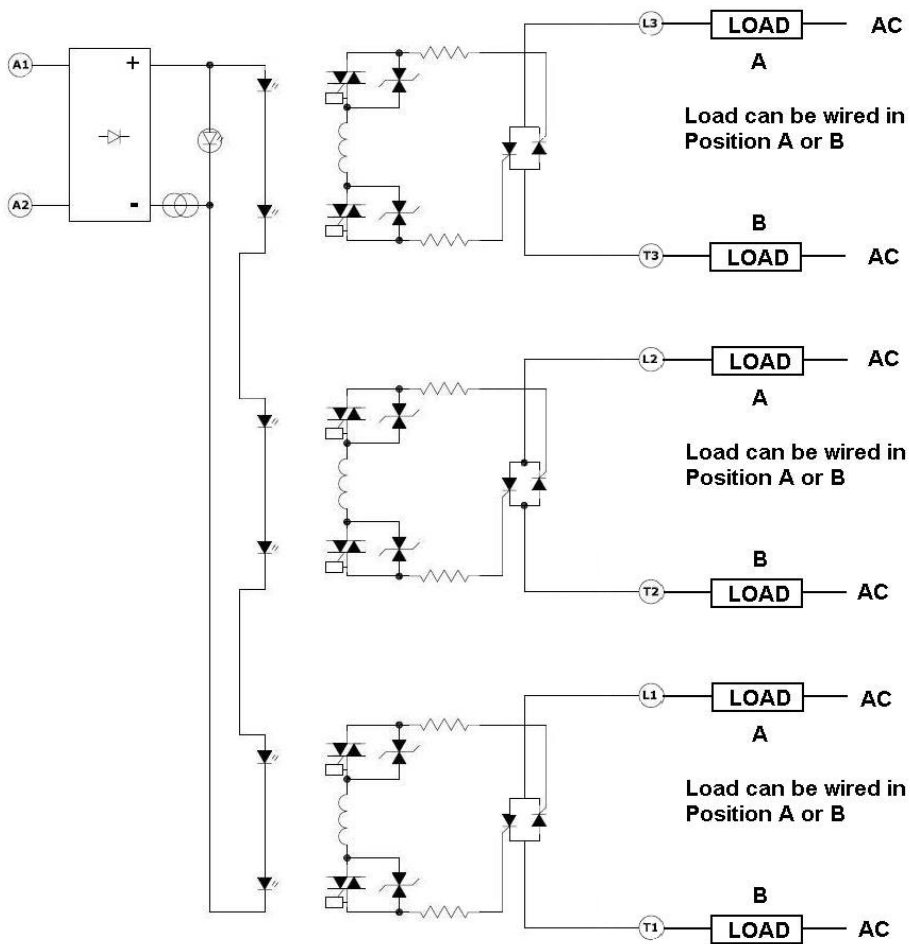
Description	Parameters
Ambient Operating Temperature Range (3)	-20 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to output isolation	4000 Vrms
Input/output to ground isolation	2500 Vrms
Input to output capacitance	8 pF
Housing Material	UL 94V0 (self extinguishing)
Status Indicating Display	Green LED
Weight (typical)	1.32lbs (600g)

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-433, paragraph 13.11.1
- 3) For 180-280VAC control, maximum Ambient operating temperature is 60°C
- 4) Random turn-on time R suffix is 100µs (for DC control only).

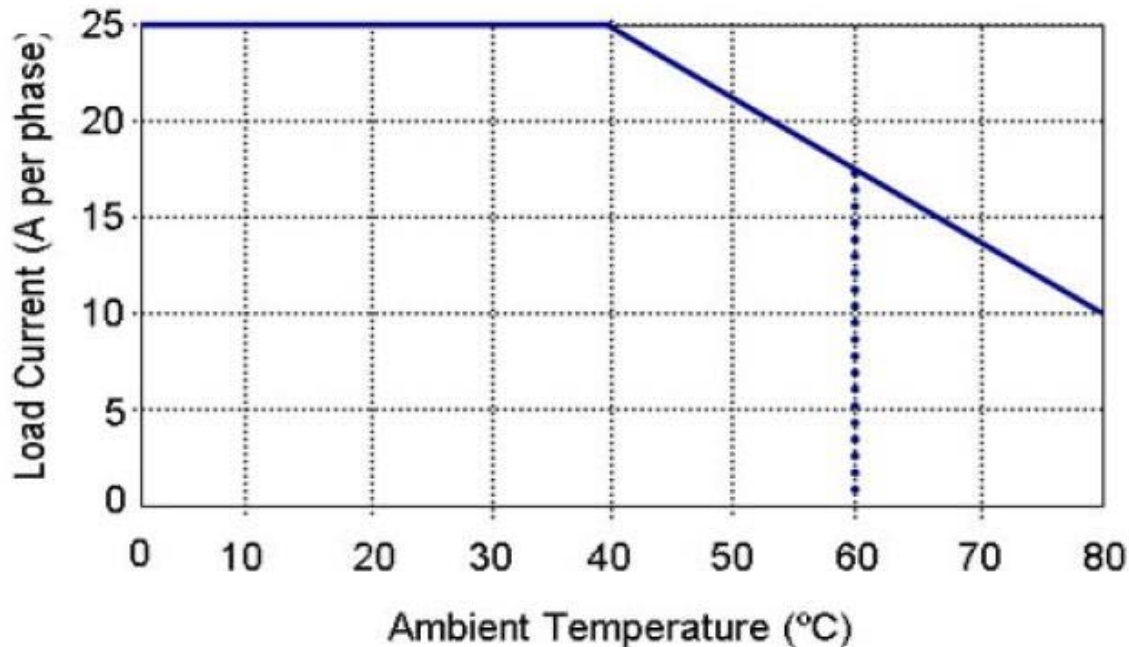
MECHANICAL SPECIFICATIONS



WIRING DIAGRAM


THERMAL DERATE INFORMATION

CURRENT v. TEMP DERATE CURVE GNR25xxx 90MM THREE-PHASE SSR (Load current per phase)



*GNR25A Series rated to 60°C max ambient

AGENCY APPROVALS

IEC 62314
IEC 60068-2-6 : 35mm/10-55Hz
IEC 60068-2-27 : 15G/11ms
IEC 61000-4-2 : Electrostatic Discharge – Level 3
IEC 61000-4-3 : Radiated Electromagnetic Noise – Level 3
IEC 61000-4-4 : Electrically Fast Transients – Level 3
IEC 61000-4-5 : Electrical Surges – Level 3
IEC 61000-4-6 : Conducted Electromagnetic Noise – Level 3
CISPIR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

UL E79183 **SP** LR38595

TÜV **CE** **RoHS**
Compliant

Rev. 081610

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar à morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
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Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

此附件所标示的包括电子信息产品污染图标的环境信息
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电子信息产品污染控制标识要求

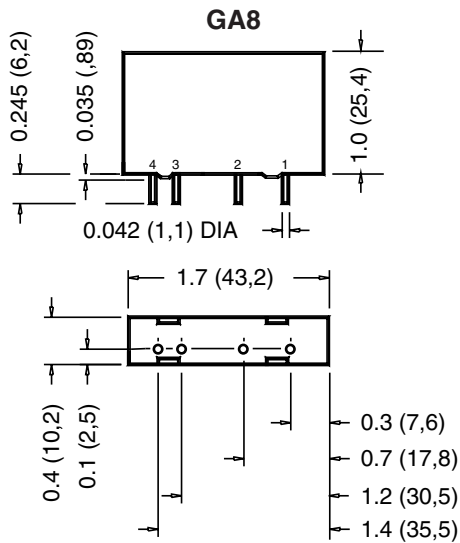
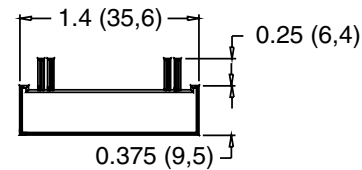
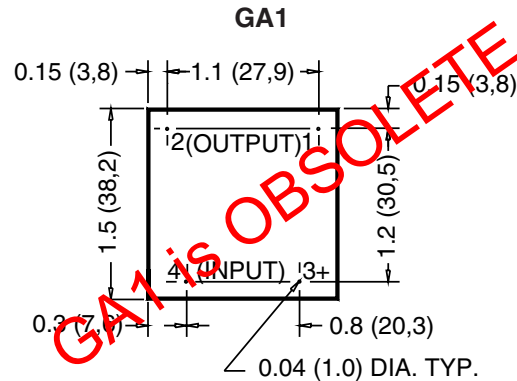


部件名称	有毒有害物质或元素					
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半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

SOLID STATE RELAYS

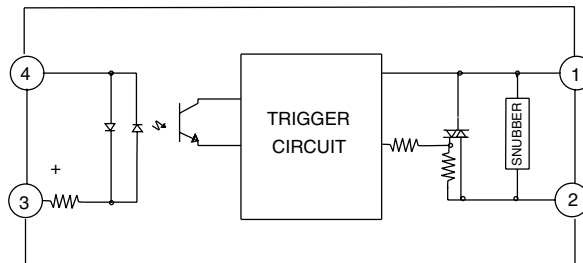
GA1, GA8, SERIES

- High Current Thyristor for 100A Surge Capability
- UL Recognized/Horse Power Rated (GA8)
(E46203)
- 4KV Optical Isolation
- Zero Voltage Turn-On
- Industry Standard Packaging. (GA1 Series is Obsolete)
- Form A Output
- CE Compliant



DIMENSIONS: inches (mm)
TOLERANCE: ± 0.020 ($\pm 0,50$)

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TOLERANCE: ± 0.020 ($\pm 0,50$)



GA1 & GA8 SERIES DC INPUT
EQUIVALENT CIRCUIT

SOLID STATE RELAYS

GA1, GA8, SERIES

INPUT SPECIFICATIONS: (1)

Parameter	GA16B02 GA86B02	GA86D05 GA86D05R	Units
Minimum Turn-On Voltage	3.0	3.0	VDC
Maximum Input Voltage	28	28	VDC
Drop Out Voltage	1.0	1.0	VDC
Maximum Input Current (2)	16	16	mADC
Nominal Input Resistance (3)	Current Regulated		

OUTPUT SPECIFICATIONS:

Model Number	GA16B02 (10) GA86B02	GA86D05 GA86D05R	Units
Parameter			
Nominal Line Voltage	240	240	Vrms
Minimum Line Voltage	24	24	Vrms
Maximum Line Voltage	280	280	Vrms
Maximum Peak Off-State Voltage(4)	±600	±600	Vpeak
Static (Off-State) dv/dt	200	200	V/μS

Parameter	GA16B02 GA86B02	GA86D05 GA86D05R	Units
Maximum On-State Current (5)	3.5	5.0	Arms
Minimum On-State Current	.05	.05	Arms
Maximum 1-Cycle Surge (6)	100	100	Apeak
On-State Voltage Drop (7)	1.6	1.6	Vpeak
Maximum Off-State Leakage (8)			
240V Models	.1	.1	mArms
HP Rating (11)	1/4	1/4	H.P.

GENERAL SPECIFICATION: (1)

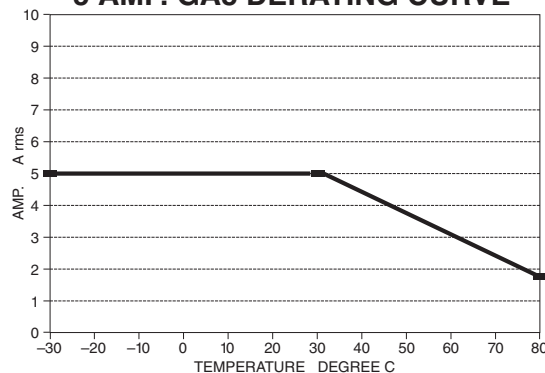
Parameter	All Devices	Units
Operating Temperature Range	-30 to +80	°C
Storage Temperature Range	-40 to +100	°C
Response Time (12)	.5	Cycle
Input to Output Isolation Voltage (9)	4000	Vrms
Capacitance Input to Output (Typ)	8	pF
Line Frequency Range	47 to 63	Hz

Note: GA1 Series is Obsolete
GA8-2B and GA8-4B have been replaced by GA8-6B

Notes:

- (1) Specifications apply to Ta -30 TO +80 unless otherwise noted.
- (2) At maximum input voltage.
- (3) Does not include IRED impedance (drop).
- (4) One minute maximum duration when applied as a DC Voltage.
- (5) Derate 50 mA/°C from 40°C to 80°C
UL rating is 3.5 Arms, CSA rating is 3.0 Arms.
- (6) At Ta of 25°C, non-repetitive.
- (7) At Ta of 25°C and maximum on-state current.
- (8) At Ta of 25°C and maximum line voltage.
- (9) At Ta of 25°C, for one second.
- (10) Random turn-on versions available. Specify by adding suffix "R" to appropriate part number. Contact factory for additional details.
- (11) For GA8 only, 1/4 H.P. at 240 VAC, 1/8 HP at 120 VAC
- (12) AT 60 Hz 100 μS for Random Turn-on
(suffix "R") models

5 AMP. GA8 DERATING CURVE



Products and specifications subject to change without notice.
Consult factory for application assistance.

Hybrid Power Relay – RHP (Single Pole Relay)

- 20 Amp output (Resistive only)
- Every SSR advantage without the drawbacks
- Lifetime > 5 million operations full load
- Noiseless
- Functions: contactor – bistable
- 17.5 mm DIN rail mount
- UL/cUL (listed)
- Label NF-USE
- CE compliant

Operation:

Contactor

Output of the contactor is closed when the input is On.
Output of the contactor is opened when the input is Off.
Led is On when the output is closed.

Bistable Relay

Output of the bistable changes of status for every pulse on the input and stays in its position between pulses.
Front plate push button allows to select the operation mode:
Stop – led off – output off
On forced – led flashing – output on
Auto – led on – bistable relay operation

Day/night contactor

Output of the contactor is closed when the input is On
Output of the contactor is opened when the input is Off.
Front plate push button allows to select the operation mode:
Stop – led off – output off
On forced – led flashing – output on – back to the Auto mode at the next change of the input.
Auto – led on – day/night contactor operation

Compliance

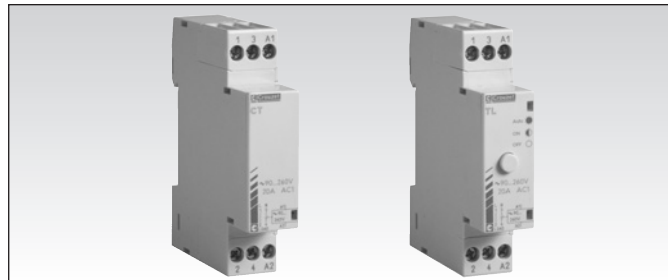
CEI/EN 60947-4-3 (industrial environment)
CEI/EN 60669-2-1 (household environment)
CEI/EN 60601-1 (medical environment)
CEI/EN 60947-7-1 (connections in industrial env.)
CEI/EN 60998-2-1 (connections in household env.)

Insulation:

Installation category: 3
pollution: 3
CEI60664-1: 4KV/3
dielectric CEI/EN 60669-2-1:
2 KV/1mm / 1mA / 50 Hz

Insulation CEI/EN 60669-2-1:
> 5M Ω /500VDC / 1 min

Vibrations CEI/EN 60068-2-6: frequencies: 10 to 55 Hz
magnitude: 0,35 mm



Type

Part number

AC input contactor	84 138 001
DC input contactor	84 138 000
AC input distable relay	84 138 101
AC input day/night contactor	84 138 201

Specifications

Power supply	90-260 Vac
Frequency	50 / 60 Hz
Max. power consumption	11 VA

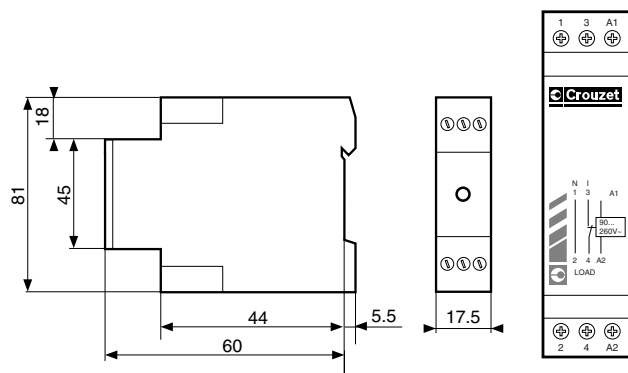
Input Control

Voltage	90-260 Vac	0-32 Vdc
Frequency	50 / 60 Hz	
Value		
Input OFF	0 – 46 Vac	0 – 1 Vdc
Input ON	76 – 260 Vac	4 – 32 Vdc
Min. time input	50 ms	50 ms

Output

Voltage	90-260 Vac
Max. current	20A in AC1 / AC51 / AC7a
Overload current 20A	AC-51: 1,25 x I _e – 60s: 50 – 30 (CEI 60947-4-3)
Min current	100mA in AC1 / AC51 / AC7a
Frequency	50 / 60 Hz
Contact	N.O.
Switching frequency	20 / min
lifetime	> 5,000,000
leakage current	< 5 mA
Acoustic noise	
ON position	< 35 dB @ 1m
switching	< 50 dB @ 0.5m
terminal capacity	2 x 1.5 mm ² with ferrule
2 x 2.5 mm ² without ferrule	
1 x 4 mm ² without ferrule	
Torque	1Nm maxi. screw M3 (CEI 60947-1)

Operating temperature:	–5°C to +55°C
Storage temperature	–40°C to +85°C
Humidity	90 to 95% non-condensing
Housing	self extinguish
protection	housing IP 50
(CEI 60529)	terminal IP 20
weight	70 gr



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Consult factory for application assistance.

HS053

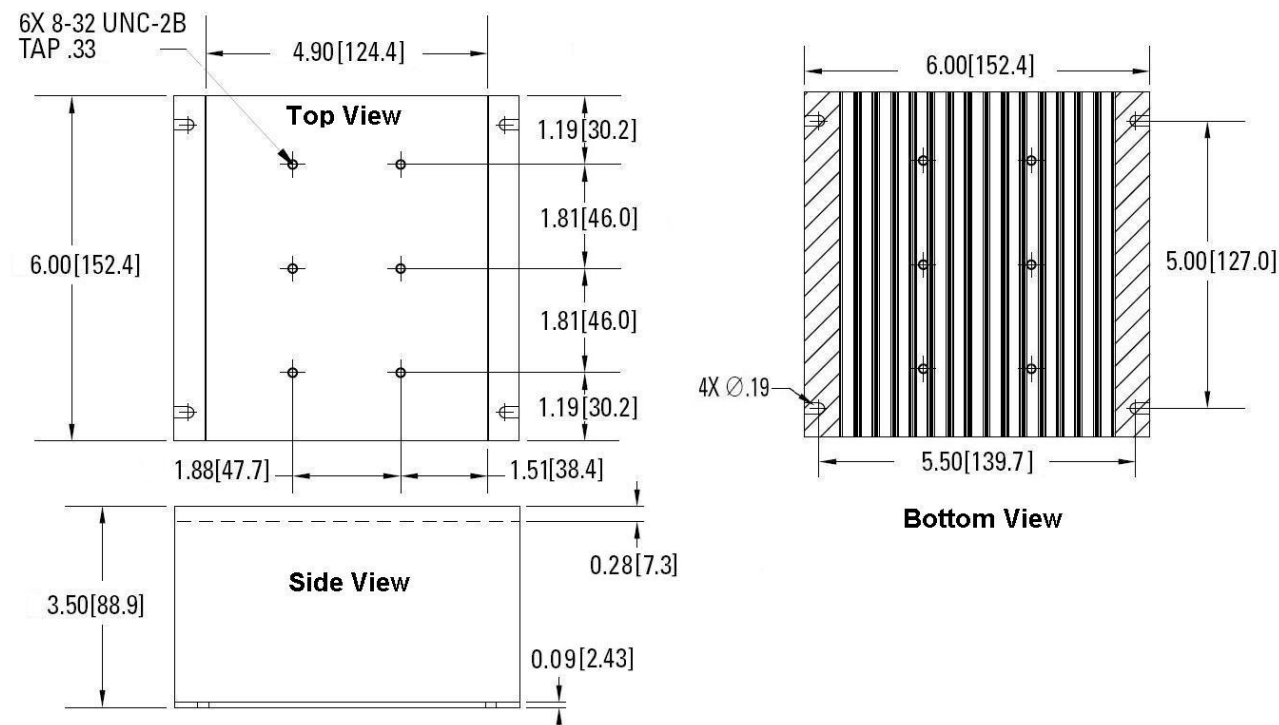


- 0.5°C/W Thermal resistance
- Suitable for 1, 2 or 3 single or dual SSRs
Or one 3 Phase SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount
Model Number	HS053
Thermal resistance [°C/W]	0.5
Surface area [in²/cm²]	694/4480
Heat sink mounting	Panel Mount
Weight [lbs/grs]	3.14/1424
Material	Aluminum
Finish	Black Anodized
SSR Mounting Holes/ threads	8, 8x32
Number and type of relay accepted	1,2 or 3 single or dual or 1, 3-Phase
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2
Accepts Fan/size [mm]	Yes/ 1-80

MECHANICAL SPECIFICATIONS



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

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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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS072

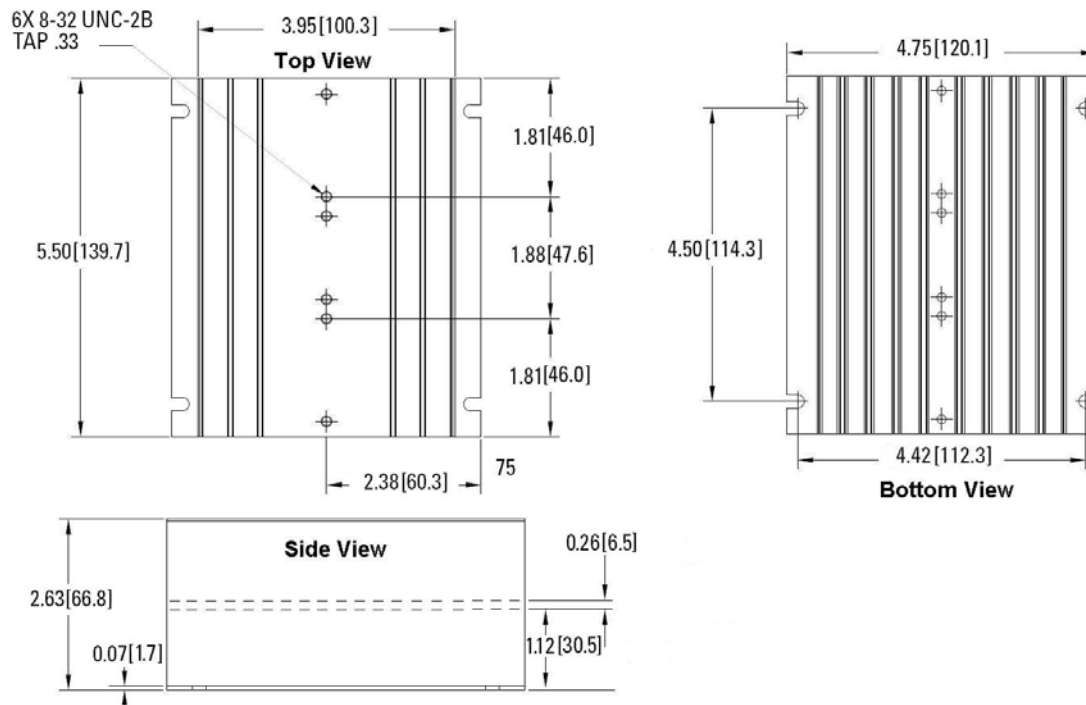


- 0.7°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSR's
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount
Model Number	HS072
Thermal resistance [°C/W]	0.70
Surface area [in²/cm²]	254/1640
Heat sink mounting	Panel Mount
Weight [lbs/grs]	1.16/526
Material	Aluminum
Finish	None
SSR Mounting Holes/ threads	8, 8x32
Number and type of relay accepted	1 or 2 single or dual
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2
Accepts Fan/size [mm]	No

MECHANICAL SPECIFICATIONS



Rev. 072209

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 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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	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

此附件所标示的包括电子信息产品污染图标的环境信息
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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

HS103 Series

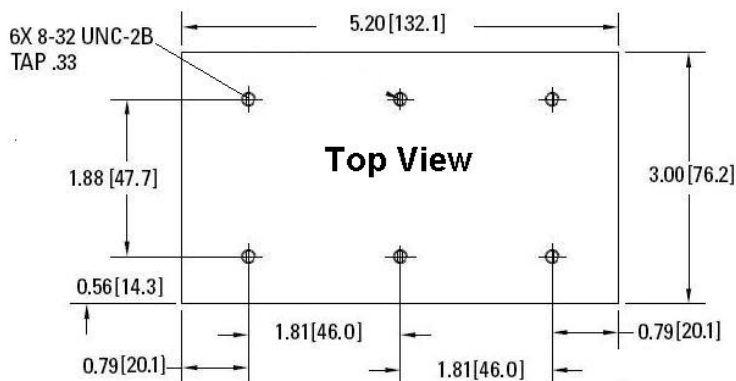


- 1.0°C/W Thermal resistance
- Suitable for 1, 2 or 3 single or dual SSR's or one 3 Phase SSR
- DIN rail or panel mounting

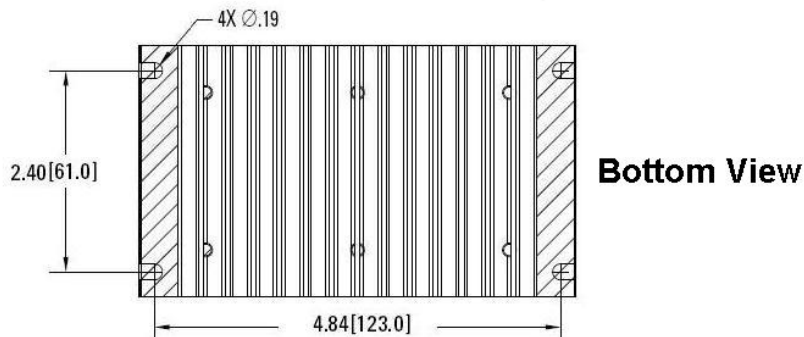
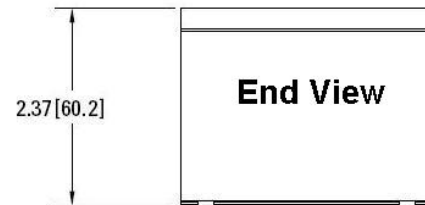
GENERAL SPECIFICATIONS

Description	Panel Mount	Din-Rail Mount
Model Number	HS103	HS103DR
Thermal resistance [°C/W]	1.0	1.0
Surface area [in²/cm²]	227/1470	227/1470
Heat sink mounting	Panel Mount	Din-Rail Mount
Weight [lbs/grs]	0.97/440	1.20/544
Material	Aluminum	Aluminum
Finish	Black Anodized	Black Anodized
SSR Mounting Holes/ threads	6, 8x32	6, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1, 2 or 3 single or dual or 1, 3-Phase	1, 2 or 3 single or dual or 1, 3-Phase
Accepts Fan/size [mm]	Yes/ 2-40	Yes/ 2-40

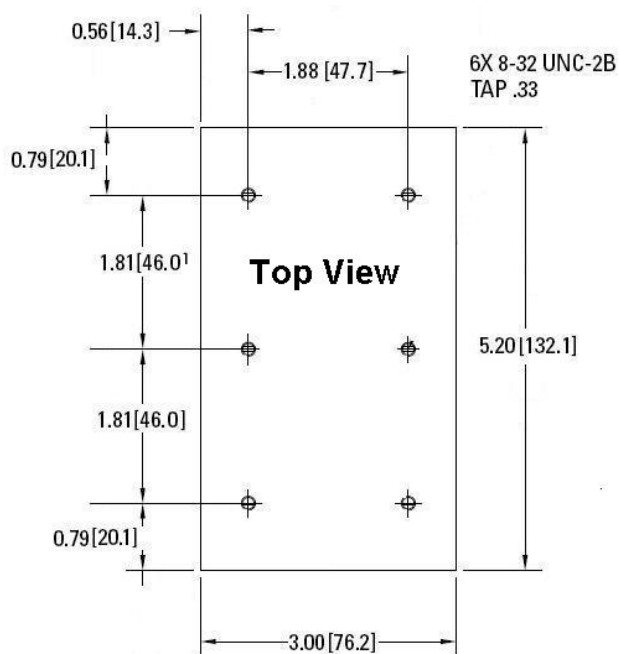
MECHANICAL SPECIFICATIONS



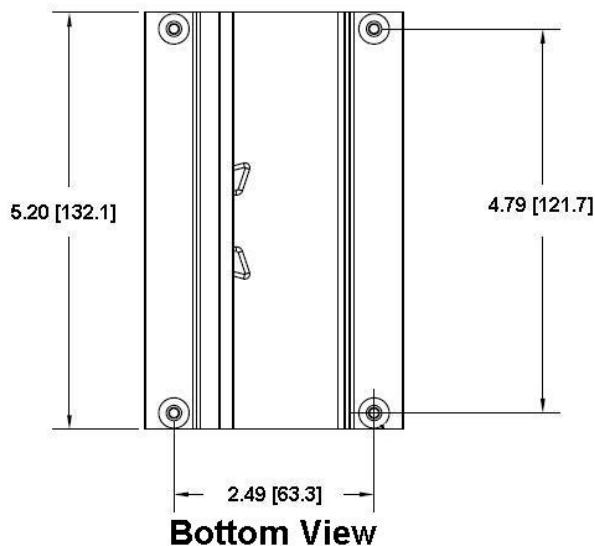
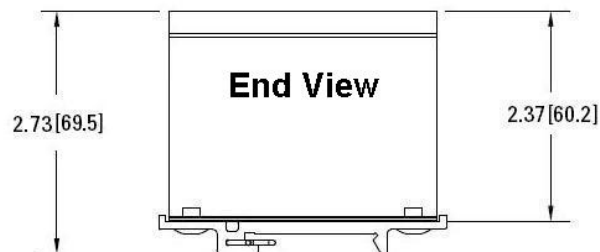
HS103



MECHANICAL SPECIFICATIONS



HS103DR



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

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Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

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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

HS122 Series

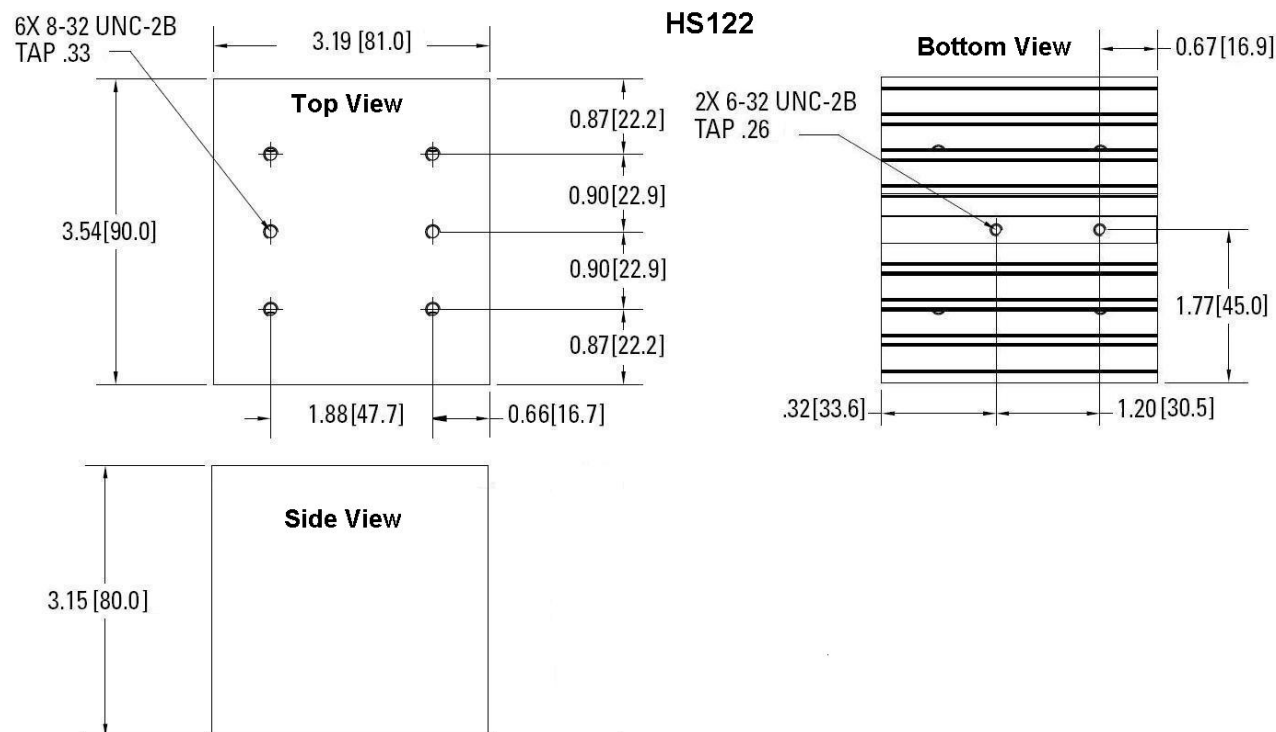


- 1.2°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSR
- DIN rail or panel mounting

GENERAL SPECIFICATIONS

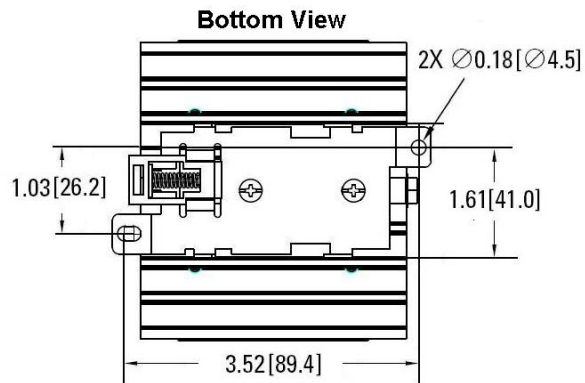
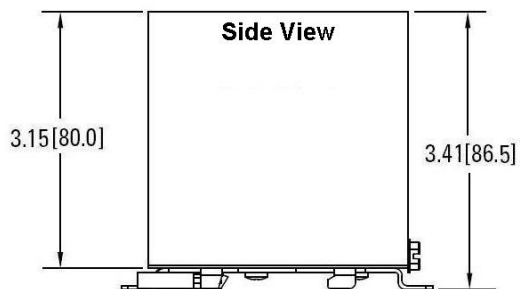
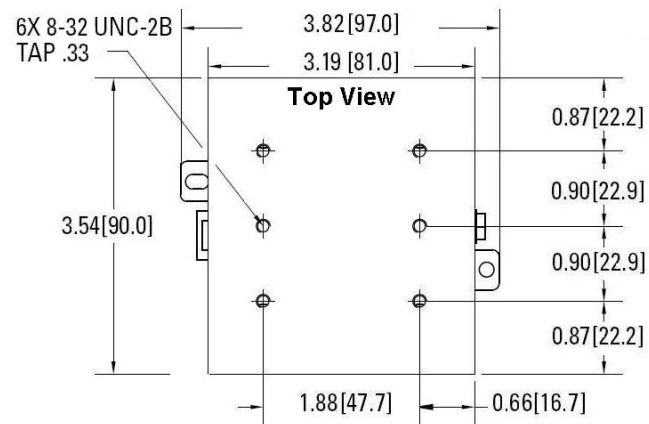
Description	Panel Mount	Din-Rail Mount
Model Number	HS122	HS122DR
Thermal resistance [°C/W]	1.2	1.2
Surface area [in²/cm²]	210/1360	210/1360
Heat sink mounting	Panel Mount	Panel or Din-Rail Mount
Weight [lbs/grs]	1.17/531	1.24/562
Material	Aluminum	Aluminum
Finish	Black Anodized	Black Anodized
SSR Mounting Holes/ threads	6, 8x32	6, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1 or 2 single or dual	1 or 2 single or dual
Accepts Fan/size [mm]	Yes/ 1-80	Yes/ 1-80

MECHANICAL SPECIFICATIONS



MECHANICAL SPECIFICATIONS

HS122DR



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS151 Series

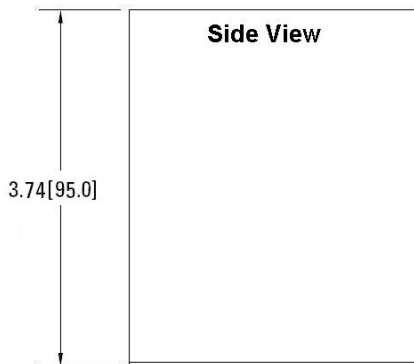
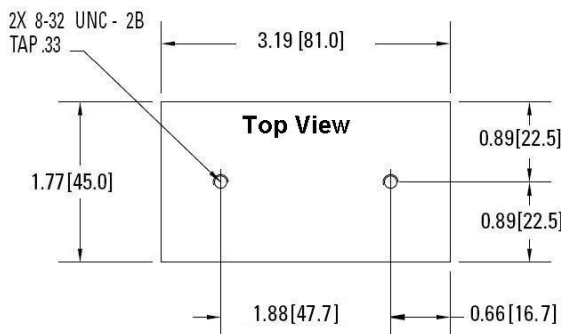


- 1.5°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- DIN rail or panel mounting

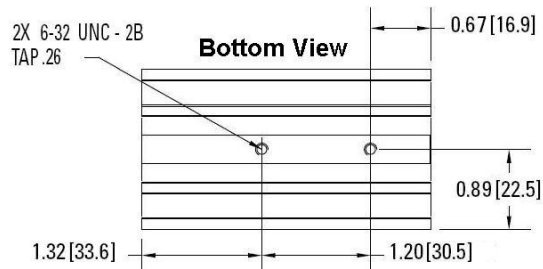
GENERAL SPECIFICATIONS

Description	Panel Mount	Din-Rail Mount
Model Number	HS151	HS151DR
Thermal resistance [°C/W]	1.5	1.5
Surface area [in²/cm²]	138/891	138/891
Heat sink mounting	Panel Mount	Panel or Din-Rail Mount
Weight [lbs/grs]	0.85/319	0.92/350
Material	Aluminum	Aluminum
Finish	Black Anodized	Black Anodized
SSR Mounting Holes/ threads	2, 8x32	2, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1 single or dual	1 single or dual
Accepts Fan/size [mm]	Yes/ 2-40	Yes/ 2-40

