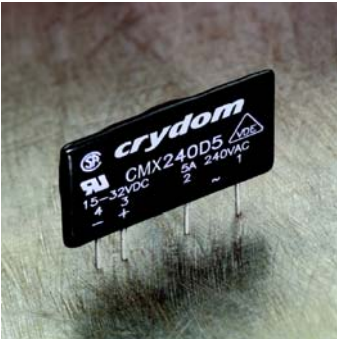


CMX Series



- SIP SSR
- Ratings to 10A @ 100 VDC, 10A @ 60 VDC and 3A @ 200 VDC
- MOSFET output
- DC control
- Low on-state impedance

PRODUCT SELECTION

Control Voltage	3A	5A	6A	10A	10A	20A
3-10 VDC	CMX200D3	CMX60D5	CMX100D6	CMX60D10	CMX100D10	CMX60D20

OUTPUT SPECIFICATIONS (1)(4)

Description						
Operating Voltage [VDC]	0-200	0-60	0-100	0-60	0-100	0-60
Maximum Off-State Leakage Current @ Rated Voltage [μ Adc]	100	100	100	100 (5)	100	100
Maximum Load Current [Arms]	3	5	6	10	10	20
Minimum Load Current [Arms]	0	0	0	0	0	0
Maximum On-State Resistance [Ohm] (2)	0.20	.10	.040	.018	.010	.0033
Maximum Surge Current (10msec) [Apk]	30	60	100	100	100	200
Maximum On-State Voltage Drop @ Rated Current [VDC]	0.6	0.5	0.24	0.18	0.1	0.1

INPUT SPECIFICATIONS (1)

Description	
Control Voltage Range	3.0-10.0 VDC
Must Turn On Voltage	3.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	15 mAdc
Nominal Input Impedance	300 Ohm
Maximum Turn-On Time [msec]	1.0
Maximum Turn-Off Time [μ sec]	300

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(3)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)(3)	10^9 Ohm
Maximum Capacitance, Input/Output	15 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.4 oz. (11g)
Encapsulation	Thermally Conductive Epoxy

1) All parameters at 25°C unless otherwise specified.

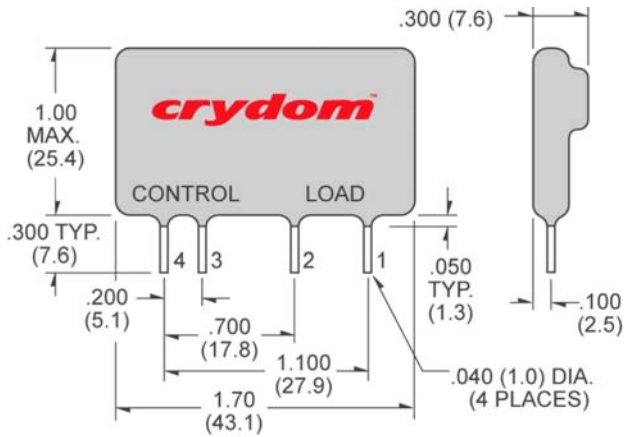
2) @ rated current (RDS-ON)

3) Dielectric and insulation resistance are measured between input and output

4) Inductive loads should be diode suppressed

5) At 55 Vdc

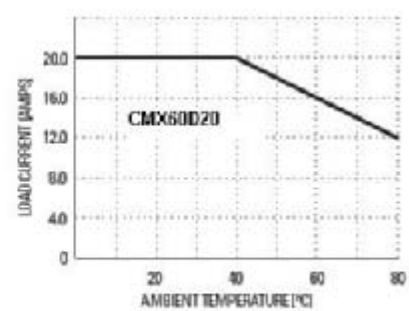
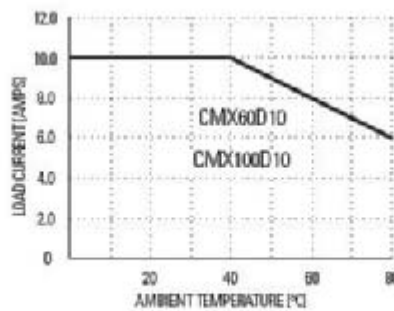
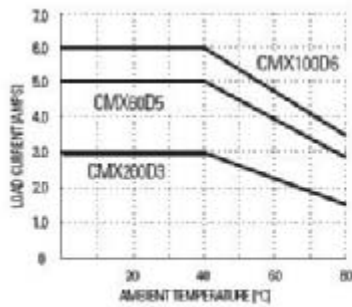
MECHANICAL SPECIFICATIONS



DC CONTROL
PIN 1: +DC LOAD
PIN 2: -DC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

All dimensions are in inches (millimeters)

THERMAL DERATE INFORMATION



Max. Load Current vs. Temp.

AGENCY APPROVALS

UL E116950(3 Amps, 6 Amps and 10 Amps Models)



Rev. 010509

 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 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 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.

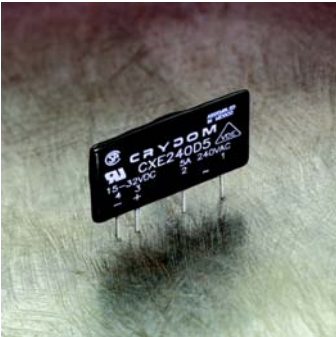
Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

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

CX Series

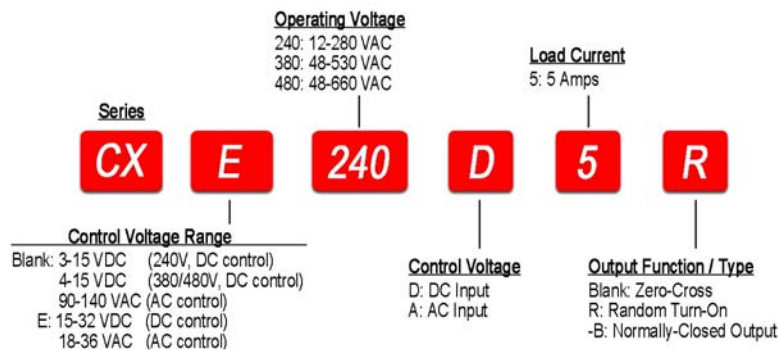


- SIP SSR
- Ratings of 5A @ 660 VAC
- SCR output for heavy industrial loads
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage			
3-15 VDC	CX240D5		
4-15 VDC		CX380D5	CX480D5
15-32 VDC	CXE240D5	CXE380D5	CXE480D5
18-36 VAC	CXE240A5		
90-140 VAC	CX240A5		

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description			
Operating Voltage (47-63Hz) [Vrms]	12-280	48-530	48-660
Transient Overvoltage [Vpk]	600	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	0.1	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500	500
Maximum Load Current [Arms]	5	5	5
Minimum Load Current [Arms]	0.06	0.06	0.06
Maximum Surge Current (16.6ms) [A _{pk}]	250	250	250
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.4	1.4	1.4
Maximum I ² t for fusing (8.3 msec) [A ² sec]	260	260	260
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	CX240Dx	CX380Dx	CXExxxDx	CX240A5	CXE240A5
Nominal Voltage	5 VDC	5 VDC	24 VDC	120 VAC	24 VAC
Control Voltage Range	3-15 VDC	4-15 VDC	15-32 VDC	90-140 VAC	18-36 VAC
Minimum Turn-On Voltage	3.0 VDC	4.0 VDC	15.0 VDC	90.0 Vrms	18.0 Vrms
Drop Out Voltage	1.0 VDC	1.0 VDC	1.0 VDC	10.0 Vrms	2.0 Vrms
Typical Input Current	15 mAdc	15 mAdc	15 mAdc	10 mArms	10 mArms
Nominal Input Impedance	300 Ohm	240 Ohm	1500 Ohm	14.1 Ohm	2.1 Ohm
Maximum Turn-On Time [msec] (3)	1/2 Cycle	1/2 Cycle	1/2 Cycle	10	10
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle	1/2 Cycle	40	40

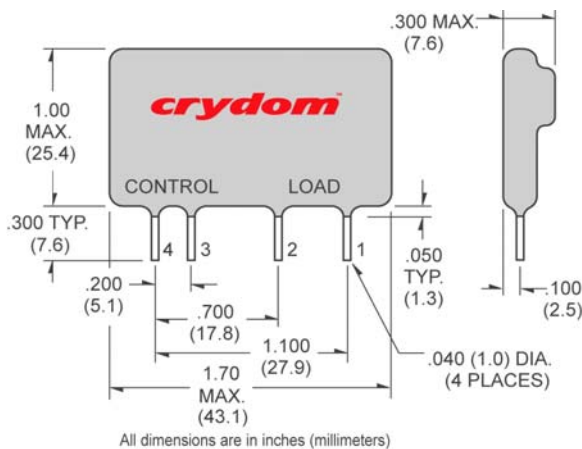
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range	-30 to 80 °C
Ambient Storage Temperature Range	-30 to 125 °C
Weight (typical)	0.4 oz. (11g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

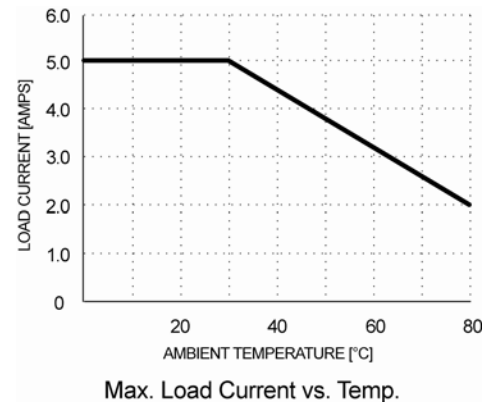
- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 3) Turn-On time for random turn-on versions is 0.1 msec (DC Control Models).

MECHANICAL SPECIFICATIONS



DC CONTROL.
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

AC CONTROL.
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: AC CONTROL
PIN 4: AC CONTROL



AGENCY APPROVALS

UL E116949
CSA LR81689
VDE 70938 UG(240 V, 380V, DC Control Only)
VG (240 V, 380 V, DC Control Only)



Rev. 06132008

 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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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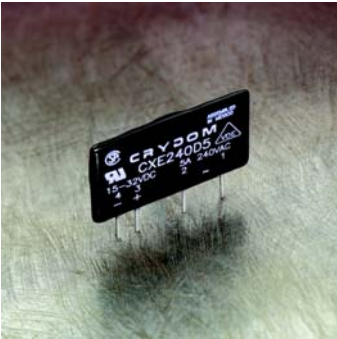
Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

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

CX-B Series



- SCR Output
- NC (Normally Closed) Configuration
- Ultra High Surge Rating
- Crydom's Patented Design

PRODUCT SELECTION

Control Voltage	5 A
3-15 VDC	CX240D5-B
4-15 VDC	CX480D5-B

OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	12-280	48-530
Transient Overvoltage [Vpk]	600	1200
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	5.0	5.0
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500
Maximum Load Current [Arms]	5	5
Minimum Load Current [Arms]	0.06	0.06
Maximum Surge Current (16.6ms) [Apk]	250	250
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.4	1.4
Maximum I ² t for fusing (8.3 msec) [A ² sec]	260	260
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	
Must Turn On Voltage Range	0-1.0 VDC
Must Turn Off Voltage Range	4-28 VDC
Typical Input Current @ 15 VDC	10 mAdc
Nominal Input Impedance	1360 Ohm
Maximum Turn-On Time [msec] (3)	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range	-30 to 80 °C
Ambient Storage Temperature Range	-30 to 125 °C
Weight (typical)	0.4 oz. (11g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

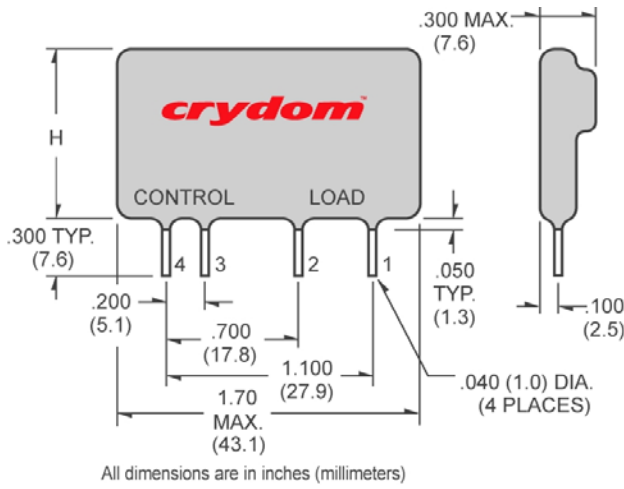
- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 3) Turn-On time for random turn-on versions is 0.01 msec (DC Control Models).

For Contact information visit our web site.

www.crydom.com

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Specifications subject to change without notice.

MECHANICAL SPECIFICATIONS

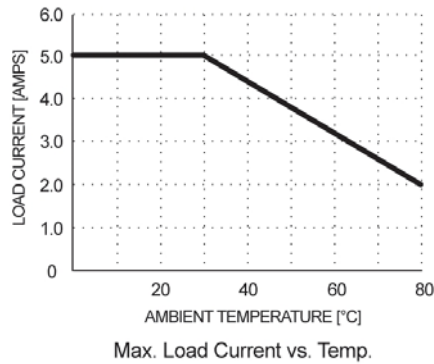


DC CONTROL
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

AC CONTROL
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: AC CONTROL
PIN 4: AC CONTROL

H = 1.0 (25.4) max for CX240
H = 1.5 (36.8) max for CX480

THERMAL DERATE INFORMATION



AGENCY APPROVALS

UL E116950
CSA LR81689



Rev. 061608

 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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.

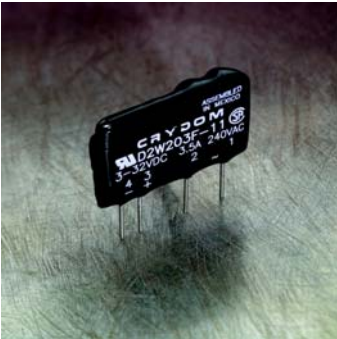
Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

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



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

D2W Series



- SIP SSR
- Ratings to 3.5A @ 280 VAC
- DC control
- Zero-crossing (resistive loads) output
- Internal snubber network

PRODUCT SELECTION

Control Voltage	2A	3A	3.5A
3-32 VDC	D2W202F	D2W203F	D2W203F-11

OUTPUT SPECIFICATIONS (1)

Description			
Operating Voltage (47-63Hz) [Vrms]	24-280	24-280	24-280
Transient Overvoltage [Vpk]	600	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	8	8	8
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	200	200	200
Maximum Load Current [A _{rms}]	2	3	3.5
Minimum Load Current [A _{rms}]	0.06	0.06	0.06
Maximum Surge Current (16.6ms) [A _{pk}]	28	70	80
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.4	1.4	1.4
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	
Control Voltage Range	3-32 VDC
Must Turn On Voltage	3.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	3.0 mA _{dc}
Nominal Input Impedance	1500 Ohm
Maximum Turn-On Time [msec]	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

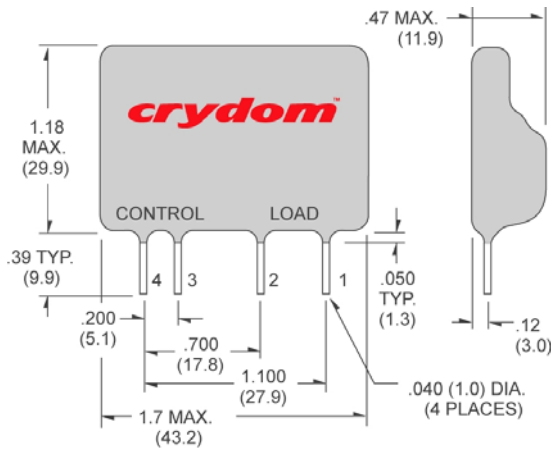
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.6 oz. (17g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS

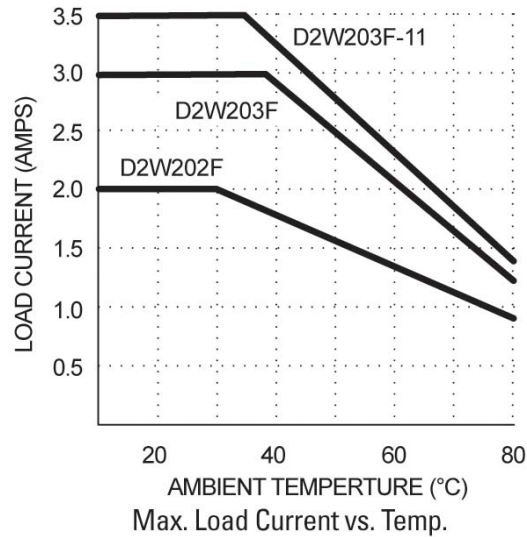
MECHANICAL SPECIFICATIONS



PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

All dimensions are in inches (millimeters)

THERMAL DERATE INFORMATION



AGENCY APPROVALS

UL E116950
CSA LR81689



Rev. 061608

 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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

LR Series

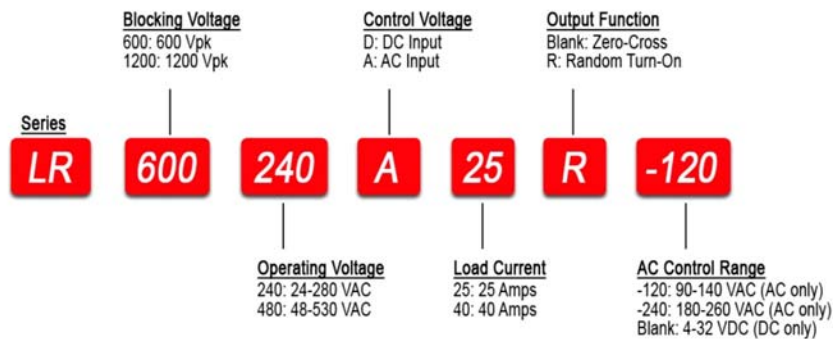


- DIP SSR
- Ratings to 40A @ 480 V AC with external heat sink
- SCR output for heavy industrial loads
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	25A	25A	40A	40A
90-140 VAC	LR600240A25	LR600240A40	LR1200480A25	LR1200480A40
180-260 VAC	LR600240A25	LR600240A40	LR1200480A25	LR1200480A40
4-32 VDC	LR600240D25	LR600240D40	LR1200480D25	LR1200480D40

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	24-280	24-280	48-530	48-530
Operating Voltage (47-63Hz) [Vrms]	24-280	24-280	48-530	48-530
Transient Overvoltage [Vpk]	600	600	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA]	0.1	0.1	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500	500	500
Maximum Load Current [A]	25	40	25	40
Minimum Load Current [A]	0.15	0.15	0.15	0.15
Maximum Surge Current Non-Repetitive(16.6ms) [A]	250	400	250	400
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6	1.6
Maximum I ² t for fusing (8.3 msec) [A ² sec]	260	660	260	660
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description			
Control Voltage Range	4-32 VDC	90-140 V	180-260 V
Must Turn On Voltage	4.0 VDC	90 VAC	180 VAC
Must Turn Off Voltage	1.0 VDC	10 VAC	10 VAC
Typical Input Current (5)(6)	9 mAdc	15	11
Maximum Turn-On Time [msec] (4)	1/2 Cycle	10.0	10.0
Maximum Turn-Off Time [msec]	1/2 Cycle	40.0	40.0

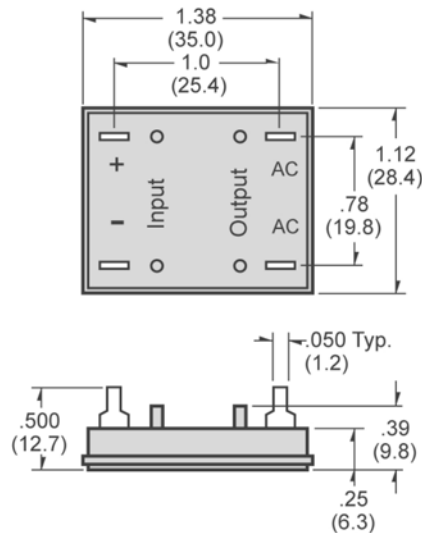
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8.0 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.5 oz. (14.4g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

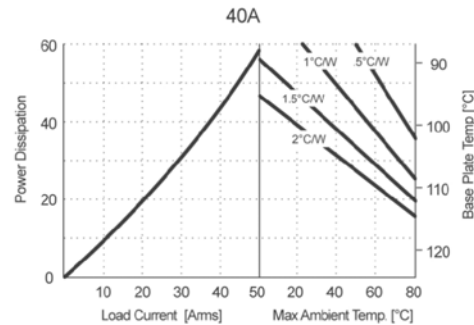
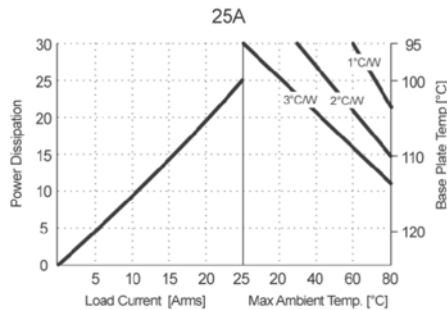
- 1) All parameters at 25°C and per section unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 4) Turn-on time for random Switching models is 0.1 ms.
- 5) DC Input circuitry incorporates active current limiter.
- 6) Use suffix-120 for 120 VAC control and -240 for 240VAC control

MECHANICAL SPECIFICATIONS



All dimensions are in inches (millimeters)

THERMAL DERATE INFORMATION



AGENCY APPROVALS

UL/cUL E116950



 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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保信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
电子信息产品污染控制标识要求



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

LS Series

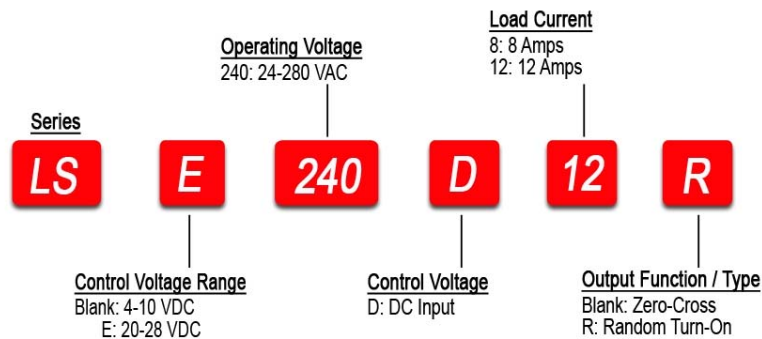


- SIP SSR
- Ratings to 12A @ 280 VAC
- SCR output for heavy industrial loads
- DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	8A	12A
4-10 VDC	LS240D8	LS240D12
20-28 VDC	LSE240D8	LSE240D12

