SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					PHOENIX Valvetrab-SEC-T2 MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	Unknown				
	No Cross					Unknown				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	175 V	40 kA	850 V	240 V	240 V
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	Unknown				
	No Cross					Unknown				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	350 V	40 kA	1500 V	415 V	457 V
	No Cross					Unknown				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	Unknown				
	550 V	50 kA	2500 V	697 V	915 V	Unknown				
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	Unknown				
	No Cross					Unknown				
1000 V dc–1300 V dc		40 kA	3800 V			Unknown				
1300 V dc–1500 V dc		30 kA	5000 V			Unknown				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					315 A gG / 200 A gG				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					25 kA / 50 kA				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	Unknown				
	No Cross					Unknown				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	175 V	Unavailable	20 kA	Unavailable	1, 2, 3, 4
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	Unknown				
	No Cross					350 V	1200 V	20 kA	50 kA	
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	Unknown				
	No Cross					Unknown				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	440 V	Unknown	Unknown	Unknown	Unknown
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	Unknown				
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	Unknown				
	No Cross					Unknown				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	Unknown				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	Unknown				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Green)				
Safety Reserve	No					No				
Thermal Protection	Y					Unknown				
Follow Current	No					No				
Leakage Free	No					No				
Standards & Certifications										
IEC 61643-11	Y					Y				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					CITEL DS40 MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	No Cross				
	No Cross					No Cross				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	150 V	40 kA	900 V	180 V	230 V
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	255 V	40 kA	1250 V	335 V	440 V
	No Cross					280 V	40 kA	1300 V	335 V	440 V
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	320 V	40 kA	1500 V	335 V	440 V
	No Cross					385 V	40 kA	1800 V	335 V	440 V
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	440 V	40 kA	1800 V	580 V	770 V
	550 V	50 kA	2500 V	697 V	915 V	530 V	40 kA	2500 V	700 V	920 V
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	660 V	40 kA	3200 V	870 V	1150 V
	No Cross					760 V	40 kA	3500 V	1000 V	1325 V
1000 V dc–1300 V dc		40 kA	3800 V			No Cross				
1300 V dc–1500 V dc		30 kA	5000 V			No Cross				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					50 A gG				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					25 kA				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	150 V	Non-UL			
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	255 V	Non-UL			
	No Cross					280 V	Non-UL			
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	320 V	Non-UL			
	No Cross					385 V	Non-UL			
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	440 V	1500 V	20 kA	100 kA	1, 2, 3, 4
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	530 V	1800 V	20 kA	100 kA	1, 2, 3, 4
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	660 V	Non-UL	Non-UL	Non-UL	Non-UL
	No Cross					760 V	2500 V	20 kA	100 kA	1, 2, 3, 4
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	Unknown				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	Unknown				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Green)				
Safety Reserve	N					N				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					N				
Standards & Certifications										
IEC 61643-11	Y					Y				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					CITEL DS70R MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	No Cross				
	No Cross					No Cross				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	150	70 kA	1000 V	180 V	230 V
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	255	70 kA	1400 V	335 V	440 V
	No Cross					280	70 kA	1500 V	335 V	440 V
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	320	70 kA	1600 V	335 V	440 V
	No Cross					No Cross				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	440	70 kA	1.8 kV	580 V	770V
	550 V	50 kA	2500 V	697 V	915 V	No Cross				
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	No Cross				
	No Cross					No Cross				
1000 V dc–1300 V dc		40 kA	3800 V			No Cross				
1300 V dc–1500 V dc		30 kA	5000 V			No Cross				
$I_{nominal}$ (IEC, all voltages)	20 kA					30 kA				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					100 A gG				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					25 kA				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	150	Non-UL			
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	255	Non-UL			
	No Cross					280	Non-UL			
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	320	Non-UL			