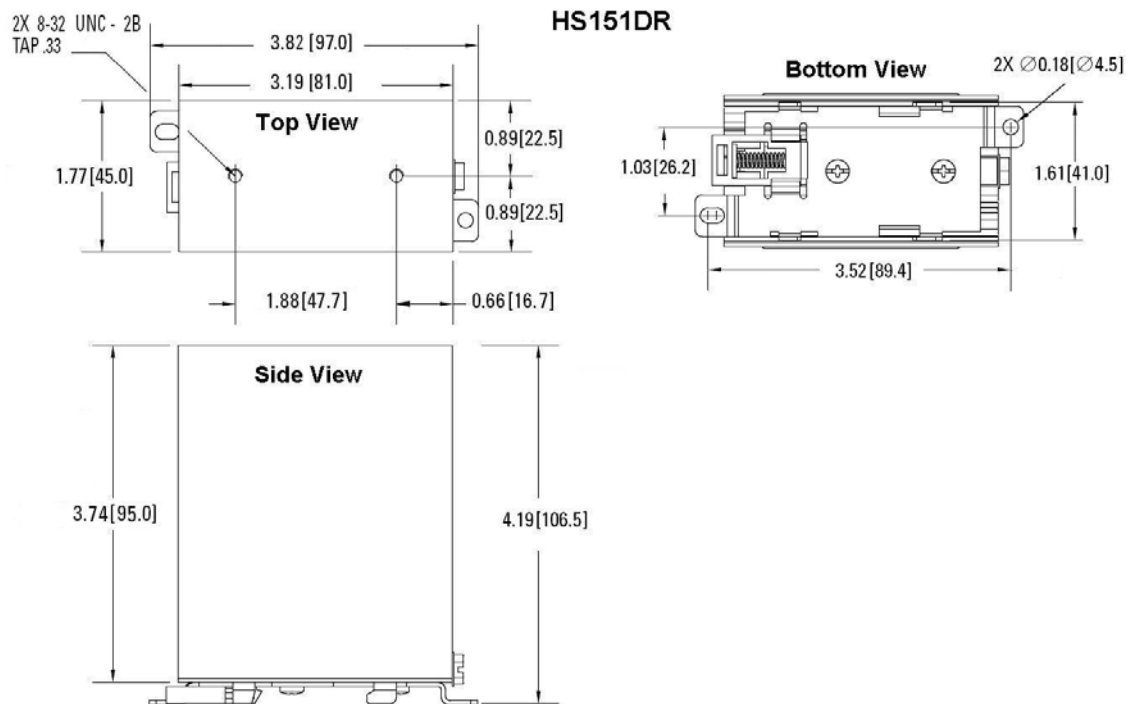
MECHANICAL SPECIFICATIONS



HS151



MECHANICAL SPECIFICATIONS



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS172 Series

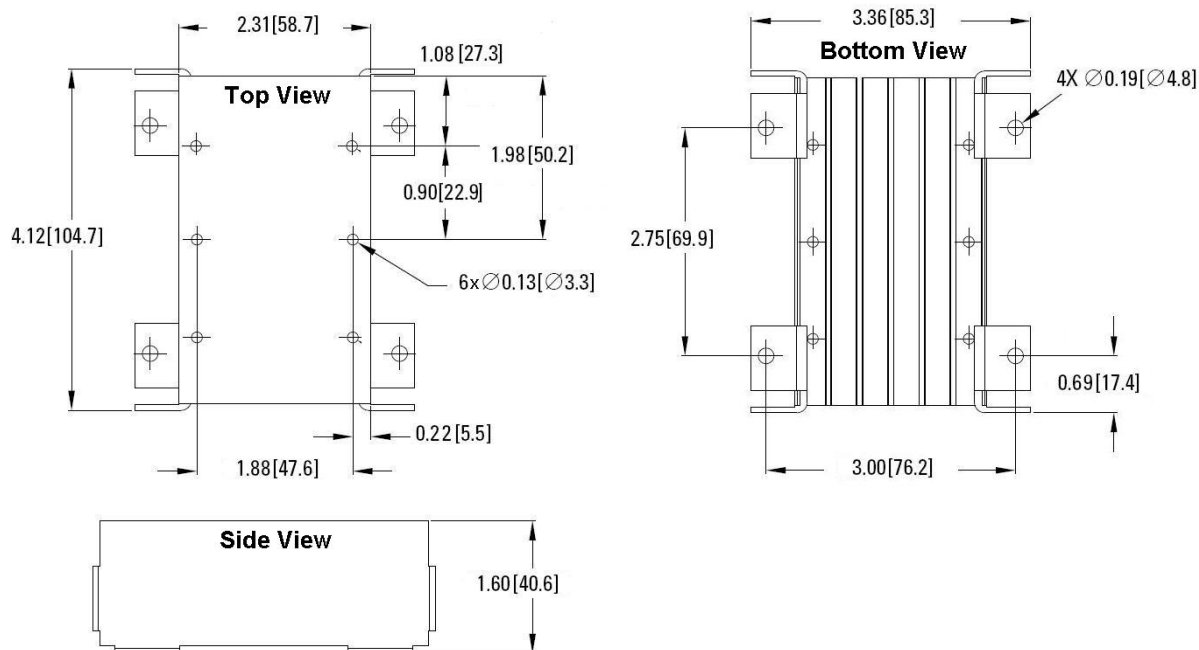


- 1.7°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount
Model Number	HS172
Thermal resistance [°C/W]	1.70
Surface area [in²/cm²]	102/659
Heat sink mounting	Panel Mount
Weight [lbs/grs]	0.43/195
Material	Aluminum
Finish	None
SSR Mounting Holes/ threads	6, 8x32
Number and type of relay accepted	1 or 2 single or dual
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2
Accepts Fan/size [mm]	No

MECHANICAL SPECIFICATIONS



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS201 Series



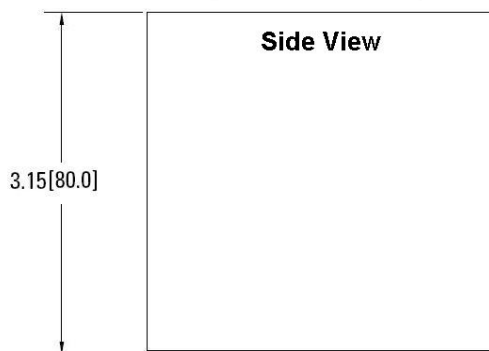
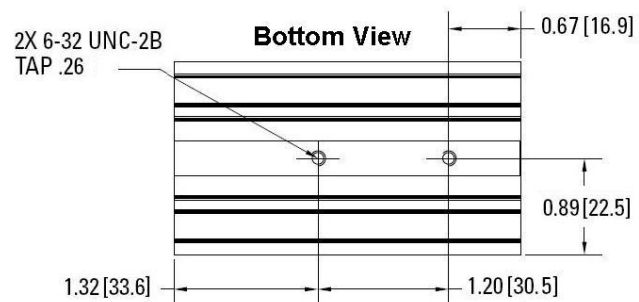
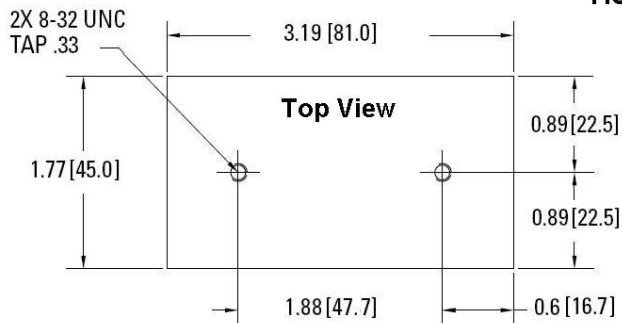
- 2.0°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- DIN rail or panel mounting

GENERAL SPECIFICATIONS

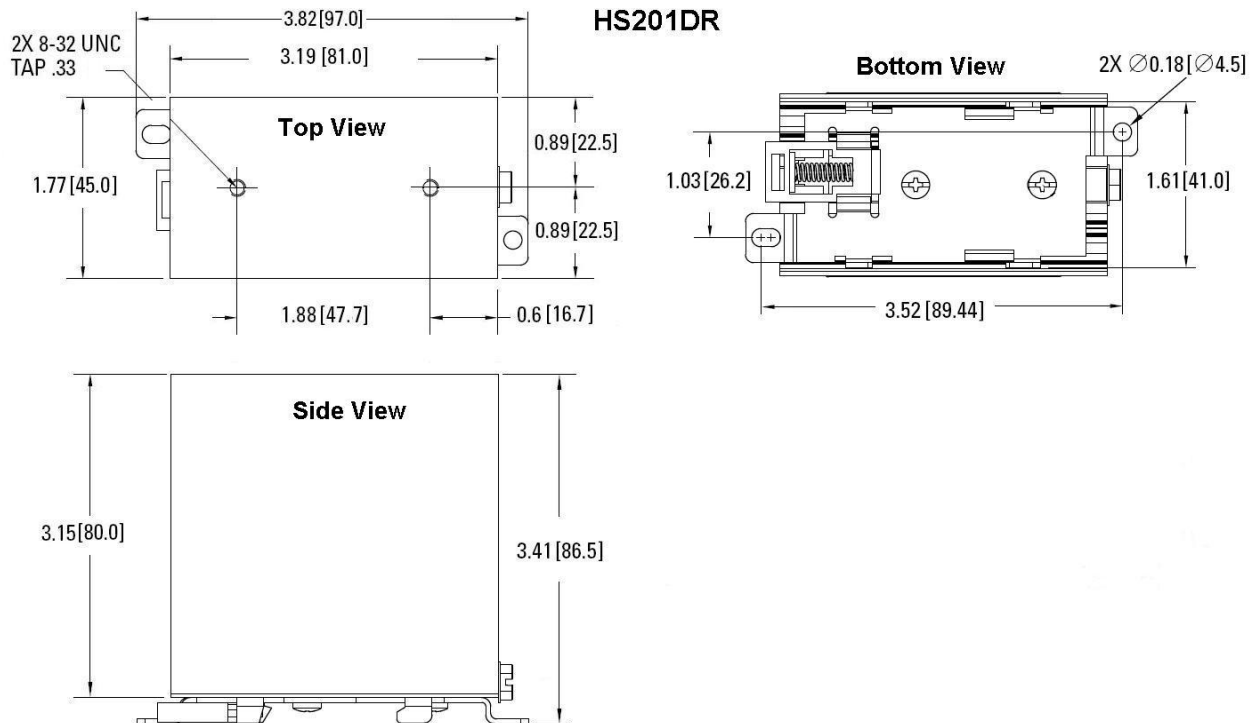
Description	Panel Mount	Din-Rail Mount
Model Number	HS201	HS201DR
Thermal resistance [°C/W]	2.0	2.0
Surface area [in ² /cm ²]	116/750	116/750
Heat sink mounting	Panel Mount	Panel or Din-Rail Mount
Weight [lbs/grs]	0.71/322	0.78/353
Material	Aluminum	Aluminum
Finish	None	None
SSR Mounting Holes/ threads	2, 8x32	2, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1 or 2 single or dual	1 or 2 single or dual
Accepts Fan/size [mm]	Yes/ 2-40	Yes/ 2-40

MECHANICAL SPECIFICATIONS

HS201



MECHANICAL SPECIFICATIONS



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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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

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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

HS202 Series

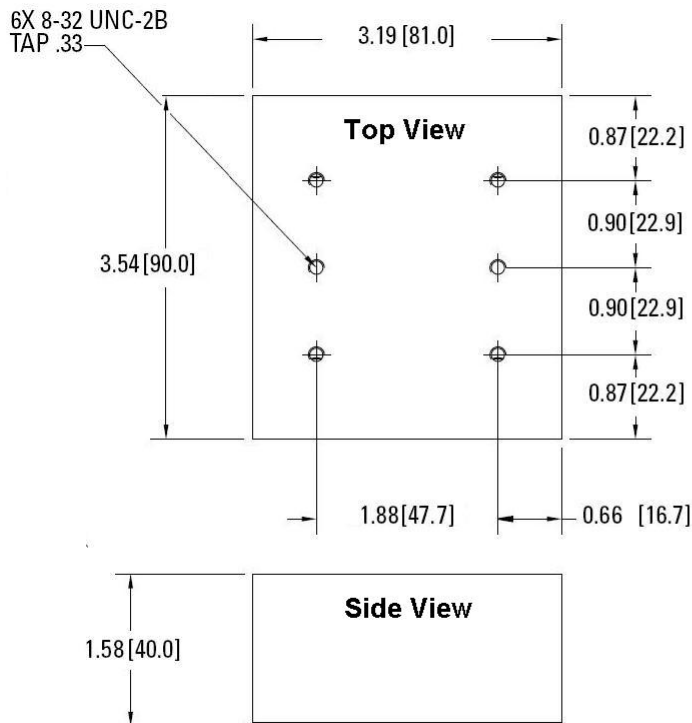


- 2.0°C/W Thermal resistance
- Suitable for 1 or 2 single or dual SSRs
- DIN rail or panel mounting

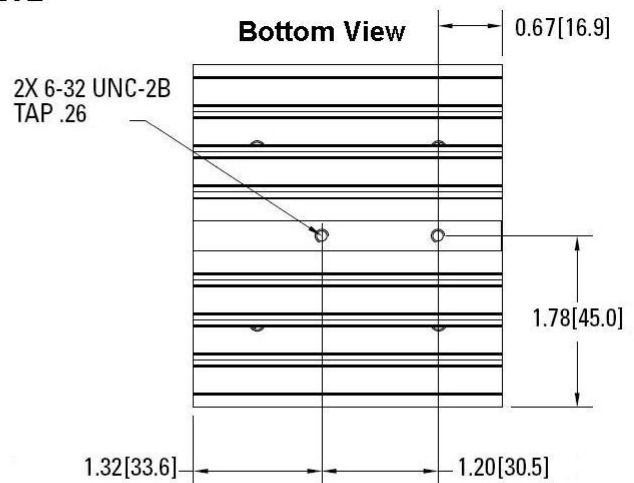
GENERAL SPECIFICATIONS

Description	Panel Mount	Din-Rail Mount
Model Number	HS202	HS202DR
Thermal resistance [°C/W]	2.0	2.0
Surface area [in²/cm²]	106.7/688	106.7/688
Heat sink mounting	Panel Mount	Panel or Din-Rail Mount
Weight [lbs/grs]	0.70/318	0.77/350
Material	Aluminum	Aluminum
Finish	None	None
SSR Mounting Holes/ threads	6, 8x32	6, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1 or 2 single or dual	1 or 2 single or dual
Accepts Fan/size [mm]	Yes/ 2-40	Yes/ 2-40

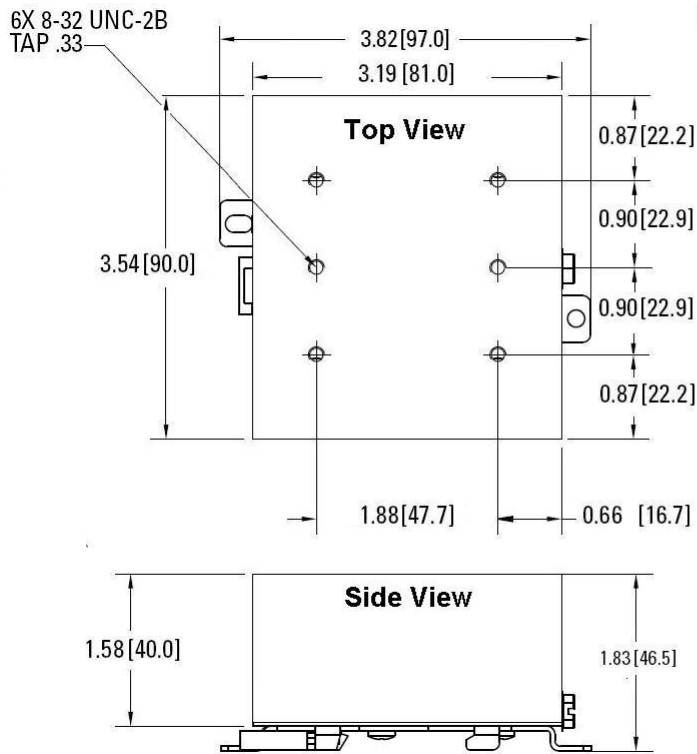
MECHANICAL SPECIFICATIONS



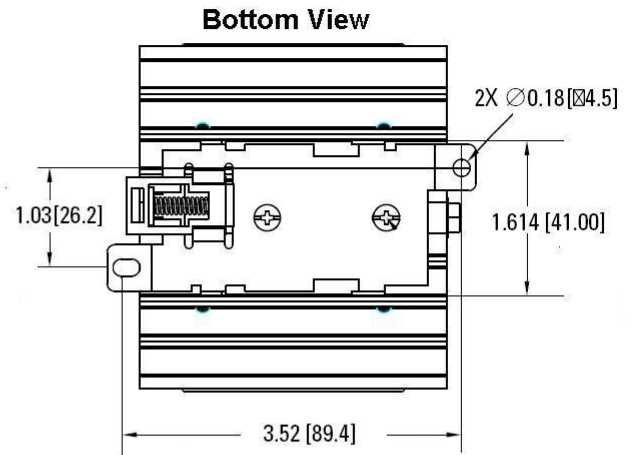
HS202



MECHANICAL SPECIFICATIONS



HS202DR



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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. Laissez 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS251 Series

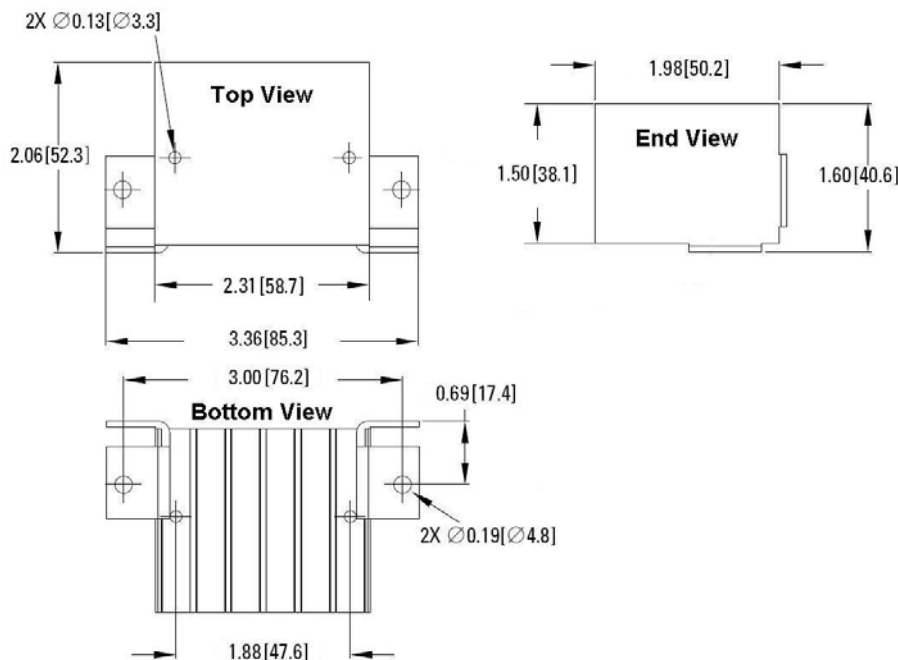


- 2.5°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- Panel mounting

GENERAL SPECIFICATIONS

Description	Panel Mount
Model Number	HS251
Thermal resistance [°C/W]	2.5
Surface area [in ² /cm ²]	521./336
Heat sink mounting	Panel Mount
Weight [lbs/grs]	0.22/100
Material	Aluminum
Finish	None
SSR Mounting Holes/ threads	2, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2
Number and type of relay accepted	1 single or dual
Accepts Fan/size [mm]	No

MECHANICAL SPECIFICATIONS



Rev. 072209

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 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS271 Series

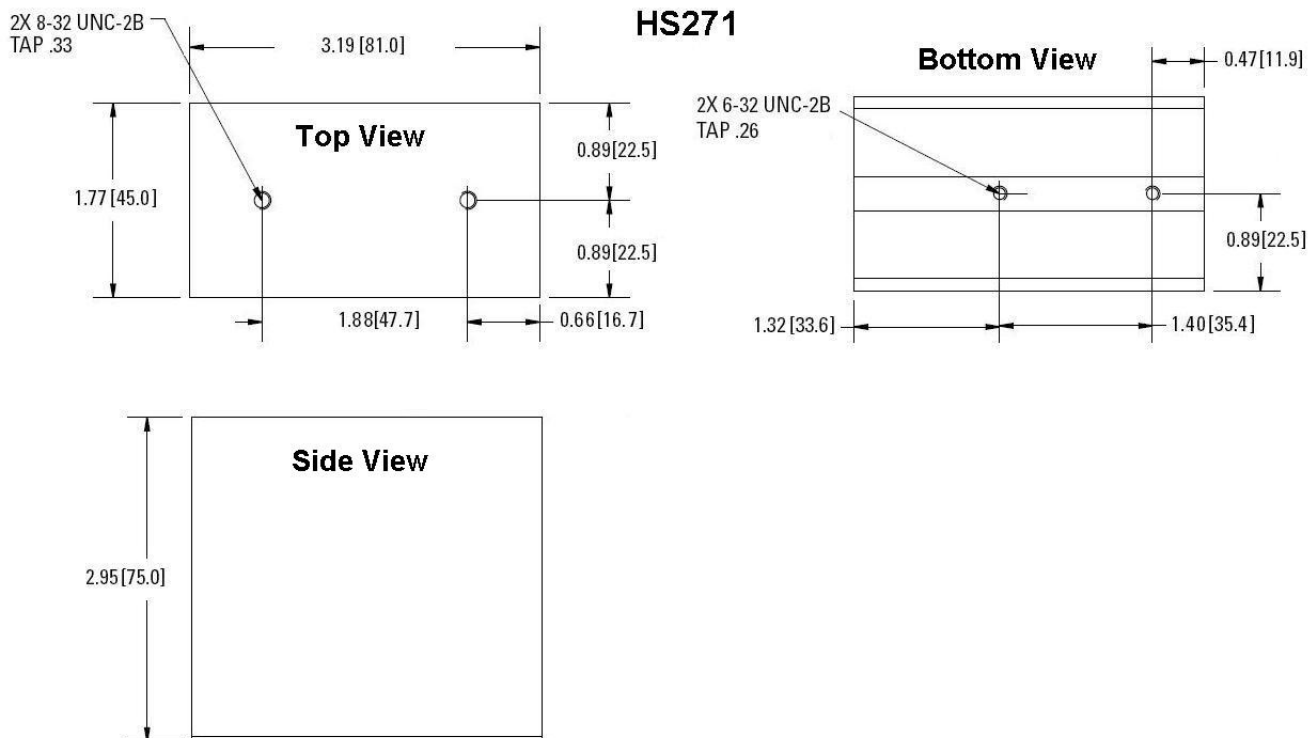


- 2.7°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- DIN rail or panel mounting

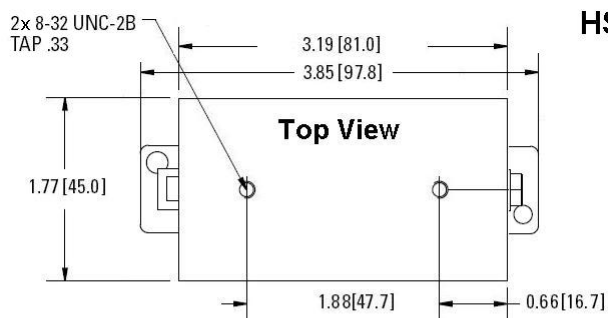
GENERAL SPECIFICATIONS

Description	Panel Mount	Din-Rail Mount
Model Number	HS271	HS271DR
Thermal resistance [°C/W]	2.7	2.7
Surface area [in²/cm²]	68.5/442	68.5/442
Heat sink mounting	Panel Mount	Panel or Din-Rail Mount
Weight [lbs/grs]	0.45/204	0.51/232
Material	Aluminum	Aluminum
Finish	None	None
SSR Mounting Holes/ threads	2, 8x32	2, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1 single or dual	1 single or dual
Accepts Fan/size [mm]	No	No

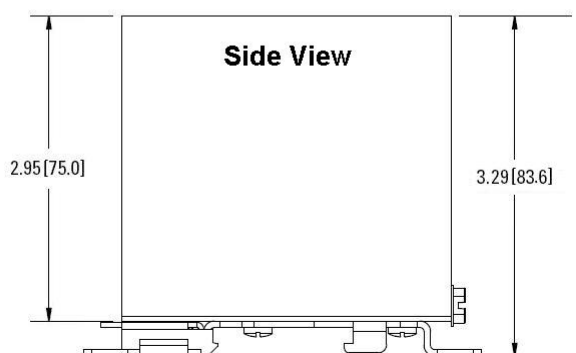
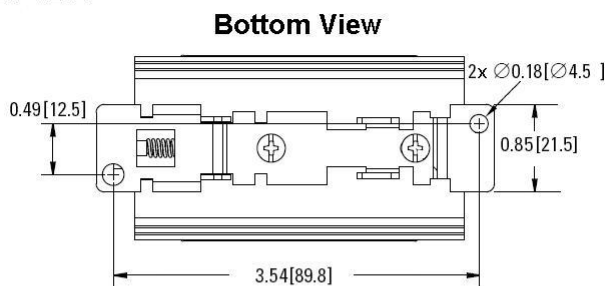
MECHANICAL SPECIFICATIONS



MECHANICAL SPECIFICATIONS



HS271DR



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS301 Series

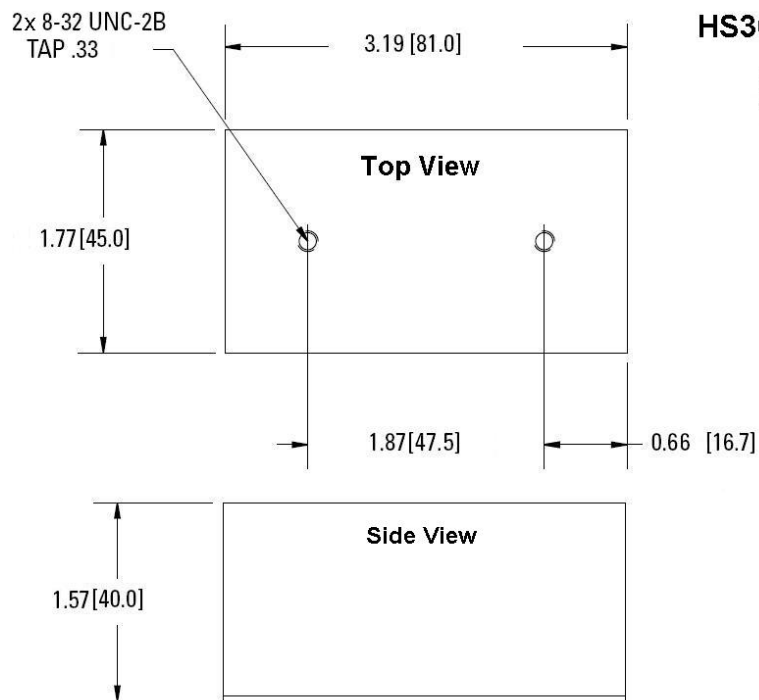


- 3.0°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- DIN rail or panel mounting

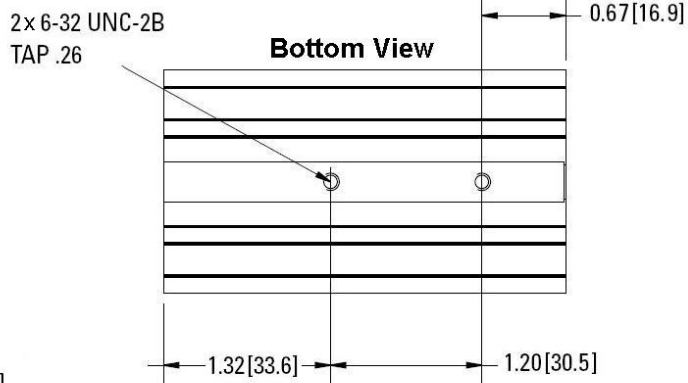
GENERAL SPECIFICATIONS

Description	Panel Mount	Din-Rail Mount
Model Number	HS301	HS301DR
Thermal resistance [°C/W]	3.0	3.0
Surface area [in²/cm²]	59/381	59/381
Heat sink mounting	Panel Mount	Panel or Din-Rail Mount
Weight [lbs/grs]	0.40/178	0.47/209
Material	Aluminum	Aluminum
Finish	None	None
SSR Mounting Holes/ threads	2, 8x32	2, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1 single or dual	1 single or dual
Accepts Fan/size [mm]	Yes/ 1-40	Yes/ 1-40

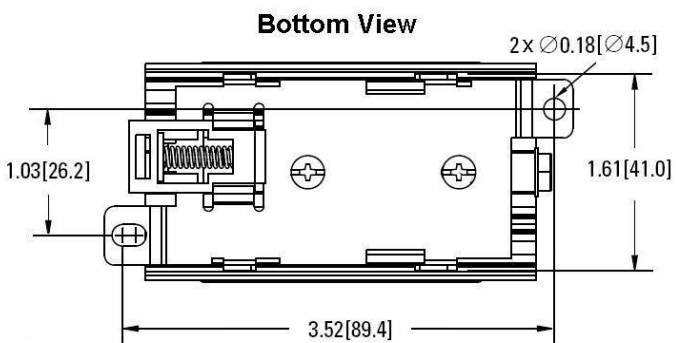
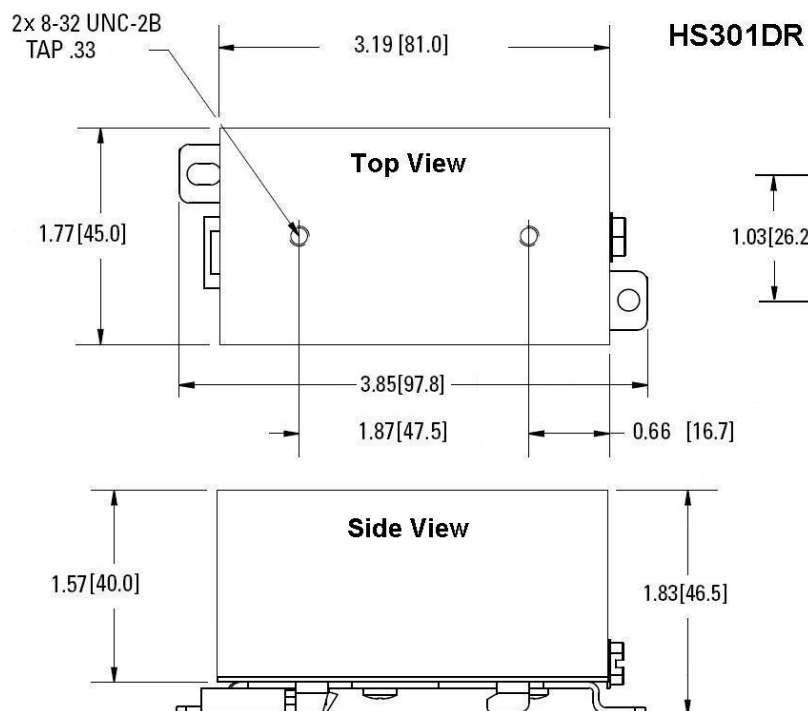
MECHANICAL SPECIFICATIONS



HS301



MECHANICAL SPECIFICATIONS



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

HS351 Series



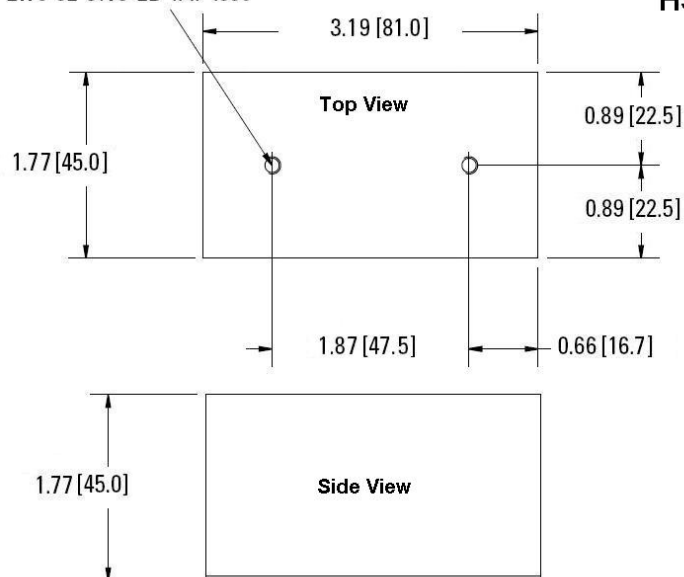
- 3.5°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- DIN rail or panel mounting

GENERAL SPECIFICATIONS

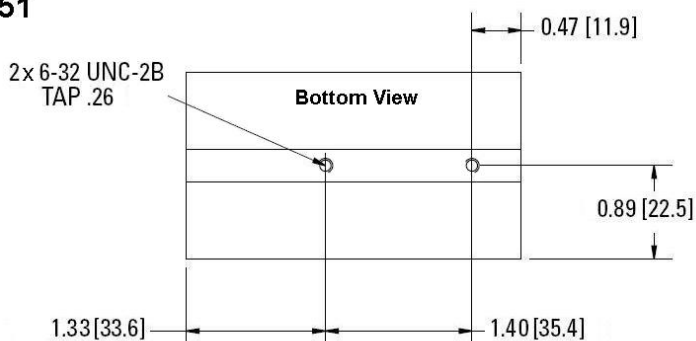
Description	Panel Mount	Din-Rail Mount
Model Number	HS351	HS351DR
Thermal resistance [°C/W]	3.5	3.5
Surface area [in ² /cm ²]	44.9/290	44.9/290
Heat sink mounting	Panel Mount	Panel or Din-Rail Mount
Weight [lbs/grs]	0.28/128	0.40/181
Material	Aluminum	Aluminum
Finish	Black Anodized	Black Anodized
SSR Mounting Holes/ threads	2, 8x32	2, 8x32
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2	15-20/1.7-2.2
Number and type of relay accepted	1 single or dual	1 single or dual
Accepts Fan/size [mm]	No	No

MECHANICAL SPECIFICATIONS

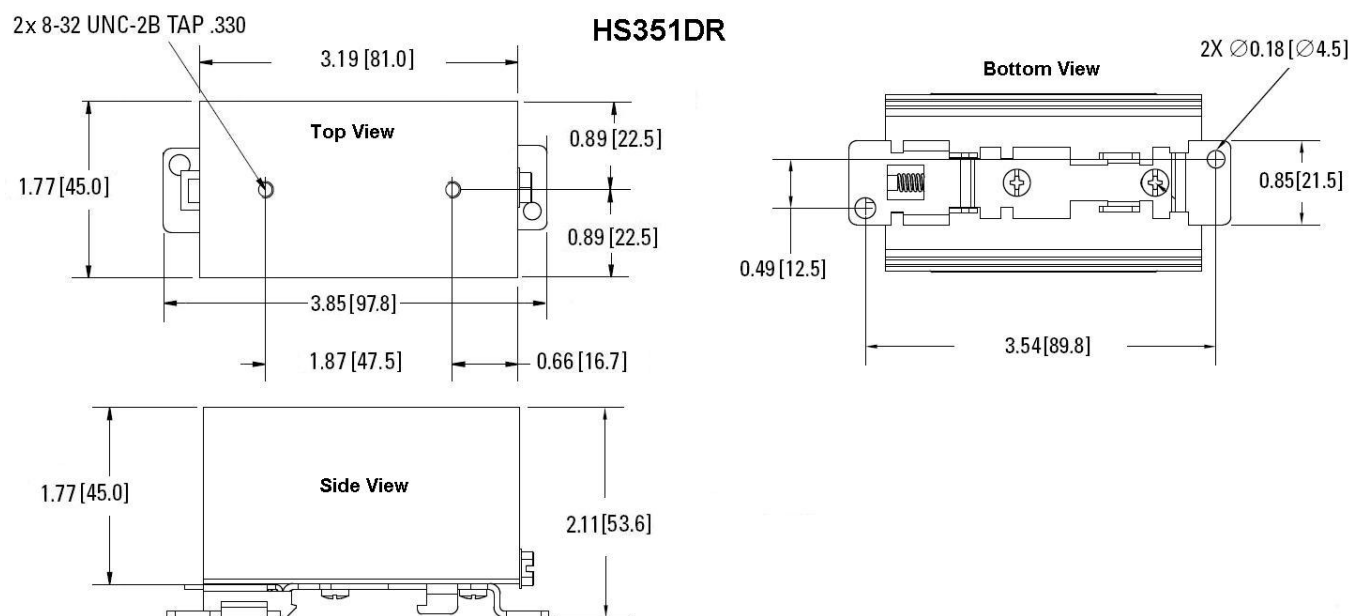
2x 8-32 UNC-2B TAP .330



HS351



MECHANICAL SPECIFICATIONS



Rev. 072209

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
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ANNEX - ENVIROMENTAL INFORMATION

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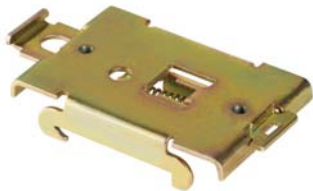
Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

此附件所标示的包括电子信息产品污染图标的环境信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
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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

HS501DR

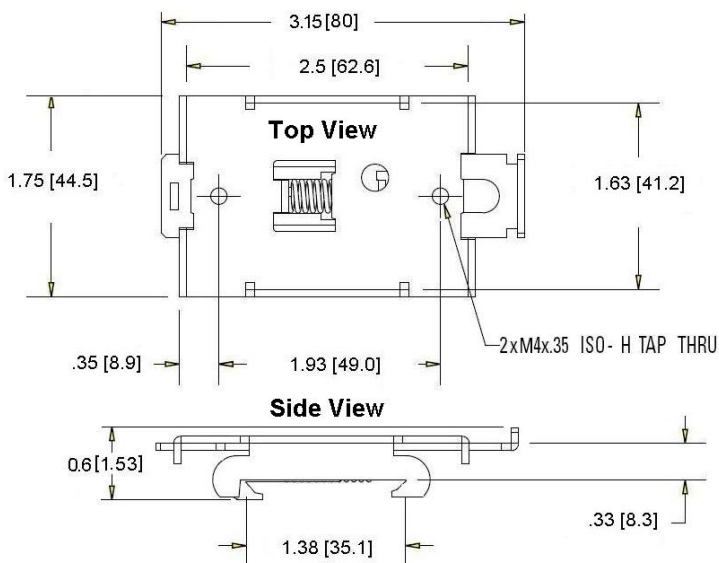


- 5.0°C/W Thermal resistance
- Suitable for 1 single or dual SSR
- DIN rail mounting

GENERAL SPECIFICATIONS

Description	Din-Rail Mount
Model Number	HS501DR
Thermal resistance [°C/W]	5.0
Surface area [in ² /cm ²]	19.0/122
Heat sink mounting	Din-Rail Mount
Weight [lbs/grs]	0.12/54
Material	Steel
Finish	Yellow Zinc
SSR Mounting Holes/ threads	2, M4
Mounting screw torque [in lbs/nm]	15-20/1.7-2.2
Number and type of relay accepted	1 single or dual
Accepts Fan/size [mm]	No

MECHANICAL SPECIFICATIONS



Rev. 072109

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Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

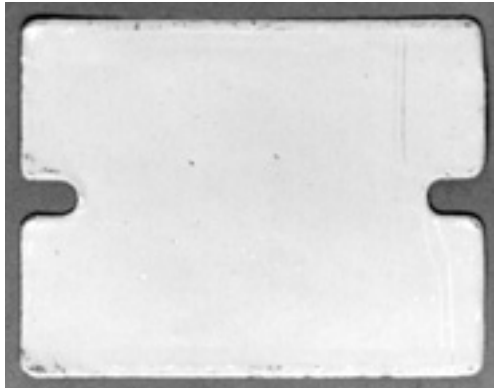
此附件所标示的包括电子信息产品污染图标的环境信息
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部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

SOLID STATE RELAY ACCESSORIES

THERMAL PADS



HSP1
Series: Single Phase



HSP3
Series: Three Phase
GN0 and GN3

HSP1 for Single Phase Relay.
HSP3 for 3 phase **GN0** Series and **GN3** Series.
Sold in multiples of 25 (1 package) per part number.

