

DRA1 SPF Series



- 10mm Single Channel DIN Rail Mount SSR Assembly
- AC Ratings up to 380 VAC and 10 Amps
- 3-15 VDC, 15-32VDC 18-36 VAC and 90-180 VAC control
- Cage style screw terminals for easy connection
- Fits standard 35mm DIN rail
- Includes LED Status indicator (DC control only)

PRODUCT SELECTION

Description	10 A	10A	10 A	10 A
3-15 VDC Control	DRA1-SPF240D25	DRA1-SPF240D25R (5)		
4-15 VDC Control				DRA1-SPF380D25
15-32 VDC Control	DRA1-SPFE240D25	DRA1-SPFE240D25R (5)		DRA1-SPFE380D25
90-140 Vrms Control			DRA1-SPF240A25	
18-36 Vrms Control			DRA1-SPFE240A25	

OUTPUT SPECIFICATIONS (1)

Description	SPF(E)240x25	SPF(E)380x25
Operating Voltage [VAC]	12-280	48-380**
Transient Overvoltage [Vpk]	600	1200
Maximum Load Current [Arms] (2) (3)	10	10
Minimum Load Current [Arms]	0.06	0.06
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1
Minimum off-state dv/dt @ maximum rated voltage [V/μsec] (4)	500	500
Maximum 1 Cycle Surge Current (50/60 Hz) [Apk]	239/250	239/250
Maximum I ² t for fusing (50/60 Hz, 1/2 cycle) [A ² sec]	285/260	285/260
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6

INPUT SPECIFICATIONS (1)

Description	SPF240D25	SPF380D25	SPFExxxD25	SPFxxxA25	SPFExxxA25
Control Voltage Range	3-15 VDC	4-15 VDC	15-32 VDC	90-140 Vrms	18-36 Vrms
Must Turn On Voltage	3.0 VDC	4.0 VDC	15.0 VDC	90.0 Vrms	18.0 Vrms
Must Turn Off Voltage	1.0 VDC	1.0 VDC	1.0 VDC	10.0 Vrms	2.0 Vrms
Typical Input Current	15 mA _{dc}	15 mA _{dc}	15 mA _{dc}	10 mA _{Arms}	10 mA _{Arms}
Nominal Input Impedance	300 Ohm	240 Ohm	1500 Ohm	14.1K Ohm	2.1k Ohm
Maximum Turn-On Time [msec] (5)	1/2 Cycle	1/2 Cycle	1/2 Cycle	10	10
Maximum Turn-Off Time [μsec]	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 Ohms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125 °C
Weight (typical)	0.32 lb (145.5g)
Encapsulation	Thermally Conductive Epoxy

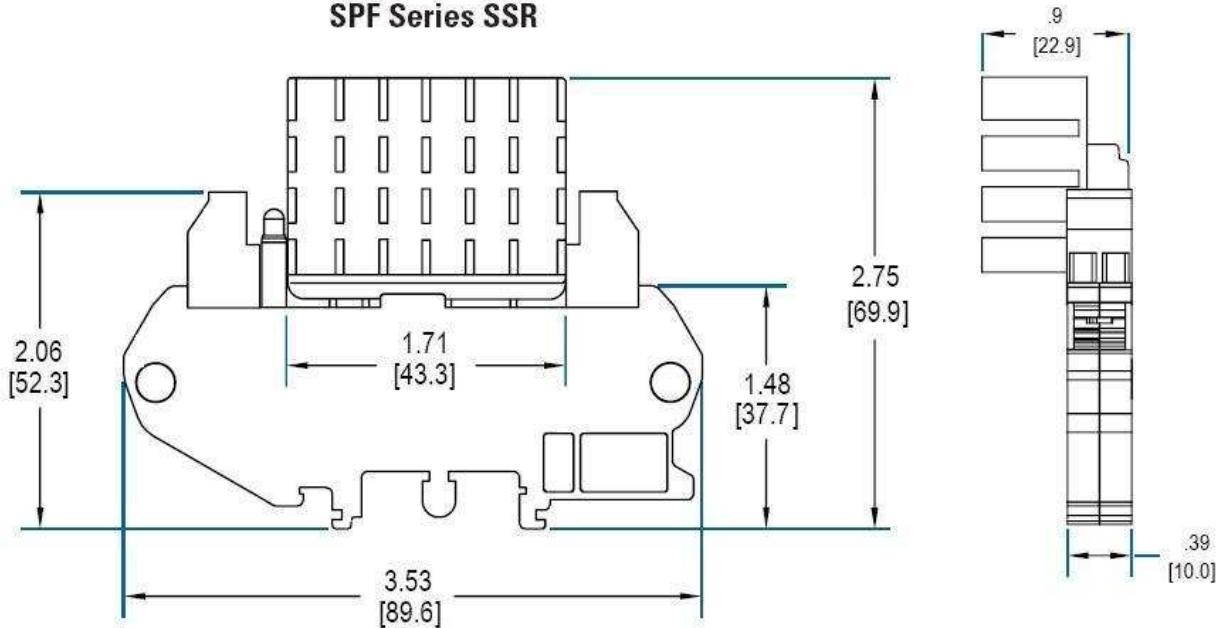
GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) See derating chart on page 3.
- 3) Steady state load current exceeding 10 amps will damage socket.
- 4) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 5) Turn-on time for DC control random turn-on versions is 0.1 msec