	No Cross					No Cross				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	440	1500 V	20 kA	100 kA	1, 2, 3, 4
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	No Cross				
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	No Cross				
	No Cross					No Cross				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	No Cross				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	No Cross				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Green)				
Safety Reserve	N					N				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					Y				
Standards & Certifications										
IEC 61643-11	Y					Y				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					MERSEN Surge-Trap STP Series MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	No Cross				
	No Cross					No Cross				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	180	75 kA	Non-IEC	Non-IEC	Non-IEC
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	275	75 kA	Non-IEC	Non-IEC	Non-IEC
	No Cross					No Cross				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	320	75 kA	Non-IEC	Non-IEC	Non-IEC
	No Cross					No Cross				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	420	75 kA	Non-IEC	Non-IEC	Non-IEC
	550 V	50 kA	2500 V	697 V	915 V	550	75 kA	Non-IEC	Non-IEC	Non-IEC
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	650	75 kA	Non-IEC	Non-IEC	Non-IEC
	No Cross					No Cross				
1000 V dc–1300 V dc		40 kA	3800 V			No Cross				
1300 V dc–1500 V dc		30 kA	5000 V			No Cross				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA (up to 400 V ac), 10 kA (600 - 1000 V ac)				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					Non-IEC				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					Non-IEC				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	175	600 V	20 kA	200 kA	1, 2, 3, 4
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	275	600 V	20 kA	200 kA	1, 2
	No Cross					No Cross				
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	320	1000 V	20 kA	200 kA	1, 3, 4
	No Cross					No Cross				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	420	1500 V	10 kA	200 kA	1, 3, 4
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	550	1500 V	10 kA	200 kA	3, 4
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	No Cross				
	No Cross					No Cross				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	No Cross				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	No Cross				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Green)				
Safety Reserve	N					N				
Thermal Protection	Y					Y				
Follow Current	N					N				
Leakage Free	N					N				
Standards & Certifications										
IEC 61643-11	Y					N				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					ABB OVR T2 80-... S P TS QS MOV				
Lightning Impulse Current (10/350)	Not Rated					6.25 kA				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	Unknown				
	No Cross					Unknown				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	Unknown				
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	275V	80 kA	1400 V	337 V	Unknown
	No Cross					Unknown				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	350V	80 kA	1400 V	1200 V	Unknown
	No Cross					Unknown				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	440V	80 kA	1800 V	581 V	Unknown
	550 V	50 kA	2500 V	697 V	915 V	Unknown				
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	Unknown				
	No Cross					Unknown				
1000 V dc–1300 V dc		40 kA	3800 V			Unknown				
1300 V dc–1500 V dc		30 kA	5000 V			Unknown				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					125 A gG / 50 A gG				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					100 kA				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	Unknown				
	No Cross					Unknown				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	Unknown				
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	275 V	Unavailable	Unavailable	Unavailable	Unavailable
	No Cross					Unknown				
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	350 V	Unavailable	Unavailable	Unavailable	Unavailable
	No Cross					Unknown				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	440 V	Unavailable	Unavailable	Unavailable	Unavailable
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	Unknown				
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	Unknown				
	No Cross					Unknown				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	Unknown				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	Unknown				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Yellow/Green)				
Safety Reserve	N					Optional				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					Y				
Standards & Certifications										
IEC 61643-11	Y					N				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					ABB OVR T2 40-... S P TS QS MOV				
Lightning Impulse Current (10/350)	Not Rated					2 kA				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	Unknown				
	No Cross					Unknown				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	Unknown				
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	275 V	40 kA	1400 V	337 V	Unknown