®Thermstrate is a registered Trademark of Power Devices, Inc.

Solid State Relay Cover



FEATURES:

- Snaps onto Crouzet Single Phase SSRs
- Provides "Finger Safe Operation" of SSRs
- Made of High Impact, Flame Retardant Polycarbonate.

ORDERING INFORMATION:

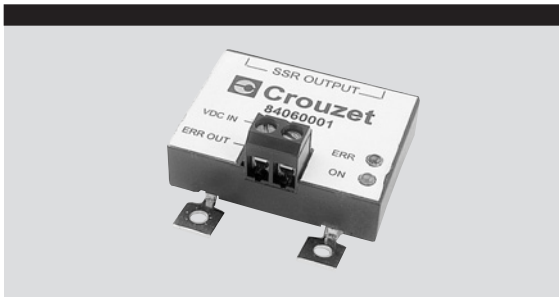
Model #	Description
SSRC	Solid State Relay Cover

Products and specifications subject to change without notice.

Order/Technical Support – Tel: (877) 502-5500 / FAX: (619) 710-8540 / www.crouzet-usa.com

SOLID STATE RELAYS

“SMART MODULE”



ELECTRICAL SPECIFICATIONS: (1)

INPUT:

Nominal Voltage	5-24 VDC
Maximum Voltage	32 VDC
Minimum Voltage	3 VDC
Off-State Voltage (2)	1 VDC

DC SUPPLY/ERROR SIGNAL:

Supply Voltage (3)	4-32 VDC
Supply Current (4)	15-30 mA
Error Output Voltage (5)	4-32 VDC
Error Output Current	30 mA

FEATURES:

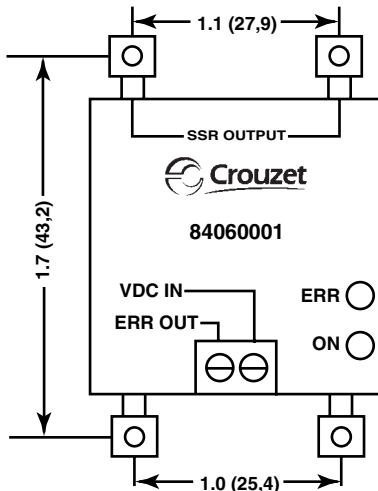
- Supplies Electrical And Visual Feedback If An Error Occurs In The Circuit Or With The Host SSR
- 4 to 32 VDC Push-Pull Transistor Alarm Output
- 4000 VAC Optical Isolation
- 1200 VAC Peak Off-State Blocking Voltage Allows For Use With Any DC Input G & GA5 Series SSR
- UL/cUL Recognition Evaluation Pending
- Mounts On Any Standard Puck Style SSR

LINE VOLTAGE:

Line Voltage	24-660 Vrms
Off-State Blocking Voltage (6)	1200 Vpk
Off-State Leakage Current (7)	8 mArms

GENERAL SPECIFICATIONS:

Operating Temperature	-20° to +80°C
Storage Temperature	-40° to +100°C
Input To Output Isolation (8)	4000 Vrms
Turn-On Time	8.3 mSec
Turn-Off Time	8.3 mSec



FUNCTION: (SMART MODULE ENERGIZED)

INDICATOR	STATUS		
	OFF	ON	BLINKING
ON (GREEN LED)	NO INPUT TO SSR	INPUT POWER TO SSR	N/A
ERROR (RED LED)	NORMAL OPERATION	INTERNAL SHORT	EXTERNAL SHORT OR OPEN CIRCUIT
ERROR OUTPUT SIGNAL	4-32VDC (DC SUPPLY)	0VDC (GROUND)	0VDC (GROUND)

Notes:

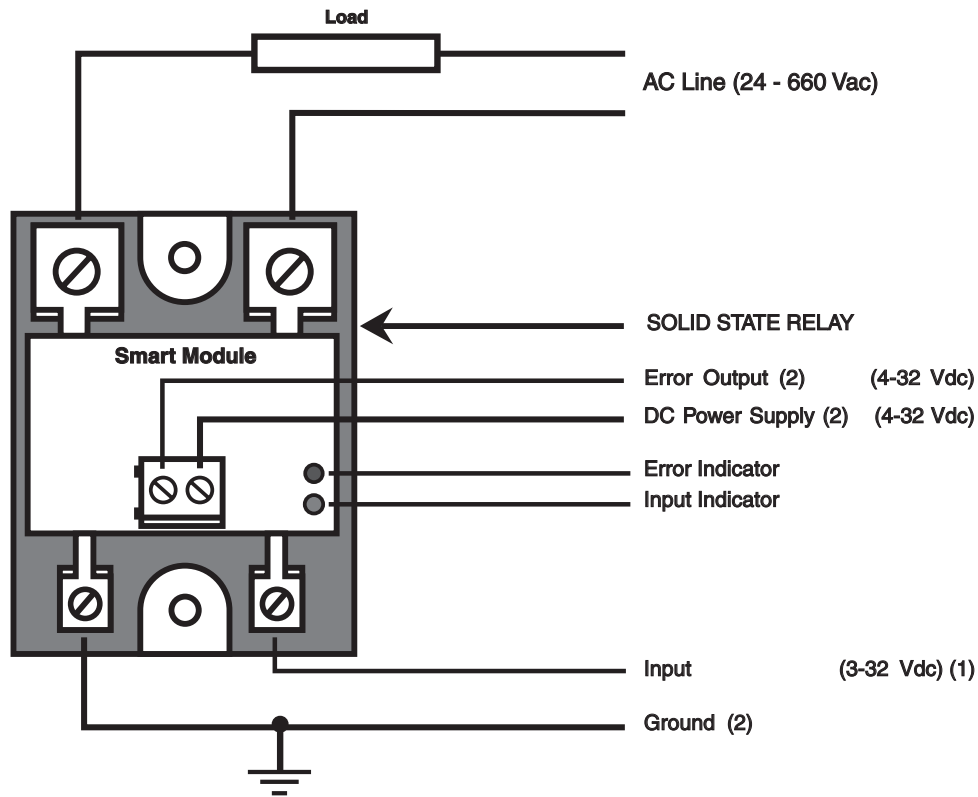
- (1) Specifications apply to an ambient of -20° to + 80°C unless otherwise specified
- (2) Defined as the maximum allowable voltage on the input terminals of the SSR for the module to “sense” an off-state condition
- (3) Referenced to pin #4 (common) of the SSR
- (4) 30 mA max @ 32 VDC supply voltage; current regulated
- (5) During normal operation of the SSR; Error output = DC supply voltage
- (6) Maximum 1 minute duration
- (7) At maximum line voltage
- (8) At 25°C for 1 second

Ordering Information
Part Number: **84060001**

Products and specifications subject to change without notice.
Consult factory for application assistance.

SOLID STATE RELAYS

WIRING DIAGRAM:



Note:

1. HV GN Series DC Input Range is 4-32 Vdc
2. Input, Outputs and DC Power Supply voltages are referred to the same common Ground

17.5mm INPUT MODULES



- DIN-Rail Mountable Single Point Input Modules
- AC Inputs (Yellow Top), DC Inputs (White Top)
- UL, cUL Recognized, CE Compliant
- 4kV Optical isolation
- Input and Output Barrier Strips Accept 14 to 28 AWG Wire
- Open-Collector Output, with LED Status Indicator

SPECIFICATIONS (1)

Input

Part Number	84115501	84115502	84115503
Voltage Range	90-140 VAC/DC	180-280 VAC/DC	4-32 VDC
Maximum Current [mA](2)	7	2	27
Minimum Current [mA](2)	28 k	75 k	28 k
Drop-out Current [mA](3)	3	1	1
Voltage for No Output (4)	50 VAC/DC	50 VAC/DC	2.2 VDC
Allowable Current [mA] (4)	2.5	0.7	1

Output

Logic Supply Voltage Range [VDC]	4.5 to 30	4.5 to 30	4.5 to 30
Maximum Logic Supply Voltage [VDC]	30	30	30
Maximum Logic Supply Current [mA](5)	32	32	32
Maximum Supply Idle Current (5)	7	7	7
Maximum Current [mA](6)	50	50	50
Maximum Logic Leakage Current [μA]	10.0	10.0	10.0
Maximum Voltage Drop [VDC]	0.2	0.2	0.2
Maximum Turn-On Time [msec] (7)	20	20	20
Maximum Turn-Off Time [msec] (7)	30	30	30

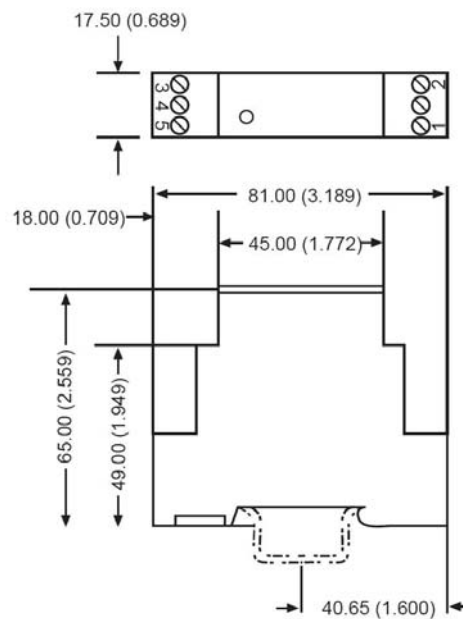
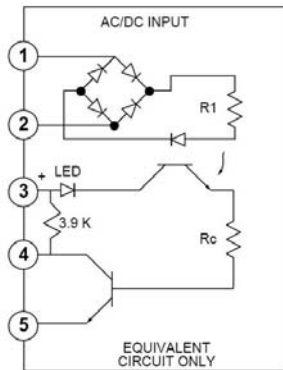
GENERAL SPECIFICATIONS

Description	
Input/Output Isolation Voltage (8)	4000
Input/Output Capacitance	8
Operating Temperature Range	-30 to 80°C
Storage Temperature Range	-40 to 100°C
Line Frequency Range	47 to 63
Weight	1.1 oz. (31.2g)

GENERAL NOTES:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Measured at maximum specified input voltage, 25°C.
- (3) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off". Higher currents may result in the output remaining in the "on" state.
- (4) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on".
- (5) At maximum specified logic voltage and 25°C.
- (6) Maximum allowable sinking current through the open collector output transistor.
- (7) At 15 VDC logic, 30 VDC output, 50 mA, 25°C and nominal input voltage.
- (8) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



DIMENSIONS: MILLIMETERS (INCHES)
TOLERANCE: ± 0.020 (± 0.50)

AGENCY APPROVALS

UL E46203



Rev. 080309

 ⚠ DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 ⚠ WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

17.5mm OUTPUT MODULES



- DIN-Rail Mountable Single Point Output Modules (35mm DIN)
- UL and cUL Recognized, CE Compliant
- Zero Voltage or Random Turn-On for AC Modules
- 4kV Optical isolation with LED Indicator
- AC Ratings 12-280 VAC, 5A. DC Output 5-60 VDC, 3A
- Industry standard Color Coding Black (AC Output) Red (DC Output)
- Barrier Strips Accept 14 to 28 AWG Wire.

SPECIFICATIONS (1)

Input

Part Number	84130105	84130108	84130104
Nominal Voltage VDC	4-32	4-32	4-32
Minimum Voltage VDC	4	4	4
Maximum Voltage VDC	32	32	32
Drop-out Voltage	1.0	1.0	1.0
Maximum Current (2)	22	22	22
Resistance	Current Regulated	Current Regulated	Current Regulated

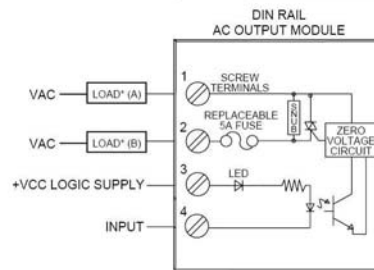
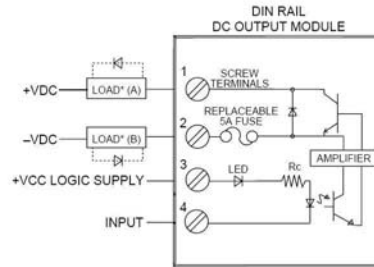
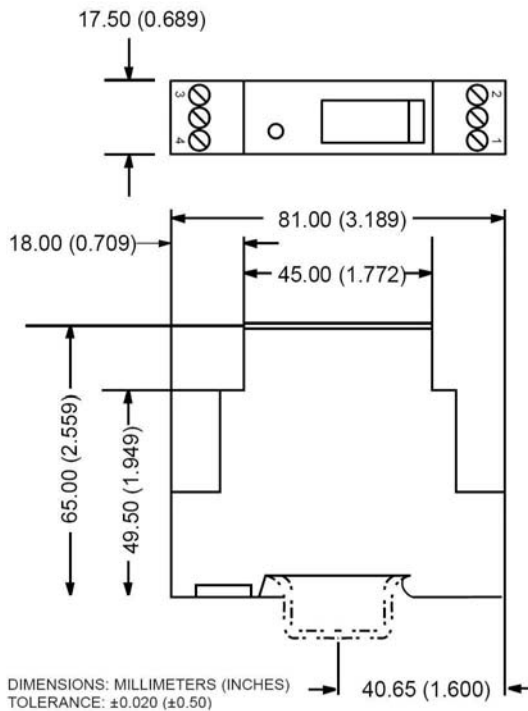
Output

	84130105	84130108	84130104
Nominal Line Voltage	240 VAC	240 VAC	5-60 VDC
Minimum Line Voltage	12 VAC	12 VAC	5 VDC
Maximum Line Voltage	280 VAC	280 VAC	60 VDC
Max Off-State Voltage (3)	800 Vpeak	800 Vpeak	60 VDC
Max Off-State Leakage (4)	0.1mArms	0.1mArms	10 uA
Static Off-State dv/dt (5)	50 V/usec	50 V/usec	N/A
Maximum Rated On-State Current (6)	5.0 Arms	5.0 Arms	3.0 A
Minimum On-State Current	50 mArms	50 mArms	10 mA
Max Surge Current (7)	350 Apeak	350 Apeak	5.0 A
On-State Voltage Drop or Resistance (8)	1.85 V	1.85 V	1.6 V
Maximum Turn-On Time [msec] (9)	8.33	0.1	0.05
Maximum Turn-Off Time [msec] (9)	8.33	8.33	0.05
Input/Output Isolation Voltage (10)	4000	4000	4000
Input/Output Capacitance	6	6	4
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 100°C	-40 to 100°C	-40 to 100°C
Line Frequency Range	47 to 63	47 to 63	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

GENERAL NOTES

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Modules are current limited +/- 10% at 25°C.
- (3) Maximum 1 minute duration for AC modules when applied as a DC voltage rather than Peak AC voltage.
- (4) At maximum line voltage, 25°C for AC modules and 80°C for DC module.
- (5) Minimum dv/dt per EIA/ARM RS443, method RS397. dv/dt ratings do not apply to DC module.
- (6) At 25°C, derate AC modules by 50 mA/°C to 80°C; derate DC module by 21.5mA/°C to 80°C.
- (7) At 25°C, maximum duration: 1 AC cycle for AC modules, 1 second for DC module.
- (8) At maximum rated on-state current and 25°C.
- (9) At maximum line voltage, maximum rated output current, nominal input voltage, 25°C.
- (10) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



*LOAD MAY BE WIRED IN LOCATION A OR B
DC INDUCTIVE LOADS MUST BE DIODE SUPPRESSED
TO PREVENT DAMAGE TO THE I/O MODULE.

AGENCY APPROVALS

UL E46203



Rev. 080309

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

C4 SERIES INPUT MODULES



- Plug into mounting boards for C4 Series modules
- AC Inputs (Yellow Case)
- DC Inputs (White Case)
- 4kV Optical isolation
- Open-collector Output
- Industry standard packaging
- Built-in LED Status Indicator

SPECIFICATIONS (1)

Input

Part Number	C4IAC	C4IACA	C4IDC
Voltage Range	90-140 VAC	180-280 VAC	10-32 VDC
Maximum Current [mA](2)	14	5	20
Resistance [Ohms](3)(4)	22 k	75 k	2 k
Drop-out Current [mA](5)	3	1	1.5
Allowable Voltage for No Output [VAC/VDC](6)	50	50	3.0
Allowable Current for No Output [mA](6)	2.5	0.7	1.0

Output

Maximum Logic Supply Voltage[VDC]	30	30	30
Maximum Output Voltage Drop [VDC](7)	0.2	0.2	0.2
Minimum Logic Supply Voltage [VDC]	4.5	4.5	4.5
Logic Supply Voltage Range [VDC]	4.5-30	4.5-30	4.5-30
Maximum Current [mA](8)	50	50	50
Maximum Logic Supply Current [mA](9)	25.0	25.0	25.0
Maximum Logic Supply Leakage Current [μA](10)	10.0	10.0	10.0
Maximum Supply Idle Current [μA](11)	10.0	10.0	10.0
Maximum Turn-On Time [msec] (12)	20	20	5.0
Maximum Turn-Off Time [msec] (12)	20	20	5.0

SPECIFICATIONS (1)

Input

Part Number	C4IDCB	C4IDCG	C4IDCK
Voltage Range	4-16 VDC	35-60 VDC	2.5-16 VDC
Maximum Current [mA](2)	40	10	60
Resistance [Ohms](3)(4)	400	10 k	300
Drop-out Current [mA](5)	2	1	2
Allowable Voltage for No Output [VAC/VDC](6)	1	7	1
Allowable Current for No Output [mA](6)	0.7	0.7	0.2

Output

Maximum Logic Supply Voltage[VDC]	30	30	30
Maximum Output Voltage Drop [VDC](7)	0.2	0.2	0.2
Minimum Logic Supply Voltage [VDC]	4.5	4.5	4.5
Logic Supply Voltage Range [VDC]	4.5-30	4.5-30	4.5-30
Maximum Current [mA](8)	50	50	50
Maximum Logic Supply Current [mA](9)	25.0	25.0	25.0
Maximum Logic Supply Leakage Current [μA](10)	10.0	10.0	10.0
Maximum Supply Idle Current [μA](11)	10.0	10.0	10.0
Maximum Turn-On Time [msec] (12)	0.05	10.0	0.025
Maximum Turn-Off Time [msec] (12)	0.1	10.0	0.025

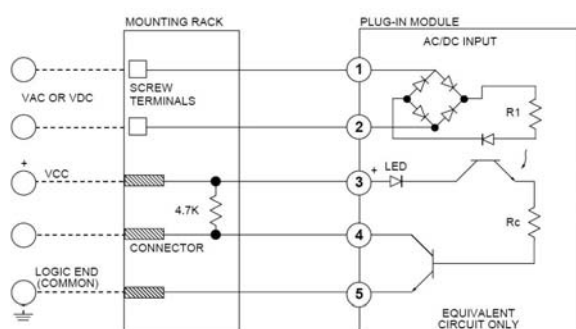
GENERAL SPECIFICATIONS

Description	Parameters
Input/Output Isolation Voltage (13)	4000 VAC
Input/Output Capacitance	8 pF
Operating Temperature Range	-30 to 80°C
Storage Temperature Range	-40 to 100°C
Weight	1.1 oz. (31.2g)

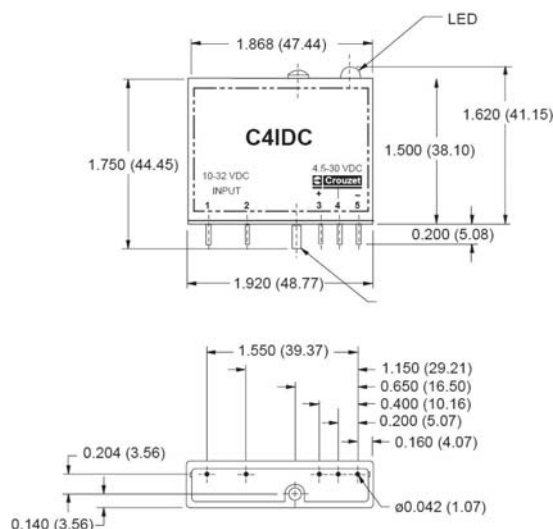
GENERAL NOTES:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Measured at maximum specified input voltage, 25°C.
- (3) Resistance values for C4IAC modules are effective impedance values at 25 °C.
- (4) Resistance values are +/-10% at 25 °C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off". Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum voltage/current allowed through the module's input that will not switch the module's output state from "off" to "on".
- (7) At maximum output current and 25°C
- (8) Maximum allowable sinking current through open collector output transistor
- (9) At maximum logic supply voltage and 25°C.
- (10) At maximum output voltage and 25°C.
- (11) At maximum specified logic voltage and 25°C.
- (12) At 15 VDC logic, 30 VDC output, 50 mA, 25°C and nominal input voltage.
- (13) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



C4 SERIES I/O MODULES
AC/DC INPUT SCHEMATIC



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 080210

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

C4 SERIES OUTPUT MODULES



- Plug into mounting boards for C4 Series modules
- AC Outputs (Black Case)
- DC Outputs (Red Case)
- 4kV Optical isolation
- Replaceable 2 AG Type Fuse
- Industry standard packaging
- Built-in LED Status Indicator

SPECIFICATIONS (1)

Input

Part Number	C4OAC	C4OACA	C4OACR	C4OACAR	C4ODC	C4ODCA
Nominal Voltage VDC	4-32	4-32	4-32	4-32	4-32	4-32
Minimum Voltage VDC	4.0	4.0	4.0	4.0	4.0	4.0
Maximum Voltage VDC	32	32	32	32	32	32
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0	1.0
Maximum Current (2) (3)	22	22	22	22	16	16
Resistance	Regulated Input	Regulated Input	Regulated Input	Regulated Input	Regulated Input	Regulated Input

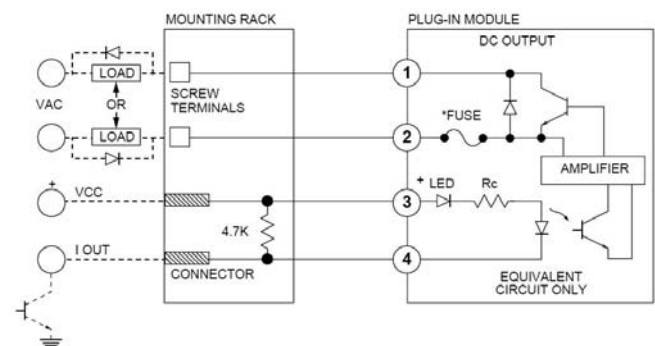
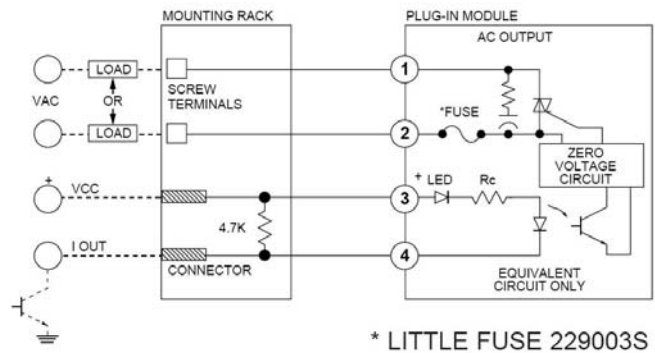
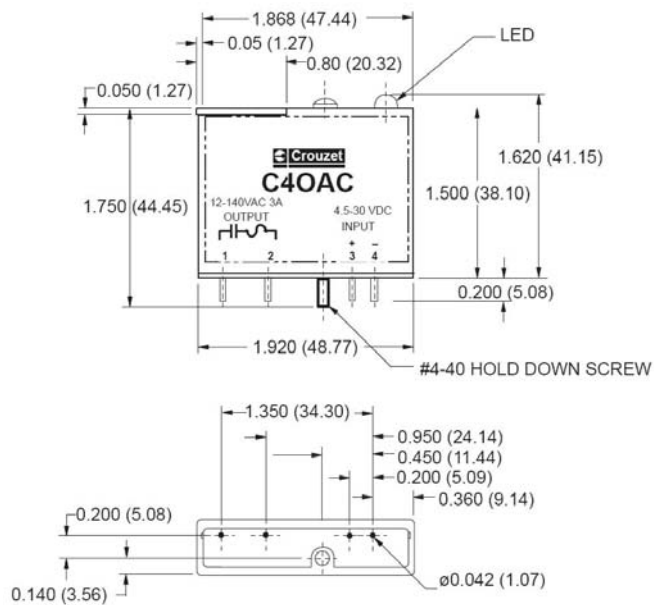
Output

Nominal Line Voltage	120 VAC	240 VAC	120 VAC	240 VAC	5-48 VDC	5-150 VDC
Minimum Line Voltage	12 VAC	12 VAC	12 VAC	12 VAC	5.0 VDC	3 VDC
Maximum Line Voltage	140 VAC	280 VAC	140 VAC	280 VAC	60 VDC	250 VDC
Max Off-State Voltage (4)	600 Vpeak	600 Vpeak	600 Vpeak	600 Vpeak	60 VDC	250 VDC
Max Off-State Leakage (5)	0.1mArms	0.1mArms	0.1mArms	0.1mArms	10 uA	10 uA
Static Off-State dv/dt (6)	200 V/usec	200 V/usec	200 V/usec	200 V/usec	n/a	n/a
Maximum Rated On-State Current (7)	3.0 Arms	3.0 Arms	3.0 Arms	3.0 Arms	3.0 A	1.0 A
Minimum On-State Current	50 mArms	50 mArms	50 mArms	50 mArms	10 mA	10 mA
Max Surge Current (8)	100 Apeak	100 Apeak	100 Apeak	100 Apeak	5.0 Apeak	5.0 Apeak
On-State Voltage Drop or Resistance (9)	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V
HP Rating	1/4	1/4	1/4	1/4	n/a	n/a
Maximum Turn-On Time [msec] (10)	8.33	8.33	0.1	0.1	0.05	0.05
Maximum Turn-Off Time [msec]	8.33	8.33	8.33	8.33	0.05	0.05
Input/Output Isolation Voltage (11)	4000	4000	4000	4000	4000	4000
Input/Output Capacitance	4	4	4	4	4	4
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 100°C	-40 to 100°C	-40 to 100°C	-40 to 100°C	-40 to 100°C	-40 to 100°C
Line Frequency Range	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

General Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) At 32 VDC typical.
- (3) 13 m at 5 VDC for AC output modules only.
- (4) Maximum 1 minute duration.
- (5) At maximum rated line voltage, TA=80°C.
- (6) Minimum DV/DT per EIA/NARM RS433, method RS397, DV/DT ratings do not apply to DC output models.
- (7) Without any external heat sink in still air, TA=45°C, at 40°C derate 40 mA/°C to 80°C.
- (8) At 25°C for 1 second maximum duration: 1 AC cycle for AC modules, 1 second for DC modules.
- (9) At peak rated current.
- (10) Before zero voltage, Vin=4V AC modules only based on 60Hz. Vin=15V for DC modules.
- (11) For 1 second maximum duration TA= 25°C.

MECHANICAL SPECIFICATIONS



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

Solid State Relays

I/O Modules

DR INPUT MODULES



- DIN-Rail Mountable Single Point Input Modules
- AC Inputs (Yellow Case)
- DC Inputs (White Case)
- 4kV Optical isolation
- Input and Output Barrier Strips Accept 14 to 28 AWG Wire
- Configured for Panel Mounting
- Open-Collector Output, with LED Status Indicator

SPECIFICATIONS (1)

Input

Part Number	DR-IAC5	DR- IAC5A	DR- IAC24	DR- IAC24A
Voltage Range	90-140 VAC/DC	180-280 VAC/DC	90-140 VAC/DC	180-280 VAC/DC
Maximum Current [mA](4)	6	5	6	5
Resistance [Ohms](2)(3)	28 k	75 k	28 k	75 k
Drop-out Current [mA](5)	2	1.5	2	1.5
Voltage for No Output [VAC/VDC](6)	50	50	50	50
Allowable Current [mA]	2.5	2	2.5	2

Output

Maximum Voltage[VDC](9)	30	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	5.0	5.0	24	24
Logic Supply Voltage Range [VDC]	3.0-6.0	3.0-6.0	20-30	20-30
Maximum Current [mA](10)	50	50	50	50
Maximum Logic Supply Current [mA](7)	28	28	28	28
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	20	20	20	20
Maximum Turn-Off Time [msec] (13)	30	30	30	30

SPECIFICATIONS (1)

Input

Part Number	DR-IDC5	DR-IDC5A	DR-IDC24	DR-IDC24A
Voltage Range	4-32 VDC/AC	10-48 VDC	4-32 VDC/AC	10-48 VDC
Maximum Current [mA](4)	34	34	34	34
Resistance [Ohms](2)(3)	1 k	2 k	1 k	2 k
Drop-out Current [mA](5)	1	1	1	1
Voltage for No Output [VAC/VDC](6)	2	4	2	4
Allowable Current [mA]	1.5	1.5	1.5	1.5

Output

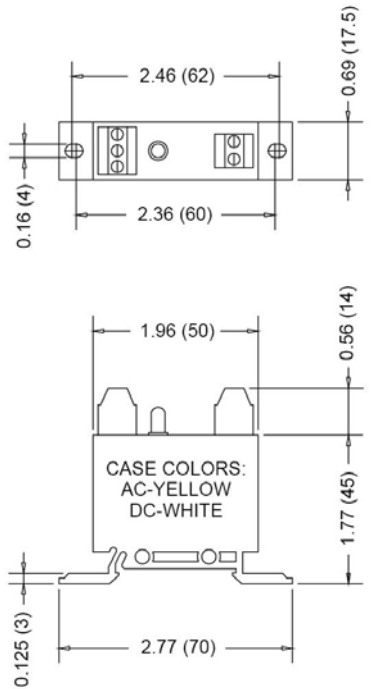
Maximum Voltage[VDC](9)	30	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	5.0	5.0	5.0	5.0
Logic Supply Voltage Range [VDC]	3.0-6.0	3.0-6.0	20-30	20-30
Maximum Current [mA](10)	50	50	50	50
Maximum Logic Supply Current [mA](7)	28	28	28	28
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	1.0	1.0	1.0	1.0
Maximum Turn-Off Time [msec] (13)	1.0	1.0	1.0	1.0

GENERAL SPECIFICATIONS

Description

Input/Output Isolation Voltage (14)	4000
Input/Output Capacitance	8
Operating Temperature Range	-30 to 80°C
Storage Temperature Range	-40 to 100°C
Line Frequency Range	47 to 63
Weight	1.1 oz. (31.2g)

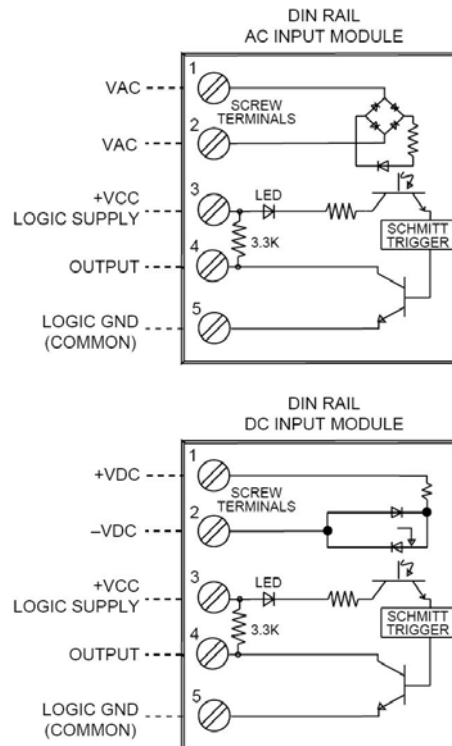
MECHANICAL SPECIFICATIONS



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ± 0.020 (± 0.50)

AGENCY APPROVALS

UL E46203
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Rev. 040609

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

DR OUTPUT MODULES



- DIN-Rail Mountable Single Point Output Modules (35mm DIN)
- Plug into mounting boards for 0.6" modules
- Zero Voltage Turn-On for AC Modules
- 4kV Optical isolation with LED Indicator
- UL Recognized, CSA Certified, CE Compliant
- Industry standard Color Coding Black (AC Output) Red (DC Output)
- Barrier Strips Accept 14 to 28 AWG Wire.

SPECIFICATIONS (1)

Input

Part Number	DR-OAC	DR-ODC5	DR-ODC24
Nominal Voltage VDC	5-24	5.0	24.0
Minimum Voltage VDC	3.7	3.5	18.0
Maximum Voltage VDC	32	8.0	32.0
Drop-out Voltage	1.0	1.0	1.0
Maximum Current (2)	18	18	13
Resistance (3)	NA	250	2000

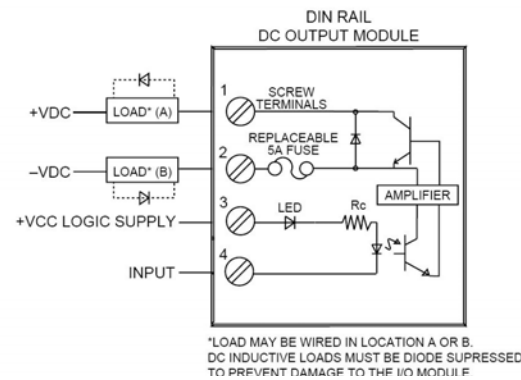
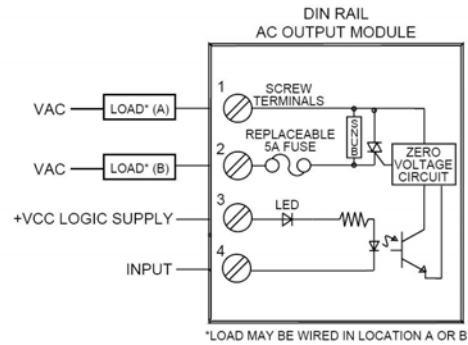
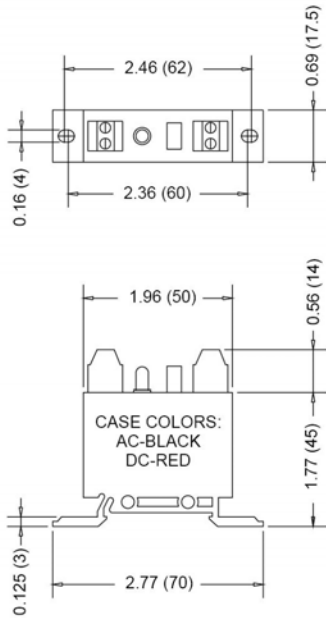
Output

Nominal Line Voltage	240 VAC	5-48 VDC	5-48 VDC
Minimum Line Voltage	12 VAC	3 VDC	3 VDC
Maximum Line Voltage	280 VAC	60 VDC	60 VDC
Max Off-State Voltage (4)	600 Vpeak	60 VDC	60 VDC
Max Off-State Leakage (5)	0.1mA _{rms}	10 μ A	10 μ A
Static Off-State dv/dt (6)	200 V/ μ sec	N/A	N/A
Maximum Rated On-State Current (7)	5.0 Arms	3.0 A	3.0 A
Minimum On-State Current	50 mA _{rms}	10 mA	10 mA
Max Surge Current (8)	250 A _{peak}	5.0 A	5.0 A
On-State Voltage Drop or Resistance (9)	1.6 V	1.6 V	1.6 V
Horse Power Rating (13)	1/2 H.P.	N/A	N/A
Maximum Turn-On Time [msec] (13)	8.33	0.1	0.1
Maximum Turn-Off Time [msec] (13)	8.33	0.75	0.75
Input/Output Isolation Voltage (14)	4000	4000	4000
Input/Output Capacitance	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	47 to 63	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

General Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) At nominal input voltage, without external LED status indicator.
- (3) +/-10% at 25°C.
- (4) Maximum 1 minute duration for OAC modules when applied as a DC voltage rather than a peak AC voltage.
- (5) At maximum line voltage, 25°C for OAC modules, and 80°C for ODC modules.
- (6) Minimum D V/DT per EIA/NARM RS433, method RS397, DV/DT ratings do not apply to DC output models
- (7) At 40°C, derate OAC modules 58 mA/°C to 80°C, derate ODC, ODCxMC and ODCxML modules 50 mA/°C to 80°C. CSA rating of OAC modules is 3.0 Arms at 40°C.
- (8) At 25°C for 1 second maximum duration: 1 AC cycle for AC modules, 1 second for DC modules.
- (9) At maximum rated on-state current and 25°C.
- (10) At maximum line voltage, maximum rated output current, nominal input voltage and 25°C. Switching speed of OAC modules is based upon 60 Hz line frequency.
- (11) At 25°C for 1 second maximum duration.
- (12) 1/3 H.P. at 240 VAC, 1/8 H.P. at 120 VAC.

MECHANICAL SPECIFICATIONS



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

M SERIES INPUT MODULES



- Plug into mounting boards for M Series modules
- AC Inputs (Yellow Case) for 24 V, 120 V, 240 V
- DC Inputs (White Case) for 3.3 to 32 V, 10 to 48 V
- 4kV Optical isolation
- Open-collector Output
- Industry standard packaging

SPECIFICATIONS (1)

Input

Part Number	M-IAC5	M- IAC5A	M- IAC24	M- IAC24A	M-IDC5
Voltage Range	90-140 VAC/DC	180-280 VAC/DC	90-140 VAC/DC	180-280 VAC/DC	3.3-32 VDC/AC
Maximum Current [mA](4)	6	5	6	5	34
Resistance [Ohms](2)(3)	28 k	75 k	28 k	75 k	500
Drop-out Current [mA](5)	2	1.5	2	1.5	1.0
Voltage for No Output [VAC/VDC](6)	50	50	50	50	2.0
Allowable Current [mA]	2.5	2	2.5	2	1.5

Output

Maximum Voltage[VDC](9)	30	30	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	5.0	5.0	24	24	5.0
Logic Supply Voltage Range [VDC]	3.0-6.0	3.0-6.0	20-30	20-30	3.0-6.0
Maximum Current [mA](10)	50	50	50	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0	16.0	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	20	20	20	20	1.0
Maximum Turn-Off Time [msec] (13)	20	20	20	20	1.0

SPECIFICATIONS (1)

Input

Part Number	M-IDC24	M-IDC5F	M-IDC5N
Voltage Range	3.3-32 VDC/AC	4-32 V	10-48 VDC/AC
Maximum Current [mA](4)	34	68	34
Resistance [Ohms](2)(3)	1 k	500	1 k
Drop-out Current [mA](5)	1	1	1
Voltage for No Output [VAC/VDC](6)	2	2	4
Allowable Current [mA]	1.5	1.5	1.5

Output

Maximum Voltage[VDC](9)	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	24	5.0	5.0
Logic Supply Voltage Range [VDC]	20-30	3.0-6.0	3.0-6.0
Maximum Current [mA](10)	50	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	1.0	0.05	8.0
Maximum Turn-Off Time [msec] (13)	1.0	0.10	7.0

GENERAL SPECIFICATIONS

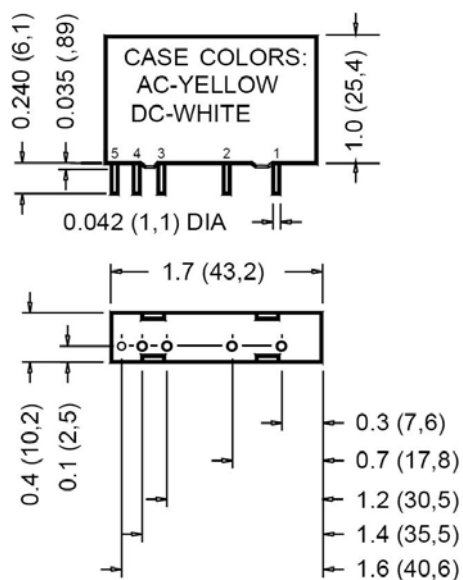
Description

Input/Output Isolation Voltage (14)	4000
Input/Output Capacitance	8
Operating Temperature Range	-30 to 80°C
Storage Temperature Range	-40 to 80°C
Line Frequency Range	47 to 63
Weight	1.1 oz. (31.2g)

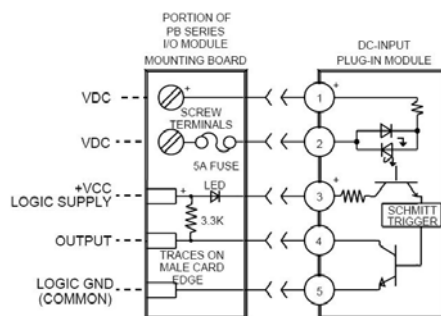
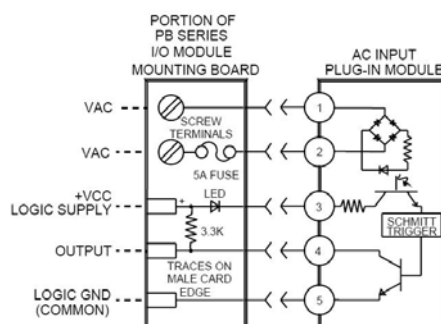
GENERAL NOTES:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Resistance values for IAC modules are effective impedance values at 25 °C.
- (3) Resistance values are +/-10% at 25 °C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off". Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on".
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18mA without external LED.
- (8) At maximum specified logic voltage and 25°C.
- (9) Applied across open collector output transistor.
- (10) Sinking current through the open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum output current and 25°C.
- (13) At nominal logic supply voltage, 25mA output sinking current, nominal input voltage and 25°C
- (14) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ± 0.020 ($\pm 0,50$)



(EQUIVALENT CIRCUIT DIAGRAMS)

AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

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 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

M SERIES OUTPUT MODULES



- AC Modules have High Current Thyristors with 100 Amp Surge Capability
- Plug into mounting boards for 0.6" modules
- Zero or Random Turn-On Available in AC Modules
- 4kV Optical isolation (1500 VAC Isolation for FET DC Output Modules)
- UL Recognized, CSA Certified, CE Compliant
- Industry standard packaging and Color Coding
Black (AC Output) Red (DC Output)

SPECIFICATIONS (1)

Input

Part Number	M-OAC5	M-OAC5A	M-OAC5AH	M-OAC5AR	M-OAC5R
Nominal Voltage VDC	5.0	5.0	5.0	5.0	5.0
Minimum Voltage VDC (2)	2.75	2.75	2.75	2.75	2.75
Maximum Voltage VDC	8.0	8.0	8.0	8.0	8.0
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	20	20	20	20	20
Resistance (4)	220	220	220	220	220

Output

Nominal Line Voltage	120 VAC	240 VAC	240 VAC	240 VAC	120 VAC
Minimum Line Voltage	12 VAC	24 VAC	24 VAC	24 VAC	12 VAC
Maximum Line Voltage	140 VAC	280 VAC	280 VAC	280 VAC	140 VAC
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	600 Vpeak	600 Vpeak	400 Vpeak
Max Off-State Leakage (6)	0.1mA _{rms}	0.1mA _{rms}	0.1mA _{rms}	0.1mA _{rms}	0.1mA _{rms}
Static Off-State dv/dt (7)	200 V/μsec	200 V/μsec	200 V/μsec	200 V/μsec	200 V/μsec
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	5.0 Arms	3.5 Arms	3.5 Arms
Minimum On-State Current	50 mA _{rms}	50 mA _{rms}	50 mA _{rms}	50 mA _{rms}	50 mA _{rms}
Max Surge Current (9)	100 Apeak	100 Apeak	100 Apeak	100 Apeak	100 Apeak
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V
Maximum Turn-On Time [msec] (13)	8.33	8.33	8.33	0.1	0.1
Maximum Turn-Off Time [msec] (13)	8.33	8.33	8.33	8.33	8.33
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	4000
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	47 to 63	47 to 63	47 to 63	47 to 63	47 to 63
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

SPECIFICATIONS (1)

Input

Part Number	M-OAC24	M-OAC24A	M-ODC5	M-ODC5A	M-ODC5F
Nominal Voltage VDC	24	24	5.0	5.0	5.0
Minimum Voltage VDC (2)	18	18	2.75	2.75	2.75
Maximum Voltage VDC	32	32	8.0	8.0	8.0
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	13	13	18	18	18
Resistance (4)	2000	2000	250	250	250

Output

Nominal Line Voltage	120 VAC	240 VAC	5-48 VDC	5-150 VDC	5-48 VDC
Minimum Line Voltage	12 VAC	24 VAC	3.0 VDC	3.0 VDC	3.0 VDC
Maximum Line Voltage	140 VAC	280 VAC	60 VDC	250 VDC	60 VDC
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	60 VDC	250 VDC	60 VDC
Max Off-State Leakage (6)	0.1mA _{rms}	0.1mA _{rms}	10 uA	10 uA	10 uA
Static Off-State dv/dt (7)	200 V/usec	200 V/usec	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	3.0 A	1.0 A	3.0 A
Minimum On-State Current	50 mA _{rms}	50 mA _{rms}	10 mA	10 mA	10 mA
Max Surge Current (9)	100 Apeak	100 Apeak	5.0 A	5.0 A	5.0 A
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.5 V	1.5 V	1.5 V
Maximum Turn-On Time [msec] (13)	8.33	8.33	0.1	0.1	0.025
Maximum Turn-Off Time [msec] (13)	8.33	8.33	0.75	0.75	0.05
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	4000
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	47 to 63	47 to 63	DC	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

SPECIFICATIONS (1)

Input

Part Number	M-ODC5MA	M-ODC5MC	M-ODC5ML	M-ODC24	M-ODC24A
Nominal Voltage VDC	5.0	5.0	5.0	24	24
Minimum Voltage VDC (2)	2.75	2.75	2.75	18	18
Maximum Voltage VDC	8.0	8.0	8.0	32	32
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	18	18	18	13	13
Resistance (4)	250	250	250	2000	2000

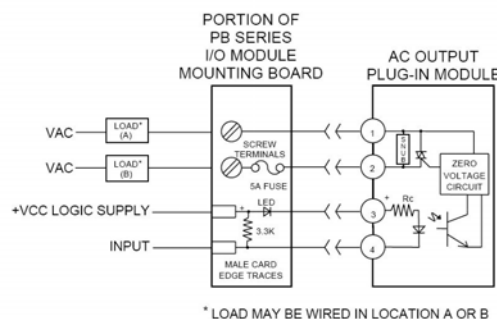
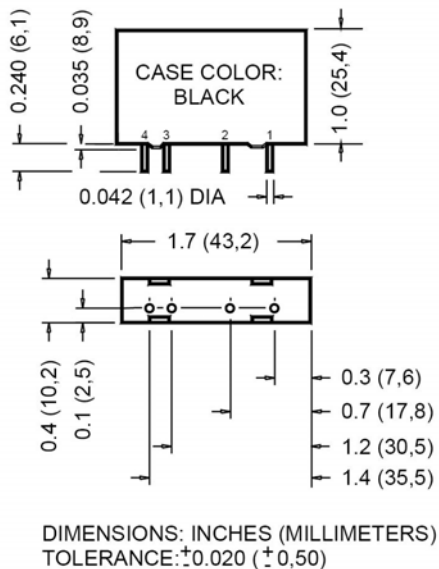
Output

Nominal Line Voltage	5-150 VDC	5-90 VDC	5-48 VDC	5-48 VDC	5-150 VDC
Minimum Line Voltage	1.0 VDC	1.0 VDC	50 VDC	60 VDC	250 VDC
Maximum Line Voltage	200 VDC	100 VDC	50 VDC	60 VDC	250 VDC
Max Off-State Voltage (5)	200 VDC	100 VDC	50 VDC	60 VDC	250 VDC
Max Off-State Leakage (6)	10 uA	10 uA	10 uA	10 uA	10 uA
Static Off-State dv/dt (7)	N/A	N/A	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.0 A	5.0 A	1.0 A	3.0 A	1.0 A
Minimum On-State Current	1.0 mA	1.0 mA	10 mA	10 mA	10 mA
Max Surge Current (9)	10 A	10 A	10 A	5.0 A	5.0 A
On-State Voltage Drop or Resistance (10)	0.25 Ohms	0.10 Ohms	0.05 Ohms	1.5 V	1.5 V
Maximum Turn-On Time [msec] (13)	1.0	1.0	1.0	0.1	0.1
Maximum Turn-Off Time [msec] (13)	0.05	0.05	0.05	0.75	0.75
Input/Output Isolation Voltage (14)	1500	1500	1500	4000	4000
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	DC	DC	DC	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

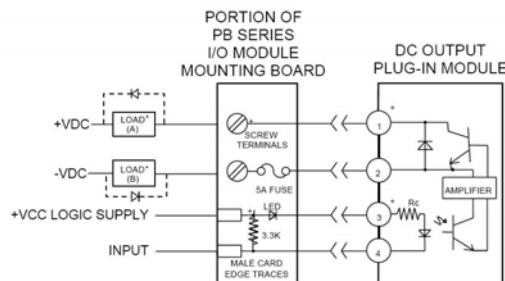
General Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Without external LED status indicator. Add 1.7 volts for external LED if utilized.
- (3) At nominal input voltage, without external LED status indicator.
- (4) $\pm 10\%$ at 25°C.
- (5) Maximum 1 minute duration for OAC modules when applied as a DC voltage rather than a peak AC voltage.
- (6) At maximum line voltage, 25°C for OAC modules, and 80°C for ODC modules.
- (7) Minimum DV/DT per EIA/NARM RS433, method RS397, DV/DT ratings do not apply to DC output models
- (8) At 40°C, derate OAC modules 58 mA/°C to 80°C, derate ODC, ODCxMC and ODCxML modules 50 mA/°C to 80°C. CSA rating of OAC modules is 3.0 Arms at 40°C.
- (9) At 25°C for 1 second maximum duration: 1 AC cycle for AC modules, 1 second for DC modules.
- (10) At maximum rated on-state current and 25°C.
- (11) At maximum line voltage, maximum rated output current, nominal input voltage and 25° C. Switching speed of OAC modules is based upon 60 Hz line frequency.
- (12) At 25°C for 1 second maximum duration.
- (13) 1/3 H.P. at 240 VAC, 1/8 H.P. at 120 VAC.

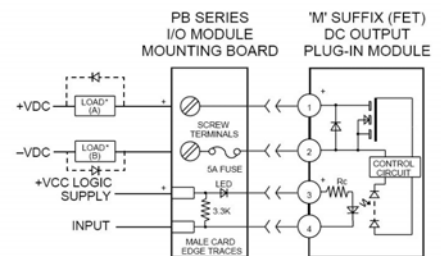
MECHANICAL SPECIFICATIONS



* LOAD MAY BE WIRED IN LOCATION A OR B



* LOAD MAY BE WIRED IN LOCATION A OR B
DC INDUCTIVE LOADS MUST BE DIODE SUPPRESSED



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

QUAD SERIES INPUT MODULES



- Plug into mounting boards for Quad Series modules
- AC Inputs (Yellow Case) for 24 V, 120 V, 240 V
- DC Inputs (White Case) for 4 to 32 V, 10 to 60 V
- 4kV Optical isolation
- Open-collector Output
- Industry standard packaging

SPECIFICATIONS (1)

Input

Part Number	IAC5Q	IAC5AQ	IAC5EQ
Voltage Range	90-140 VAC/DC	180-280 VAC/DC	18-36 VAC/DC
Maximum Current [mA](4)	6	5	10
Resistance [Ohms](2)(3)	28 k	75 k	3.3 k
Drop-out Current [mA](5)	2	1.5	1.0
Voltage for No Output [VAC/VDC](6)	50	50	50
Allowable Current [mA]	2.5	2	1.5

Output

Maximum Voltage[VDC](9)	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	5.0	5.0	5.0
Logic Supply Voltage Range [VDC]	3.0-6.0	3.0-6.0	3.0-6.0
Maximum Current [mA](10)	50	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	20	20	60
Maximum Turn-Off Time [msec] (13)	20	20	30

SPECIFICATIONS (1)

Input

Part Number	IDC5Q	IDC5BQ
Voltage Range	12-60 VDC/AC	5-32 VDC
Maximum Current [mA](4)	34	68
Resistance [Ohms](2)(3)	2 k	500
Drop-out Current [mA](5)	1	1
Voltage for No Output [VAC/VDC](6)	1	2
Allowable Current [mA]	4	1.5

Output

Maximum Voltage[VDC](9)	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2
Nominal Logic Supply Voltage [VDC]	5.0	5.0
Logic Supply Voltage Range [VDC]	3.0-6.0	3.0-6.0
Maximum Current [mA](10)	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0
Maximum Turn-On Time [msec] (13)	1.0	0.05
Maximum Turn-Off Time [msec] (13)	1.0	0.10

GENERAL SPECIFICATIONS

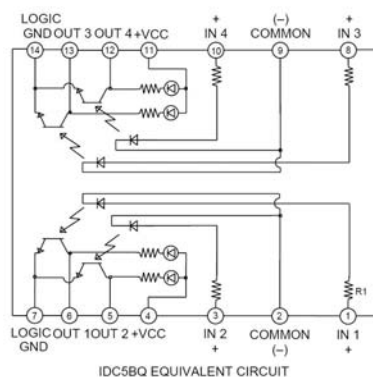
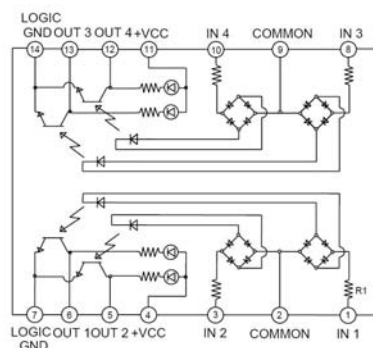
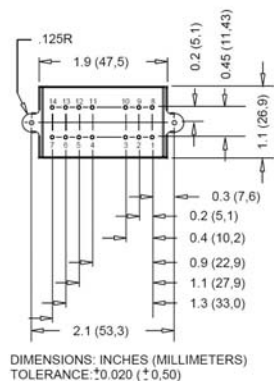
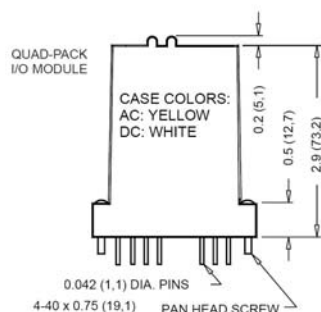
Description

Input/Output Isolation Voltage (14)	4000
Input/Output Capacitance	8
Operating Temperature Range	-30 to 80°C
Storage Temperature Range	-40 to 100°C
Line Frequency Range	47 to 63

GENERAL NOTES:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Resistance values for IAC modules are effective impedance values at 25 °C.
- (3) Resistance values are +/-10% at 25 °C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off". Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on".
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18mA without external LED.
- (8) At maximum specified logic voltage and 25°C.
- (9) Applied across open collector output transistor.
- (10) Sinking current through the open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum output current and 25°C.
- (13) At nominal logic supply voltage, 25mA output sinking current, nominal input voltage and 25°C
- (14) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

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 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

ANNEX - ENVIROMENTAL INFORMATION

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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

此附件所标示的包括电子信息产品污染图标的环境信息
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

QUAD SERIES OUTPUT MODULES



- AC Modules have High Current Thyristors with 100 Amp Surge Capability
- Plug into mounting boards for Quad modules
- Zero or Random Turn-On Available in AC Modules
- 4kV Optical isolation
- 4 Outputs per Quad-Pack Module
- UL Recognized, CSA Certified, CE Compliant
- Industry standard packaging and Color Coding
Black (AC Output) Red (DC Output)

SPECIFICATIONS (1)

Input

Part Number	OAC5Q	OAC5AQ	OAC5RQ	OAC5ARQ	ODC5Q	ODC5Q-11
Nominal Voltage VDC	5	5	5	5	5	5
Minimum Voltage VDC	4.0	4.0	4.0	4.0	4.0	4.0
Maximum Voltage VDC	8	8	8	8	8	8
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0	1.0
Maximum Current (2) (3)	20 mA	20 mA	20 mA	20 mA	18 mA	18 mA
Resistance	220 Ohms	220 Ohms	220 Ohms	220 Ohms	250 Ohms	250 Ohms

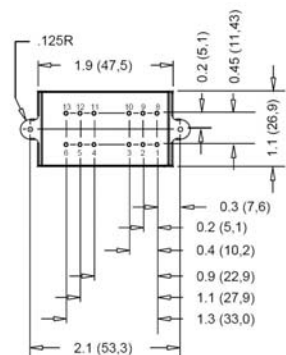
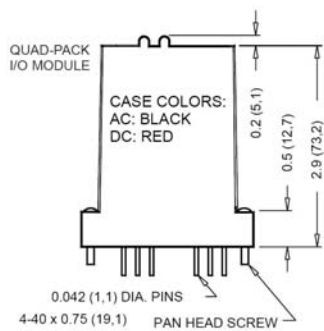
Output

Nominal Line Voltage	120 VAC	240 VAC	120 VAC	240 VAC	5-48 VDC	5-48 VDC
Minimum Line Voltage	12 VAC	12 VAC	12 VAC	12 VAC	3.0 VDC	3.0 VDC
Maximum Line Voltage	140 VAC	280 VAC	140 VAC	280 VAC	60 VDC	60 VDC
Max Off-State Voltage (4)	600 Vpeak	600 Vpeak	600 Vpeak	600 Vpeak	60 VDC	60 VDC
Max Off-State Leakage (5)	0.1mA _{rms}	0.1mA _{rms}	0.1mA _{rms}	0.1mA _{rms}	10 uA	10 uA
Static Off-State dv/dt (6)	200 V/usec	200 V/usec	200 V/usec	200 V/usec	n/a	n/a
Maximum Rated On-State Current (7)	3.0 Arms	3.0 Arms	3.0 Arms	3.0 Arms	3.0 A	1.0 A
Minimum On-State Current	50 mA _{rms}	50 mA _{rms}	50 mA _{rms}	50 mA _{rms}	10 mA	10 mA
Max Surge Current (8)	100 Apeak	100 Apeak	100 Apeak	100 Apeak	5.0 Apeak	5.0 Apeak
On-State Voltage Drop or Resistance (9)	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V
HP Rating	1/4	1/4	1/4	1/4	n/a	n/a
Maximum Turn-On Time [msec] (10)	8.33	8.33	0.1	0.1	0.1	0.05
Maximum Turn-Off Time [msec]	8.33	8.33	8.33	8.33	0.05	0.05
Input/Output Isolation Voltage (11)	4000	4000	4000	4000	4000	4000
Input/Output Capacitance	4	4	4	4	4	4
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 100°C	-40 to 100°C	-40 to 100°C	-40 to 100°C	-40 to 100°C	-40 to 100°C
Line Frequency Range	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

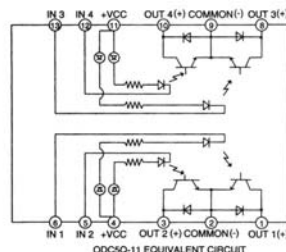
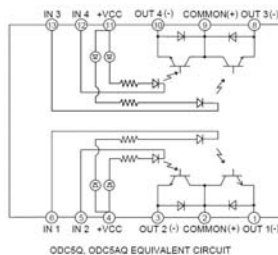
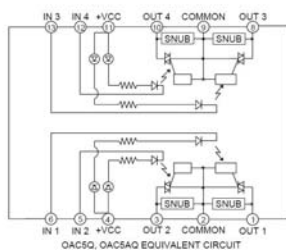
General Notes:

- (1) Specifications apply to Each Quad-Pack channel at an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) At nominal input voltage, without external LED status indicator..
- (3) +/-10% at 25 °C.
- (4) Maximum 1 minute duration for OACQ modules when applied as a DC voltage rather than peak AC voltage.
- (5) At maximum line voltage, 25°C for OACQ modules, and 80°C for ODCQ modules.
- (6) Minimum D V/DT per EIA/NARM RS433, method RS397, DV/DT ratings do not apply to ODCQ models.
- (7) At 40°C, derate OACQ modules by 58mA/°C to 80°C; derate ODCQ modules By 50mA/°C to 80°C; CSA rating for OACQ modules is 3.0 Arms at 40°C..
- (8) At 25°C maximum duration: 1 AC cycle for OACQ modules, 1 second for ODCQ modules..
- (9) At maximum rated on-state current and 25°C.
- (10) At maximum line voltage, maximum rated output current, nominal input voltage, 25°C. Switching speed for OACQ modules based upon 60Hz. .
- (11) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ± 0.020 (± 0.50)



DC INDUCTIVE LOADS MUST BE DIODE SUPPRESSED
TO PREVENT DAMAGE TO THE I/O MODULE.

AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions 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 der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

SM SERIES INPUT MODULES



- Plug into mounting boards for SM Series modules
- AC Inputs (Yellow Case) for 24 V, 120 V, 240 V
- DC Inputs (White Case) for 3.3 to 32 V, 10 to 48 V
- 4kV Optical isolation
- Open-collector Output
- Industry standard packaging

SPECIFICATIONS (1)

Input

Part Number	SM-IAC5	SM- IAC5A	SM- IAC24	SM- IAC24A	SM-IDC5
Voltage Range	90-140 VAC/DC	180-280 VAC/DC	90-140 VAC/DC	180-280 VAC/DC	3.3-32 VDC/AC
Maximum Current [mA](4)	6	5	6	5	34
Resistance [Ohms](2)(3)	28 k	75 k	28 k	75 k	500
Drop-out Current [mA](5)	2	1.5	2	1.5	1.0
Voltage for No Output [VAC/VDC](6)	50	50	50	50	2.0
Allowable Current [mA]	2.5	2	2.5	2	1.5

Output

Maximum Voltage[VDC](9)	30	30	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	5.0	5.0	24	24	5.0
Logic Supply Voltage Range [VDC]	3.0-6.0	3.0-6.0	20-30	20-30	3.0-6.0
Maximum Current [mA](10)	50	50	50	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0	16.0	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	20	20	20	20	1.0
Maximum Turn-Off Time [msec] (13)	20	20	20	20	1.0

SPECIFICATIONS (1)

Input

Part Number	SM-IDC24	SM-IDC5F	SM-IDC5N
Voltage Range	3.3-32 VDC/AC	4-32 V	10-48 VDC/AC
Maximum Current [mA](4)	34	68	34
Resistance [Ohms](2)(3)	1 k	500	1 k
Drop-out Current [mA](5)	1	1	1
Voltage for No Output [VAC/VDC](6)	2	2	4
Allowable Current [mA]	1.5	1.5	1.5

Output

Maximum Voltage[VDC](9)	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	24	5.0	5.0
Logic Supply Voltage Range [VDC]	20-30	3.0-6.0	3.0-6.0
Maximum Current [mA](10)	50	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	1.0	0.05	8.0
Maximum Turn-Off Time [msec] (13)	1.0	0.10	7.0

GENERAL SPECIFICATIONS

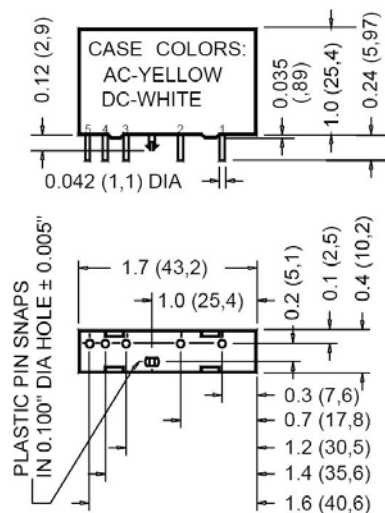
Description

Input/Output Isolation Voltage (14)	4000
Input/Output Capacitance	8
Operating Temperature Range	-30 to 80°C
Storage Temperature Range	-40 to 80°C
Line Frequency Range	47 to 63
Weight	1.1 oz. (31.2g)

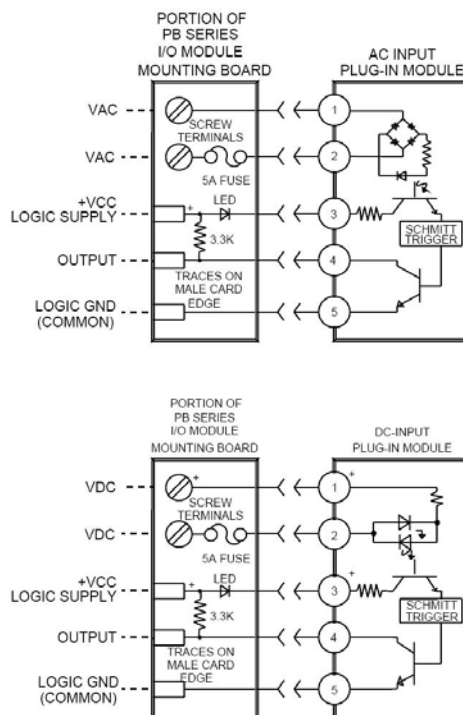
GENERAL NOTES:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Resistance values for IAC modules are effective impedance values at 25 °C.
- (3) Resistance values are +/-10% at 25 °C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off". Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on".
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18mA without external LED.
- (8) At maximum specified logic voltage and 25°C.
- (9) Applied across open collector output transistor.
- (10) Sinking current through the open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum output current and 25°C.
- (13) At nominal logic supply voltage, 25mA output sinking current, nominal input voltage and 25°C
- (14) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ±0.020 (±0,50)



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

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 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

SM SERIES OUTPUT MODULES



- AC Modules have High Current Thyristors with 100 Amp Surge Capability
- Plug into mounting boards for 0.6" modules
- Zero or Random Turn-On Available in AC Modules
- 4kV Optical isolation (1500 VAC Isolation for FET DC Output Modules)
- UL Recognized, CSA Certified, CE Compliant
- Industry standard packaging and Color Coding
Black (AC Output) Red (DC Output)

SPECIFICATIONS (1)

Input

Part Number	SM-OAC5	SM-OAC5A	SM-OAC5AH	SM-OAC5AR	SM-OAC5R
Nominal Voltage VDC	5.0	5.0	5.0	5.0	5.0
Minimum Voltage VDC (2)	2.75	2.75	2.75	2.75	2.75
Maximum Voltage VDC	8.0	8.0	8.0	8.0	8.0
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	20	20	20	20	20
Resistance (4)	220	220	220	220	220

Output

Nominal Line Voltage	120 VAC	240 VAC	240 VAC	240 VAC	120 VAC
Minimum Line Voltage	12 VAC	24 VAC	24 VAC	24 VAC	12 VAC
Maximum Line Voltage	140 VAC	280 VAC	280 VAC	280 VAC	140 VAC
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	600 Vpeak	600 Vpeak	400 Vpeak
Max Off-State Leakage (6)	0.1mArms	0.1mArms	0.1mArms	0.1mArms	0.1mArms
Static Off-State dv/dt (7)	200 V/usec	200 V/usec	200 V/usec	200 V/usec	200 V/usec
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	5.0 Arms	3.5 Arms	3.5 Arms
Minimum On-State Current	50 mArms	50 mArms	50 mArms	50 mArms	50 mArms
Max Surge Current (9)	100 Apeak	100 Apeak	100 Apeak	100 Apeak	100 Apeak
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V
Maximum Turn-On Time [msec] (13)	8.33	8.33	8.33	0.1	0.1
Maximum Turn-Off Time [msec] (13)	8.33	8.33	8.33	8.33	8.33
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	4000
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	47 to 63	47 to 63	47 to 63	47 to 63	47 to 63
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

SPECIFICATIONS (1)

Input

Part Number	SM-OAC24	SM-OAC24A	SM-ODC5	SM-ODC5A	SM-ODC5F
Nominal Voltage VDC	24	24	5.0	5.0	5.0
Minimum Voltage VDC (2)	18	18	2.75	2.75	2.75
Maximum Voltage VDC	32	32	8.0	8.0	8.0
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	13	13	18	18	18
Resistance (4)	2000	2000	250	250	250

Output

Nominal Line Voltage	120 VAC	240 VAC	5-48 VDC	5-150 VDC	5-48 VDC
Minimum Line Voltage	12 VAC	24 VAC	3.0 VDC	3.0 VDC	3.0 VDC
Maximum Line Voltage	140 VAC	280 VAC	60 VDC	250 VDC	60 VDC
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	60 VDC	250 VDC	60 VDC
Max Off-State Leakage (6)	0.1mA _{rms}	0.1mA _{rms}	10 uA	10 uA	10 uA
Static Off-State dv/dt (7)	200 V/usec	200 V/usec	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	3.0 A	1.0 A	3.0 A
Minimum On-State Current	50 mA _{rms}	50 mA _{rms}	10 mA	10 mA	10 mA
Max Surge Current (9)	100 Apeak	100 Apeak	5.0 A	5.0 A	5.0 A
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.5 V	1.5 V	1.5 V
Maximum Turn-On Time [msec] (13)	8.33	8.33	0.1	0.1	0.025
Maximum Turn-Off Time [msec] (13)	8.33	8.33	0.75	0.75	0.05
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	4000
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	47 to 63	47 to 63	DC	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

SPECIFICATIONS (1)

Input

Part Number	SM-ODC5MA	SM-ODC5MC	SM-ODC5ML	SM-ODC24	SM-ODC24A
Nominal Voltage VDC	5.0	5.0	5.0	24	24
Minimum Voltage VDC (2)	2.75	2.75	2.75	18	18
Maximum Voltage VDC	8.0	8.0	8.0	32	32
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	18	18	18	13	13
Resistance (4)	250	250	250	2000	2000

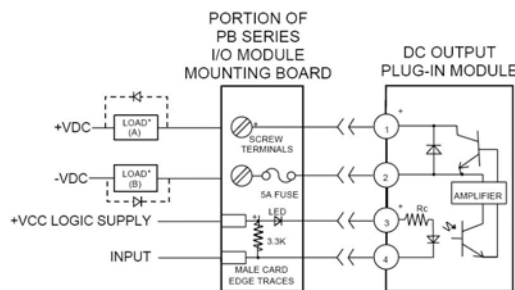
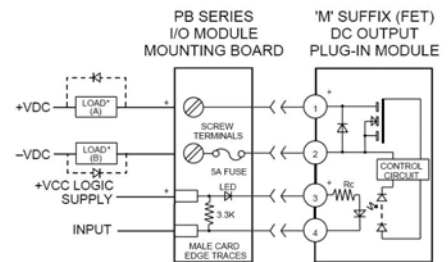
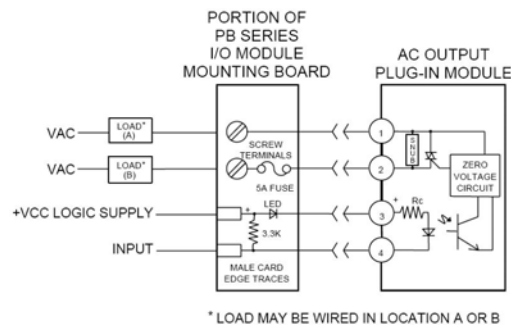
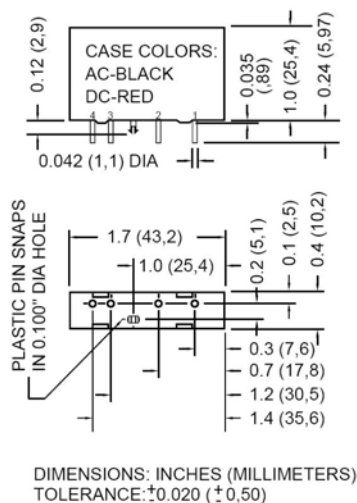
Output

Nominal Line Voltage	5-150 VDC	5-90 VDC	5-48 VDC	5-48 VDC	5-150 VDC
Maximum Line Voltage	200 VDC	100 VDC	50 VDC	60 VDC	250 VDC
Max Off-State Voltage (5)	200 VDC	100 VDC	50 VDC	60 VDC	250 VDC
Max Off-State Leakage (6)	10 uA	10 uA	10 uA	10 uA	10 uA
Static Off-State dv/dt (7)	N/A	N/A	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.0 A	5.0 A	1.0 A	3.0 A	1.0 A
Minimum On-State Current	1.0 mA	1.0 mA	10 mA	10 mA	10 mA
Max Surge Current (9)	10 A	10 A	10 A	5.0 A	5.0 A
On-State Voltage Drop or Resistance (10)	0.25 Ohms	0.10 Ohms	0.05 Ohms	1.5 V	1.5 V
Maximum Turn-On Time [msec] (13)	1.0	1.0	1.0	0.1	0.1
Maximum Turn-Off Time [msec] (13)	0.05	0.05	0.05	0.75	0.75
Input/Output Isolation Voltage (14)	1500	1500	1500	4000	4000
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	DC	DC	DC	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

General Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Without external LED status indicator. Add 1.7 volts for external LED if utilized.
- (3) At nominal input voltage, without external LED status indicator.
- (4) $\pm 10\%$ at 25°C.
- (5) Maximum 1 minute duration for OAC modules when applied as a DC voltage rather than a peak AC voltage.
- (6) At maximum line voltage, 25°C for OAC modules, and 80°C for ODC modules.
- (7) Minimum DV/DT per EIA/NARM RS433, method RS397, DV/DT ratings do not apply to DC output models
- (8) At 40°C, derate OAC modules 58 mA/°C to 80°C, derate ODC, ODCxMC and ODCxML modules 50 mA/°C to 80°C. CSA rating of OAC modules is 3.0 Arms at 40°C.
- (9) At 25°C for 1 second maximum duration: 1 AC cycle for AC modules, 1 second for DC modules.
- (10) At maximum rated on-state current and 25°C.
- (11) At maximum line voltage, maximum rated output current, nominal input voltage and 25° C. Switching speed of OAC modules is based upon 60 Hz line frequency.
- (12) At 25°C for 1 second maximum duration.
- (13) 1/3 H.P. at 240 VAC, 1/8 H.P. at 120 VAC.

MECHANICAL SPECIFICATIONS



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

 ⚠ DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 ⚠ WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

0.6" SERIES INPUT MODULES



- Plug into mounting boards for 0.6" modules
- AC Inputs for 24 V, 120 V, 240 V
- DC Inputs for 3.3 to 32 V, 10 to 48 V
- 4kV Optical isolation
- Open-collector Output
- Industry standard packaging

SPECIFICATIONS (1)

Input

Part Number	IAC5	IAC5A	IAC24	IAC24A	IDC5
Voltage Range	90-140 VAC/DC	180-280 VAC/DC	90-140 VAC/DC	180-280 VAC/DC	3.3-32 VDC/AC
Maximum Current [mA](4)	6	5	6	5	34
Resistance [Ohms](2)(3)	28 k	75 k	28 k	75 k	500
Drop-out Current [mA](5)	2	1.5	2	1.5	1.0
Voltage for No Output [VAC/VDC](6)	50	50	50	50	2.0
Allowable Current [mA]	2.5	2	2.5	2	1.5

Output

Maximum Voltage[VDC](9)	30	30	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	5.0	5.0	24	24	5.0
Logic Supply Voltage Range [VDC]	3.0-6.0	3.0-6.0	20-30	20-30	3.0-6.0
Maximum Current [mA](10)	50	50	50	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0	16.0	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	20	20	20	20	1.0
Maximum Turn-Off Time [msec] (13)	20	20	20	20	1.0

SPECIFICATIONS (1)

Input

Part Number	IDC24	IDC5F	IDC24F	IDC5N	IDC24N
Voltage Range (VAC or VDC)	3.3-32 VDC/AC	4-32 VDC	4-32 VDC	10-48 VDC/AC	10-48 VDC/AC
Maximum Current [mA](4)	34	68	68	34	34
Resistance [Ohms](2)(3)	1 k	500	500	1 k	1 k
Drop-out Current [mA](5)	1	1	1	1	1
Voltage for No Output [VAC/VDC](6)	2	2	2	4	4
Allowable Current [mA]	1.5	1.5	1.5	1.5	1.5

Output

Maximum Voltage[VDC](9)	30	30	30	30	30
Maximum Voltage Drop [VDC](12)	0.2	0.2	0.2	0.2	0.2
Nominal Logic Supply Voltage [VDC]	24	5.0	24	5.0	24
Logic Supply Voltage Range [VDC]	20-30	3.0-6.0	20-30	3.0-6.0	20-30
Maximum Current [mA](10)	50	50	50	50	50
Maximum Logic Supply Current [mA](7)	16.0	16.0	16.0	16.0	16.0
Maximum Logic Supply Leakage Current [μA](8)	10.0	10.0	10.0	10.0	10.0
Maximum Leakage Current [μA](11)	10.0	10.0	10.0	10.0	10.0
Maximum Turn-On Time [msec] (13)	1.0	0.05	0.05	8.0	8.0
Maximum Turn-Off Time [msec] (13)	1.0	0.10	0.10	7.0	7.0

GENERAL SPECIFICATIONS

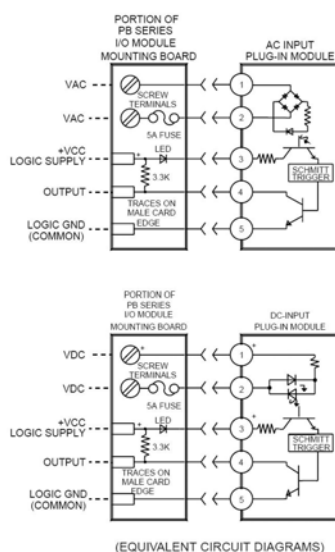
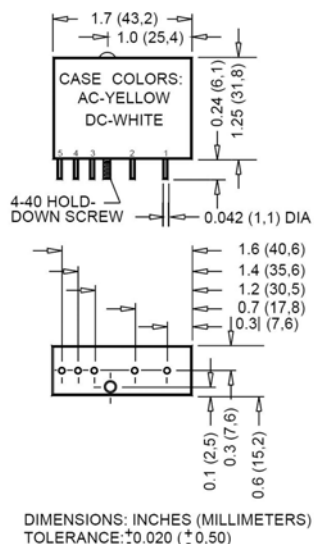
Description

Input/Output Isolation Voltage (14)	4000
Input/Output Capacitance	8
Operating Temperature Range	-30 to 80°C
Storage Temperature Range	-40 to 80°C
Line Frequency Range	47 to 63
Weight	1.1 oz. (31.2g)

GENERAL NOTES:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Resistance values for IAC modules are effective impedance values at 25 °C.
- (3) Resistance values are +/-10% at 25 °C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off". Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on".
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18mA without external LED.
- (8) At maximum specified logic voltage and 25°C.
- (9) Applied across open collector output transistor.
- (10) Sinking current through the open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum output current and 25°C.
- (13) At nominal logic supply voltage, 25mA output sinking current, nominal input voltage and 25°C
- (14) At 25°C for 1 second maximum duration.