**NOTE: Voltages in excess of 380V will damage output terminals.

MECHANICAL SPECIFICATIONS

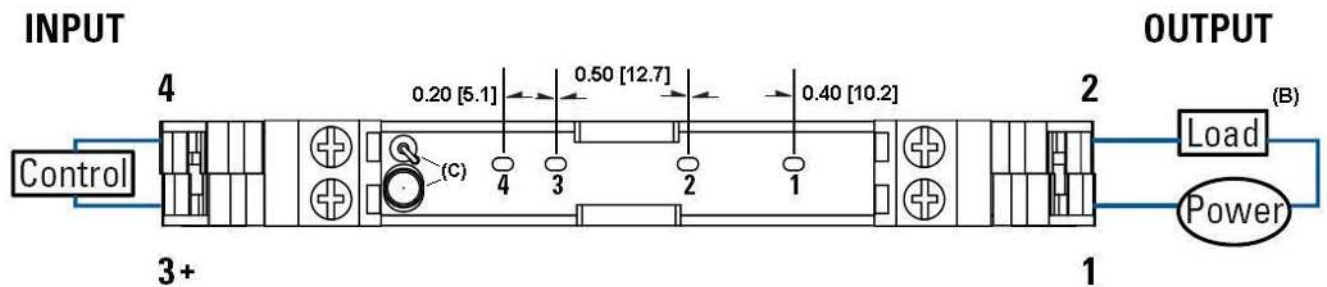
SPF Series SSR



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

WIRING DIAGRAM

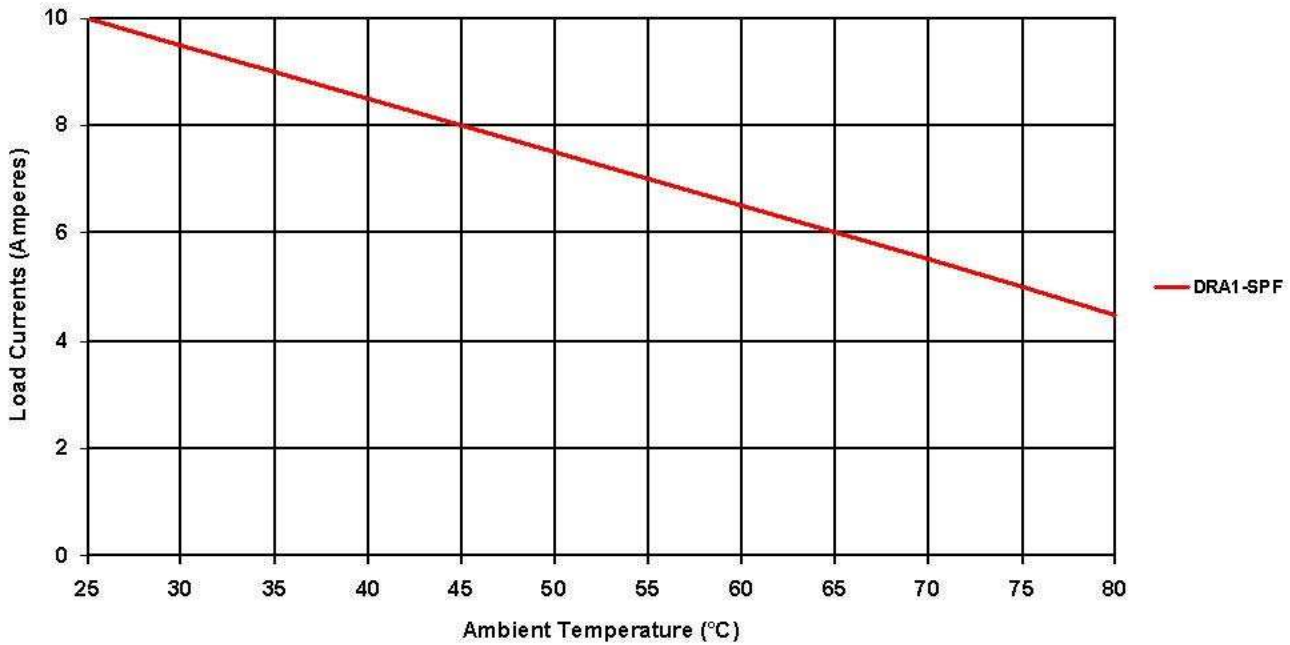
Wiring Diagram (A)



- (A) Wiring diagram is identical for each individual section whether it is a single or four channel assembly.
- (B) Load can be placed on either side of "Power".
- (C) LED and resistor not installed for AC input

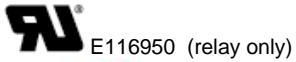
THERMAL DERATE INFORMATION

DRA1-SPF Derating Curve





AGENCY APPROVALS

Designed in accordance with the requirements of IEC 62314



Rev. 110811

 DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO					
<p>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.</p> <ul style="list-style-type: none"> • Disconnect all power before installing or working with this equipment. • Verify all connections and replace all covers before turning on power. <p>Failure to follow these instructions will result in death or serious injury.</p>	<p>RIESGO DE DESCARGA ELECTRICA O EXPLOSION.</p> <ul style="list-style-type: none"> • 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. <p>EI incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.</p>	<p>RISQUE DE DESCARGE ELECTRIQUE OU EXPLOSION</p> <ul style="list-style-type: none"> • 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 <p>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.</p>	<p>GEFAHR EINES ELEKTRISCHE N SCHLAGES ODER EINER EXPLOSION.</p> <ul style="list-style-type: none"> • 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. <p>Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.</p>	<p>RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.</p> <ul style="list-style-type: none"> • Spenga tutta l'alimentazion 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 <p>L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie</p>	<p>RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO</p> <ul style="list-style-type: none"> • 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 <p>O não cumprimento destas instruções pode levar à morte ou lesões sérias.</p>

 WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO		
<p>RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE</p> <ul style="list-style-type: none"> • The product's side panels may be hot, allow the product to cool before touching. • Follow proper mounting instructions including torque values. • Do not allow liquids or foreign objects to enter this product. <p>Failure to follow these instructions can result in serious injury, or equipment damage.</p>	<p>RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER</p> <ul style="list-style-type: none"> • 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. <p>Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.</p>	<p>GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG</p> <ul style="list-style-type: none"> • 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. <p>Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.</p>
<p>RIESGO DE DAÑOS MATERIALES Y DE SOBRECIENTAMIENTO DE LA UNIDAD</p> <ul style="list-style-type: none"> • 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. <p>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</p>	<p>RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO</p> <ul style="list-style-type: none"> • 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. <p>La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.</p>	<p>RISCO DE DANO MATERIAL E DE AQUECIMENTO</p> <ul style="list-style-type: none"> • 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. <p>A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.</p>

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	○	○	○	○	○
Solder	X	○	○	○	○	○

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	○	○	○	○	○
焊接点	X	○	○	○	○	○