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	8A	12A
Operating Voltage (47-63Hz) [Vrms]	24-280	24-280
Transient Overvoltage [Vpk]	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500
Maximum Load Current [A _{rms}](3)	8	12
Minimum Load Current [A _{rms}]	0.15	0.15
Maximum Surge Current (16.6ms) [A _{pk}]	80	120
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.6	1.6
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description

Control Voltage Range	4-10 VDC	20-28 VDC
Minimum Turn On Voltage	4.0 VDC	20 VDC
Minimum Turn-Off Voltage	1.0 VDC	1.0 VDC
Typical Input Current @ Nominal Voltage	15 mAdc	15 mAdc
Nominal Input Impedance	270 Ohm	1500 Ohm
Maximum Turn-On Time [msec]	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

GENERAL SPECIFICATIONS

Description

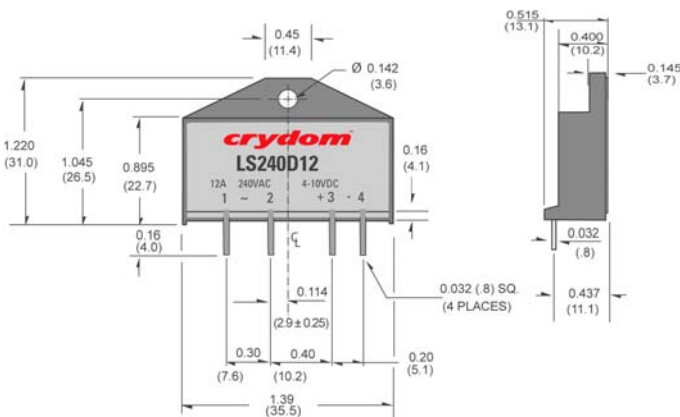
Dielectric Strength, Input/Output/Base (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.6 oz. (17g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1

3) See current derating curve.

MECHANICAL SPECIFICATIONS



All dimensions are in inches (millimeters)

PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: + DC CONTROL
PIN 4: -DC CONTROL

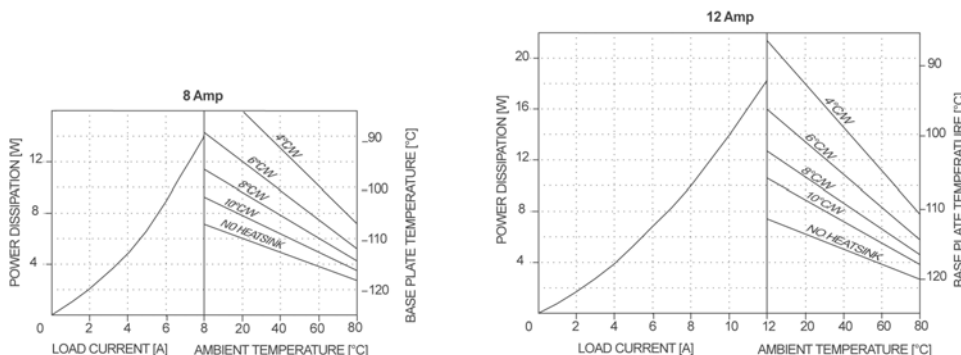
Notes:

- 1.-Tolerances are ± 0.02 " (0.5mm) unless otherwise stated.
- 2.-All pin dimensions are from center of pin

UL E116950
CSA LR816889
TUV E2072777
CE

Rev. 071608

THERMAL DERATE INFORMATION



For Contact information visit our web site.

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Specifications subject to change without notice.

⚠ 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenga tutta l'alimentazione 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

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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

MCX Series

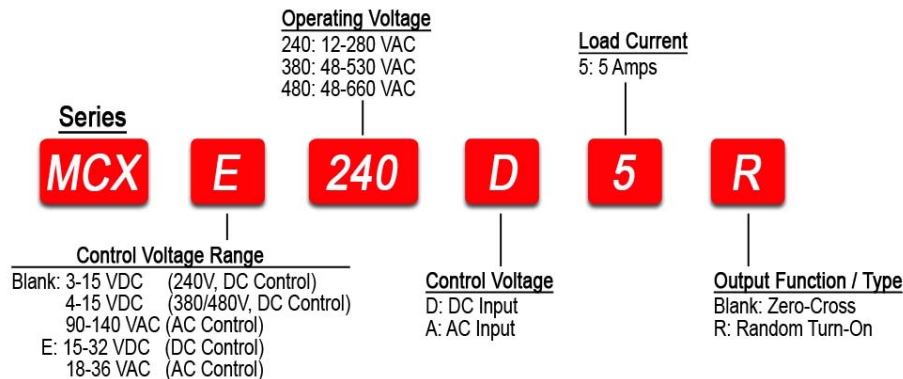


- SIP SSR
- Ratings to 5A @ 280 VAC
- SCR output for heavy industrial loads
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- Plastic encapsulated

PRODUCT SELECTION

Control Voltage	5A	5A	5A
3-15 VDC	MCX240D5		
4-15 VDC		MCX380D5	MCX480D5
15-32 VDC	MCXE240D5	MCXE380D5	MCXE480D5
18-36 VAC	MCXE240A5		
90-140 VAC	MCX240A5		

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	12-280	48-530	48-660
Operating Voltage (47-63Hz) [Vrms]	12-280	48-530	48-660
Transient Overvoltage [Vpk]	600	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA]	0.1	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500	500
Maximum Load Current [Arms](3)	5	5	5
Minimum Load Current [Arms]	0.06	0.06	0.06
Maximum Surge Current (16.6ms) [Apk]	250	250	250
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.4	1.4	1.4
Maximum I ² t for fusing (8.3 msec) [A ² sec]	260	260	260
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	MCX240Dx	MCX380Dx	MCXExxxDx	MCX240A5	MCXE240A5
Control Voltage Range	3-15 VDC	4-15 VDC	15-32 VDC	90-140 VAC	18-36 VAC
Maximum Turn On Voltage	3.0 VDC	4.0 VDC	15.0 VDC	90.0 Vrms	18.0 Vrms
Minimum Turn-Off Voltage	1.0 VDC	1.0 VDC	1.0 VDC	10.0 Vrms	2.0 VDC
Input Current @ Nominal Voltage	15 mAdc	15 mAdc	15 mAdc	10 mAdc	10 mAdc
Nominal Input Impedance	300 Ohm	240 Ohm	1500 Ohm	14.1 Ohm	2.1 k Ohm
Maximum Turn-On Time [msec] (3)	1/2 Cycle	1/2 Cycle	1/2 Cycle	10	10
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle	1/2 Cycle	40	40

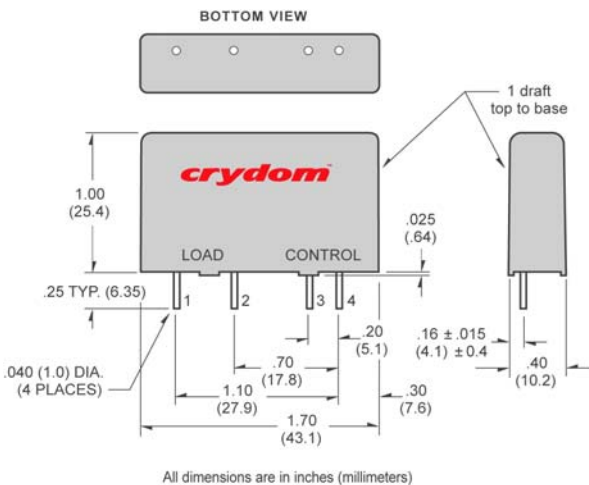
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10pF
Ambient Operating Temperature Range	-40 to 80 °C
Ambient Storage Temperature Range	-40 to 125 °C
Weight (typical)	0.7 oz. (20g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

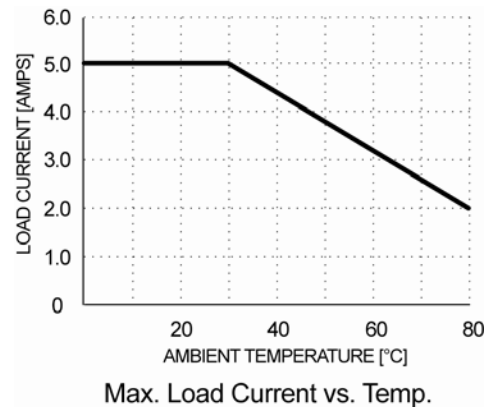
- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 3) Turn-On time for random turn-on versions is 0.01 msec (DC Control Models).

MECHANICAL SPECIFICATIONS



DC CONTROL.
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

AC CONTROL.
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: AC CONTROL
PIN 4: AC CONTROL



AGENCY APPROVALS

UL E116949



Rev. 06 1608

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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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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.

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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

MP Series

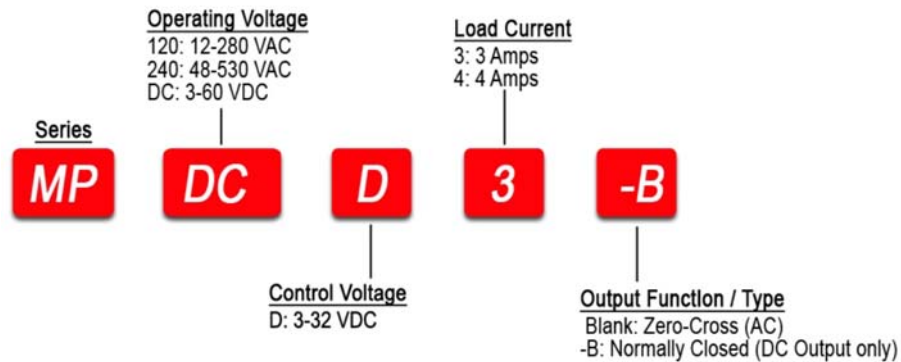


- SIP SSR
- Ratings to 3A @ 60 VDC
- MOSFET output
- DC Control
- Low on-state impedance
- Normally open or normally closed output

PRODUCT SELECTION

Control Voltage	3A	3A	4A	3A
3-32 VDC	MP120D3	MP240D3	MP240D4	MPDCD3

AVAILABLE OPTIONS



AC OUTPUT SPECIFICATIONS (1)

Description	12-140	24-280	24-280
Operating Voltage (47-63Hz) [Vrms]	12-140	24-280	24-280
Transient Overvoltage [Vpk]	400	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	5	5	5
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	200	200	200
Maximum Load Current [Arms]	3	3	4
Minimum Load Current [Arms]	0.02	0.02	0.02
Maximum Surge Current (16.6ms) [Apk]	90	90	130
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Maximum I ² t for fusing (8.3 msec) [A ² sec]	36	36	72
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

