


Features

- Nano-second response to transients
- Solid brass gold or tin plated pins
- Designed to Telcordia and RUS standards
-  Listing per UL497 (File E53117)

Applications

- Central Office
- Remote cabinet
- Building entrance terminal

F Series 5-Pin Solid-State Overvoltage Surge Protectors

Bourns® solid-state 5-pin protector modules are designed to protect personnel and equipment from damage caused by excessive voltages and currents induced on telephone lines by lightning and AC power system faults. The solid-state protectors incorporate a fast semiconductor switch with operating voltage nearly independent of transient rise time. The module's fast, repeatable operation is designed to provide excellent equipment protection and long protection life. A fail-short mechanism operates under high current power-cross conditions to permanently short the line to ground. The industry-standard 5-pin base makes the modules interchangeable with existing 5-pin modules. The pins are available with gold or tin plating. The protectors have a detent position which disconnects the equipment side but leaves the module connected to the line side. Test points on the line side are optional.

Characteristics @ 20 °C, ±5 °C

	240 V	300 V
DC Breakdown Voltage (1 mA).....	200 V min.....	265 V min.
AC Breakdown (60 Hz).....	265 V max.....	400 V max.
Impulse Breakdown		
100 V/μs.....	<350 V.....	<400 V
1000 V/μs.....	<350 V.....	<400 V
Insulation Resistance @ 50 Vdc.....	100 MΩ min.	
Insulation Resistance @ 200 Vdc.....	100 MΩ min.	
DC Holdover.....	<30 ms max. with 25 A (10/1000 μs) surge @260 mA and ± 52 Vdc @200 mA and ± 135 Vdc @140 mA and ± 150 Vdc	
Service life.....	10 A for 1 sec, 10 surges, 60 Hz, 480 V ±10 A (10 x1000 μs) unlimited ±100 A (10 x1000 μs) unlimited ±10,000 A (8 x 20 μs) fail-short	
Capacitance.....	Line to Ground, <100 pF @ 50 Vdc, 1 Vac, 1 Khz Line to Ground, <200 pF @ 0 Vdc, 1 Vac, 1 Khz to 1 Mhz Tip to Ring – imbalance <15 pF	
Response Time.....	<20 nanoseconds	
Power Cross Operation @60 Hz, rms.....	Fail-Short 5 A for 15 minutes Fail-Short 10 A for 15 minutes Fail-Short 30 A for 15 minutes Fail-Short 60 A for 3 seconds Fail-Short 120 A for 0.6 seconds Fail-Short 350 A for 0.04 seconds	
Storage and Operating Temperature.....	-40 to +65 °C	

F Series 5-Pin Solid-State Overvoltage Surge Protectors

BOURNS®

How to Order

Catalog Number	Part Number	Color	Plating	Test Points	Housing Size	Service
240 Volt Modules without Heat Coil						
S3ABF	F013613	Black	Tin	No	3-type	Standard
R3B1FS	F013404	Black	Gold	No	3-type	Standard
R3C1FS	F013628	Black	Gold	Yes	3-type	Standard
R3B2FS	F013405	Green	Gold	No	3-type	Denial
R3C2FS	F013580	Green	Gold	Yes	3-type	Denial
S3ARF	F013614	Red	Tin	No	3-type	Special
R3B3FS	F013406	Red	Gold	No	3-type	Special
R3C3FS	F013570	Red	Gold	Yes	3-type	Special
R3B4FS	F013407	Yellow	Gold	No	3-type	PBX Battery
R3C4FS	F013571	Yellow	Gold	Yes	3-type	PBX Battery
300 Volt Modules without Heat Coil						
S3AB	F013609	Black	Tin	No	3-type	Standard
R3B1S	F013618	Black	Gold	No	3-type	Standard
R3C1S	F013522	Black	Gold	Yes	3-type	Standard
R3B2S	F013619	Green	Gold	No	3-type	Denial
R3C2S	F013523	Green	Gold	Yes	3-type	Denial
S3AR	F013612	Red	Tin	No	3-type	Special
R3B3S	F013620	Red	Gold	No	3-type	Special
R3C3S	F013526	Red	Gold	Yes	3-type	Special
R3B4S	F013621	Yellow	Gold	No	3-type	PBX Battery
R3C4S	F013527	Yellow	Gold	Yes	3-type	PBX Battery

Notes: S3AB modules are RDUP (formerly RUS) accepted in an R99 connector and available for use in connector equivalents.

All modles are UL Listed.

RxxxS modules are designed to meet Telcordia specification GR-974 CORE.

All RDUP (formerly RUS) modules meet the criteria in Govt Publication RDUP TE&CM 823.

REV. B 11/08

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications