

F18 Series



- Industry Standard Package and Circuits
- Power Control Building Blocks
- 10 Circuits to Choose from
- UL Recognized E72445

AVAILABLE OPTIONS



ELECTRICAL SPECIFICATIONS

	Symbol	27	42	57	92	107(2)
Maximum DC Output Current (Tc = 85°C)	I _D	25 A	40 A	55 A	90 A	105 A
Maximum Voltage Drop @ Amps Peak	V _F	1.55V @ 75 A	1.4V @ 120 A	1.4V @ 165 A	1.40V @ 270 A	1.65V @ 300 A
Operating Junction Temperature Range	T _J	-40 - 125° C	-40 - 125°C	-40 - 125°C	-40 - 125°C	-40 - 125°C
Critical Rate of Rise of On-State Current @ T _J =125°C [A/μs]	di/dt	100	100	100	100	100
Critical Rate of Rise of Off-State Voltage [V/μs]	dv/dt	1000	1000	1000	1000	1000
Repetitive Peak Reverse Voltage (AC Line Nominal) [Vpk]	V _{RRM}	400 (120 VAC)				
		600 (240 VAC)				
		800 (280 VAC)				
		1200 (480 VAC)				
		1400 (530 VAC)				
Maximum Non-Repetitive Surge Current (1/2 Cycle, 60 Hz) [A]	I _{TSM}	400	1000	1500	1950	2250
		670	4150	9350	15800	25000
Maximum I ² T for Fusing (t=8.3ms) [A ² sec]	I ² T	670	4150	9350	15800	25000
Maximum Required Gate Current to Trigger @ 25°C [mA]	I _{GT}	150	150	150	150	150
Maximum Required Gate Voltage to Trigger @ 25°C [V]	V _{GT}	3.0	3.0	3.0	3.0	3.0
Average Gate Power [W]	P _{G(AV)}	0.5	0.5	0.5	0.5	0.5
Maximum Peak Reverse Gate Voltage [V]	V _{GM}	5.0	5.0	5.0	5.0	5.0
Maximum Thermal Resistance, Junction to Ceramic Base per Chip [°C/W]	R _{JC}	0.4	0.28	0.25	0.14	0.135
Isolation Voltage [Vrms]	V _{ISDL}	2500	2500	2500	2500	2500

GENERAL SPECIFICATIONS

Description	Parameters
Weight (typical)	4.75 oz (135g)
Torque Required	Terminal Stud Screw : 30 in. lbs. Mounting Screws : 20 in. lbs.

GENERAL NOTES

- (1) All parameters at 25°C and per section unless otherwise specified.
 (2) Available only in SD and SDK circuit configuration.

CIRCUIT DIAGRAMS



MECHANICAL SPECIFICATIONS

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



Agency Approvals



Rev. 012518
ECN#20400

! DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / 危险

<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>El 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 connexions, et remettre tous couverts en place avant de mettre sous <p>De non-suivi de ces instructions provoquera la mort ou des lésions 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. <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'alimentazione che fornisce questa apparecchiatura prima di lavorare a questa apparecchiatura • Verificare tutti i collegamenti e sostituire tutte le coperture prima dell'accensione <p>L'omissione di queste istruzioni provocherà la morte o lesioni serie</p>	<p>存在电击、爆炸或电弧闪烁危险</p> <ul style="list-style-type: none"> • 在操作此设备之前请先关闭电源。 <p>若不遵守这些说明,可能会导致严重的人身伤害甚至死亡。</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------

! WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / 警告

<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>材料损坏和高温外壳的危险性</p> <ul style="list-style-type: none"> • 产品的一侧面板可能很热, 在其冷却前请不要触碰。 • 遵照正确的安装说明, 包括扭矩值。 • 请勿让液体及其他异物进入本产品。 <p>如不能正确执行这些操作说明, 极有可能造成严重人体伤害或者设备的损坏。</p>