DC OUTPUT SPECIFICATIONS (1)

Description	
Operating Voltage Range [VDC]	3-60
Maximum Load Current [Arms]	3
Minimum Load Current [Arms]	0.02
Maximum Surge Current [Adc]	5
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5

INPUT SPECIFICATIONS (1)

Description	AC Output	DC Output	DC Output (-B)
Control Voltage Range	3-32 VDC	3-32 VDC	3-32 VDC
Must Turn On Voltage	3.0 VDC	3.0 VDC	1.0 VDC
Must Turn Off Voltage	1.0 VDC	1.0 VDC	3.0 VDC
Nominal Input Impedance	1500 Ohm	1500 Ohm	1500 Ohm
Maximum Turn-On Time [msec]	1/2 Cycle	100 μ s	100 μ s
Maximum Turn-Off Time [msec]	1/2 Cycle	100 μ s	100 μ s

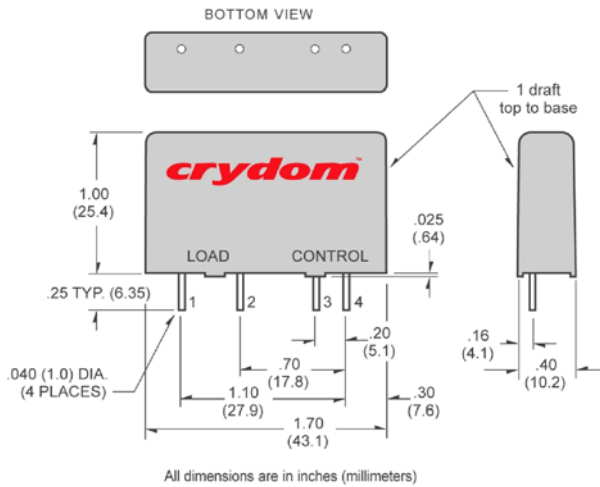
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C
Weight (typical)	0.7 oz. (20g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443,13.11.1
- 3) Inductive loads should be diode suppressed

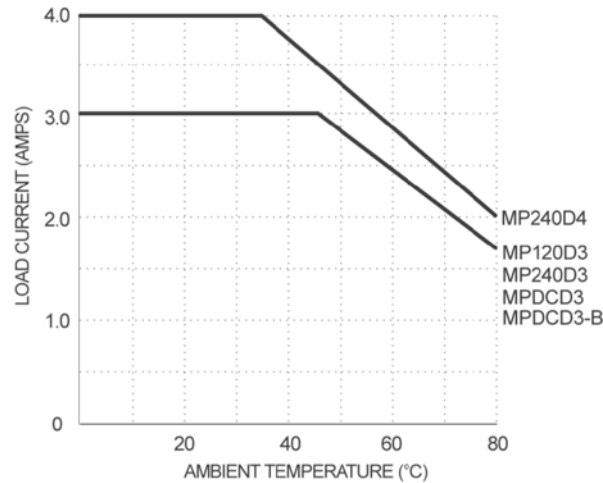
MECHANICAL SPECIFICATIONS



DC OUTPUT
 PIN 1: +DC LOAD
 PIN 2: -DC LOAD
 PIN 3: +DC CONTROL
 PIN 4: -DC CONTROL

AC Output
 PIN 1: AC LOAD
 PIN 2: AC LOAD
 PIN 3: +DC CONTROL
 PIN 4: -DC CONTROL

THERMAL DERATE INFORMATION



AGENCY APPROVALS

UL E116950
 CSA LR81689 (AC Output Only)
 VDE 5900 UG (AC Output Only)



 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保信息
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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

MPF Series



- SIP SSR
- Ratings to 4A @ 280 VAC
- SCR output for heavy industrial loads
- DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	Zero Crossing	Random Fire
4-10 VDC	MPF240D4	MPF240D4R

OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	12-280	12-280
Transient Overvoltage [Vpk]	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500
Maximum Load Current [Arms]	4	4
Minimum Load Current [Arms]	0.1	0.1
Maximum Surge Current (16.6ms) [Apk]	40	40
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5	1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	
Control Voltage Range	4-10 VDC
Must Turn On Voltage	4.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	15 mAdc
Nominal Input Impedance	300 Ohm
Maximum Turn-On Time [msec] *	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

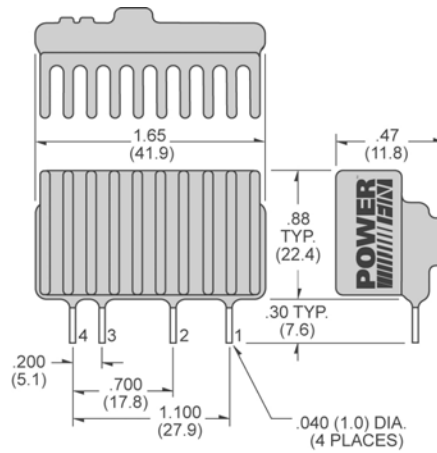
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	3750 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8.0 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.6 oz. (17g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

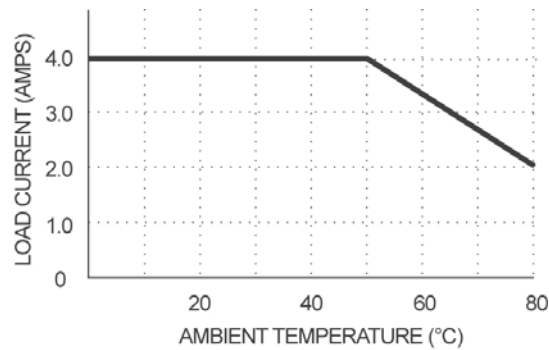
- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured are between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443

MECHANICAL SPECIFICATIONS



All dimensions are in inches (millimeters)

THERMAL DERATE INFORMATION



Max. Load Current vs. Temp.

AGENCY APPROVALS

UL E116950
CSA LR81689



Rev. 0061608

 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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

PF Series

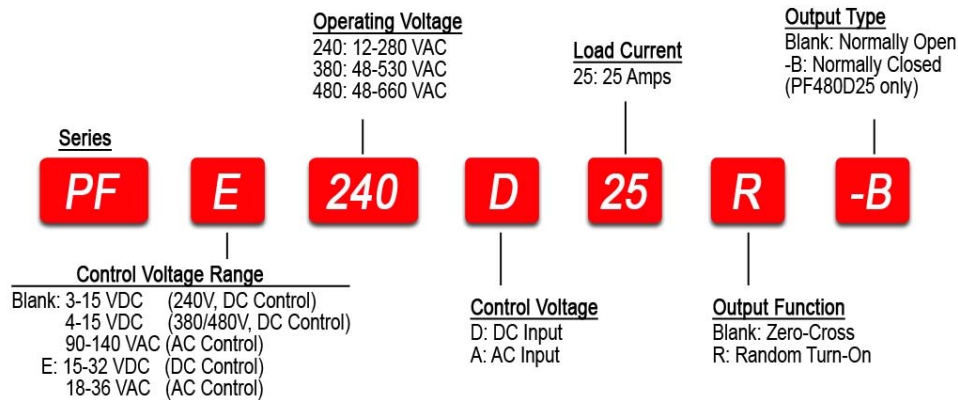


- SIP SSR
- Ratings to 25A (forced air) @ 480 VAC
- SCR output for heavy industrial loads
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	25A	25A	25A
3-15 VDC	PF240D25		
4-15 VDC		PF380D25	PFE480D25
15-32 VDC	PFE240D25	PFE380D25	PF480D25
18-36 VAC	PFE240A25		
90-140 VAC	PF240A25		

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	12-280	48-530	48-660
Operating Voltage (47-63Hz) [Vrms]	12-280	48-530	48-660
Transient Overvoltage [Vpk]	600	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500	500
Maximum Load Current [Arms](3)	Forced Air 25 Convection Air 10	Forced Air 25 Convection Air 10	Forced Air 25 Convection Air 10
Minimum Load Current [Arms]	0.06	0.06	0.06
Maximum Surge Current (16.6ms) [Apk]	250	250	250
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Maximum I ² t for fusing (8.3 msec) [A ² sec]	260	260	260
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	PF240D25	PF380D/480D	PFExxxD25	PF240A25	PFE240A25
Control Voltage Range	3-15 VDC	4-15 VDC	15-32 VDC	90-140 VAC	18-36 VAC
Maximum Turn On Voltage	3.0 VDC	4.0 VDC	15.0 VDC	90.0 Vrms	18.0 Vrms
Minimum Turn-Off Voltage	1.0 VDC	1.0 VDC	1.0 VDC	10.0 Vrms	2.0 Vrms
Typical Input Current @ Nominal Voltage	15 mAdc	15 mAdc	15 mAdc	10 mAdc	10 mAdc
Nominal Input Impedance	300 Ohm	240 Ohm	1500 Ohm	14.1 k Ohm	2.1 k Ohm
Maximum Turn-On Time [msec] (4)	1/2 Cycle	1/2 Cycle	1/2 Cycle	10	10
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle	1/2 Cycle	40	40

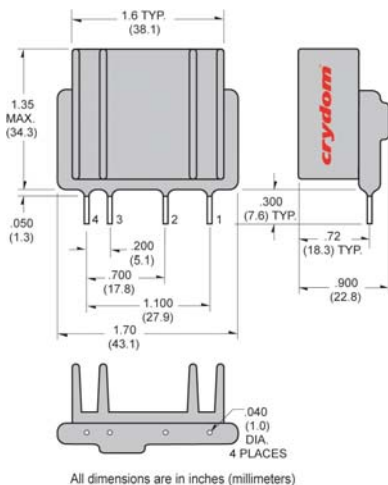
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.85 oz. (25g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443,13.11.1
- 3) Heatsink temperature 85 °C Maximum.
- 4) Turn-On Time for Random Turn-On versions 0.1 msec (DC Control Models)

MECHANICAL SPECIFICATIONS



DC CONTROL.
 PIN 1: AC LOAD
 PIN 2: AC LOAD
 PIN 3: +DC CONTROL
 PIN 4: -DC CONTROL

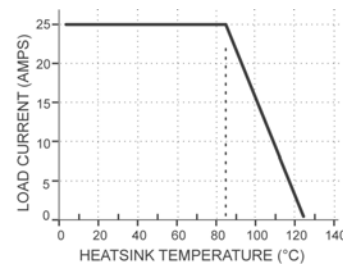
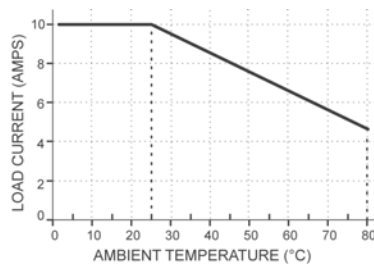
AC CONTROL.
 PIN 1: AC LOAD
 PIN 2: AC LOAD
 PIN 3: AC CONTROL
 PIN 4: AC CONTROL

UL E116950
 CSA LR70938(DC Control Only)



Rev. 061608

THERMAL DERATE INFORMATION



For Contact information visit our web site.

www.crydom.com

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 Specifications subject to change without notice.