MECHANICAL SPECIFICATIONS



AGENCY APPROVALS

UL E46203
CSA 38595



Rev. 040609

 ! DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 ! WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
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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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

此附件所标示的包括电子信息产品污染图标的环境信息
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

0.6" SERIES OUTPUT MODULES



- AC Modules have High Current Thyristors with 100 Amp Surge Capability
- Plug into mounting boards for 0.6" modules
- Zero or Random Turn-On Available in AC Modules
- 4kV Optical isolation (1500 VAC Isolation for FET DC Output Modules)
- UL Recognized, CSA Certified, CE Compliant
- Industry standard packaging and Color Coding
Black (AC Output) Red (DC Output)

SPECIFICATIONS (1)

Input

Part Number	OAC5	OAC5A	OAC5AH	OAC5AR	OAC5R	OAC24
Nominal Voltage VDC	5.0	5.0	5.0	5.0	5.0	24
Minimum Voltage VDC (2)	2.75	2.75	2.75	2.75	2.75	18
Maximum Voltage VDC	8.0	8.0	8.0	8.0	8.0	32
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	20	20	20	20	20	13
Resistance (4)	220	220	220	220	220	2000

Output

Nominal Line Voltage	120 VAC	240 VAC	240 VAC	240 VAC	120 VAC	120 VAC
Minimum Line Voltage	12 VAC	24 VAC	24 VAC	24 VAC	12 VAC	12 VAC
Maximum Line Voltage	140 VAC	280 VAC	280 VAC	280 VAC	140 VAC	140 VAC
Max Off-State Voltage (5)	400 Vpeak	600 Vpeak	600 Vpeak	600 Vpeak	400 Vpeak	400 Vpeak
Max Off-State Leakage (6)	0.1mArms	0.1mArms	0.1mArms	0.1mArms	0.1mArms	0.1mArms
Static Off-State dv/dt (7)	200 V/usec	200 V/usec	200 V/usec	200 V/usec	200 V/usec	200 V/usec
Maximum Rated On-State Current (8)	3.5 Arms	3.5 Arms	5.0 Arms	3.5 Arms	3.5 Arms	3.5 Arms
Minimum On-State Current	50 mArms	50 mArms	50 mArms	50 mArms	50 mArms	50 mArms
Max Surge Current (9)	100 Apeak	100 Apeak	100 Apeak	100 Apeak	100 Apeak	100 Apeak
On-State Voltage Drop or Resistance (10)	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V	1.6 V
Maximum Turn-On Time [msec] (13)	8.33	8.33	8.33	0.1	0.1	8.33
Maximum Turn-Off Time [msec] (13)	8.33	8.33	8.33	8.33	8.33	8.33
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	4000	4000
Input/Output Capacitance	8	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	47 to 63	47 to 63	47 to 63	47 to 63	47 to 63	47 to 63
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

Input

Part Number	OAC24A	ODC5	ODC5A	ODC5F	ODC5MA
Nominal Voltage VDC	24	5.0	5.0	5.0	5.0
Minimum Voltage VDC (2)	18	2.75	2.75	2.75	2.75
Maximum Voltage VDC	32	8.0	8.0	8.0	8.0
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	13	18	18	18	18
Resistance (4)	2000	250	250	250	250

Output

Nominal Line Voltage	240 VAC	5-48 VDC	5-150 VDC	5-48 VDC	5-150 VDC
Minimum Line Voltage	24 VAC	3.0 VDC	3.0 VDC	3.0 VDC	1.0 VDC
Maximum Line Voltage	280 VAC	60 VDC	250 VDC	60 VDC	200 VDC
Max Off-State Voltage (5)	600 Vpeak	60 VDC	250 VDC	60 VDC	200 VDC
Max Off-State Leakage (6)	0.1mAmps	10 uA	10 uA	10 uA	10 uA
Static Off-State dv/dt (7)	200 V/usec	N/A	N/A	N/A	N/A
Maximum Rated On-State Current (8)	3.5 Arms	3.0 A	1.0 A	3.0 A	3.0 A
Minimum On-State Current	50 mAmps	10 mA	10 mA	10 mA	1.0 mA
Max Surge Current (9)	100 Apeak	5.0 A	5.0 A	5.0 A	10 A
On-State Voltage Drop or Resistance (10)	1.6 V	1.5 V	1.5 V	1.5 V	0.25 Ohms
Maximum Turn-On Time [msec] (13)	8.33	0.1	0.1	0.025	1.0
Maximum Turn-Off Time [msec] (13)	8.33	0.75	0.75	0.05	0.05
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	1500
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	47 to 63	DC	DC	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

Input

Part Number	ODC5MC	ODC5ML	ODC24	ODC24A	ODC24F
Nominal Voltage VDC	5.0	5.0	24	24	24
Minimum Voltage VDC (2)	2.75	2.75	18	18	18
Maximum Voltage VDC	8.0	8.0	32	32	32
Drop-out Voltage	1.0	1.0	1.0	1.0	1.0
Maximum Current (3)	18	18	13	13	13
Resistance (4)	250	250	2000	2000	2000

Output

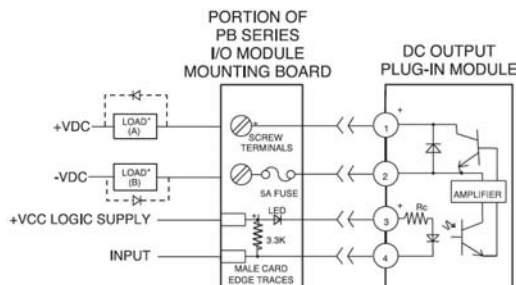
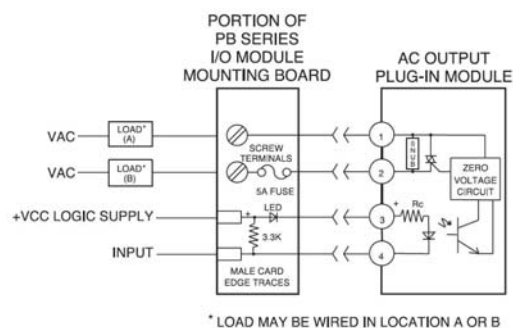
Nominal Line Voltage	5-90 VDC	5-48 VDC	5-48 VDC	5-150 VDC	5-48 VDC
Minimum Line Voltage	1.0 VDC	1.0 VDC	3.0 VDC	3.0 VDC	3.0 VDC
Maximum Line Voltage	100 VDC	50 VDC	60 VDC	250 VDC	60 VDC
Max Off-State Voltage (5)	50 VDC	60 VDC	250 VDC	60 VDC	60 VDC
Max Off-State Leakage (6)	10 uA	10 uA	10 uA	10 uA	10 uA
Static Off-State dv/dt (7)	N/A	N/A	N/A	N/A	N/A
Maximum Rated On-State Current (8)	5.0 A	1.0 A	3.0 A	1.0 A	3.0 A
Minimum On-State Current	1.0 mA	10 mA	10 mA	10 mA	10 mA
Max Surge Current (9)	10 A	10 A	5.0 A	5.0 A	5.0 A
On-State Voltage Drop or Resistance (10)	0.10 Ohms	0.05 Ohms	1.5 V	1.5 V	1.5 V
Maximum Turn-On Time [msec] (13)	1.0	1.0	0.1	0.1	0.025
Maximum Turn-Off Time [msec] (13)	0.05	0.05	0.75	0.75	0.05
Input/Output Isolation Voltage (14)	1500	1500	4000	4000	4000
Input/Output Capacitance	8	8	8	8	8
Operating Temperature Range	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C	-30 to 80°C
Storage Temperature Range	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C	-40 to 80°C
Line Frequency Range	DC	DC	DC	DC	DC
Weight	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)	1.1 oz. (31.2g)

GENERAL NOTES

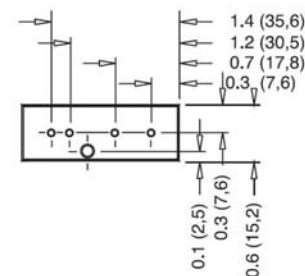
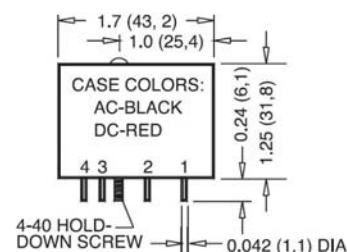
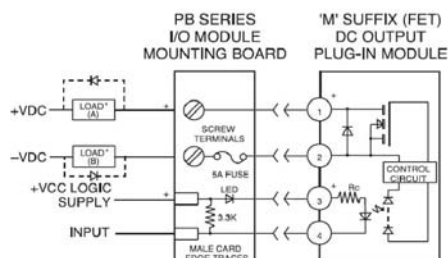
General Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Without external LED status indicator. Add 1.7 volts for external LED if utilized.
- (3) At nominal input voltage, without external LED status indicator.
- (4) $\pm 10\%$ at 25°C.
- (5) Maximum 1 minute duration for OAC modules when applied as a DC voltage rather than a peak AC voltage.
- (6) At maximum line voltage, 25°C for OAC modules, and 80°C for ODC modules.
- (7) Minimum DV/DT per EIA/NARM RS433, method RS397, DV/DT ratings do not apply to DC output models
- (8) At 40°C, derate OAC modules 58 mA/°C to 80°C, derate ODC, ODCxMC and ODCxML modules 50 mA/°C to 80°C. CSA rating of OAC modules is 3.0 Arms at 40°C.
- (9) At 25°C for 1 second maximum duration: 1 AC cycle for AC modules, 1 second for DC modules.
- (10) At maximum rated on-state current and 25°C.
- (11) At maximum line voltage, maximum rated output current, nominal input voltage and 25° C. Switching speed of OAC modules is based upon 60 Hz line frequency.
- (12) At 25°C for 1 second maximum duration.
- (13) 1/3 H.P. at 240 VAC, 1/8 H.P. at 120 VAC.

MECHANICAL SPECIFICATIONS



* LOAD MAY BE WIRED IN LOCATION A OR B
DC INDUCTIVE LOADS MUST BE DIODE SUPPRESSED
TO PREVENT DAMAGE TO THE I/O MODULE.



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ± 0.020 (± 0.50)

AGENCY APPROVALS

UL
CSA
CE

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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 energizar el equipo. El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.	RISQUE DE DESCARGE 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 place avant de mettre sous De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.	GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenda tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie	RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO - Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento O não cumprimento destas instruções pode levar a morte ou lesões sérias.

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO			
RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE - The product's side panels may be hot, allow time for 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 this instruction 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.	RISCO DE DANO MATERIAL E DE AQUECIMENTO - Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar. - Siga devidamente as instruções de montagem. - Não permita a entrada de líquidos e de objectos estranhos no produto. A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.	

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

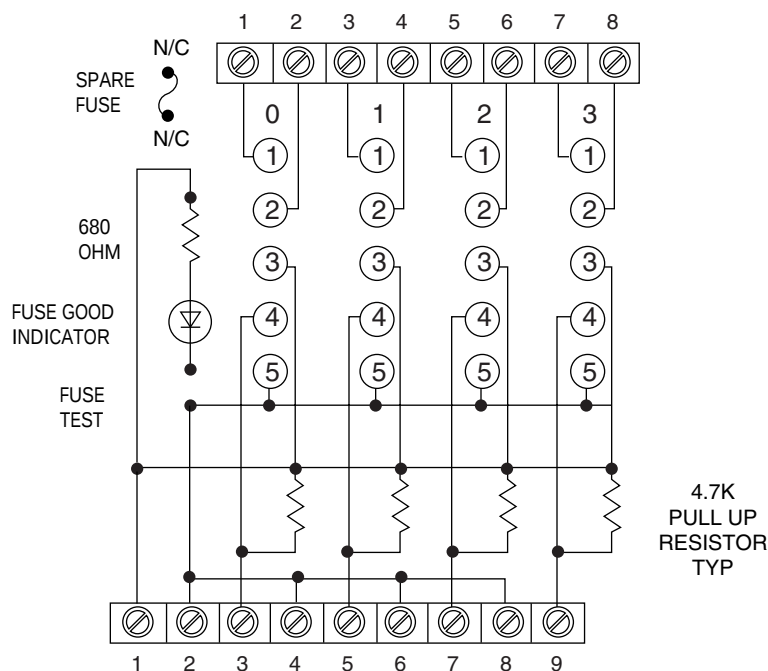
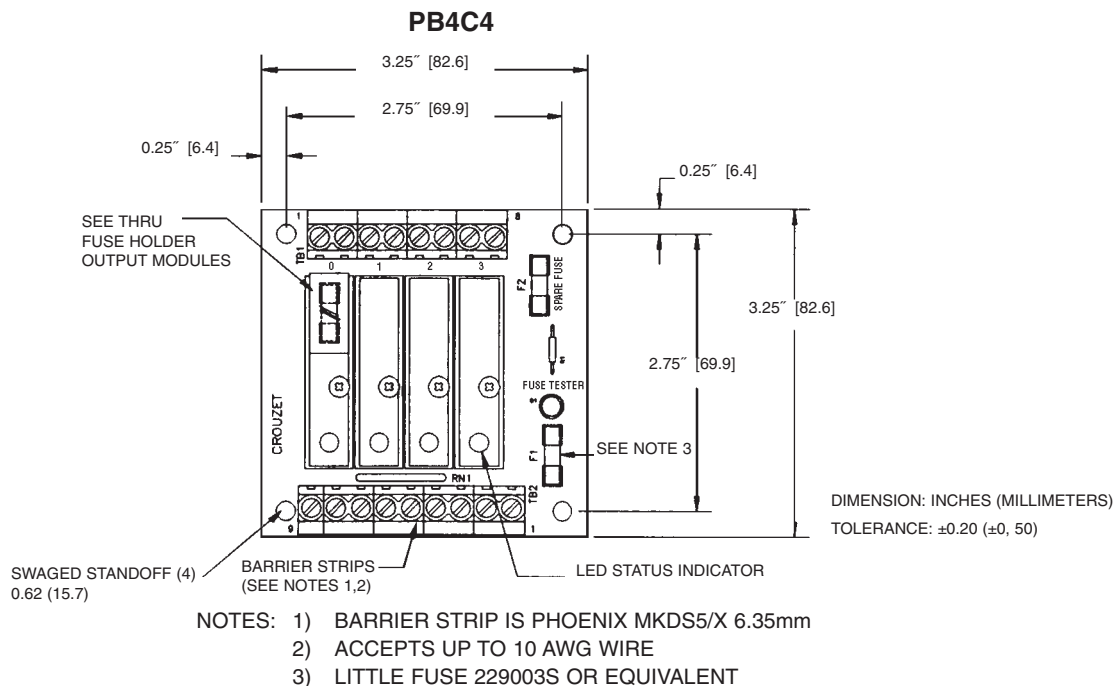
此附件所标示的包括电子信息产品污染图标的环境信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
电子信息产品污染控制标识要求



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

DIGITAL I/O MODULE MOUNTING BOARDS

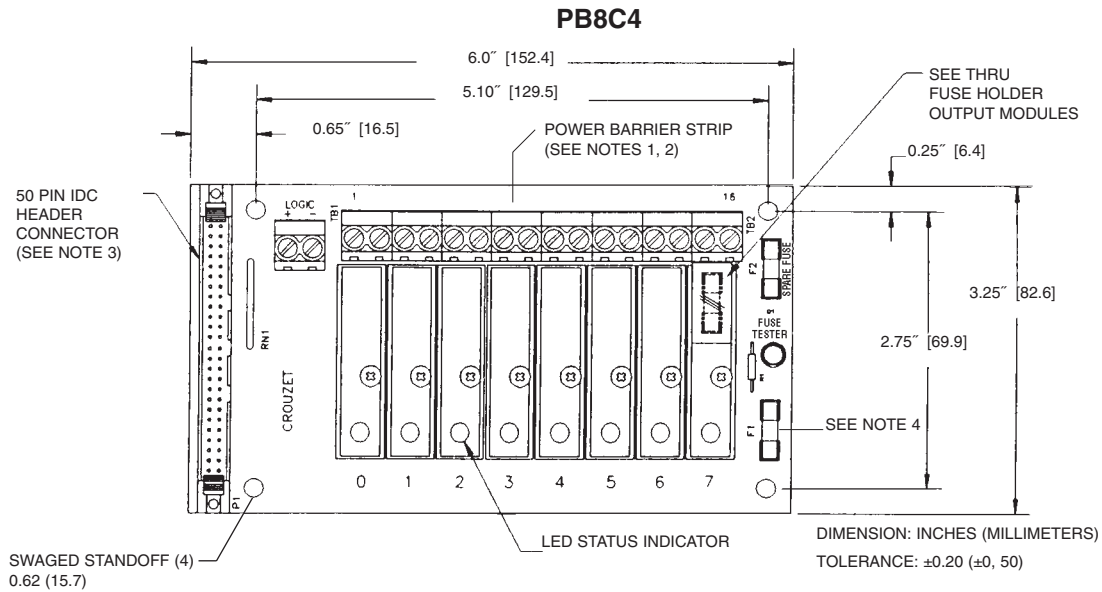
FOR C4 MODULES



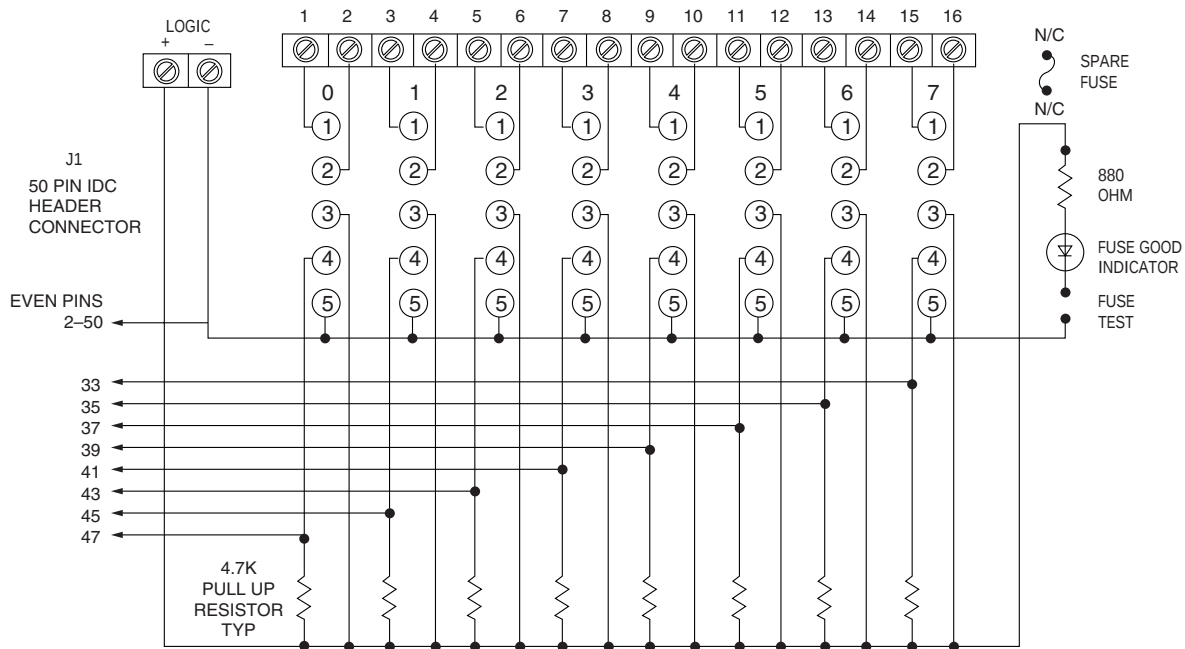
Products and specifications subject to change without notice.
Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

FOR C4 MODULES



- NOTES: 1) BARRIER STRIP IS PHOENIX MKDS5/X 6.35mm
 2) ACCEPTS UP TO 10 AWG WIRE
 3) CONNECTOR IS CIRCUIT ASSEMBLY CA-50H-2B OR EQUIVALENT
 4) LITTLE FUSE 229003S OR EQUIVALENT

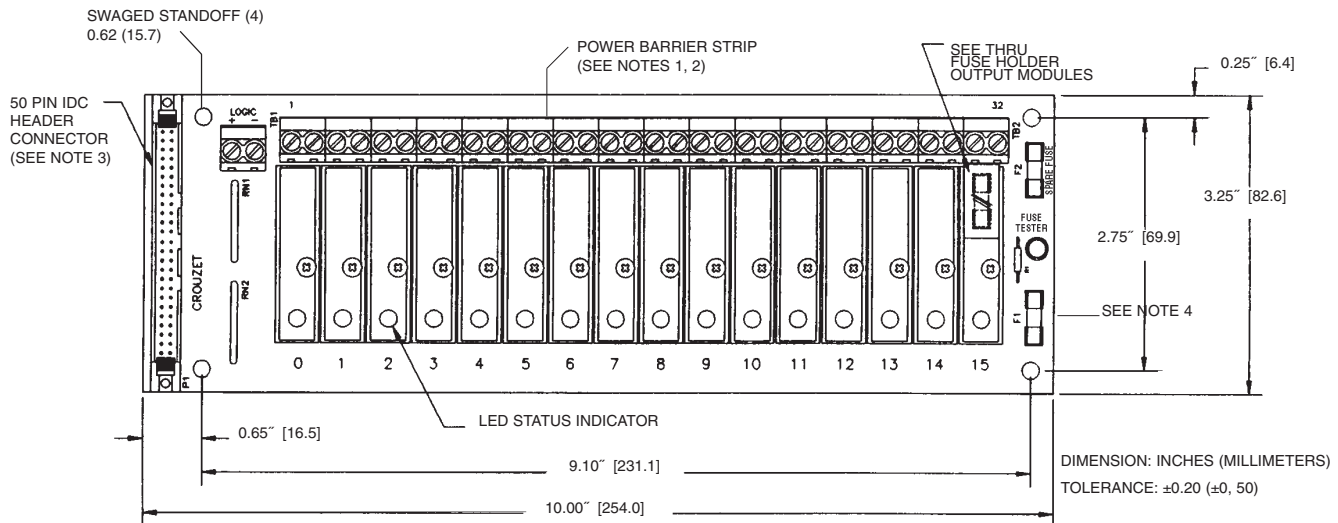


Products and specifications subject to change without notice.
 Consult factory for application assistance.

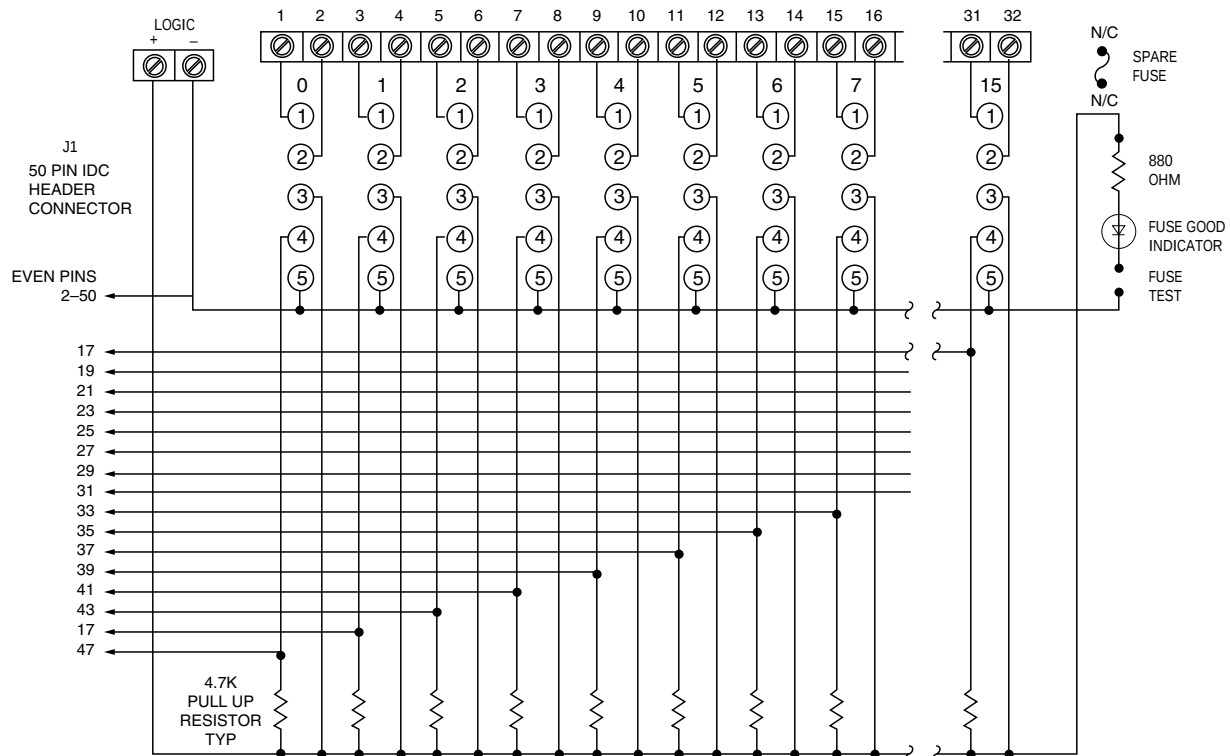
DIGITAL I/O MODULE MOUNTING BOARDS

FOR C4 MODULES

PB16C4



- NOTES: 1) BARRIER STRIP IS PHOENIX MKDS5/X 6.35mm
2) ACCEPTS UP TO 10 AWG WIRE
3) CONNECTOR IS CIRCUIT ASSEMBLY CA-50H-2B OR EQUIVALENT
4) LITTLE FUSE 229003S OR EQUIVALENT

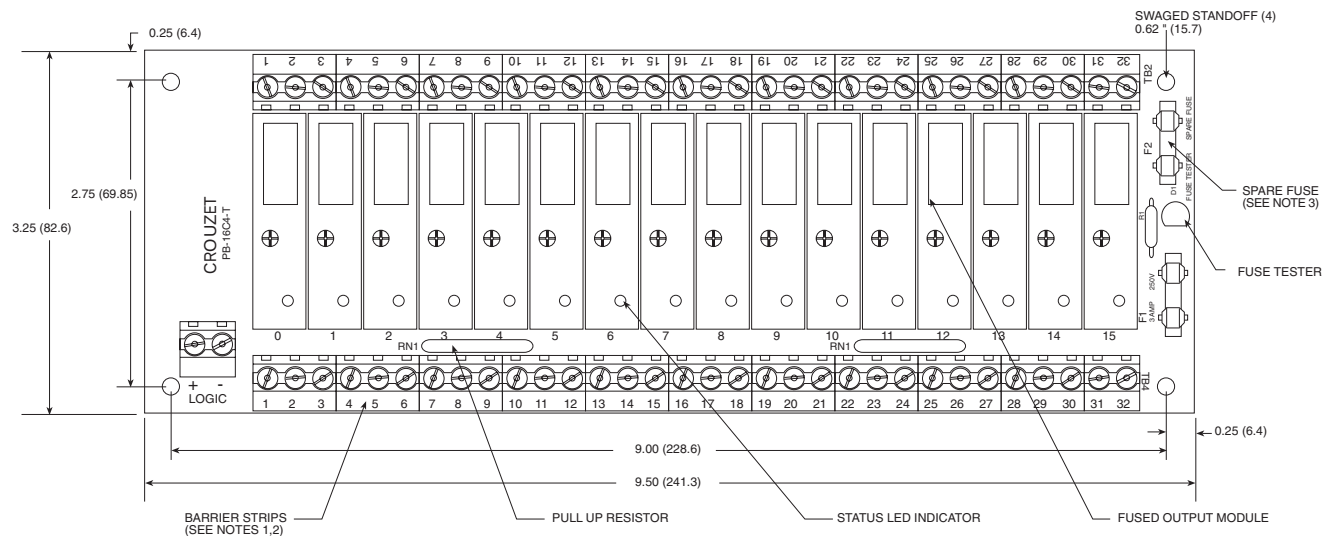


Products and specifications subject to change without notice.
Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

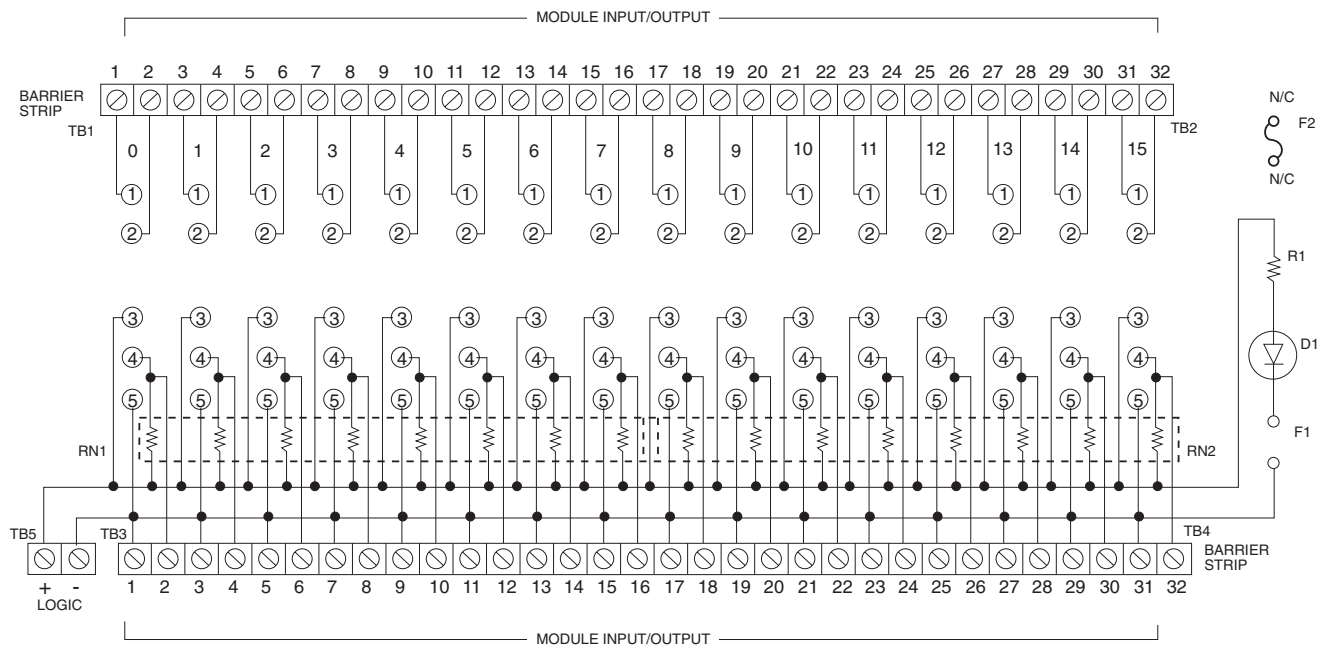
FOR C4 MODULES

PB16C4T



- NOTES:
- 1) BARRIER STRIP IS PHOENIX MKDS5/X 6.35mm
 - 2) ACCEPTS UP TO 10 AWG WIRE
 - 3) LITTLE FUSE 229003S OR EQUIVALENT

PB16C4T

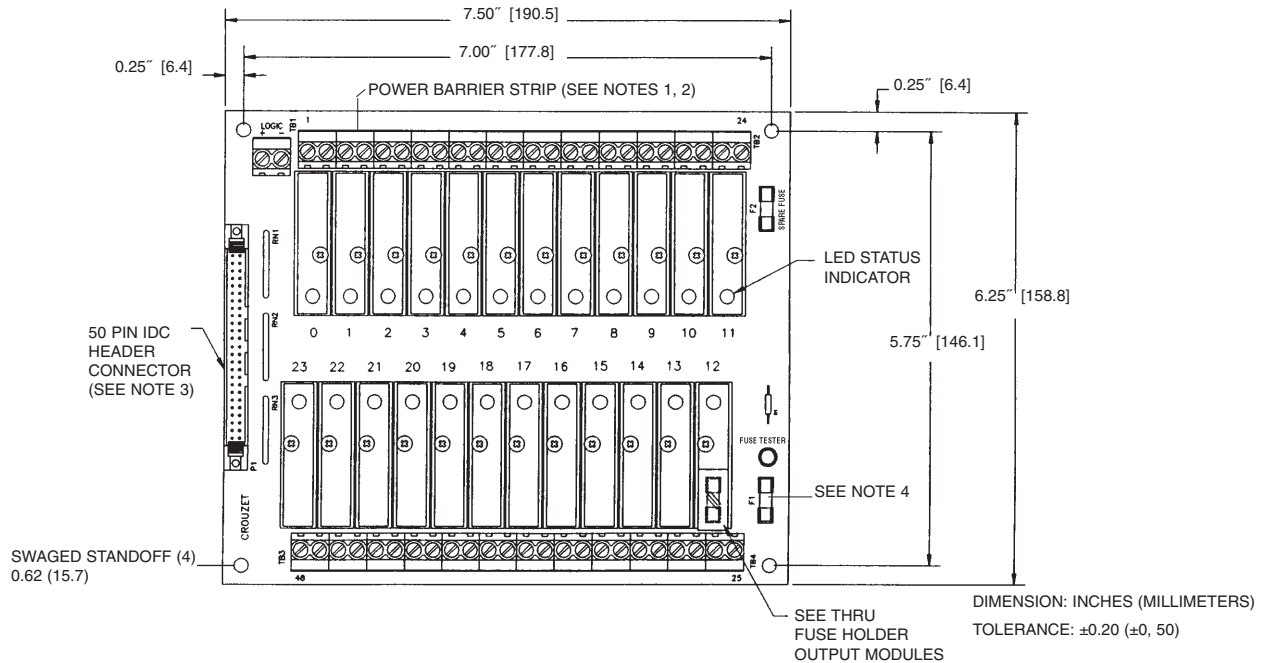


Products and specifications subject to change without notice.
Consult factory for application assistance.

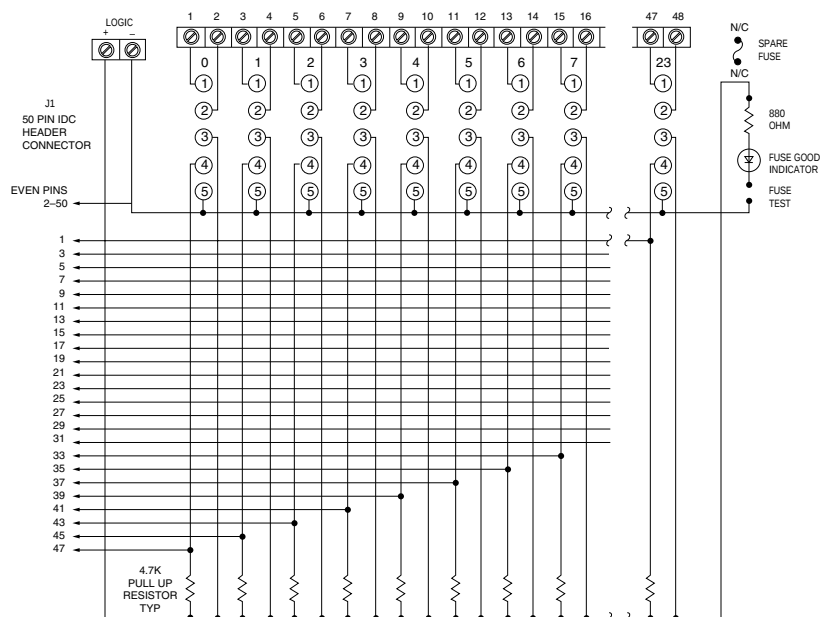
DIGITAL I/O MODULE MOUNTING BOARDS

FOR C4 MODULES

PB24C4



- NOTES: 1) BARRIER STRIP IS PHOENIX MKDS5/X 6.35mm
2) ACCEPTS UP TO 10 AWG WIRE
3) CONNECTOR IS CIRCUIT ASSEMBLY CA-50H-2B OR
EQUIVALENT
4) LITTLE FUSE 229003S OR EQUIVALENT



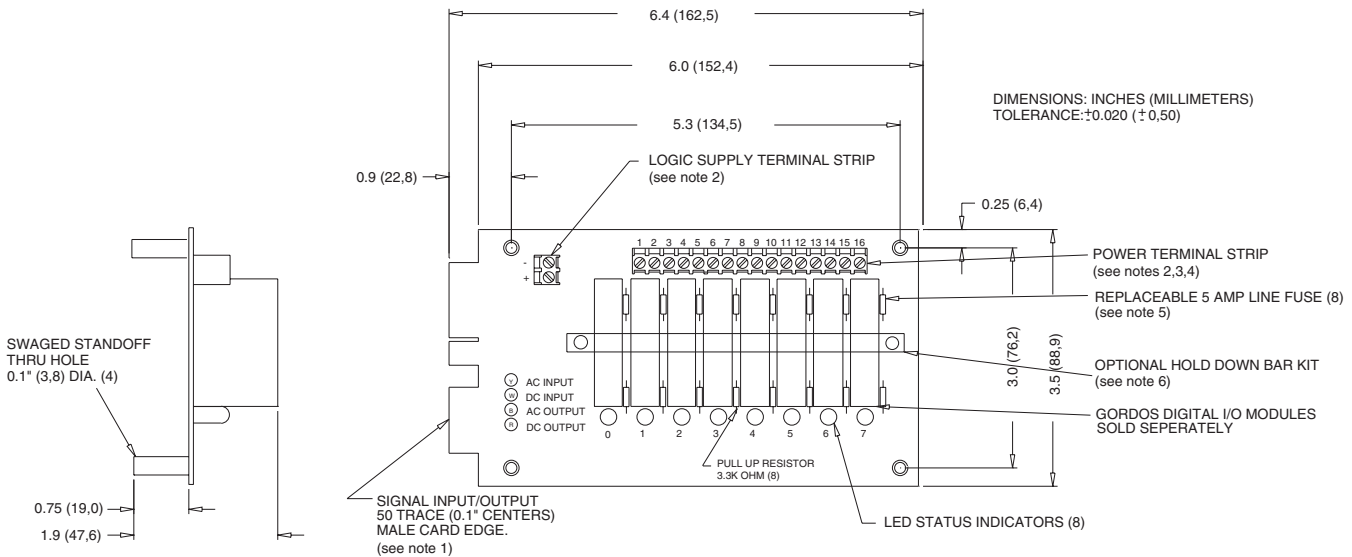
Products and specifications subject to change without notice.

Consult factory for application assistance.

