



| F18 SERIES

POWER MODULES



Features

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

SPECIFICATIONS

Electrical

Description	Symbol	27	42	57	92	107 ⁽²⁾
Maximum DC Output Current (Tc = 85°C)	I _D	25 A	40 A	55 A	90 A	150 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)				
		1000 (380 VAC)				
		1200 (480 VAC)				
		1400 (530 VAC)				
		1600 (600 VAC)				
Maximum Non-Repetitive Surge Current (1/2 Cycle, 60 Hz) [A]	I _{TSM}	400	1000	1500	1950	2250
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

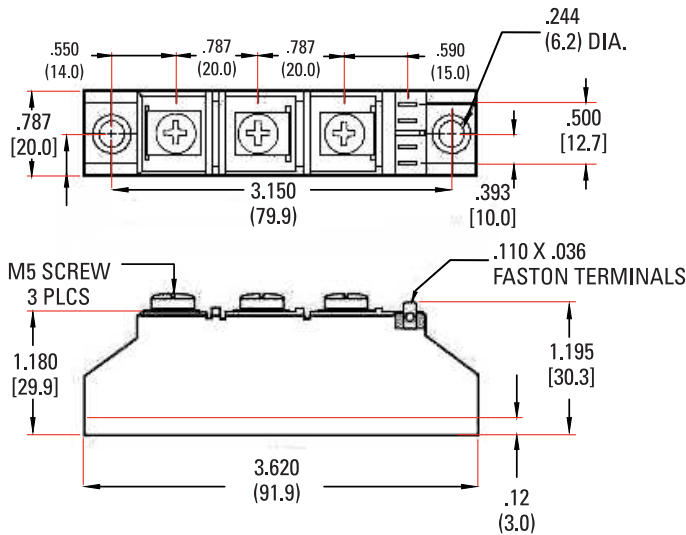
Maximum Required Gate Voltage to Trigger @ 25°C [V]	V_{GT}	3.0	3.0	3.0	3.0	3.0
Average Gate Power [W]	$P_{G(AV)}$	0.5	0.5	0.5	0.5	0.5
Maximum Peak Reverse Gate Voltage [V]	V_{GM}	5.0	5.0	5.0	5.0	5.0
Maximum Thermal Resistance, Junction to Ceramic Base per Chip [°C/W]	R_{JC}	0.4	0.28	0.25	0.14	0.135
Isolation Voltage [Vrms]	V_{ISOL}	2500	2500	2500	2500	2500

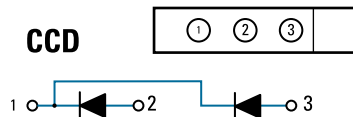
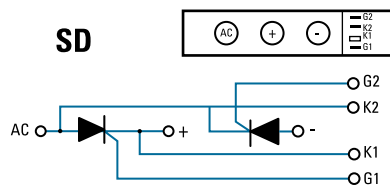
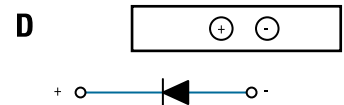
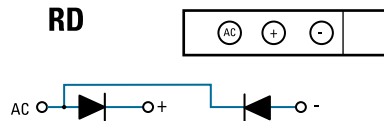
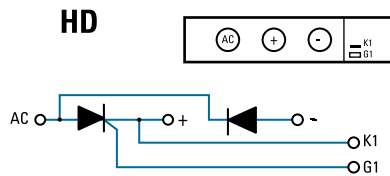
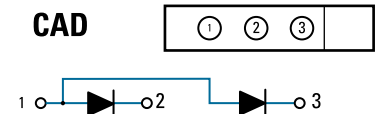
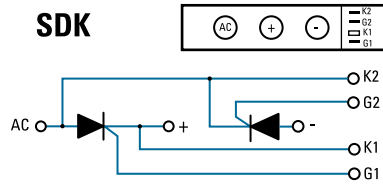
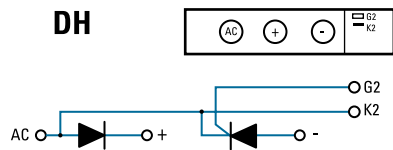
General

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

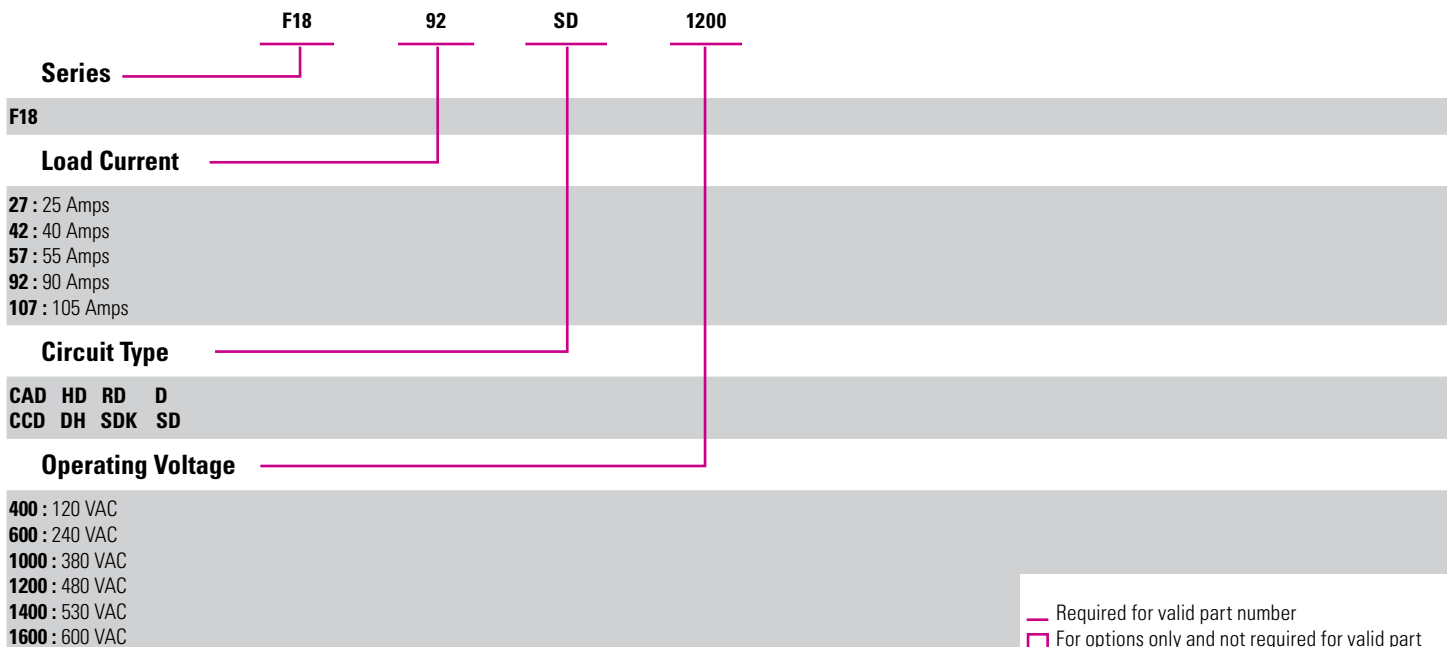
MECHANICAL SPECIFICATIONS

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





Example : F1892SD1200



NOTE: Not all combinations are available.
Consult factory for information on the availability of a specific part number.

GENERAL NOTES

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

AGENCY APPROVALS & CERTIFICATIONS



E72445



WARNINGS



RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.



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.

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