AGENCY APPROVALS

UL E116950
CSA LR70938(DC Control Only)



Rev. 0061608

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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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

CTX SERIES



- Independently controlled quad output solid-state relay; Rated at 20A @ 24-280 VAC
- Industry standard package
- DC Control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- Ideal for limited-space applications

PRODUCT SELECTION

Control Voltage	Zero-crossing	Random Fire
3-15 VDC	CX240D3Q	
4-10 VDC	CTX240D3Q	CTX240D3QR

OUTPUT SPECIFICATIONS (1)(3)

Description	
Operating Voltage (47-63Hz) [Vrms]	24-280
Transient Overvoltage [Vpk]	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	200
Maximum Load Current [Arms](3)	1 Section ON: 0.1-6.0 2 Section ON: 0.1-4.0 3 Section ON: 0.1-3.0 4 Section ON: 0.1-2.5
Maximum Surge Current (16.6ms) [Apk]	120
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.4
Maximum I ² t for fusing (8.3 msec) [A ² sec]	60
Minimum Power Factor (with Maximum Load)	0.5

INPUT SPECIFICATIONS (1)(3)

Description	
Control Voltage Range	4-10 VDC
Must Turn On Voltage	4.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	15 mAdc
Nominal Input Impedance	270 Ohm
Maximum Turn-On Time [msec]	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

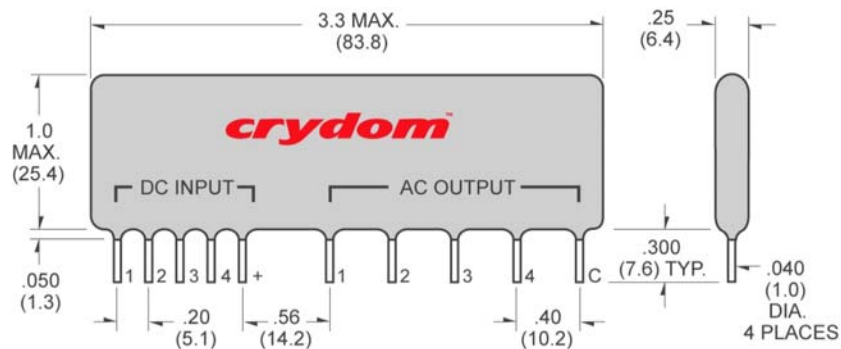
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.5 oz. (14.4g)
Encapsulation	Thermally Conductive Epoxy

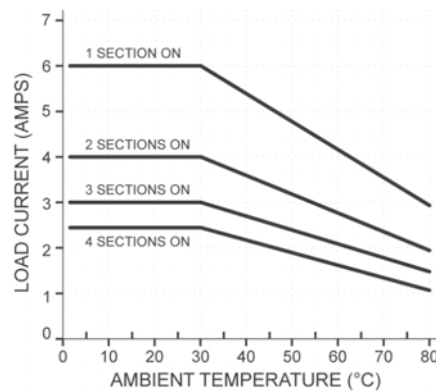
GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, 13.11.1
- 3) All specifications are per section unless otherwise noted

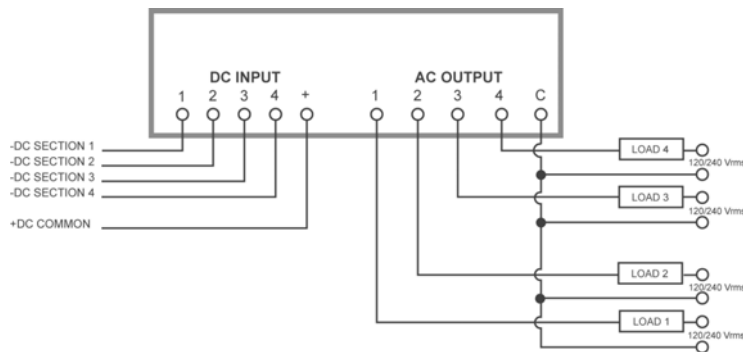
MECHANICAL SPECIFICATIONS



THERMAL DERATE INFORMATION



WIRING DIAGRAM



AGENCY APPROVALS

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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spegna 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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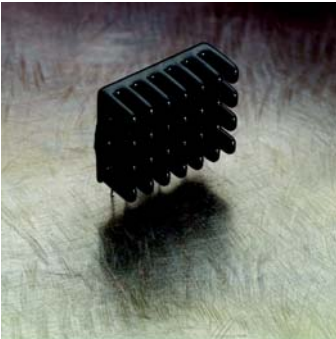
Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

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



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

SPF Series

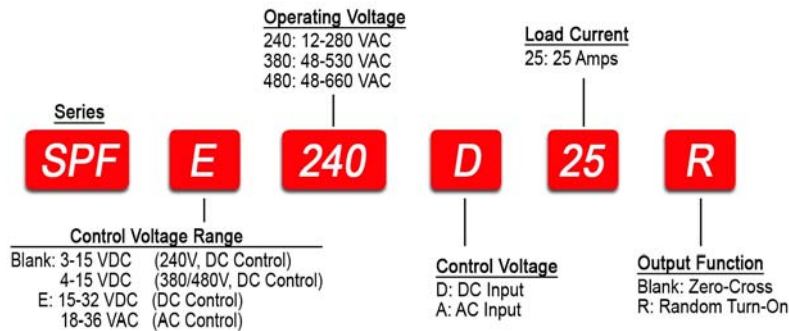


- SIP SSR
- Ratings to 25A (forced air) @ 480 VAC
- SCR output for heavy industrial loads
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	25A	25A	25A
	SPF240D25		
4-15 VDC		SPF380D25	SPFE480D25
15-32 VDC	SPFE240D25	SPFE380D25	SPFE480D25
18-36 VAC	SPFE240A25		
90-140 VAC	SPF240A25		

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description			
Operating Voltage (47-63Hz) [Vrms]	12-280	48-530	48-660
Transient Overvoltage [Vpk]	600	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	0.1	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500	500
Maximum Load Current [A _{rms}](3)	Forced Air 25 Convection Air 10	Forced Air 25 Convection Air 10	Forced Air 25 Convection Air 10
Minimum Load Current [A _{rms}]	0.06	0.06	0.06
Maximum Surge Current (16.6ms) [A _{pk}]	250	250	250
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.6	1.6	1.6
Maximum I ² t for fusing (8.3 msec) [A ² sec]	260	260	260
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	SPF240D25	SPF380D/480D	SPFExxxD25	SPF240A25	SPFE240A25
Control Voltage Range	3-15 VDC	4-15 VDC	15-32 VDC	90-140 VAC	18-36 VAC
Maximum Turn On Voltage	3.0 VDC	4.0 VDC	15.0 VDC	90.0 Vrms	18.0 Vrms
Minimum Turn-Off Voltage	1.0 VDC	1.0 VDC	1.0 VDC	10.0 Vrms	2.0 Vrms
Typical Input Current @ Nominal Voltage	15 mAdc	15 mAdc	15 mAdc	10 mAdc	10 mAdc
Nominal Input Impedance	300 Ohm	240 Ohm	1500 Ohm	14.1 k Ohm	2.1 k Ohm
Maximum Turn-On Time [msec] (4)	1/2 Cycle	1/2 Cycle	1/2 Cycle	10	10
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle	1/2 Cycle	40	40

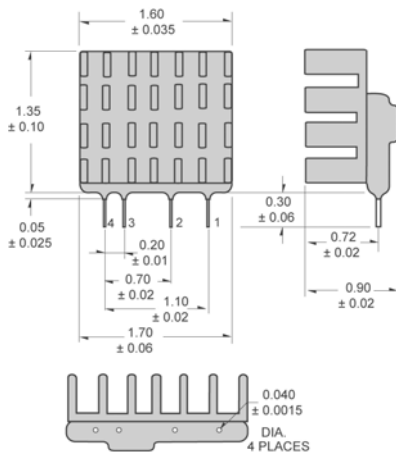
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.85 oz. (25g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443,13.11.1
- 3) Heatsink temperature 85 °C Maximum.
- 4) Turn-On Time for Random Turn-On versions 0.1 msec (DC Control Models)

MECHANICAL SPECIFICATIONS



All dimensions are in inches (millimeters)

AC CONTROL
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: AC CONTROL
PIN 4: AC CONTROL

DC CONTROL
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

UL E116950
CE

Rev. 061608

THERMAL DERATE INFORMATION

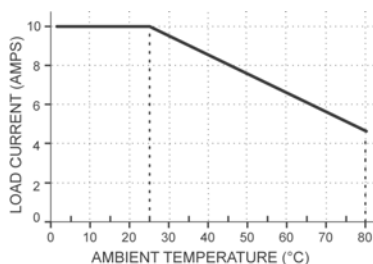


Fig.1 Convection Cooling

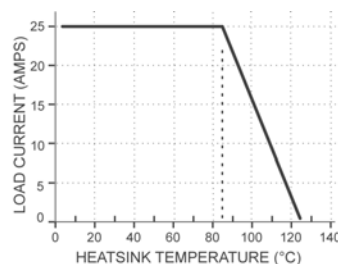


Fig.2 Forced Air Cooling

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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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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保信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
电子信息产品污染控制标识要求



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

DPA Series

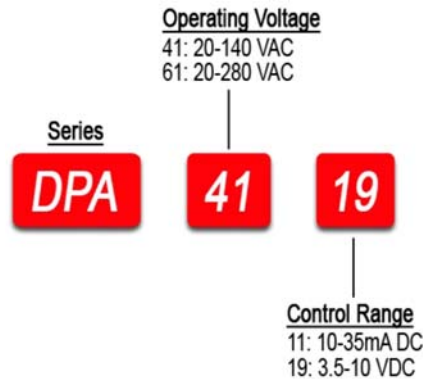


- 16 Pin DIP SSR
- Ratings to 1A @ 280 VAC
- SCR output
- Voltage or current-control input
- Zero-crossing (resistive loads) output

PRODUCT SELECTION

Control Voltage		
3.5-10 VDC	DPA4119	DPA6119
10-35 mA	DPA4111	DPA6111

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	20-140	20-280
Transient Overvoltage [Vpk]	400	600
Maximum Off-State Leakage Current @ Rated Voltage [mA]	0.01	0.01
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500
Maximum Load Current [Arms]	1.0	1.0
Minimum Load Current [Arms]	0.025	0.025
Maximum Surge Current (16.6ms) [A _{pk}]	30	30
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.2	1.2
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description		
Control Voltage Range	-	3.5-10 VDC
Control Current Range	10-35 mA	-
Must Turn Off-State Current	1.0 mA	-
Must Turn Off-State Voltage	-	1.0 VDC
Typical Input Current @ 5 VDC	-	15 mA _{dc}
Nominal Input Impedance	-	270 Ohm
Maximum Turn-On Time [msec]	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