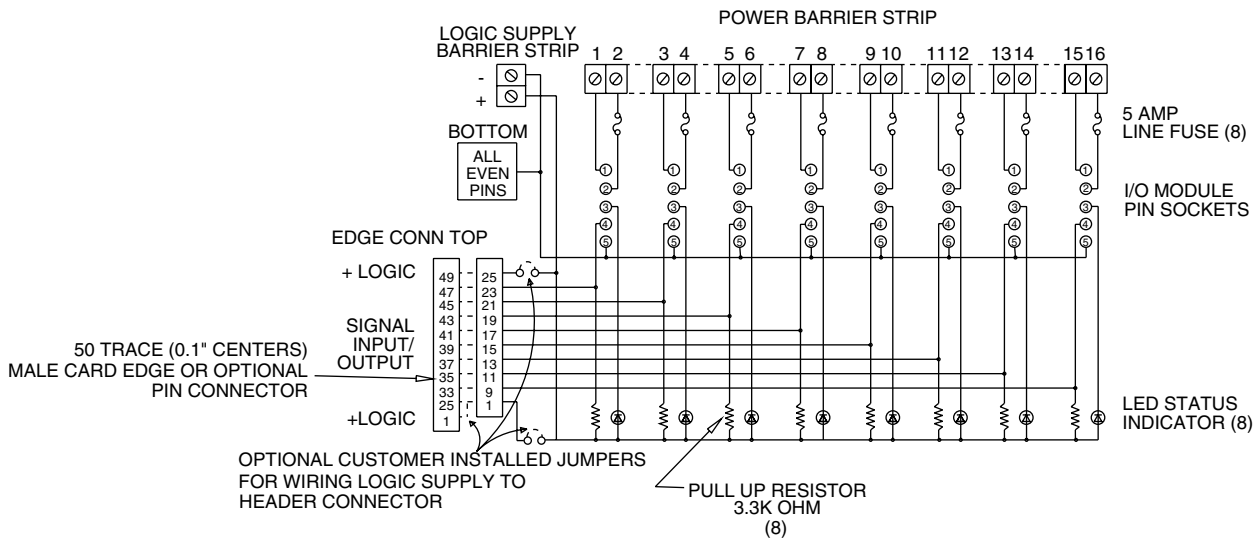
DIGITAL I/O MODULE MOUNTING BOARDS

FOR "M" SERIES MINIATURE MODULES

PB8M



- NOTES: 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT. SPECIFY SUFFIX 'C' FOR OPTIONAL 65823-093 OR EQUIVALENT MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION. SPECIFY SUFFIX 'V' FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) 4-40 SCREW TERMINAL STRIPS ACCEPT WIRE SIZES FROM 26 TO 14 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS. ORDER 1 EACH "JM8".
- 4) PHOENIX MKD51.5 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL BLOCKS STANDARD. SPECIFY SUFFIX 'A' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY SUFFIX 'B' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.5/16-ST-5.08 (OR EQUIVALENT) FEMALE, SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251005 OR EQUIVALENT.
- 6) TWO HOLD-DOWN BAR KITS ARE AVAILABLE SEPARATELY. MODEL NO. 11.06.414 EMPLOYS A PLAIN ALUMINUM CHANNEL WHILE MODEL NO. 11.06.293 PROVIDES POCKETS IN THE CHANNEL FOR INDIVIDUAL MODULES.

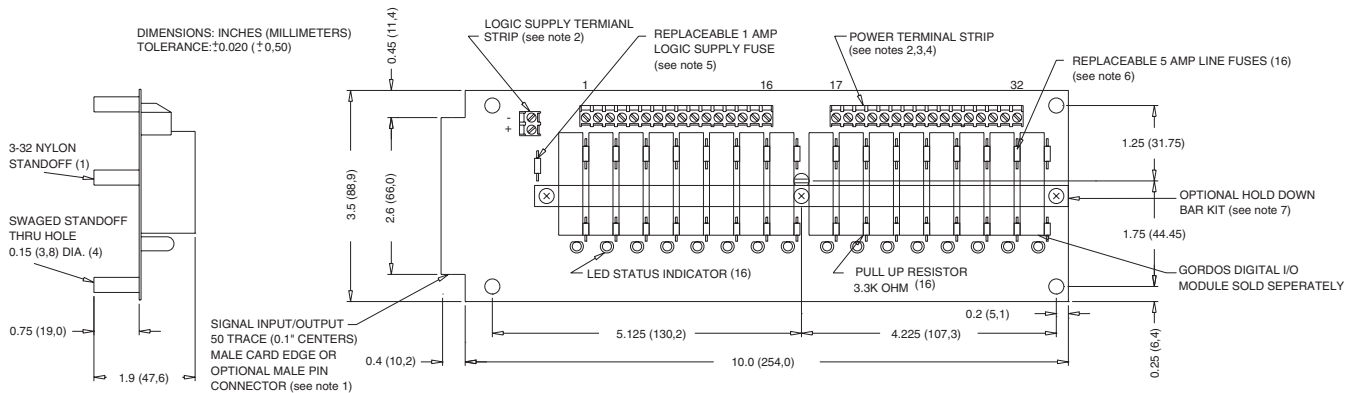


Products and specifications subject to change without notice.
Consult factory for application assistance.

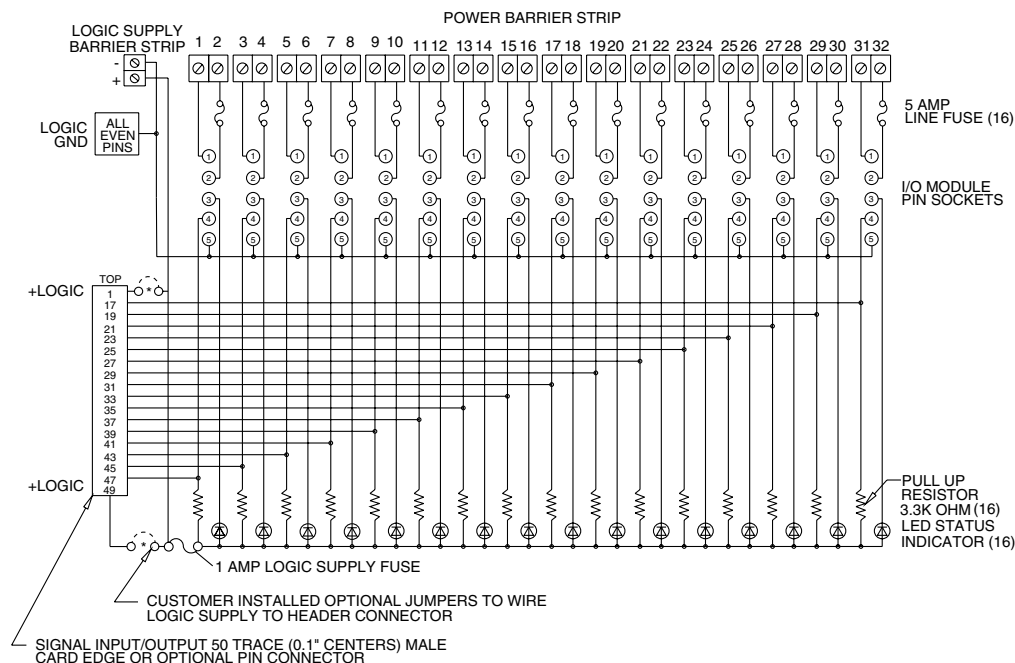
DIGITAL I/O MODULE MOUNTING BOARDS

FOR "M" SERIES MINIATURE MODULES

PB16M



- NOTES: 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT. SPECIFY SUFFIX 'C' FOR OPTIONAL 65823-093 OR EQUIVALENT MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION. SPECIFY SUFFIX 'V' FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) 4-40 SCREW TERMINAL STRIPS ACCEPT WIRE SIZES FROM 26 TO 14 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP ORDER 1 EACH "JM2" AND 2 EACH "JM8".
- 4) PHOENIX MKDS1.5 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL BLOCKS STANDARD. SPECIFY SUFFIX 'A' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY SUFFIX 'B' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.5/16-ST-5.08 (OR EQUIVALENT) FEMALE. SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251001 OR EQUIVALENT.
- 6) LITTLE FUSE 251005 OR EQUIVALENT.
- 7) TWO HOLD-DOWN BAR KITS ARE AVAILABLE SEPARATELY. MODEL NO. 11.06.415 EMPLOY A PLAIN ALUMINUM CHANNEL WHILE MODEL NO. 11.06.278 PROVIDES POCKETS IN THE CHANNEL FOR INDIVIDUAL MODULES.

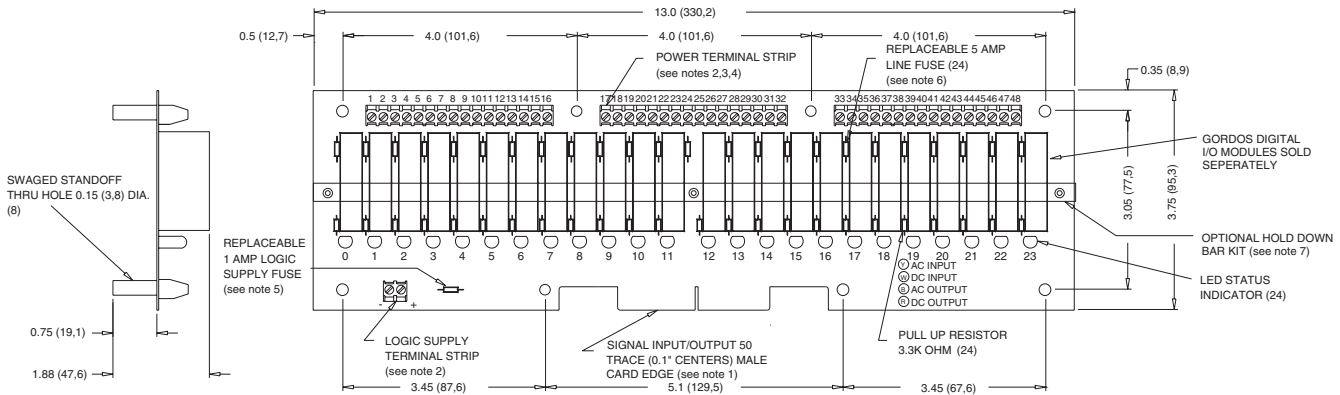


Products and specifications subject to change without notice.
Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

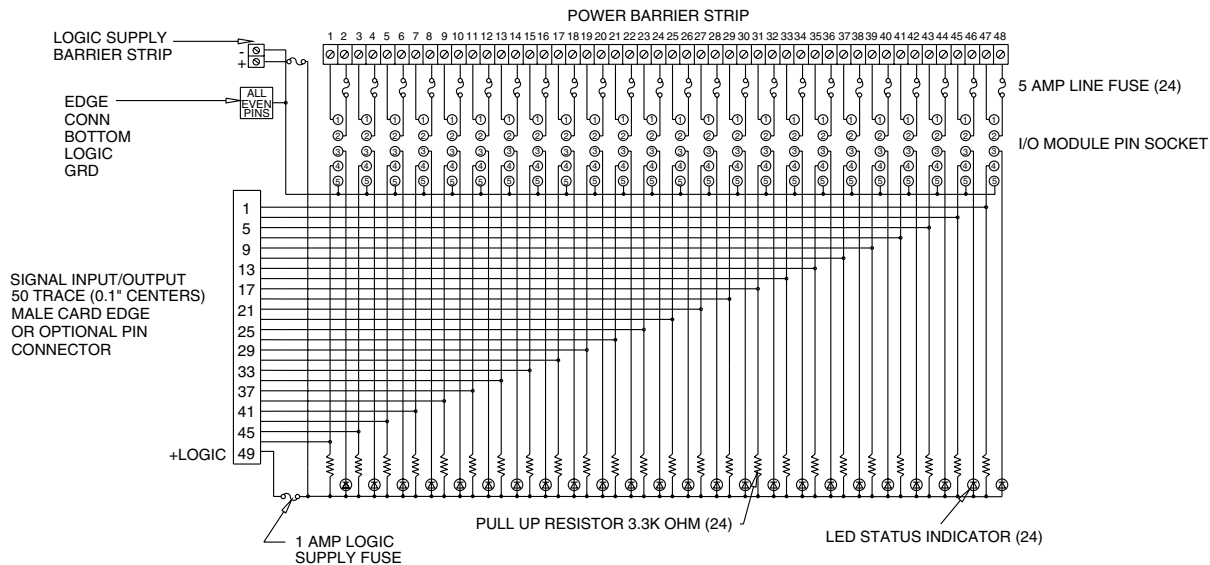
FOR “M” SERIES MINIATURE MODULES

PB24M



DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ± 0.020 ($\pm 0,50$)

- NOTES: 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT.
SPECIFY SUFFIX 'C' FOR OPTIONAL 65823-093 OR EQUIVALENT
MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE
CONNECTION. SPECIFY SUFFIX 'V' FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR
OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD
CABLE CONNECTION.
- 2) 4 TERMINAL STRIPS ACCEPT WIRE SIZES FROM 26 TO 14 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP
ORDER 3 EACH "JMS".
- 4) PHOENIX MKD51 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL
BLOCKS STANDARD. SPECIFY SUFFIX "A" FOR BOARD-MOUNTED PHOENIX
MSTBVA 1.516-6-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY
SUFFIX "B" FOR BOARD-MOUNTED PHOENIX MSTBVA 1.516-G-5.08
(OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.516-ST-5.08
(OR EQUIVALENT) FEMALE SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251001 OR EQUIVALENT.
- 6) LITTLE FUSE 251005 OR EQUIVALENT.
- 7) TWO HOLD-DOWN BAR KITS ARE AVAILABLE SEPARATELY. MODEL NO. 11.06.413 EMPLOY
A PLAIN ALUMINUM CHANNEL WHILE MODEL NO. 11.06.288 PROVIDES POCKETS IN
THE CHANNEL FOR INDIVIDUAL MODULES.

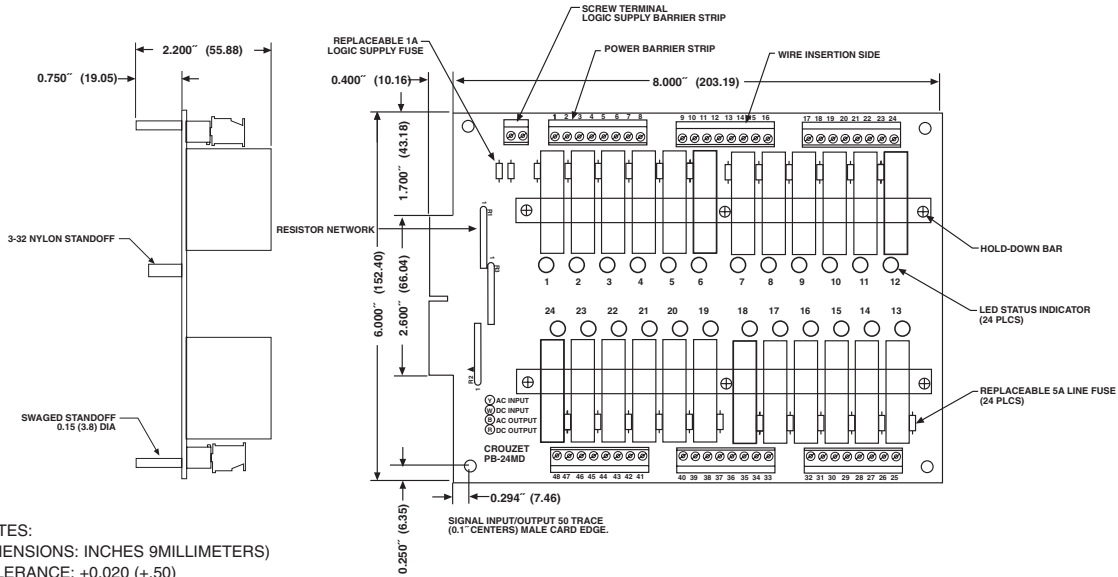


Products and specifications subject to change without notice.
Consult factory for application assistance.

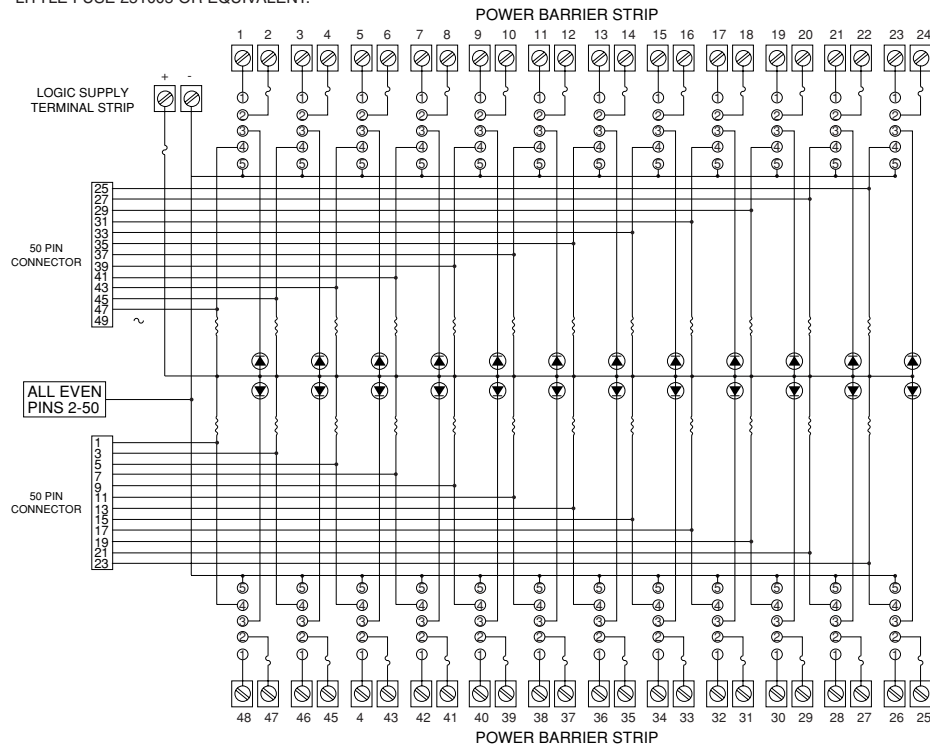
DIGITAL I/O MODULE MOUNTING BOARDS

FOR "M" SERIES MINIATURE MODULES

PB24MD



- NOTES: 1) MATING CONNECTOR IS BERG66317-150 OR EQUIVALENT. SPECIFY SUFFIX 'C' FOR OPTIONAL 65823-093 OR EQUIVALENT MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION. SPECIFY SUFFIX 'V' FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) 4-40 TERMINAL STRIPS ACCEPT WIRE SIZES FROM 26 TO 14 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP ORDER "JM8"
- 4) PHOENIX MKD51.5 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL BLOCKS STANDARD. SPECIFY SUFFIX "A" FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY SUFFIX "B" FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.5/16-ST-5.08 (OR EQUIVALENT) FEMALE. SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251001 OR EQUIVALENT.
- 6) LITTLE FUSE 251005 OR EQUIVALENT.

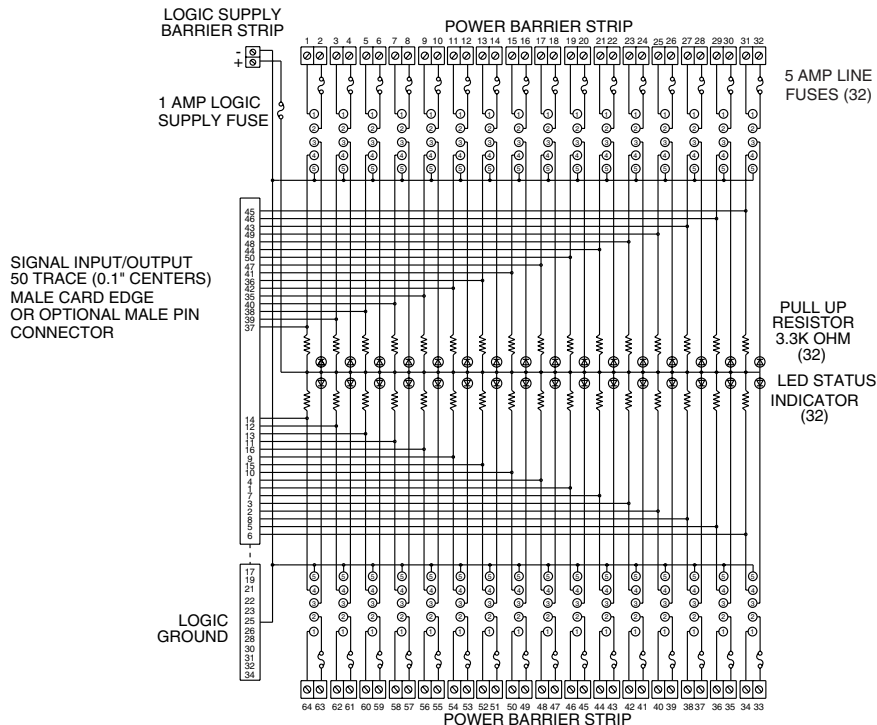
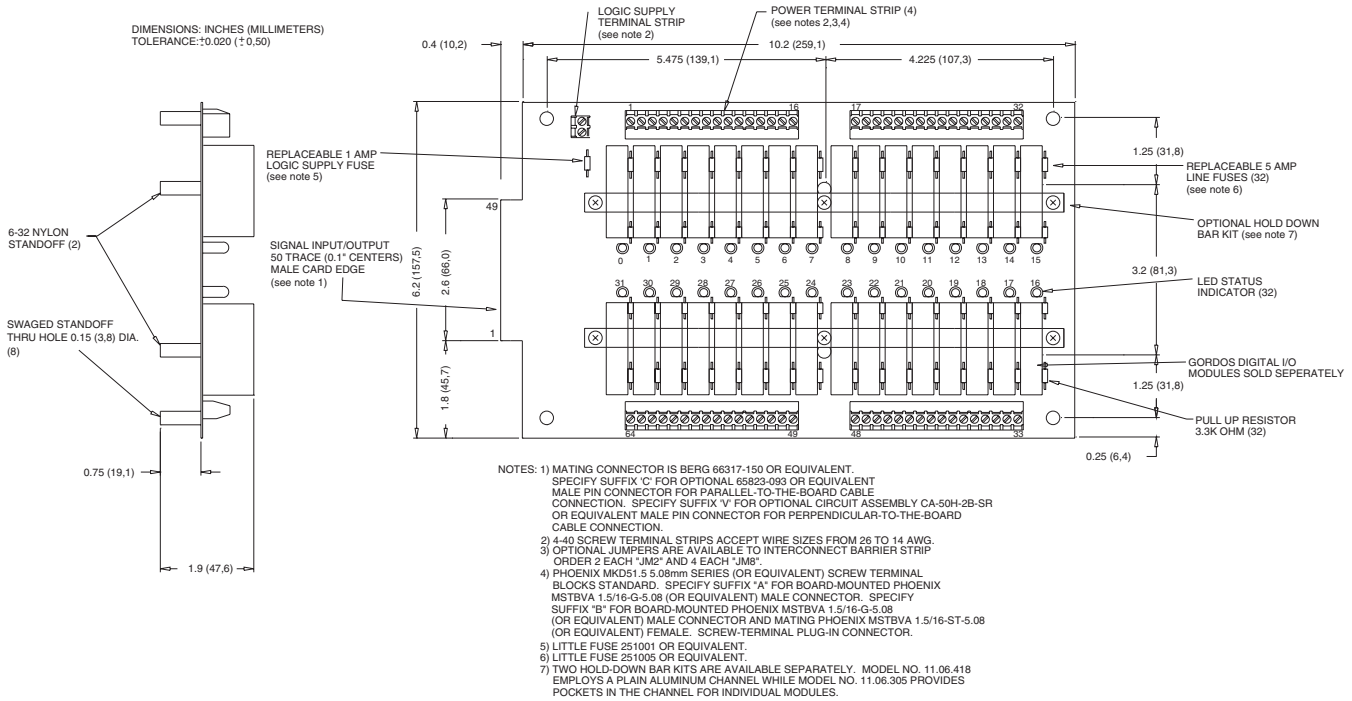


Products and specifications subject to change without notice.
Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

FOR "M" SERIES MINIATURE MODULES

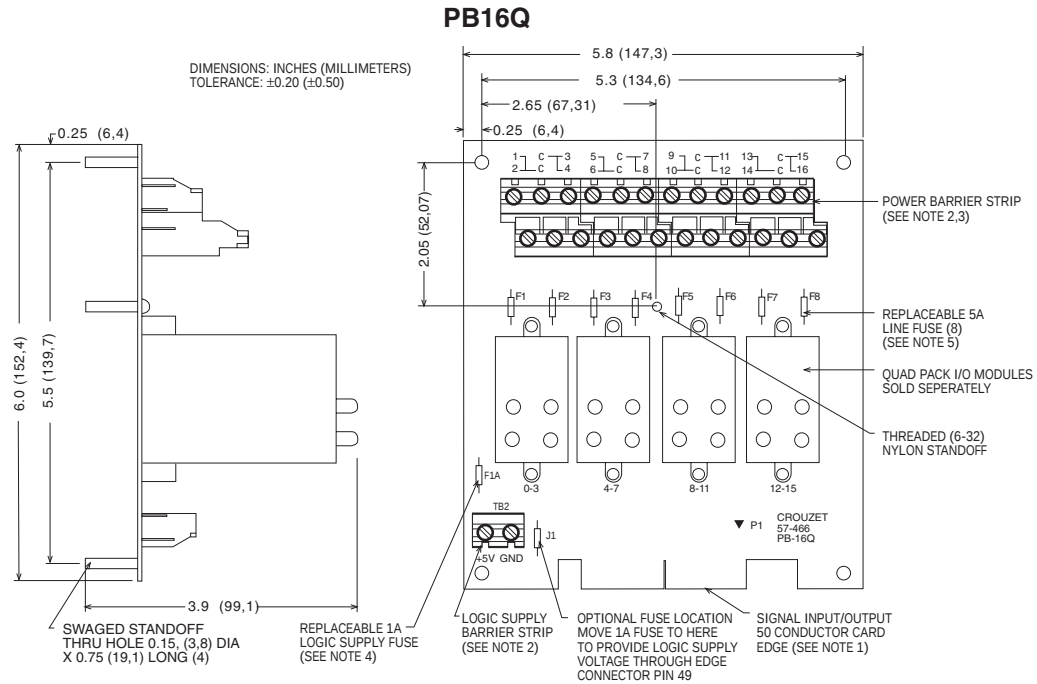
PB32M



Products and specifications subject to change without notice.
Consult factory for application assistance.

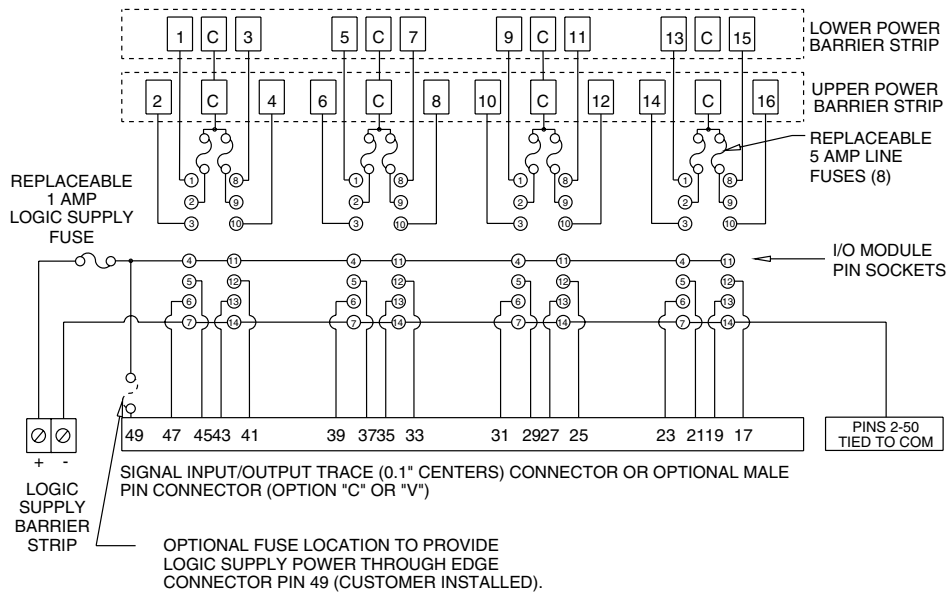
DIGITAL I/O MODULE MOUNTING BOARDS

FOR QUAD-PACK MODULES



NOTES:

- 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT.
SPECIFY SUFFIX "C" FOR OPTIONAL BERG 65823-093 (OR EQUIVALENT) MALE PIN CONNECTOR FOR PARALLEL-TO-THE BOARD CABLE CONNECTION.
SPECIFY SUFFIX "V" FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR (OR EQUIVALENT) MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
- 3) OPTIONAL JUMPERS AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS.
ORDER 2 EACH JUMPER "JQ4".
- 4) LITTLE FUSE 251001 OR EQUIVALENT.
- 5) LITTLE FUSE 251005 OR EQUIVALENT.

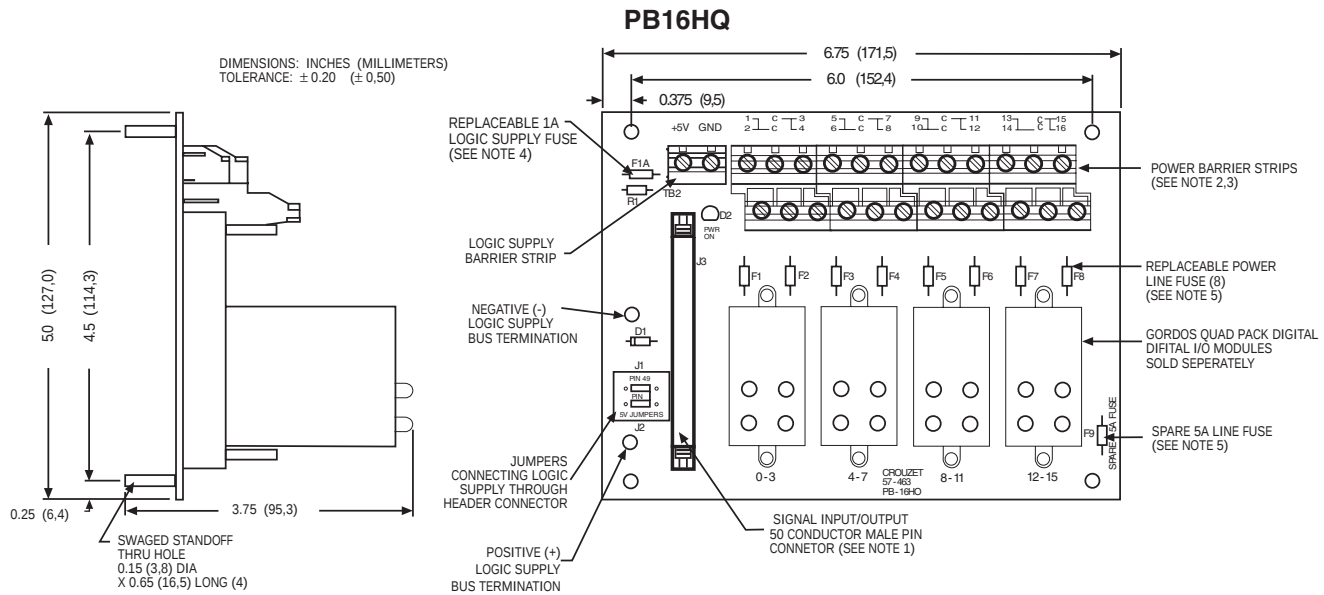


Products and specifications subject to change without notice.

Consult factory for application assistance.

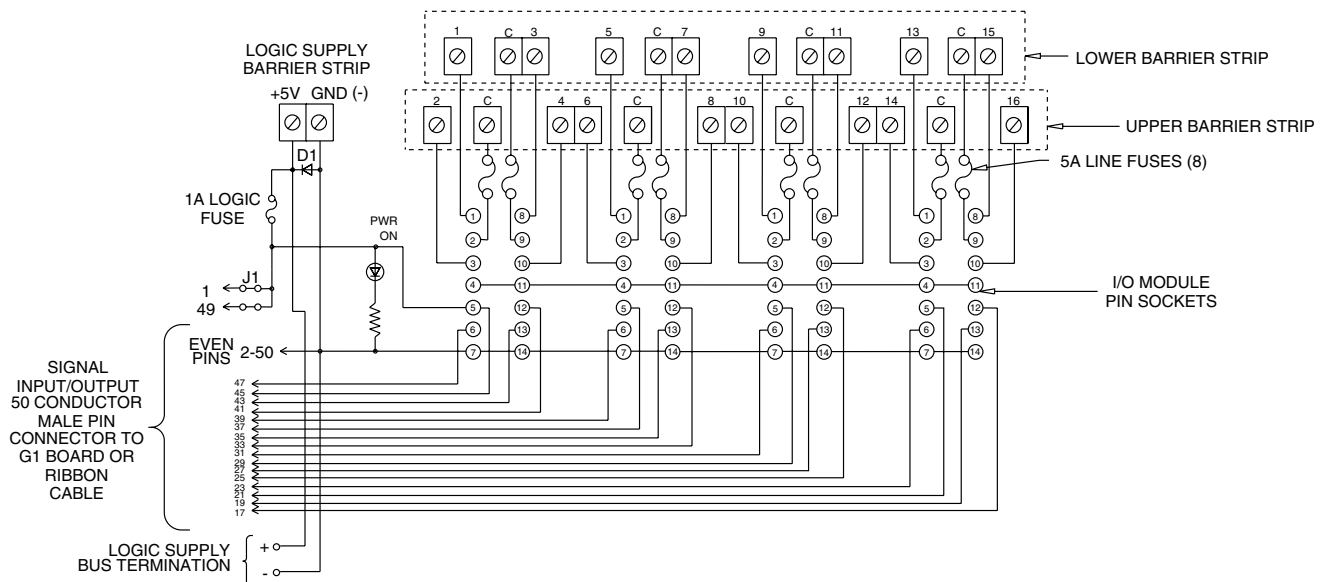
DIGITAL I/O MODULE MOUNTING BOARDS

FOR QUAD-PACK MODULES



NOTES:

- 1) CONNECTOR IS BERG 65863-145 OR EQUIVALENT.
- 2) 6-32 SCREW TERMINAL BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
- 3) OPTIONAL JUMPERS AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS. ORDER 2 EACH JUMPER "JQ4".
- 4) LITTLE FUSE 251001 OR EQUIVALENT.
- 5) LITTLE FUSE 251005 OR EQUIVALENT.



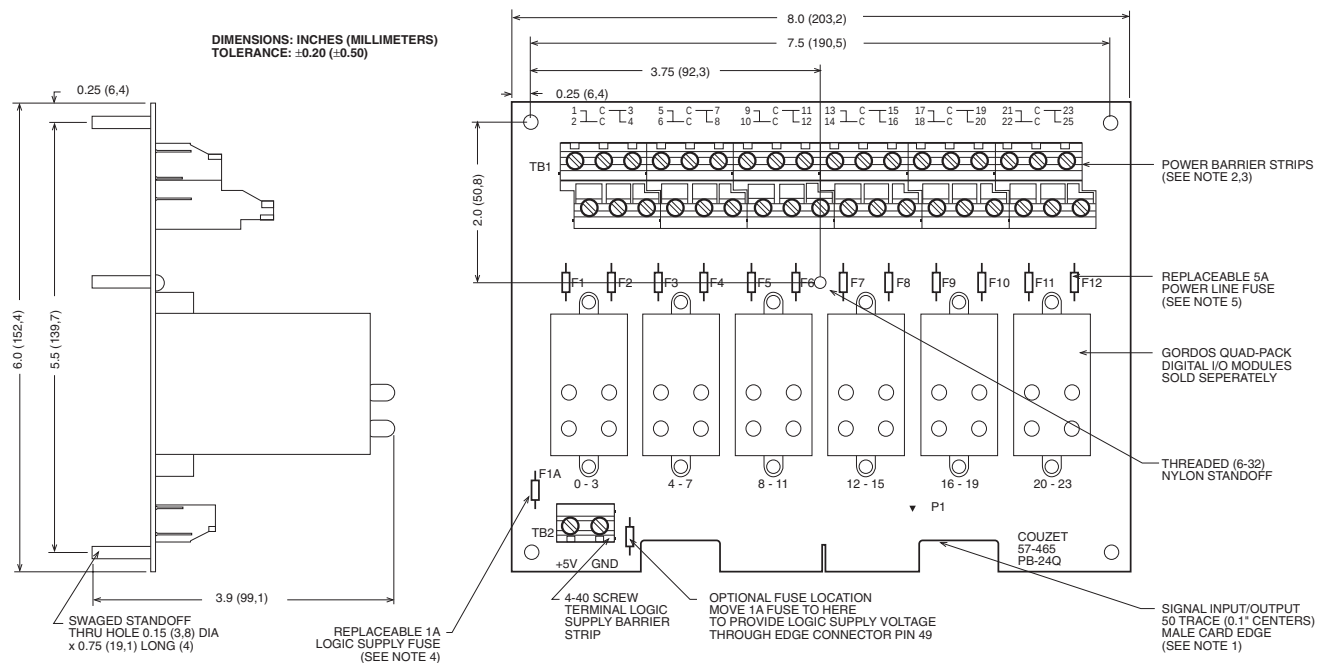
Products and specifications subject to change without notice.

Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

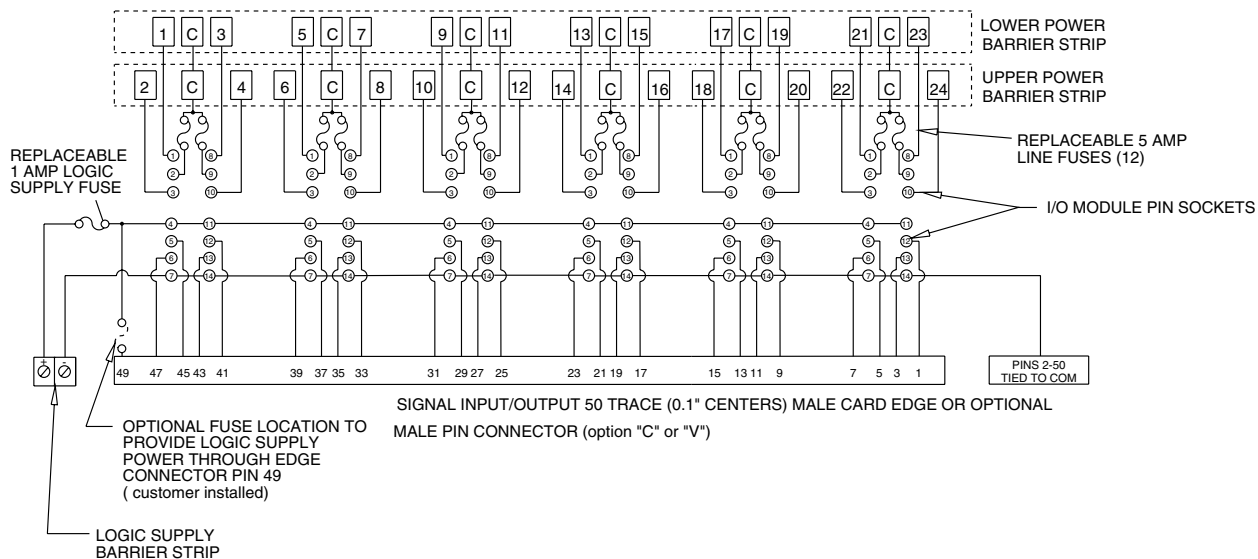
FOR QUAD-PACK MODULES

PB24Q



NOTES:

- 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT.
SPECIFY SUFFIX "C" FOR OPTIONAL BERG 65823-093 (OR EQUIVALENT) MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION.
- 2) SUFFIX "D" FOR OPTIONAL BERG 65863-145 (OR EQUIVALENT) MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 3) 6-32 SCREW TERMINAL BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
- 3) OPTIONAL JUMPEES AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS.
ORDER 2 EACH JUMPER "104"
- 4) LITTLE FUSE 251001 OR EQUIVALENT.
- 5) LITTLE FUSE 251005 OR EQUIVALENT.