	No Cross					Unknown				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	350 V	40 kA	1500 V	462 V	Unknown
	No Cross					Unknown				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	440 V	40 kA	1800 V	581 V	Unknown
	550 V	50 kA	2500 V	697 V	915 V	Unknown				
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	600 V	40 kA	2300 V	792 V	Unknown
	No Cross					Unknown				
1000 V dc–1300 V dc		40 kA	3800 V			Unknown				
1300 V dc–1500 V dc		30 kA	5000 V			Unknown				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					125 A gG / 50 A gG				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					100 kA				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	Unknown				
	No Cross					Unknown				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	Unknown				
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	275 V	Unavailable	Unavailable	Unavailable	Unavailable
	No Cross					Unknown				
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	350 V	Unavailable	Unavailable	Unavailable	Unavailable
	No Cross					Unknown				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	440 V	Unavailable	Unavailable	Unavailable	Unavailable
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	Unknown				
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	600 V	Unavailable	Unavailable	Unavailable	Unavailable
	No Cross					Unknown				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	Unknown				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	Unknown				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Yellow/Green)				
Safety Reserve	N					Optional				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					Y				
Standards & Certifications										
IEC 61643-11	Y					N				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					BOURNS 1210 Series MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	No Cross				
	No Cross					No Cross				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	150 V	100 kA	900 V	230 V	Unknown
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	275 V	100 kA	1250 V	440 V	Unknown
	No Cross					No Cross				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	No Cross				
	No Cross					No Cross				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	420 V	100 kA	1800 V	770 V	Unknown
	550 V	50 kA	2500 V	697 V	915 V	No Cross				
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	No Cross				
	No Cross					840 V	100 kA	4000 V	1117 V	Unknown
1000 V dc–1300 V dc		40 kA	3800 V			No Cross				
1300 V dc–1500 V dc		30 kA	5000 V			No Cross				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					Unknown				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					Unknown				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	150	600 V	20 kA	100 kA	1, 2, 3, 4
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	275	900 V	20 kA	100 kA	1, 2, 3, 4
	No Cross					No Cross				
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	420	1200 V	20 kA	100 kA	1, 2, 3, 4
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	No Cross				
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	No Cross				
	No Cross					840	3000 V	20 kA	100 kA	1, 2, 3, 4
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	No Cross				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	No Cross				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Y				
Safety Reserve	N					Unknown				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					<1 mA				
Standards & Certifications										
IEC 61643-11	Y					Y				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					BOURNS 1250 Series MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	No Cross				
	No Cross					No Cross				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	150	50 kA	900 V	230 V	Unknown
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	275	50 kA	1250 V	440 V	Unknown
	No Cross					No Cross				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	No Cross				
	No Cross					No Cross				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	420	50 kA	1800 V	440 V	Unknown
	550 V	50 kA	2500 V	697 V	915 V	550	50 kA	2500 V	770 V	Unknown
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	No Cross				
	No Cross					No Cross				
1000 V dc–1300 V dc		40 kA	3800 V			No Cross				
1300 V dc–1500 V dc		30 kA	5000 V			No Cross				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					Unknown				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					Unknown				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	150	700 V	20 kA	100 kA	1, 2, 3, 4
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	275	1000 V	20 kA	100 kA	1, 2, 3, 4
	No Cross					No Cross				
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	420	1200 V	20 kA	100 kA	1, 2, 3, 4
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	550	1800 V	20 kA	100 kA	1, 2, 3, 4
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	No Cross				
	No Cross					No Cross				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	No Cross				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	No Cross				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Y				
Safety Reserve	N					Unknown				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					<1 mA				
Standards & Certifications										
IEC 61643-11	Y					Y				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					DEHN DEHNguard M MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	No Cross				
	No Cross					No Cross				
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	150 V	40 kA	700 V	175 V	230 V
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	275 V	40 kA	1500 V	335 V	440 V
	No Cross					No Cross				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	385 V	40 kA	1750 V	335 V	440 V
	No Cross					No Cross				
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	440 V	40 kA	2000 V	335 V	440 V
	550 V	50 kA	2500 V	697 V	915 V	No Cross				
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	No Cross				
	No Cross					No Cross				
1000 V dc–1300 V dc		40 kA	3800 V			No Cross				
1300 V dc–1500 V dc		30 kA	5000 V			No Cross				
$I_{nominal}$ (IEC, all voltages)	20 kA					20 kA (Under 200 V ac 15 kA)				
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					125 A gG (Version Uc 600 V 100 A gG and 25 kA_{rms})				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					50 kA				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	No Cross				
	No Cross					No Cross				
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	150 V	Unknown	20 kA	Unknown	2, 3, 4
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	275 V	Unknown	20 kA	Unknown	2, 3, 4
	No Cross					No Cross				
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	385 V	Unknown	20 kA	Unknown	2, 3, 4
	No Cross					No Cross				
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	440 V	Unknown	10 kA	Unknown	2, 3, 4
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	No Cross				
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	No Cross				
	No Cross					No Cross				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	No Cross				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	No Cross				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Green)				
Safety Reserve	N					N				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					N				
Standards & Certifications										
IEC 61643-11	Y					Y				
UL 1449 4th Edition	Y					Y				

SPD2 Series
Type 2 Surge Protection Devices
COMPETITIVE ADVANTAGES

INTERNAL USE ONLY

CHARACTERISTICS	LITTELFUSE SPD2 MOV					DEHN DEHNguard S MOV				
Lightning Impulse Current (10/350)	Not Rated					Not Rated				
IEC Characteristics										
Voltage Range	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**	**Maximum Continuous Operating Voltage (U_C)**	**I_{max}**	**Voltage Protection Level (Up)**	**TOV U_T Withstand (5 sec)**	**TOV U_T Safe Failure (120 min)**
> 100 V ac	75 V	50 kA	800 V	114 V	229 V	48	25 kA	330 V	70 V	90 V
	No Cross					75	40 kA	400 V	90 V	115 V
101–200 V ac	150 V	50 kA	1250 V	229 V	229 V	150	40 kA	700 V	175 V	230 V
201–300 V ac	300 V	50 kA	1500 V	337 V	442 V	275	40 kA	1500 V	335 V	440 V
	No Cross					No Cross				
301–400 V ac	350 V	50 kA	1750 V	403 V	529 V	320	40 kA	1500 V	335 V	440 V
	No Cross					385	40 kA	1750 V	385 V	440 V
401 V–600 V ac	480 V	50 kA	2300 V	581 V	762 V	440	40 kA	2000 V	580 V	765 V
	550 V	50 kA	2500 V	697 V	915 V	No Cross				
601 V ac–1000 V ac	750 V	35 kA	3400 V	871 V	1143 V	600	30 kA	2500 V	700 V	915 V
	No Cross					No Cross				
1000 V dc–1300 V dc		40 kA	3800 V			No Cross				
1300 V dc–1500 V dc		30 kA	5000 V			No Cross				
$I_{nominal}$ (IEC, all voltages)	20 kA					7.5 kA (48 V ac and under) 15 kA (100 V ac–200 V ac and 500+ V ac)		10 kA (75 V ac–100 V ac), 20 kA (200 V ac–500 V ac)		
Back Up Fuse (IEC, all voltages)	315 A gG / 200 A gG					125 A gG (Version Uc 600 V 100 A gG and 25 kA_{rms})				
I_{SCCR} (IEC, all voltages)	25 kA / 50 kA (except PV, 11 kA)					50 kA				
UL Characteristics										
Voltage Range	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**	**Max Continuous Voltage (MCOV)**	**Voltage Protection Rating (VPR)**	**$I_{nominal}$**	**SCCR**	**Poles**
> 100 V ac	75	330 V	20 kA	100 kA	1, 2, 3, 4	48	Unknown	Unknown	Unknown	1
	No Cross					75	Unknown	Unknown	Unknown	1
101–200 V ac	150	600 V	20 kA	200 kA	1, 2, 3, 4	150	Unknown	Unknown	Unknown	1
201–300 V ac	300	900 V	20 kA	150 kA	1, 2, 3, 4	275	Unknown	Unknown	Unknown	1
	No Cross					No Cross				
301–400 V ac	350	1000 V	20 kA	200 kA	1, 2, 3, 4	320	Unknown	Unknown	Unknown	1
	No Cross					385	Unknown	Unknown	Unknown	1
401–600 V ac	480	1500 V	20 kA	200 kA	1, 2, 3, 4	440	Unknown	Unknown	Unknown	1
	550	2000 V	20 kA	200 kA	1, 2, 3, 4	No Cross				
601 V ac–1000 V ac	750	2500 V	20 kA	200 kA	1, 2, 3	600	Unknown	Unknown	Unknown	1
	No Cross					No Cross				
1000 V dc–1300 V dc	1100	2500 V	20 kA	50 kA	3	No Cross				
1300 V dc–1500 V dc	1500	4000 V	20 kA	65 kA	3	No Cross				
Miscellaneous										
Fault Indication	Yes, Mechanical (Red/Green)					Yes, Mechanical (Red/Green)				
Safety Reserve	N					N				
Thermal Protection	Y					Unknown				
Follow Current	N					N				
Leakage Free	N					N				
Standards & Certifications										
IEC 61643-11	Y					Y				
UL 1449 4th Edition	Y					Y				