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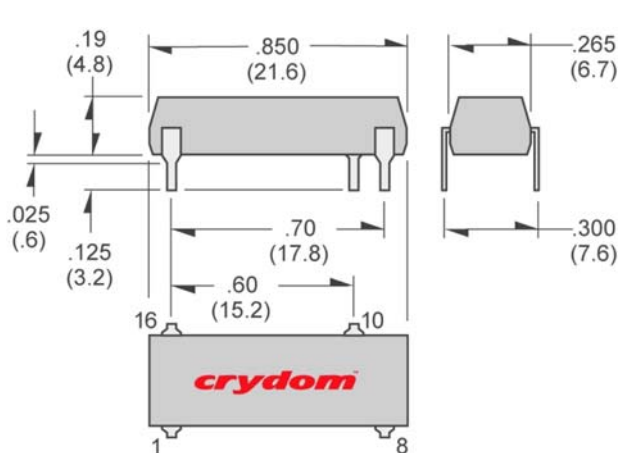
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	3750 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	2.0 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.1 oz. (2.9g)
Encapsulation	Thermally Conductive Epoxy

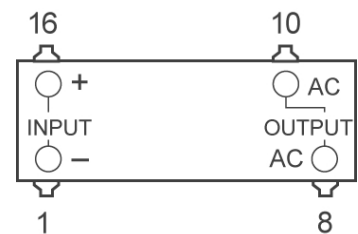
GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS

MECHANICAL SPECIFICATIONS

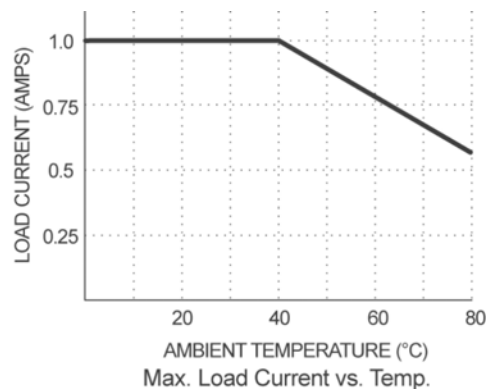


PIN 8: AC LOAD
 PIN 10: AC LOAD
 PIN 16: +DC CONTROL
 PIN 1: -DC CONTROL



All dimensions are in inches (millimeters)

THERMAL DERATE INFORMATION



AGENCY APPROVALS

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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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenga tutta l'alimentazione 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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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保信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
电子信息产品污染控制标识要求



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

SDV / SDI Series

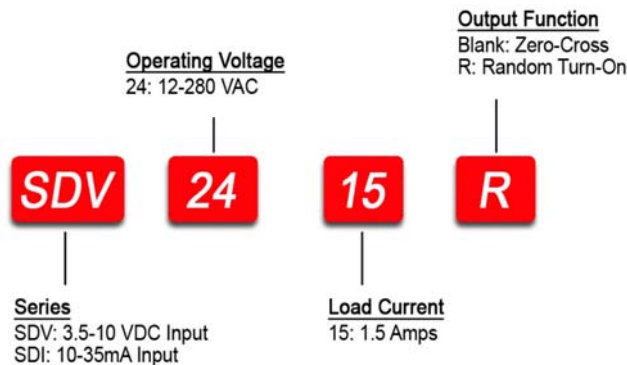


- 16 Pin DIP SSR
- Ratings to 1.5A @ 280 VAC
- SCR output
- Voltage or current-control input
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	1.5A	1.5A
3.5-10 VDC	SDV2415	SDV2415R
10-35mA	SDI2415	SDI2415R

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	
Operating Voltage (47-63Hz) [Vrms]	12-280
Transient Overvoltage [Vpk]	600
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	0.01
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500
Maximum Load Current [A _{rms}](3)	1.5
Minimum Load Current [A _{rms}]	0.025
Maximum Surge Current (16.6ms) [A _{pk}]	30
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.2
Minimum Power Factor (with Maximum Load)	0.5

INPUT SPECIFICATIONS (1)

Description		
Model	SDV	SDI
Control Voltage Range	-	3.5-10 VDC
Control Current Range	10-32 mA	-
Must Turn On Voltage	-	3.5 VDC
Must Turn On Current	10 mA	-
Must Turn Off Voltage	-	1.0 VDC
Must Turn Off Current	1.0 mA	-
Typical Input Current @ 5 VDC	-	15 mAdc
Nominal Input Impedance	-	270 Ohm
Maximum Turn-On Time [msec] (4)	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

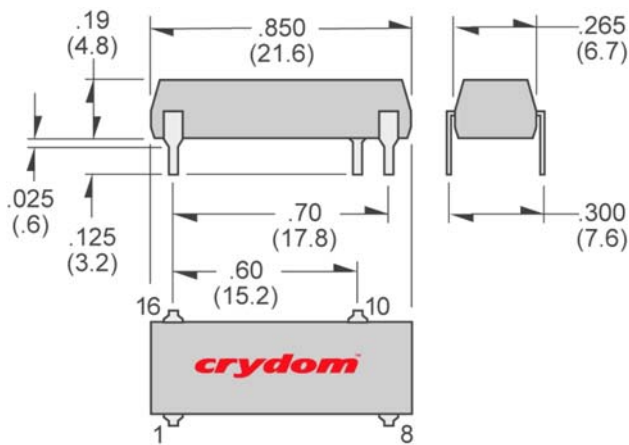
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	3750 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	2.0 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.10 oz. (2.9g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

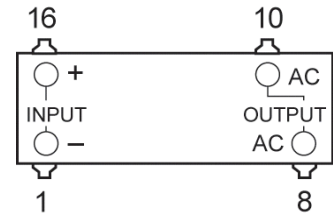
- 1) All parameters at 25¼°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443

MECHANICAL SPECIFICATIONS

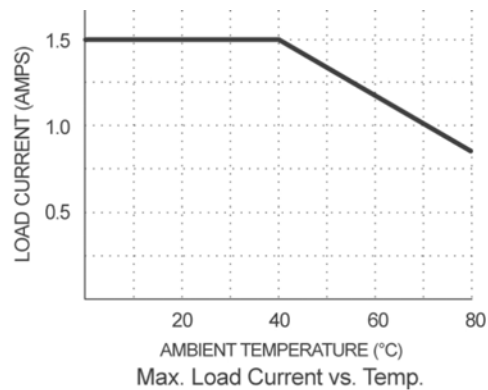


All dimensions are in inches (millimeters)

DC CONTROL
 PIN 8: AC LOAD
 PIN 10: AC LOAD
 PIN 16: +DC CONTROL
 PIN 1: -DC CONTROL



THERMAL DERATE INFORMATION



AGENCY APPROVALS

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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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenga tutta l'alimentazione 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

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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保信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
电子信息产品污染控制标识要求



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

AO / ASO Series

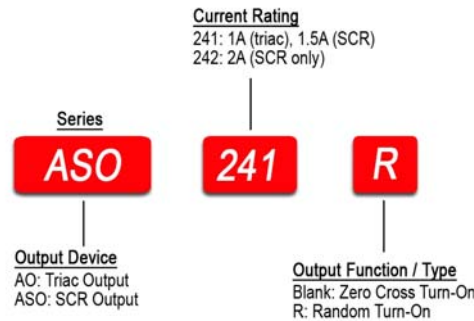


- Mini-SIP SSR
- Ratings to 2A @ 280 VAC
- SCR or Triac output
- DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	1A	1.5A	2A
4-10 VDC	AO241	ASO241	ASO242

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	1A	1.5A	2A
Operating Voltage (47-63Hz) [Vrms]	24-280	24-280	24-280
Transient Overvoltage [Vpk]	600	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500	500
Maximum Load Current [Arms](3)	1.0	1.5	2.0
Minimum Load Current [Arms]	0.025	0.025	0.06
Maximum Surge Current (16.6ms) [Apk]	40	40	120
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5	1.5	1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	
Control Voltage Range	4-10 VDC
Must Turn On Voltage	4.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	15 mAdc
Nominal Input Impedance	300 Ohm
Maximum Turn-On Time [msec]	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

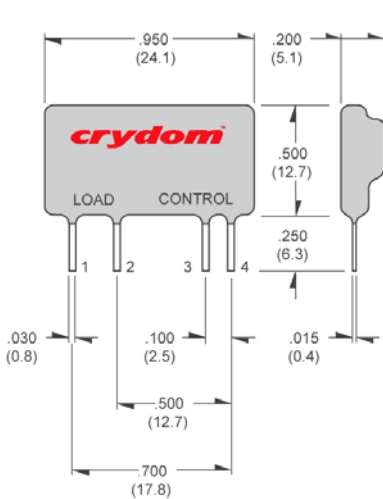
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10^9 Ohm
Maximum Capacitance, Input/Output	8.0 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.15 oz. (4.3g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

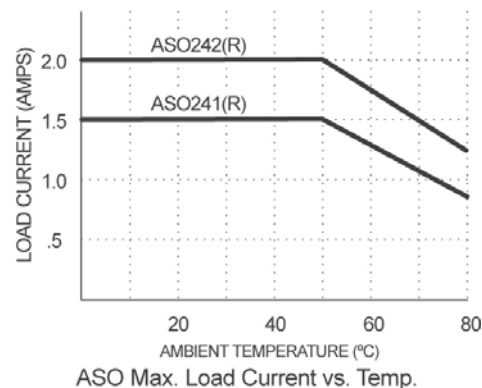
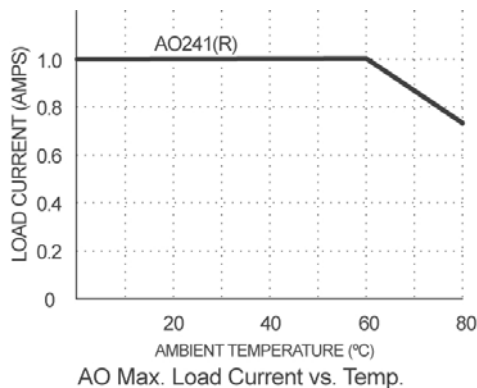
- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443

MECHANICAL SPECIFICATIONS



DC CONTROL.
PIN 1: AC LOAD
PIN 2: AC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

THERMAL DERATE INFORMATION



AGENCY APPROVALS

UL E116950
CSA LR81689
CE

Rev. 061608

 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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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	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

ASPF Series



- Mini-SIP SSR
- Ratings to 3A @ 280 V AC
- SCR output
- DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	Zero Crossing	Random Fire
4-10 VDC	ASPF240D3	ASPF240D3R

OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	24-280	24-280
Transient Overvoltage [Vpk]	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500
Maximum Load Current [Arms]	3.0	3.0
Minimum Load Current [Arms]	0.1	0.1
Maximum Surge Current (16.6ms) [Apk]	40	40
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5	1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	
Control Voltage Range	4-10 VDC
Must Turn On Voltage	4.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	15 mAdc
Nominal Input Impedance	300 Ohm
Maximum Turn-On Time [msec] (4)	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	3750 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.35 oz. (10g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443.
- 4) Turn-On time for random turn-on versions is 0.01 msec (DC C

 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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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	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

CR-A Series



- Mini-SIP SSR
- Ratings to 2A @ 280 VAC
- 15-72 V DC control
- Zero-crossing (resistive loads) output

PRODUCT SELECTION

Control Voltage	
24 VDC	CR01A-2240
60 VDC	CR02A-2240

OUTPUT SPECIFICATIONS (1)

Description	
Operating Voltage (47-63Hz) [Vrms]	12-280
Transient Overvoltage [Vpk]	600
Maximum Off-State Leakage @ Rated Voltage [mArms]	1.5
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500
Maximum Load Current [Arms]	2
Minimum Load Current [Arms]	0.025
Maximum Surge Current (20ms) [Apk]	40
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6
Maximum I ² t for fusing (10ms)[A ² s]	8

INPUT SPECIFICATIONS (1)

Description		
Control Voltage Range	15-30 VDC	35-72 VDC
Must Turn On Voltage	15 VDC	35 VDC
Must Turn Off Voltage	9 VDC	35 VDC
Typical Input Current @ Nominal Voltage	7 mAdc	3 mAdc
Nominal Input Impedance	3.2 K Ohm	21.3 K Ohm
Maximum Turn-On Time [msec]	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8.0 pF
Ambient Operating Temperature Range	-20 to 80°C
Ambient Storage Temperature Range	-40 to 100°C
Weight (typical)	0.15 oz. (4.3g)
Encapsulation	UL94V-0 Moulded epoxy

GENERAL NOTES

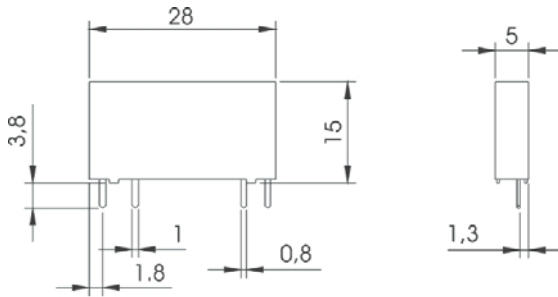
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For Contact information visit our web site.