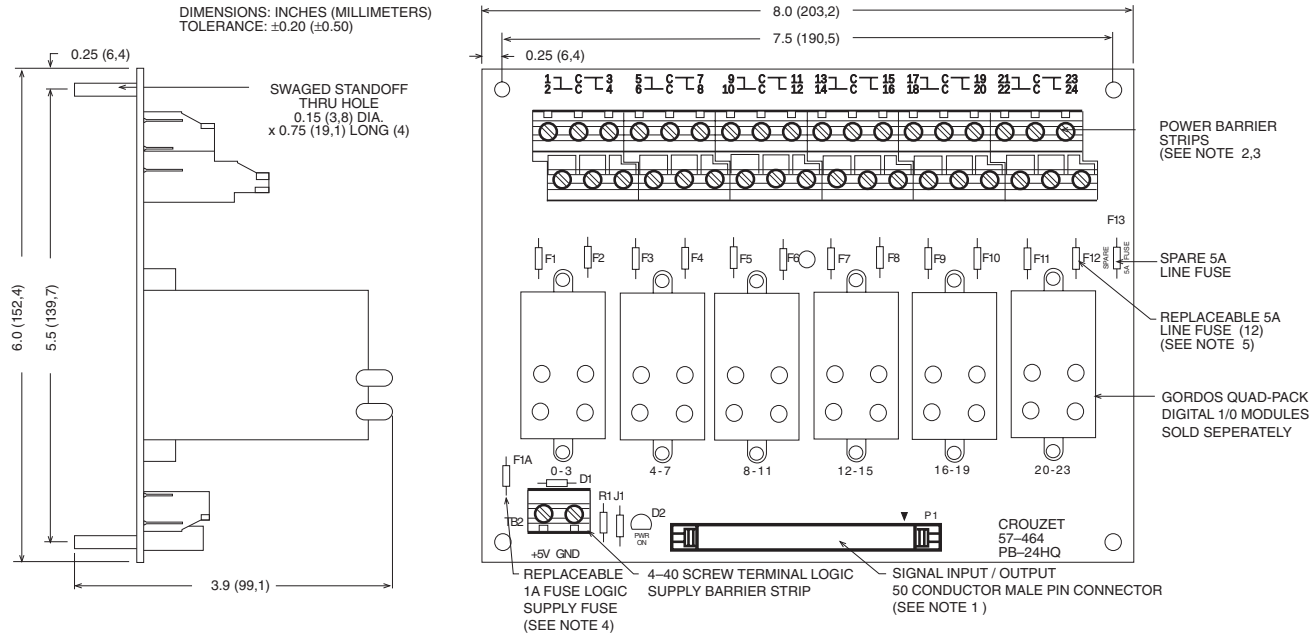
Products and specifications subject to change without notice.

Consult factory for application assistance.

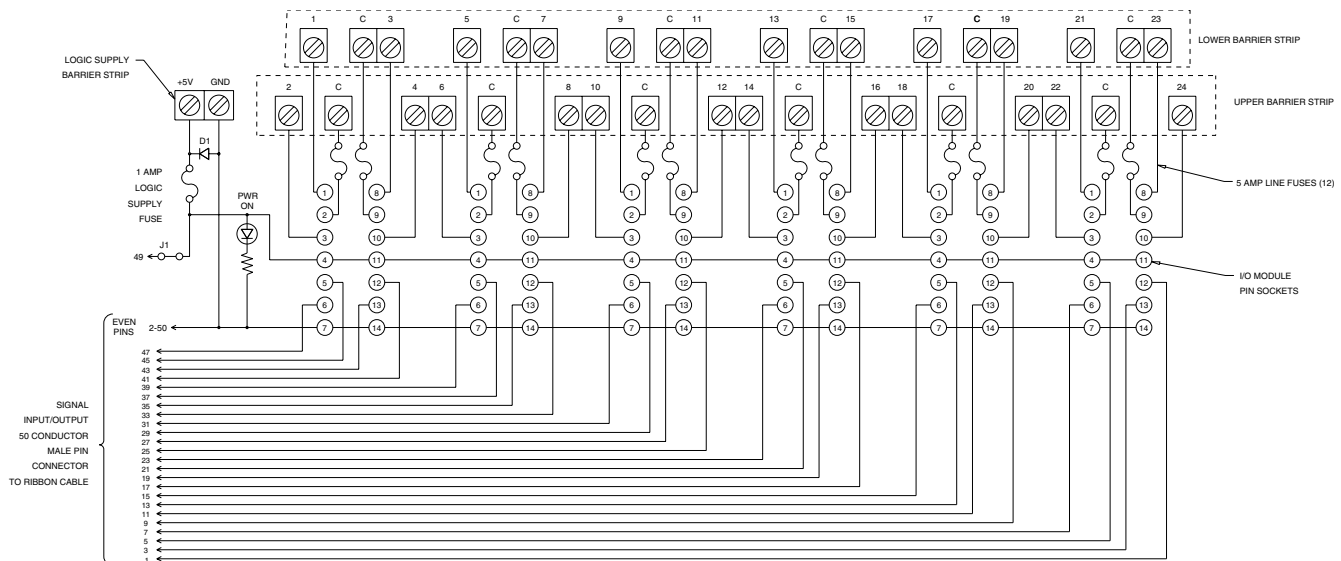
DIGITAL I/O MODULE MOUNTING BOARDS

FOR QUAD-PACK MODULES

PB24HQ



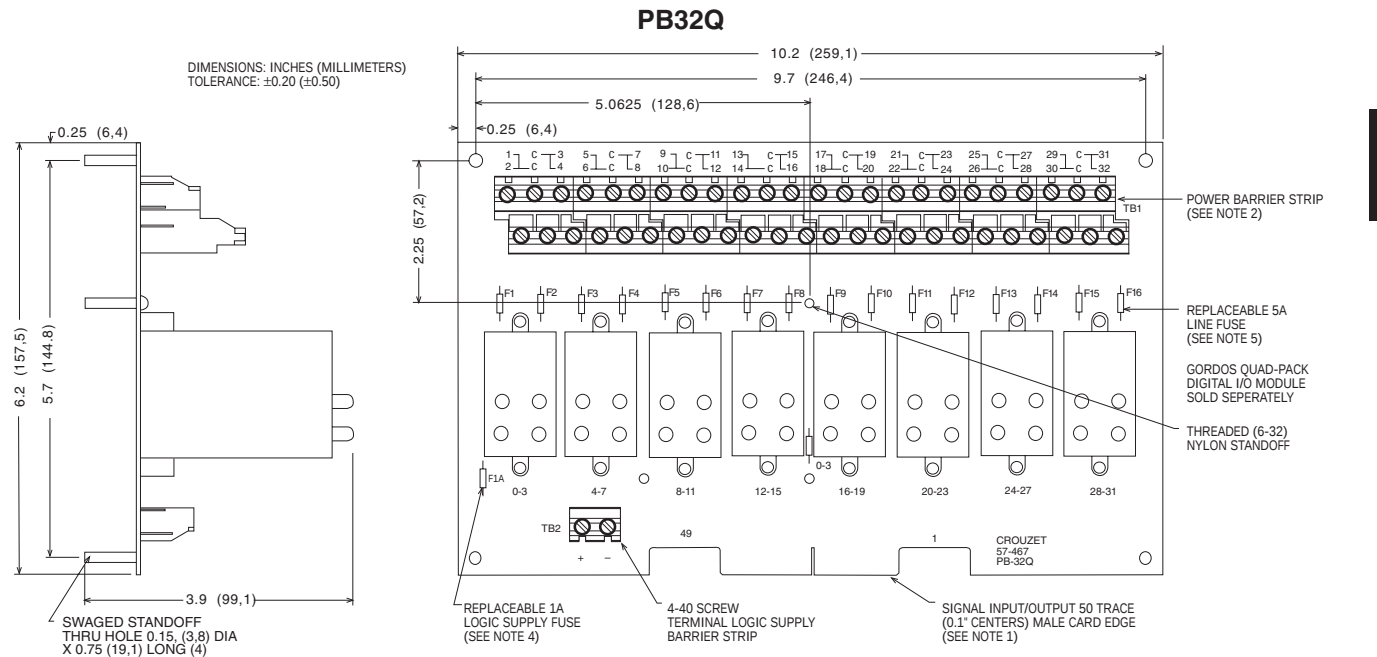
- NOTES: 1) CONNECTOR IS CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT.
2) 6-32 SCREW TERMINAL BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
3) OPTIONAL JUMPERS AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS.
ORDER 2 EACH JUMPERS "JQ2" AND 4 EACH JUMPERS "JQ4".
JQ4 REQUIRES CUSTOMER MODIFICATIONS TO USE WITH PB24HQ.
4) LITTLE FUSE 251001 OR EQUIVALENT.
5) LITTLE FUSE 251005 OR EQUIVALENT.



Products and specifications subject to change without notice.
Consult factory for application assistance.

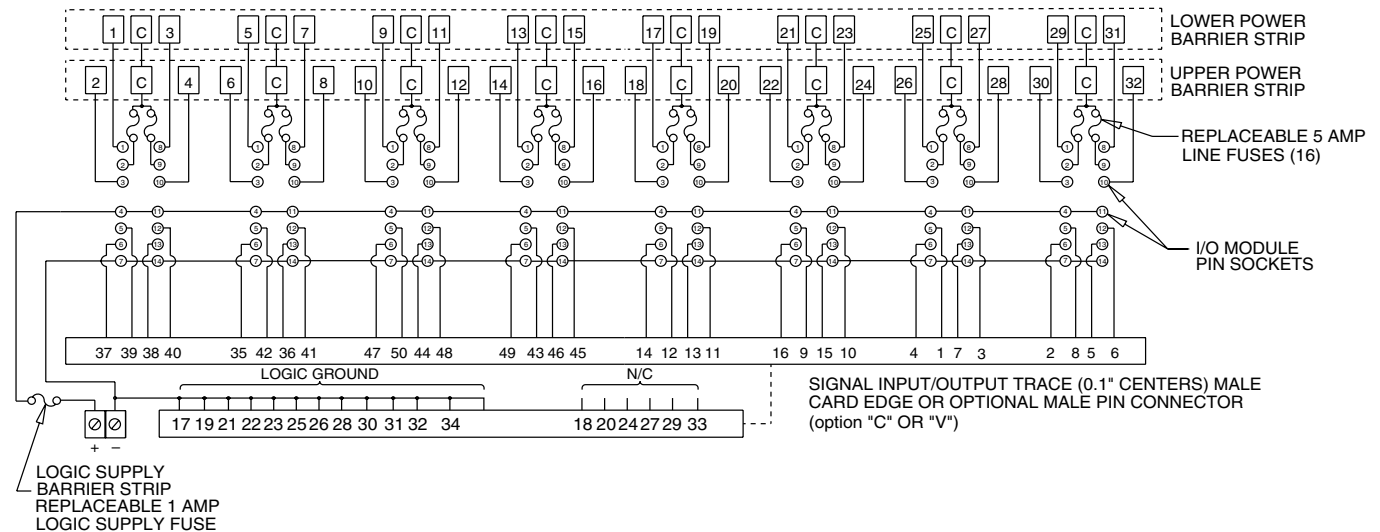
DIGITAL I/O MODULE MOUNTING BOARDS

FOR QUAD-PACK MODULES



NOTES:

- 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT. SPECIFY SUFFIX "C" FOR OPTIONAL BERG 65823-093 (OR EQUIVALENT) MALE PIN CONNECTOR FOR PARALLEL-TO-THE BOARD CABLE CONNECTION. SPECIFY SUFFIX "V" FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR (OR EQUIVALENT) MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) 6-32 SCREW TERMINAL BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
- 3) OPTIONAL JUMPERS AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS. ORDER 2 EACH JUMPERS "JQ2" AND 2 EACH JUMPERS "JQ4".
- 4) LITTLE FUSE 251001 OR EQUIVALENT.
- 5) LITTLE FUSE 251005 OR EQUIVALENT.

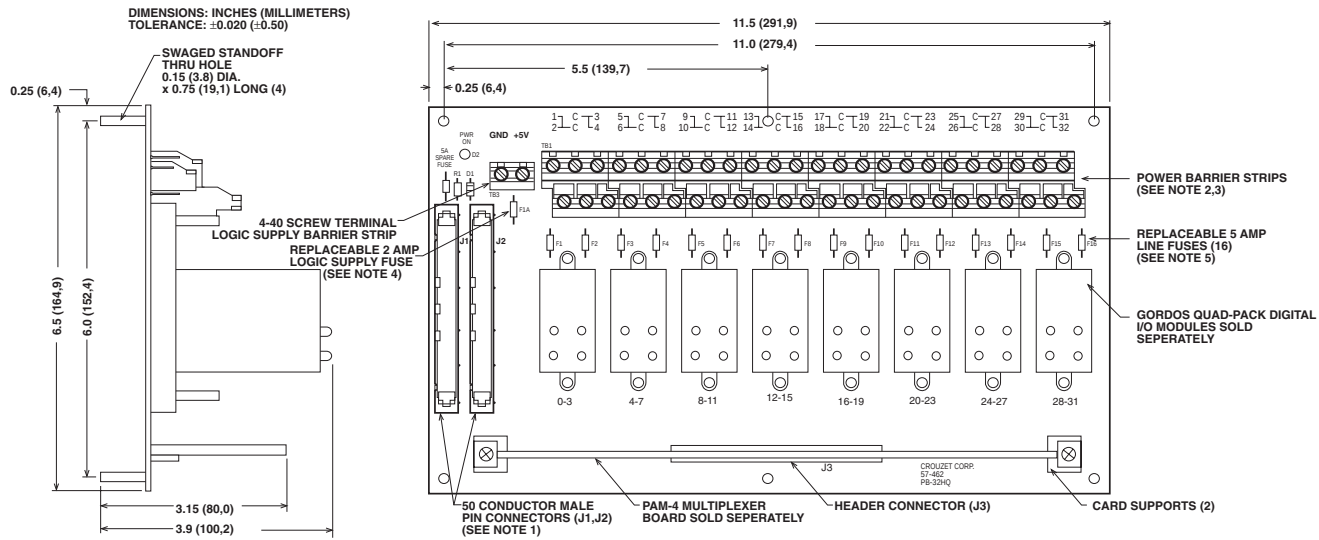


Products and specifications subject to change without notice.
Consult factory for application assistance.

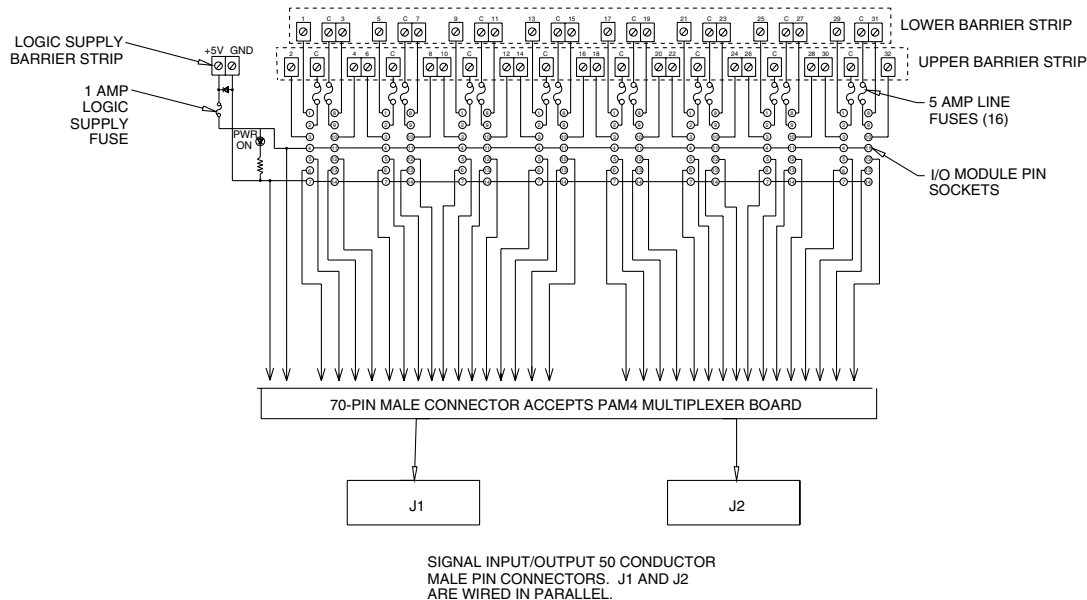
DIGITAL I/O MODULE MOUNTING BOARDS

FOR QUAD-PACK MODULES

PB32HQ



- NOTES: 1) CONNECTOR IS CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT. CONNECTORS ARE WIRED IN PARALLEL.
2) 6-32 SCREW TERMINAL BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
3) OPTIONAL JUMPERS AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS. ORDER 2 EACH JUMPERS "JQ2" AND 4 EACH JUMPERS "JQ4".
4) LITTLE FUSE 251001 OR EQUIVALENT.
5) LITTLE FUSE 251005 OR EQUIVALENT.

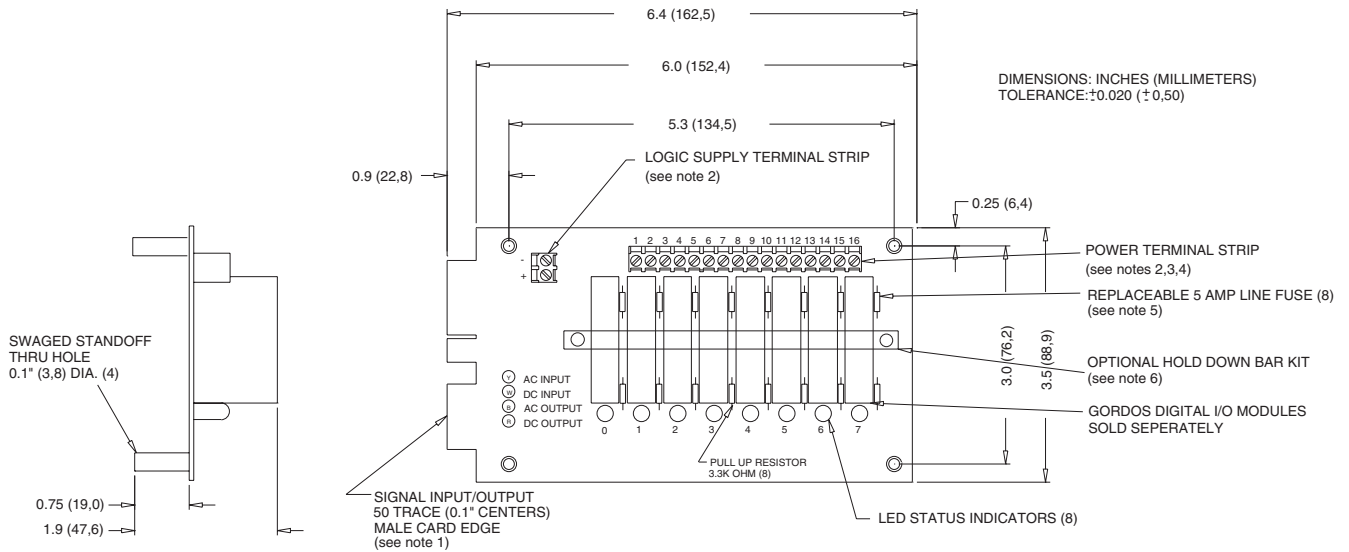


Products and specifications subject to change without notice.
Consult factory for application assistance.

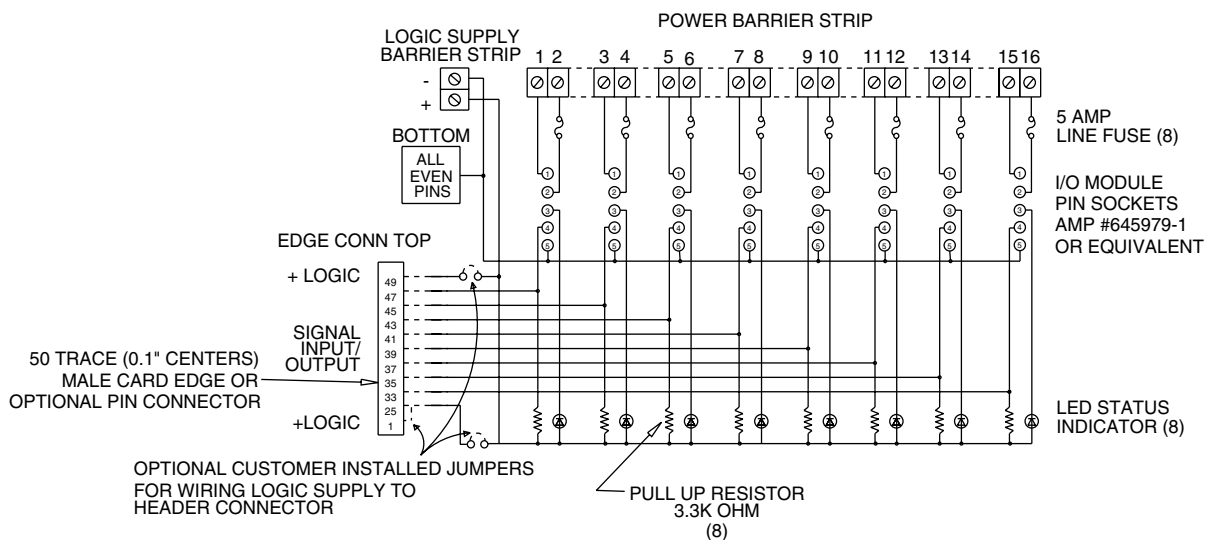
DIGITAL I/O MODULE MOUNTING BOARDS

FOR "SM" SERIES MINIATURE MODULES

PB8SM



- NOTES: 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT. SPECIFY SUFFIX 'C' FOR OPTIONAL 65823-093 OR EQUIVALENT MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION. SPECIFY SUFFIX 'V' FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) 4-40 SCREW TERMINAL STRIPS ACCEPT WIRE SIZES FROM 26 TO 14 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS. ORDER 1 EACH "JM8".
- 4) PHOENIX MKD51.5 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL BLOCKS STANDARD. SPECIFY SUFFIX 'A' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY SUFFIX 'B' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.5/16-ST-5.08 (OR EQUIVALENT) FEMALE, SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251005 OR EQUIVALENT.
- 6) TWO HOLD-DOWN BAR KITS ARE AVAILABLE SEPARATELY. MODEL NO. 11.06.414 EMPLOYS A PLAIN ALUMINUM CHANNEL WHILE MODEL NO. 11.06.293 PROVIDES POCKETS IN THE CHANNEL FOR INDIVIDUAL MODULES.

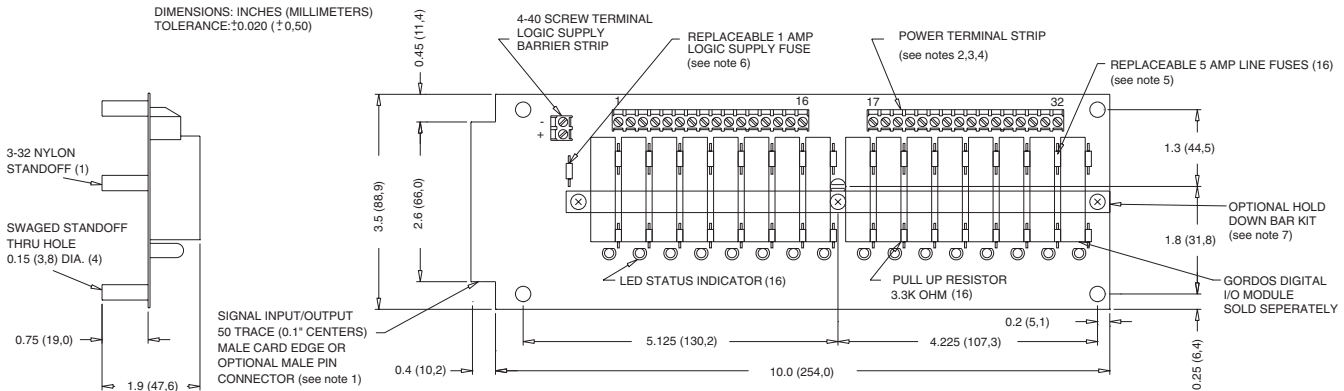


Products and specifications subject to change without notice.
Consult factory for application assistance.

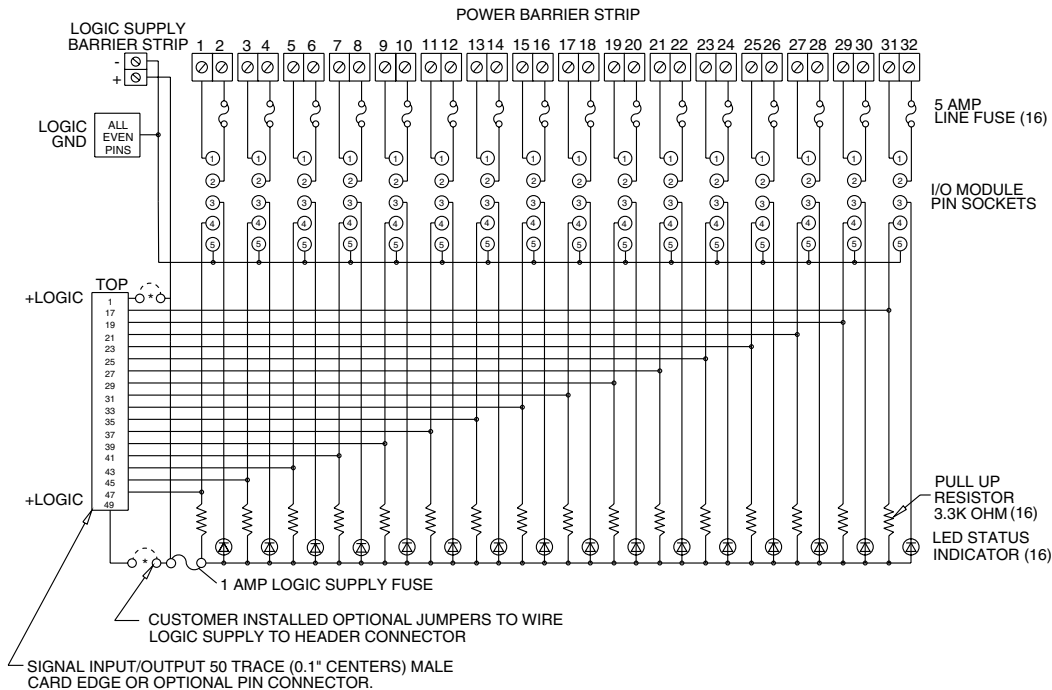
DIGITAL I/O MODULE MOUNTING BOARDS

FOR "SM" SERIES MINIATURE MODULES

PB16SM



- NOTES: 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT. SPECIFY SUFFIX 'C' FOR OPTIONAL 65823-093 OR EQUIVALENT MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION. SPECIFY SUFFIX 'V' FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) 6-32 SCREW TERMINAL BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP ORDER 1 EACH "JM2" AND 2 EACH "JM8".
- 4) PHOENIX MKD51.5 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL BLOCKS STANDARD. SPECIFY SUFFIX 'A' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY SUFFIX 'B' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.5/16-ST-5.08 (OR EQUIVALENT) FEMALE. SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251001 OR EQUIVALENT.
- 6) LITTLE FUSE 251005 OR EQUIVALENT.
- 7) TWO HOLD-DOWN BAR KITS ARE AVAILABLE SEPARATELY. MODEL NO. 11.06.415 EMPLOYS A PLAIN ALUMINUM CHANNEL WHILE MODEL NO. 11.06.278 PROVIDES POCKETS IN THE CHANNEL FOR INDIVIDUAL MODULES.



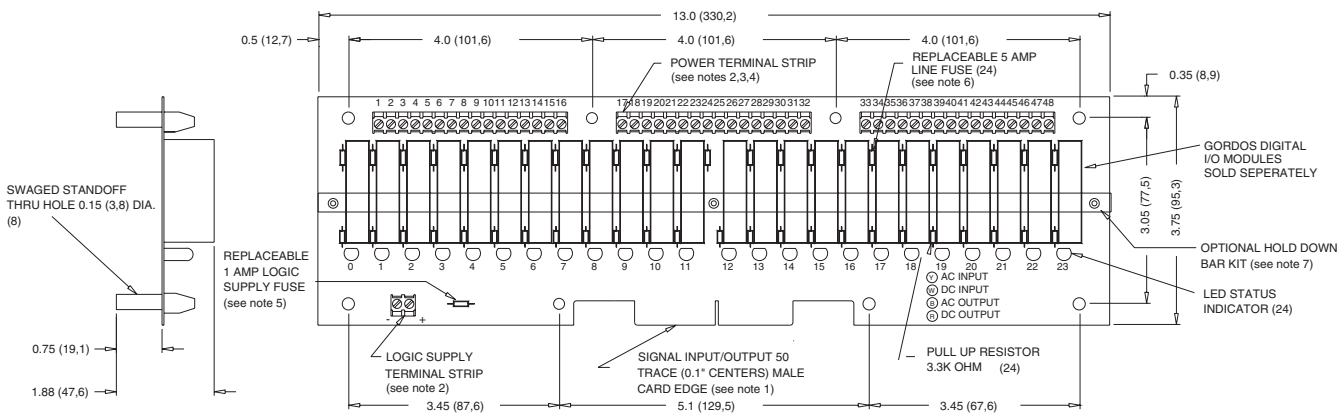
Products and specifications subject to change without notice.

Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

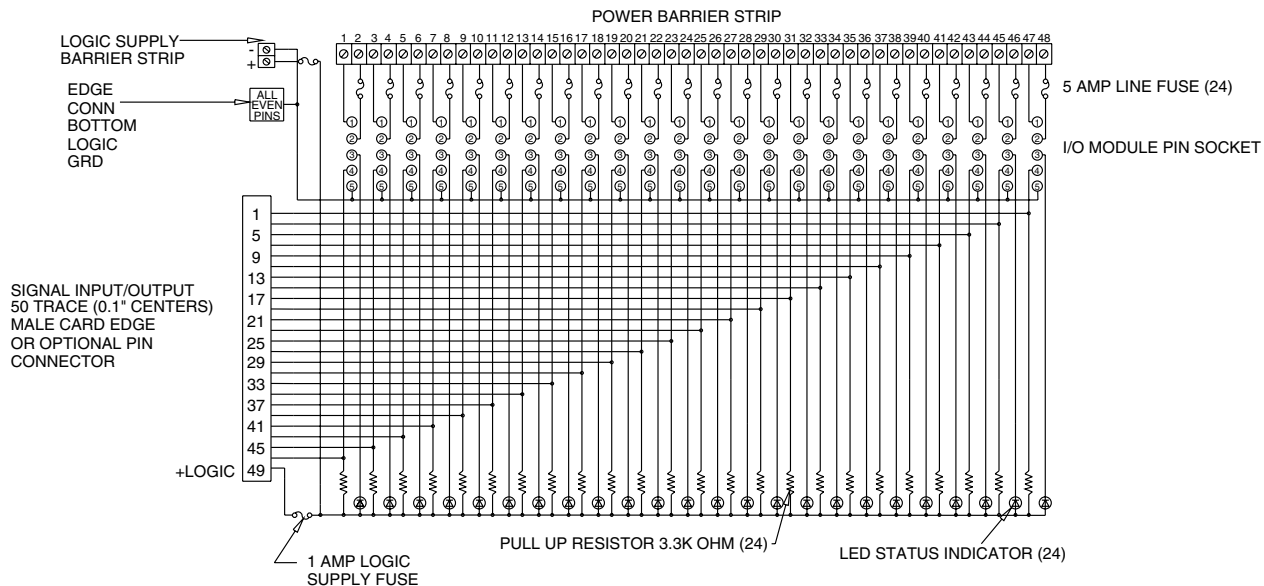
FOR "SM" SERIES MINIATURE MODULES

PB24SM



- NOTES: 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT. SPECIFY SUFFIX 'C' FOR OPTIONAL 65823-093 OR EQUIVALENT MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION. SPECIFY SUFFIX 'V' FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) 4-40 SCREW TERMINAL STRIPS ACCEPT WIRE SIZES FROM 26 TO 14 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP ORDER 3 EACH "JMS".
- 4) PHOENIX MKD51.5 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL BLOCKS STANDARD. SPECIFY SUFFIX 'A' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY SUFFIX 'B' FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.5/16-ST-5.08 (OR EQUIVALENT) FEMALE SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251001 OR EQUIVALENT.
- 6) LITTLE FUSE 251005 OR EQUIVALENT.
- 7) TWO HOLD-DOWN BAR KITS ARE AVAILABLE SEPARATELY. MODEL NO. 11.06.413 EMPLOYS A PLAIN ALUMINUM CHANNEL WHILE MODEL NO. 11.06.288 PROVIDES POCKETS IN THE CHANNEL FOR INDIVIDUAL MODULES.

DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ±0.020 (±0.50)

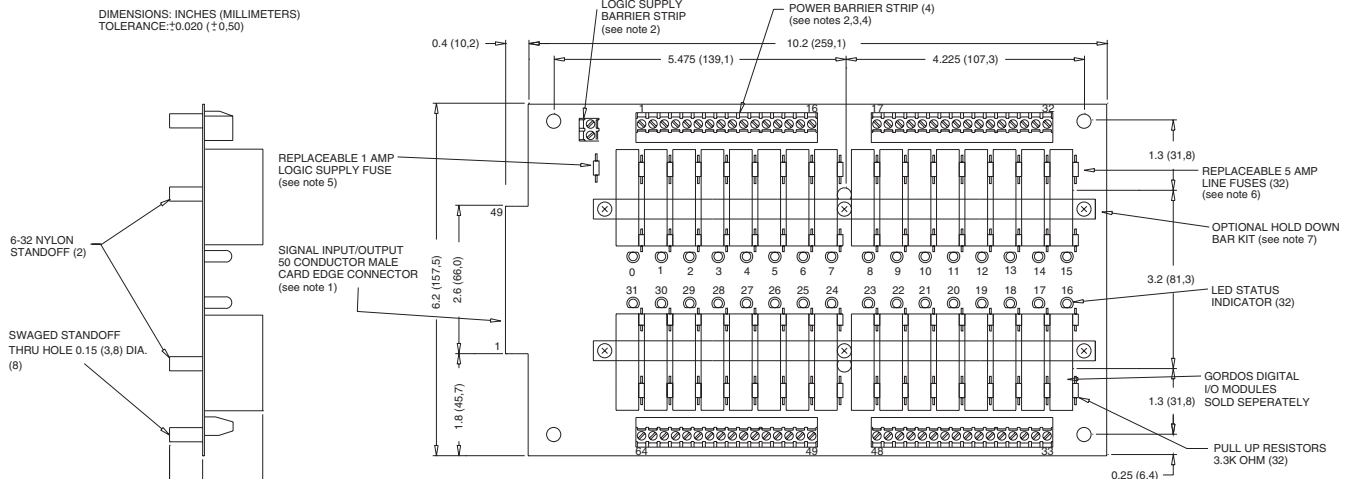


Products and specifications subject to change without notice.
Consult factory for application assistance.

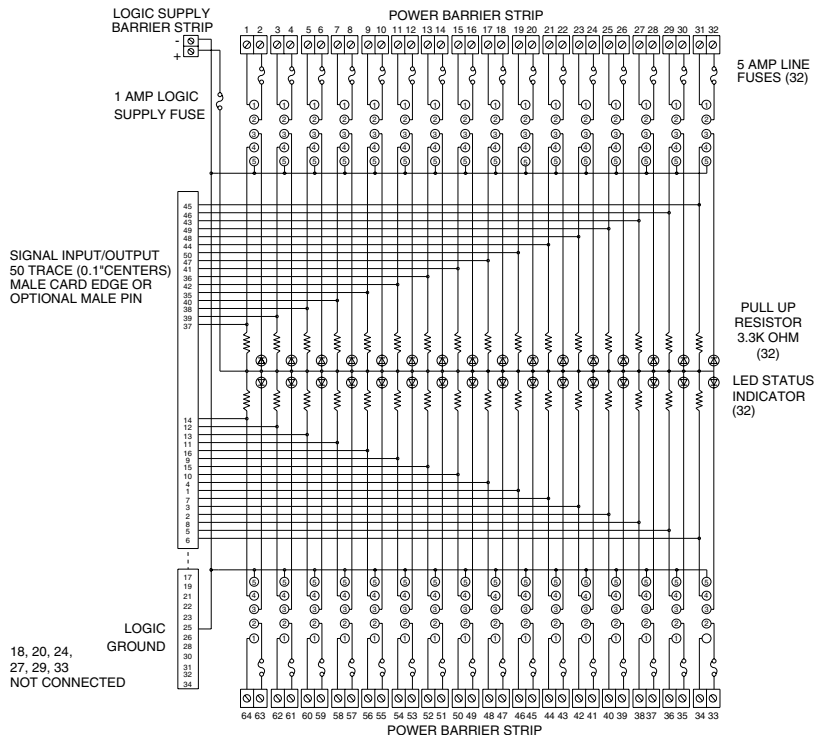
DIGITAL I/O MODULE MOUNTING BOARDS

FOR "SM" SERIES MINIATURE MODULES

PB32SM



- NOTES: 1) MATING CONNECTOR IS BERG 66317-150 OR EQUIVALENT. SPECIFY SUFFIX "C" FOR OPTIONAL 65623-093 OR EQUIVALENT MALE PIN CONNECTOR FOR PARALLEL-TO-THE-BOARD CABLE CONNECTION. SPECIFY SUFFIX "V" FOR OPTIONAL CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT MALE PIN CONNECTOR FOR PERPENDICULAR-TO-THE-BOARD CABLE CONNECTION.
- 2) BARRIER STRIPS ACCEPT WIRE SIZES FROM 26 TO 14 AWG.
- 3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP. ORDER 2 EACH "JM2" AND 4 EACH "JM5".
- 4) PHOENIX MKD51 5 5.08mm SERIES (OR EQUIVALENT) SCREW TERMINAL BLOCKS STANDARD. SPECIFY SUFFIX "A" FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR. SPECIFY SUFFIX "B" FOR BOARD-MOUNTED PHOENIX MSTBVA 1.5/16-G-5.08 (OR EQUIVALENT) MALE CONNECTOR AND MATING PHOENIX MSTBVA 1.5/16-ST-5.08 (OR EQUIVALENT) FEMALE. SCREW-TERMINAL PLUG-IN CONNECTOR.
- 5) LITTLE FUSE 251001 OR EQUIVALENT.
- 6) LITTLE FUSE 251005 OR EQUIVALENT.
- 7) OPTIONAL HOLD DOWN BAR KITS AVAILABLE. ORDER KIT 11.06.418 FOR LOW COST CLAMPING VERSION, OR KIT 11.06.305 FOR FULLY RETAINED VERSION.



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Consult factory for application assistance.

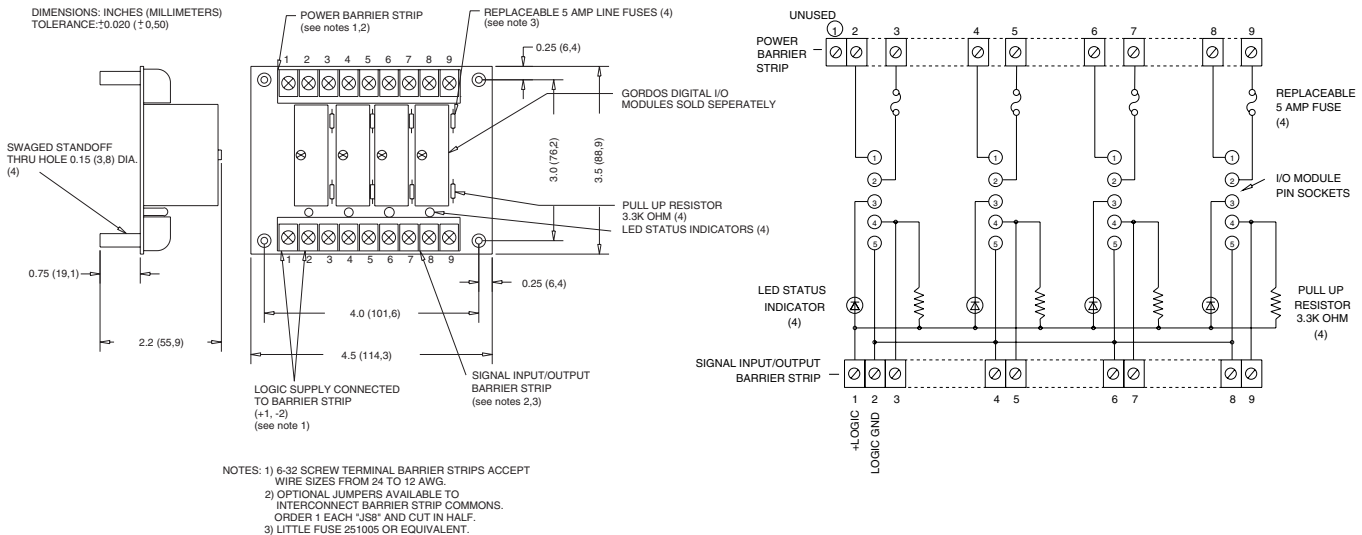
DIGITAL I/O MODULE MOUNTING BOARDS

FEATURES:

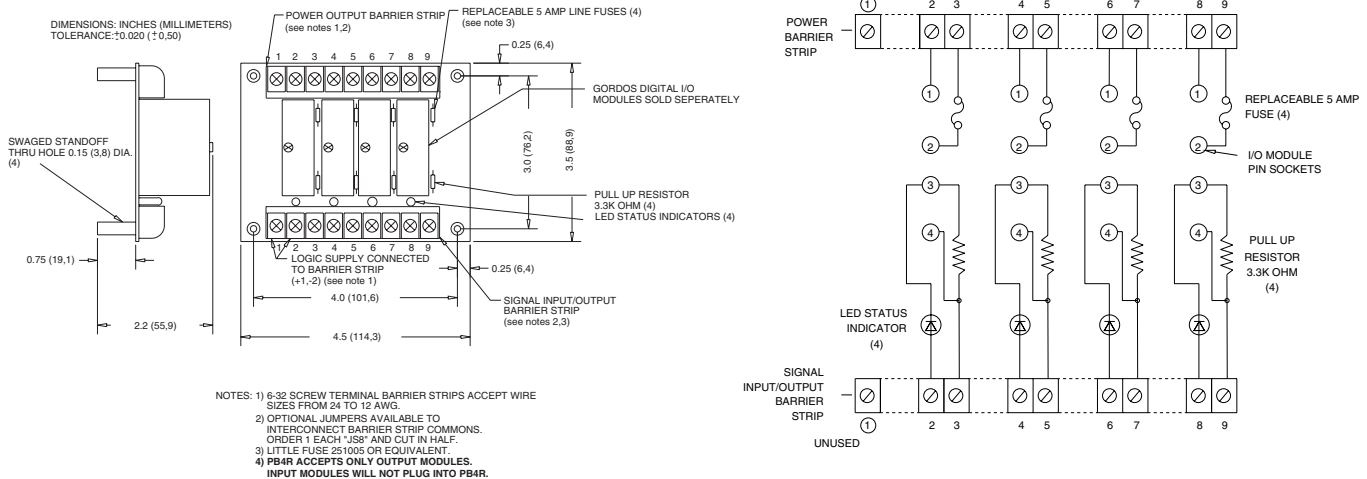
- Plug-compatible logic connections on 8, 16, 24 and 32 position boards. Screw terminal barrier block for logic connections on 4-position boards.
- Screw terminal barrier block for load connections
- Resident pull-up resistors
- 5 amp field-replaceable fuses (LITTLEFUSE #251005 or equivalent)
- LEDs indicate logic status
- All even-numbered logic connections are logic ground
- Input and output modules accepted interchangeably
- Operate with 5, 15 or 24 volt logic supplies
- Captive-screw retaining system for standard-size modules and "Quad-Packs." Pin retaining system for "SM" series miniature modules. Optional hold down bar for "M" and "SM" series miniature modules.
- PB4, PB4R, PB8, PB16, PB16S, PB16T, PB24, PB24Q and PB32Q UL recognized and approved for field wiring (E79183) and CSA certified (38595). Additional approvals pending. Consult factory for updated list.

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB4



PB4R



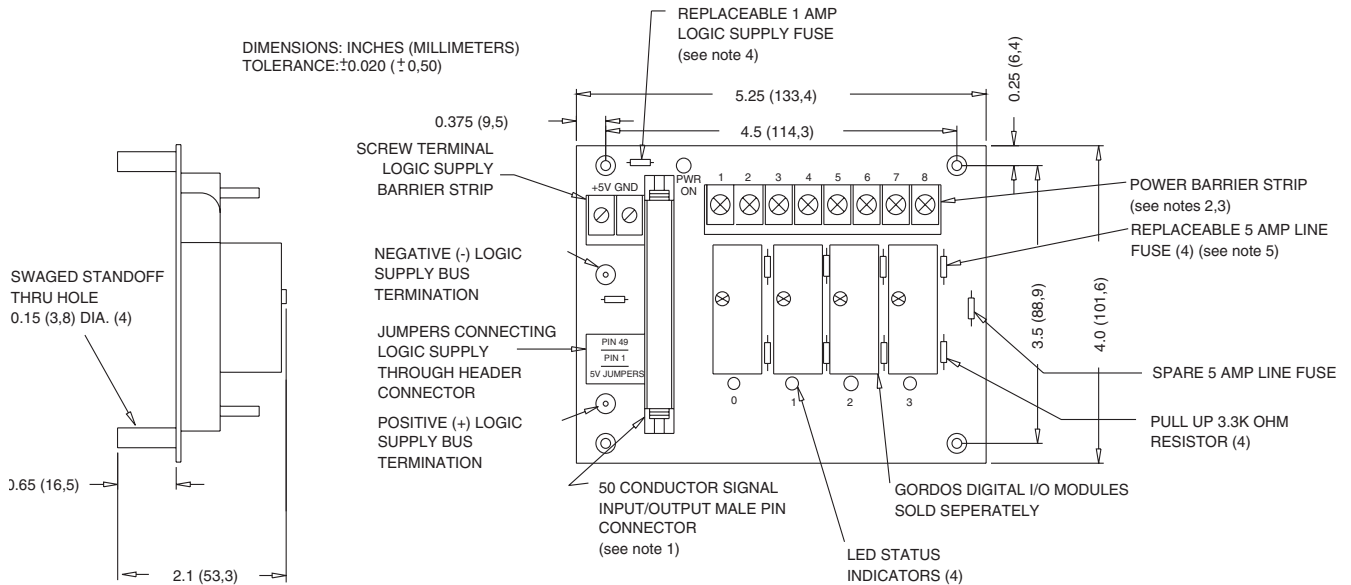
Products and specifications subject to change without notice.

Consult factory for application assistance.

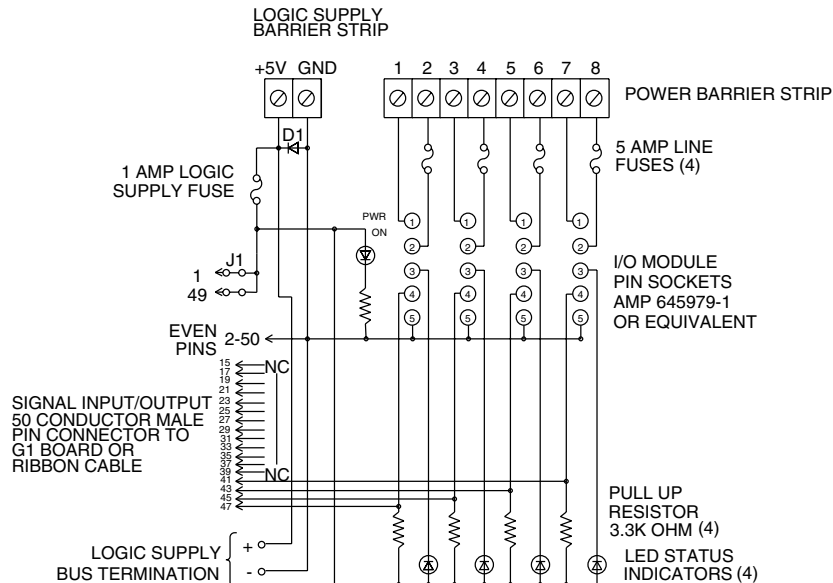
DIGITAL I/O MODULE MOUNTING BOARDS

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB4H



- NOTES: 1) CONNECTOR IS CIRCUIT ASSEMBLY CA-50H-2B-SR OR EQUIVALENT.
2) 6-32 SCREW TERMINAL BARRIER STRIPS ACCEPT WIRE SIZES FROM 24 TO 12 AWG.
3) OPTIONAL JUMPERS ARE AVAILABLE TO INTERCONNECT BARRIER STRIP COMMONS. ORDER 1 EACH "JS8" AND CUT IN HALF.
4) LITTLE FUSE 251001 OR EQUIVALENT.
5) LITTLE FUSE 251005 OR EQUIVALENT.

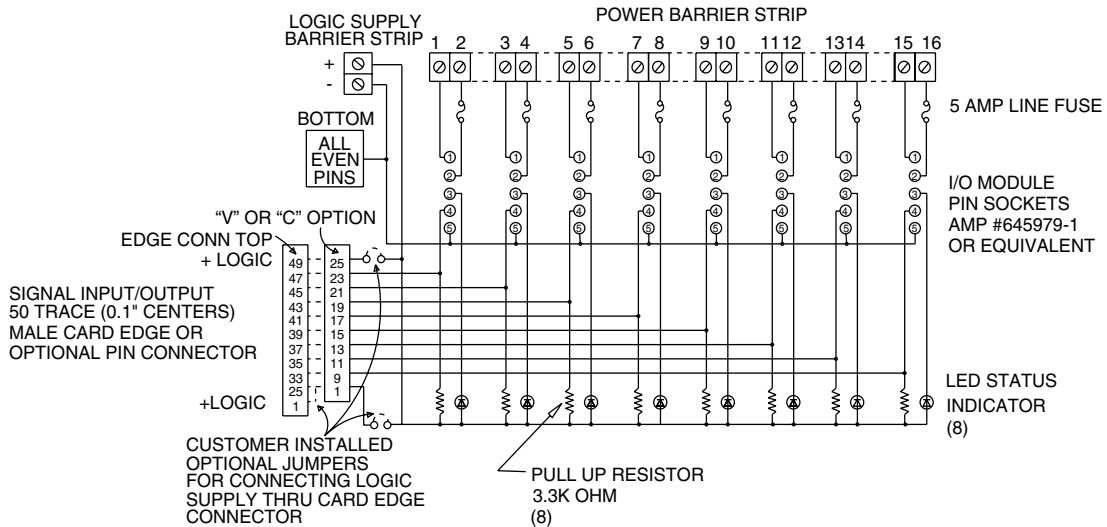
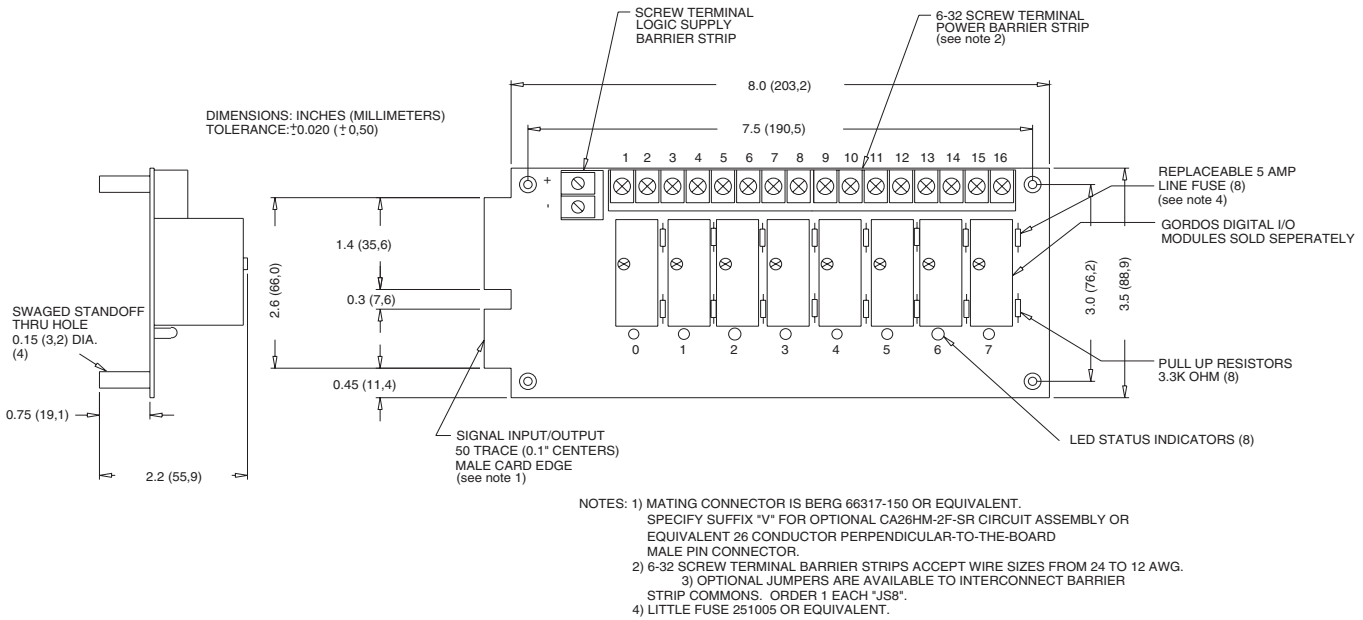


Products and specifications subject to change without notice.
Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB8

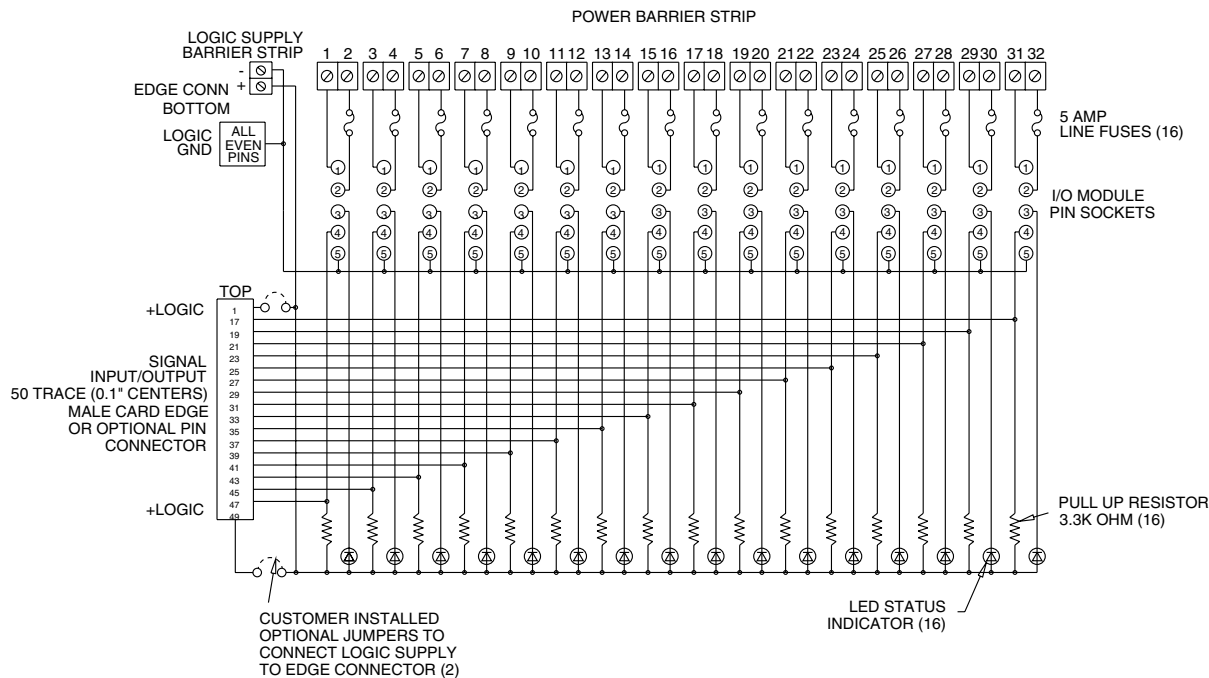
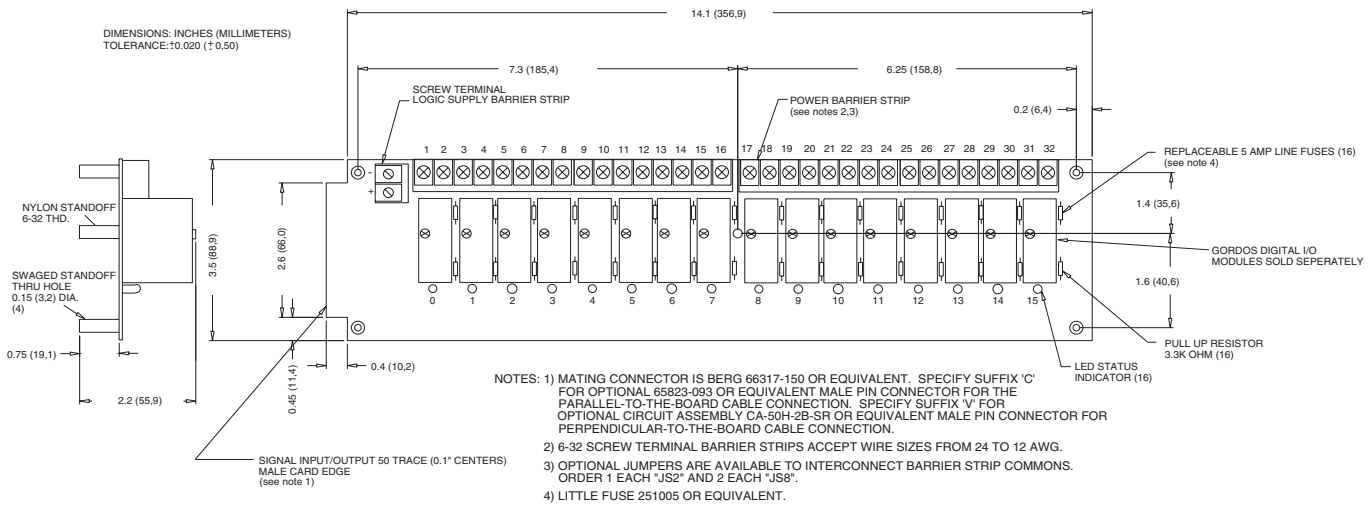


Products and specifications subject to change without notice.
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DIGITAL I/O MODULE MOUNTING BOARDS

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB16

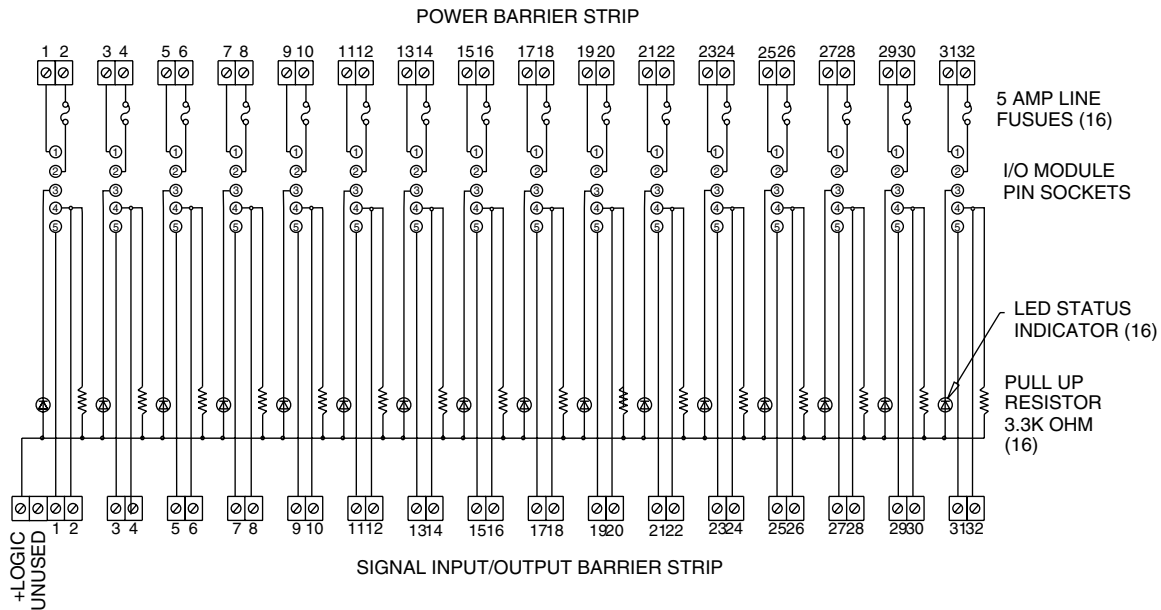
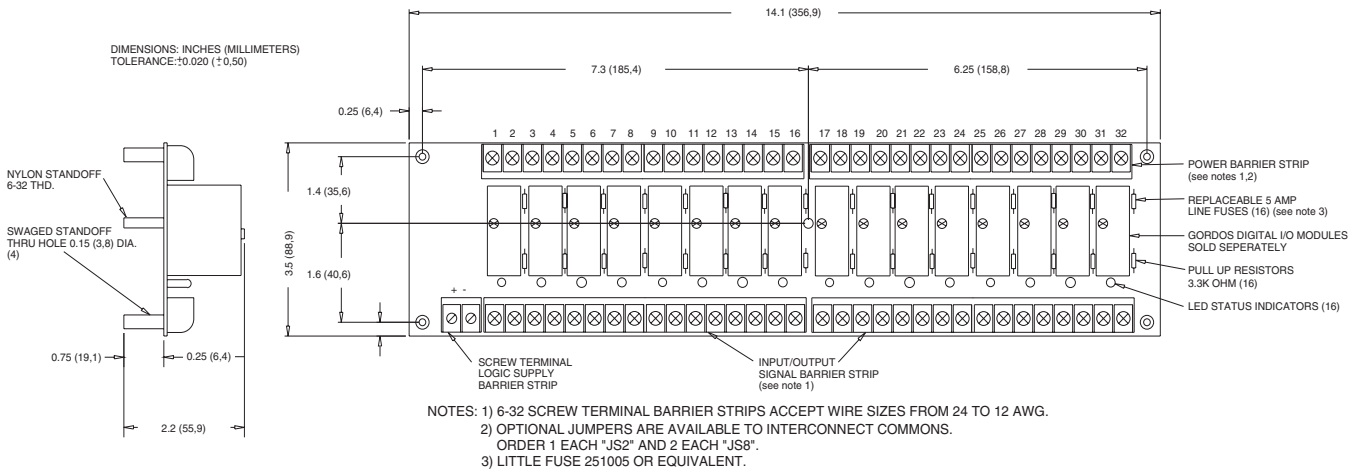


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DIGITAL I/O MODULE MOUNTING BOARDS

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB16S

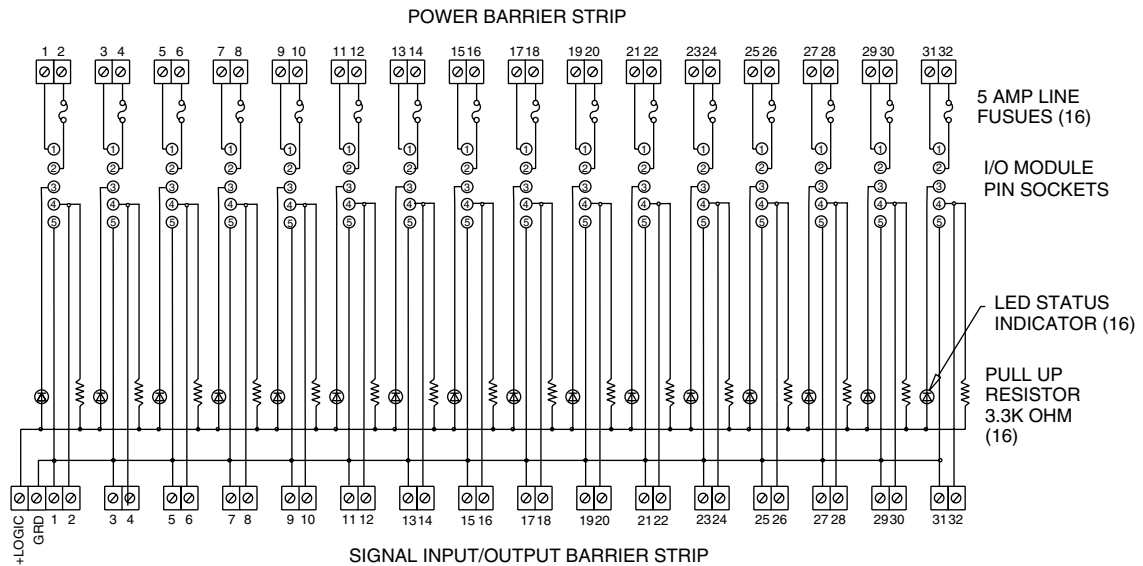
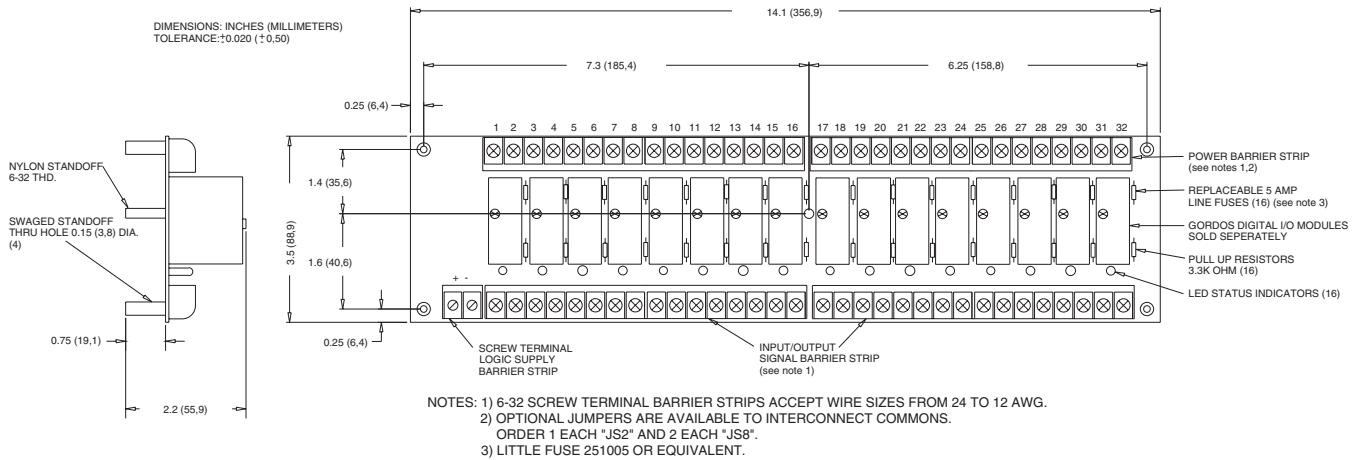


Products and specifications subject to change without notice.
Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB16T

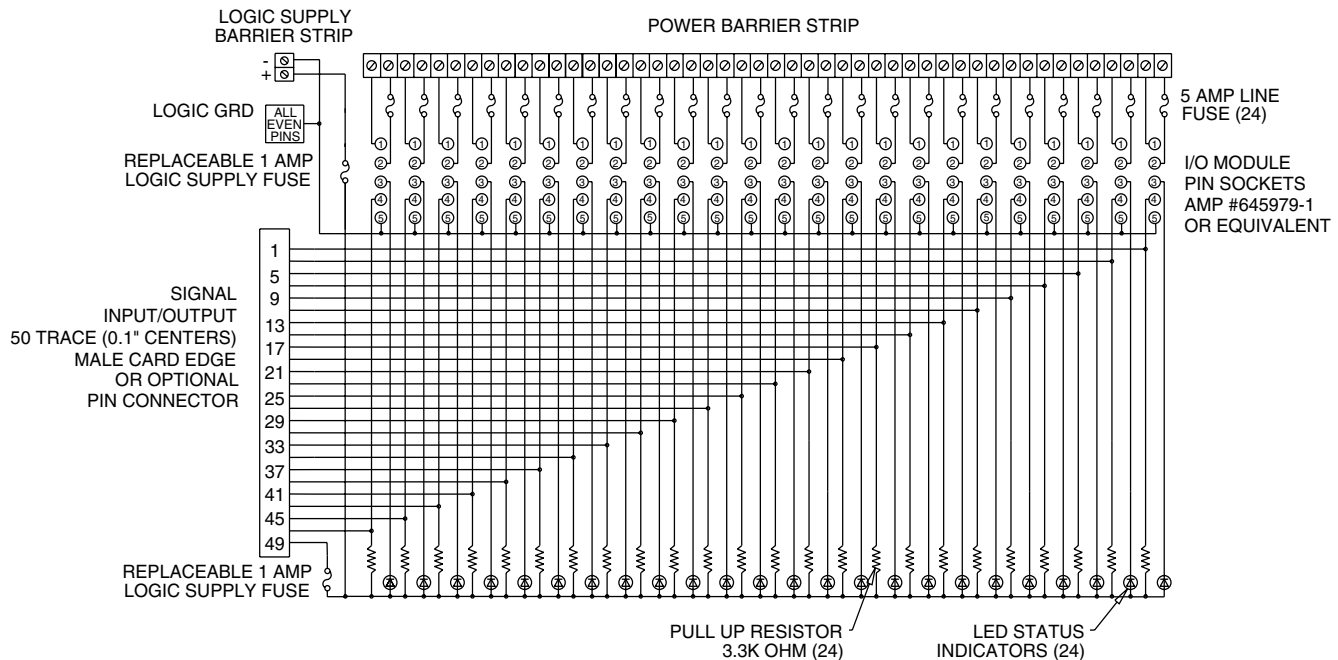
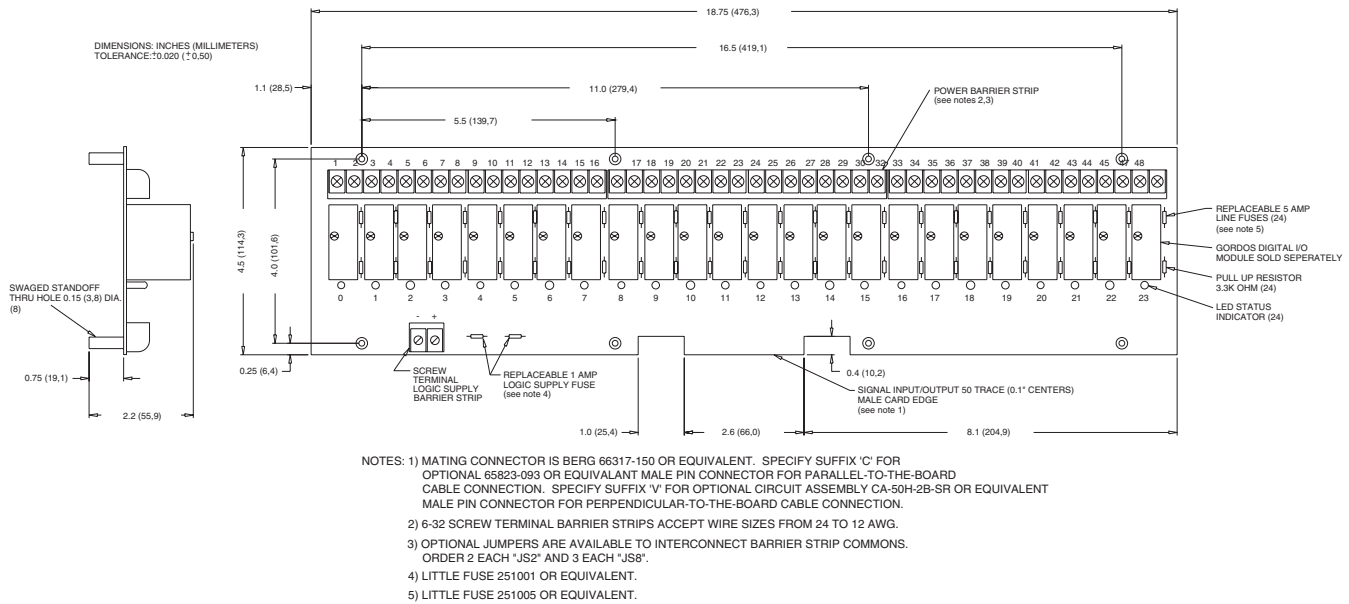


Products and specifications subject to change without notice.
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DIGITAL I/O MODULE MOUNTING BOARDS

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB24

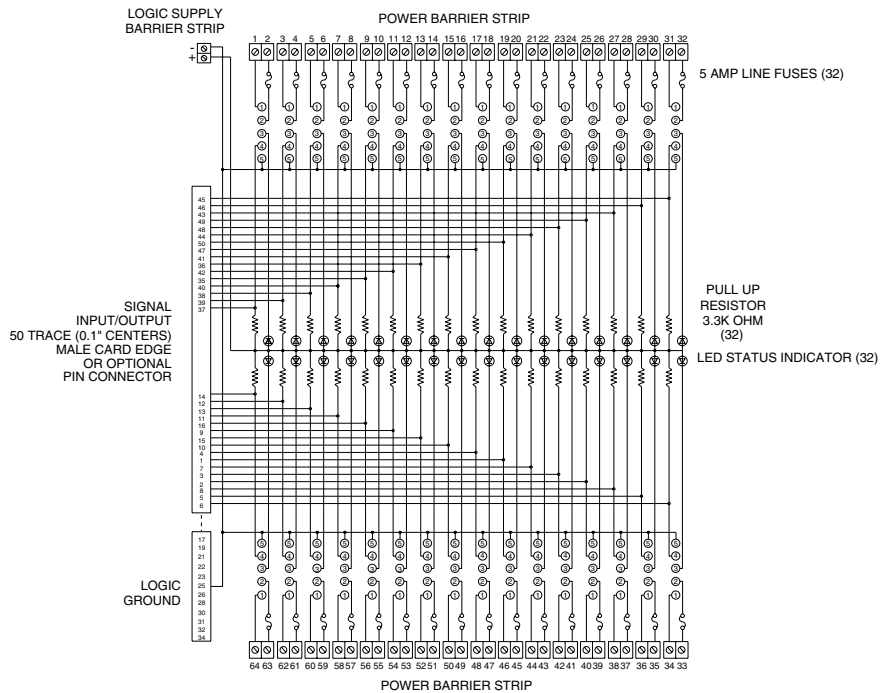
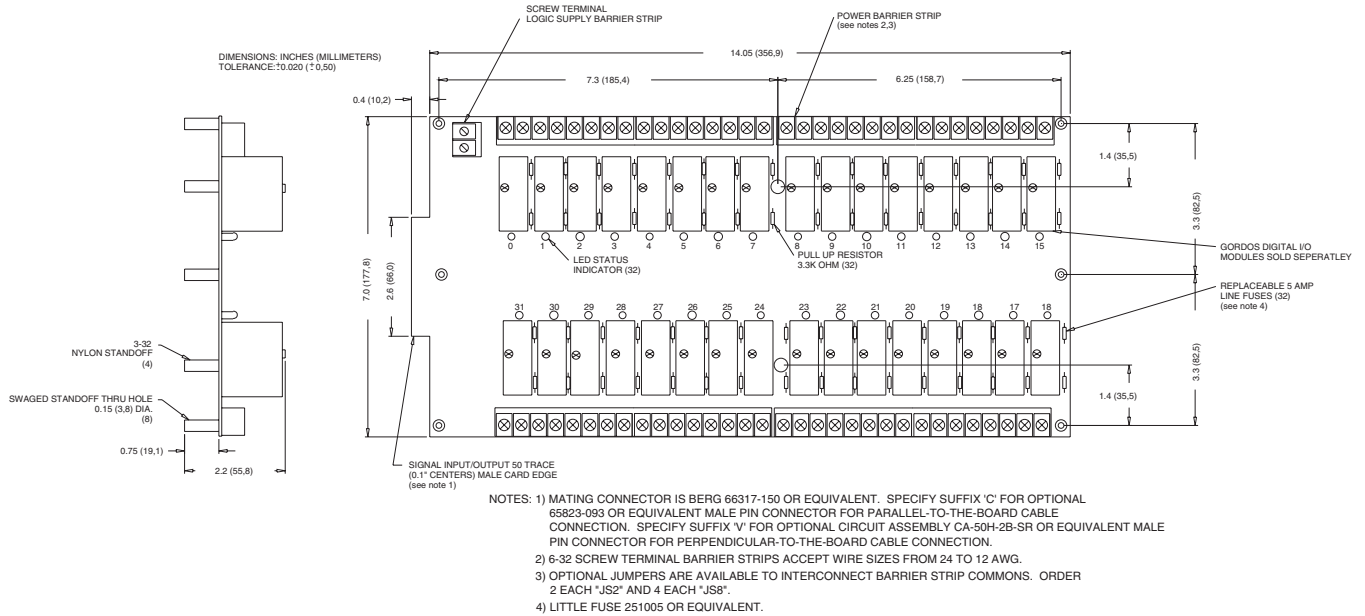


Products and specifications subject to change without notice.
Consult factory for application assistance.

DIGITAL I/O MODULE MOUNTING BOARDS

FOR 0.6 INCH MODULES (Compatible with "SM" Series Modules)

PB32D



Products and specifications subject to change without notice.
Consult factory for application assistance.