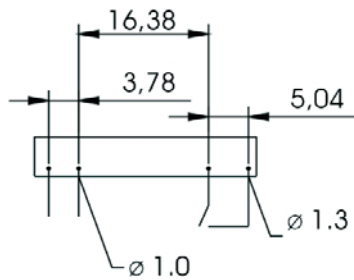
www.crydom.com

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MECHANICAL SPECIFICATIONS

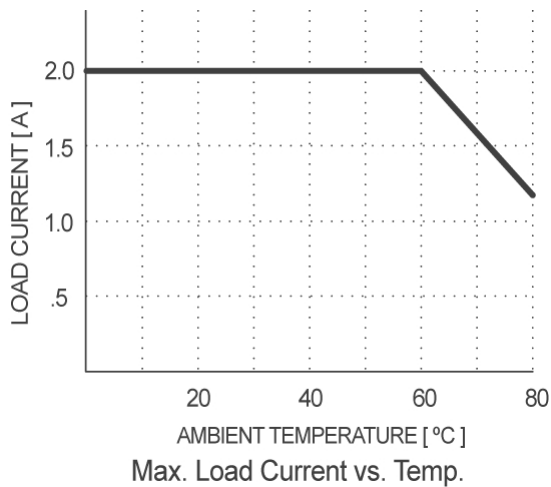


Mounting hole Layout



Note: Dimensions in mm

THERMAL DERATE INFORMATION



 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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

CR-D Series



- Mini-SIP SSR
- Ratings to 3A @ 24 VDC or 100mA @ 48 VDC
- MOSFET or bi-polar transistor output
- DC control

PRODUCT SELECTION

Control Voltage	2 A	100 mA
24 VDC	CR01D-224	CR01D-0148
60 VDC	CR02D-224	CR02D-0148

OUTPUT SPECIFICATIONS (1)

Description		
Nominal Control Voltage	24	60
Operating Voltage (47-63Hz) [VDC]	0-24	0-48
Maximum Blocking voltage [VDC]	33	60
Maximum Load Current [A] @20°C	3A	100 mA
Minimum Load Current [mA]	0.05	0.05
Maximum On-State Voltage Drop @ Rated Current [VDC]	120m	1.0

INPUT SPECIFICATIONS (1)

Description		
Control Voltage Range	15-30 VDC	35-72 VDC
Must Turn On Voltage	15 VDC	35 VDC
Must Turn Off Voltage	10 VDC	20 VDC
Typical Input Current @ Nominal Voltage	7 mAdc	3 mAdc
Nominal Input Impedance	3.2 K Ohm	21.3 K Ohm

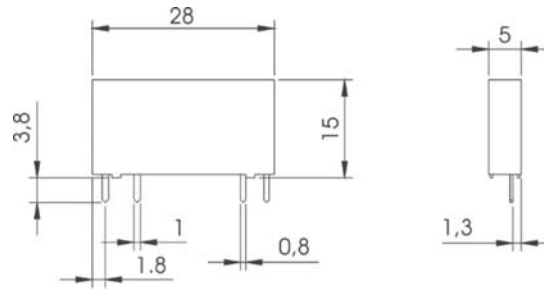
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC) (2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8.0 pF
Ambient Operating Temperature Range	-20 to 80°C
Ambient Storage Temperature Range	-40 to 100°C
Weight (typical)	0.15 oz. (4.3g)
Encapsulation	UL94V-0 Moulded epoxy

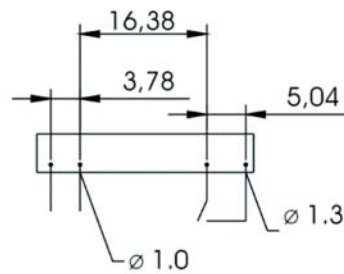
GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output

MECHANICAL SPECIFICATIONS

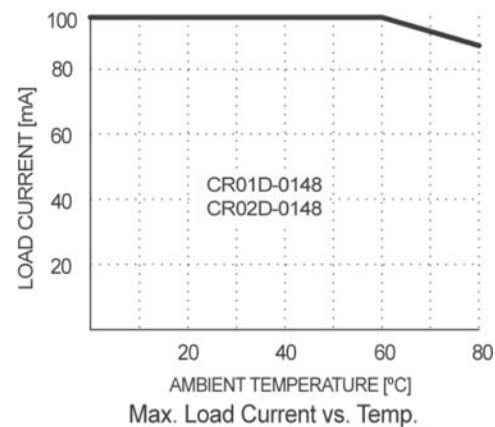
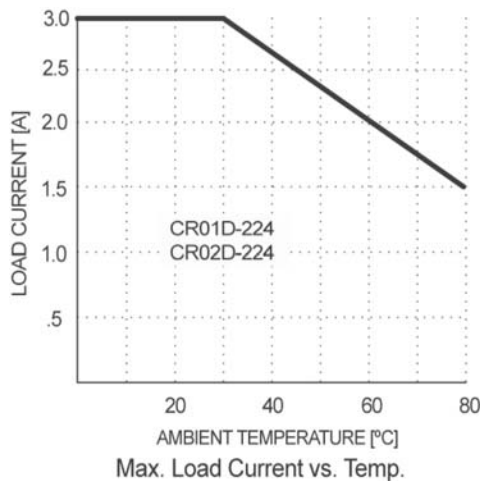


Mounting hole Layout



Note: Dimensions in [mm]

THERMAL DERATE INFORMATION



 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
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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保信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
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	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

CX241 Series



- Mini-SIP SSR
- Ratings to 1.5A @ 280 VAC
- SCR output
- DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output

PRODUCT SELECTION

Control Voltage	Zero Crossing	Random Fire
4-10 VDC	CX241	CX241R

OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	12-280	12-280
Transient Overvoltage [Vpk]	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500
Maximum Load Current [A _{rms}](3)	1.5	1.5
Minimum Load Current [A _{rms}]	0.025	0.025
Maximum Surge Current (16.6ms) [A _{pk}]	40	40
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.5	1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	DC Control
Control Voltage Range	4-10 VDC
Must Turn On Voltage	4.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	15 mA _{dc}
Nominal Input Impedance	300 Ohm
Maximum Turn-On Time [msec]	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC) (2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8.0 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.4 oz. (11 g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443

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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

DO / DMO Series

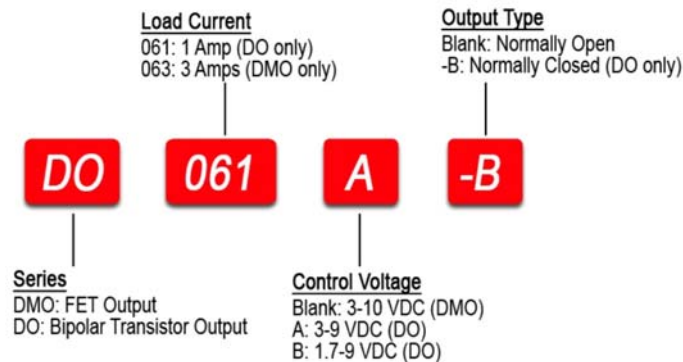


- Mini-SIP SSR
- Ratings to 2A @ 60 V DC
- MOSFET or bi-polar transistor output
- DC control
- Normally open or normally closed output

PRODUCT SELECTION

Control Voltage	1 A	3 A
3-9 VDC	DO061A (4), DO061A-B	
1.7-9 VDC	DO061B (4), DO061B -B	
3-10 VDC		DMO063 (4)

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description	DO0	DMO
Operating Voltage Range (47-63Hz) [VDC]	3-60	0-60
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	200	100
Maximum Load Current [Arms]	1.0	3.0
Minimum Load Current [Arms]	0.02	0
Maximum Surge Current [Adc]	5 (1sec)	12 (10ms)
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5	0.4
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	DO061A	DO061B	DMO063
Control Voltage Range	3-9 VDC	1.7-9 VDC	3-10 VDC
Must Turn On Voltage	3.0 VDC	1.7 VDC	3.0 VDC
Must Turn Off Voltage	1.0 VDC	0.8 VDC	1.0 VDC
Typical Input Current @ 5 VDC	15 mAdc	15 mAdc	20 mAdc
Nominal Input Impedance	270 Ohm	270 Ohm	270 Ohm
Maximum Turn-On Time [msec]	50	50	50
Maximum Turn-Off Time [msec]	50	150	300

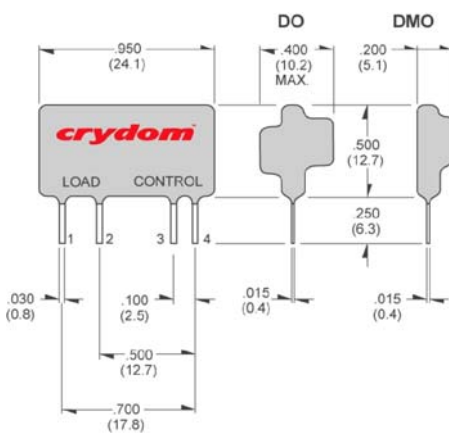
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(3)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)(3)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80 °C
Ambient Storage Temperature Range	-30 to 125 °C
Weight (typical)	0.15 oz. (4.3g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

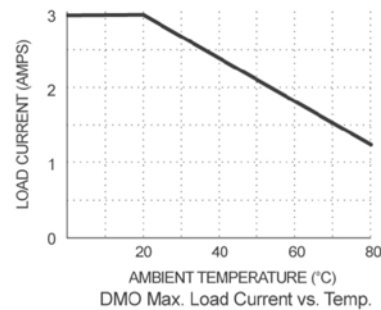
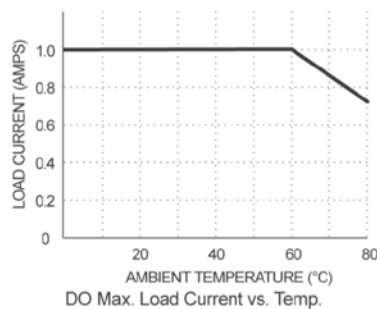
- 1) All parameters at 25°C unless otherwise specified.
- 2) Typical On-State Resistance=.13
- 3) Dielectric and insulation resistance are measured between input and output
- 4) Inductive loads should be diode suppressed

MECHANICAL SPECIFICATIONS



DC CONTROL
PIN 1: +DC LOAD
PIN 2: -DC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

THERMAL DERATE INFORMATION



 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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.
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ANNEX - ENVIROMENTAL INFORMATION

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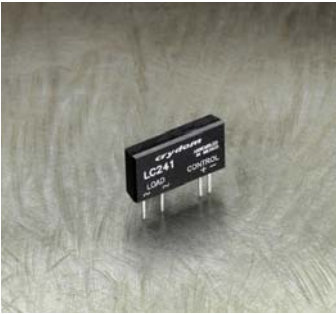
Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

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



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

LC Series

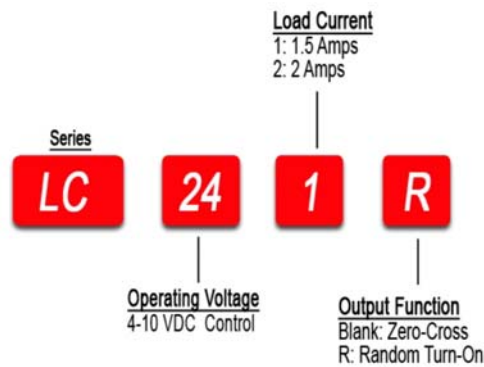


- Mini-SIP SSR
- Ratings to 2A @ 280 VAC
- Triac output
- DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- Plastic encapsulated

PRODUCT SELECTION

Control Voltage	1.5A	2A
4-10 VDC	LC241	LC242

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	12-280	12-280
Transient Overvoltage [Vpk]	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500
Maximum Load Current [Arms]	1.5	2.0
Minimum Load Current [Arms]	0.025	0.025
Maximum Surge Current (16.6ms) [A _{pk}]	80	100
Maximum On-State Voltage Drop @ Rated Current [V _{pk}]	1.5	1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	
Control Voltage Range	4-10 VDC
Must Turn On Voltage	4.0 VDC
Must Turn Off Voltage	1.0 VDC
Typical Input Current @ 5 VDC	15 mA _{dc}
Nominal Input Impedance	300 Ohm
Maximum Turn-On Time [msec] (4)	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

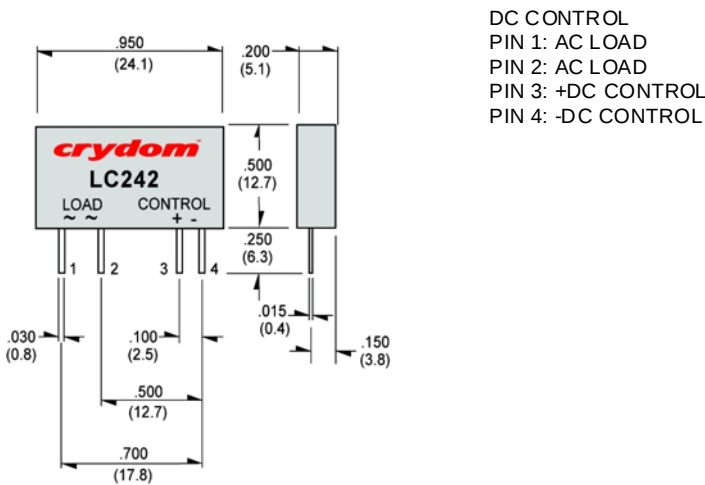
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C
Weight (typical)	0.15 oz. (4.3g)
Encapsulation	UL94V-0Molded epoxy

GENERAL NOTES

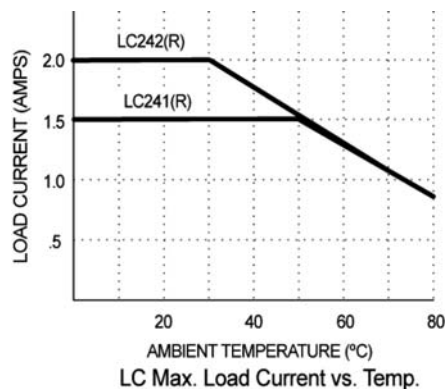
- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output.
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443.
- 4) 0.1 msec for random turn-on version (R suffix).

MECHANICAL SPECIFICATIONS



All dimensions are in inches (millimeters)

THERMAL DERATE INFORMATION



AGENCY APPROVALS

UL / cUL E116950



Rev. 061608

For Contact information visit our web site.

www.crydom.com

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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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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.

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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.

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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保信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
电子信息产品污染控制标识要求



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

MCX 241 Series



- Mini-SIP SSR
- Ratings to 1.5A @ 280 VAC
- SCR output • DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- Plastic encapsulated

PRODUCT SELECTION

Control Voltage	Zero-crossing	Random Fire
4-10 VDC	MCX241	MCX241R

OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	12-280	12-280
Transient Overvoltage [Vpk]	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	200	200
Maximum Load Current [Arms]	1.5	1.5
Minimum Load Current [Arms]	0.025	0.025
Maximum Surge Current (16.6ms) [Apk]	40	40
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5	1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description		
Control Voltage Range	4-10 VDC	4-10 VDC
Must Turn On Voltage	4.0 VDC	4.0 VDC
Must Turn Off Voltage	1.0 VDC	1.0 VDC
Typical Input Current @ 5 VDC	15 mAdc	15 mAdc
Nominal Input Impedance	300 Ohm	300 Ohm
Maximum Turn-On Time [msec] (4)	1/2 Cycle	0.1
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

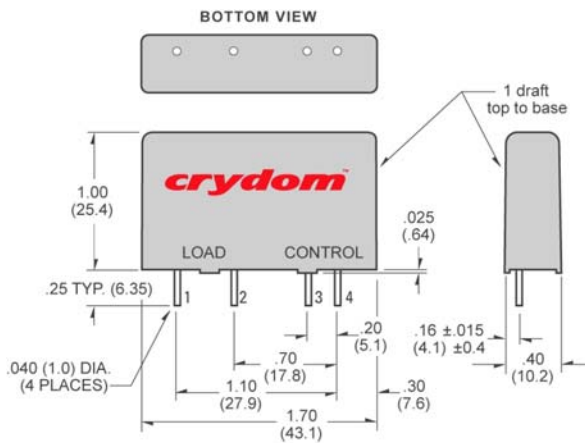
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C
Weight (typical)	0.7 oz.(20g)
Encapsulation	Thermally Conductive Epoxy

GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Dielectric and insulation resistance are measured between input and output
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443
- 4) Turn on time or Random Turn on is 0.1 m sec

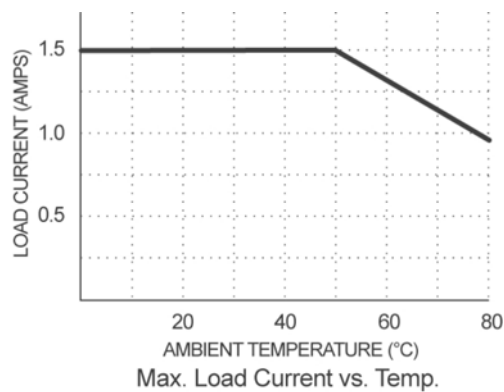
MECHANICAL SPECIFICATIONS



All dimensions are in inches (millimeters)

DC CONTROL.
PIN 1: +DC LOAD
PIN 2: -DC LOAD
PIN 3: +DC CONTROL
PIN 4: -DC CONTROL

THERMAL DERATE INFORMATION



AGENCY APPROVALS

UL E116950
CSA LR81689
VDE 5921 UG
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 sérieuses.	GEFAHR EINES ELEKTRISCHE N SCHLAGES ODER EINER EXPLOSION. - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen - Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - 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.

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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

SPA Series



- Mini-SIP SSR
- Ratings to 1A @ 280 VAC
- SCR output
- DC control
- Zero-crossing (resistive loads) output
- 10-35mA current-control input

PRODUCT SELECTION

Control Voltage	1A	1A
10-35 VDC	SPA4191	SPA6191

OUTPUT SPECIFICATIONS (1)

Description		
Operating Voltage (47-63Hz) [Vrms]	20-140	20-280
Transient Overvoltage [Vpk]	400	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.01	0.01
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500
Maximum Load Current [Arms](3)	1.0	1.0
Minimum Load Current [Arms]	0.025	0.025
Maximum Surge Current (16.6ms) [Apk]	30	30
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5	1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	DC Control
Control Current Range	10-35 VDC
Must Turn On Current	10 mA
Must Turn Off Current	1 mA
Maximum Turn-On Time [msec]	1/2 cycle
Maximum Turn-Off Time [msec]	1/2 cycle

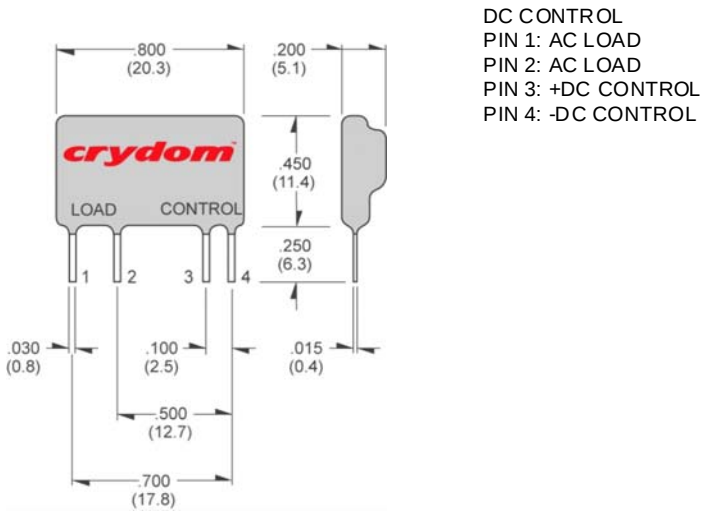
GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)(2)	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)(2)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8.0 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C
Weight (typical)	0.15 oz. (4.3g)
Encapsulation	Thermally Conductive Epoxy

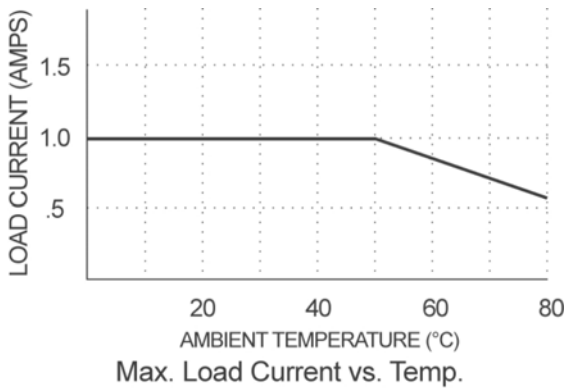
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MECHANICAL SPECIFICATIONS



THERMAL DERATE INFORMATION



 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE. - Spenga tutta l'alimentazione 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保信息
符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**,
电子信息产品污染控制标识要求



部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O