

Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Overvoltage Protection

ProTec T2

Special features:

- Available in a wide variety of operating voltages 75V to 750V
- High Impulse Current capability using a single MOV
- Sensitive state-of-the-art thermal disconnecter
- Backup fuse up to 315AgG
- Short-circuit current rating up to 50kA
- Vibration and shock withstand capability
- VDE-IEC Class II / Type 2 certified and Open Type 1 SPD Listed
- All modules including N-PE with operating state green-red
- Optional remote contact (RC) signaling



Compliance	IEC 61643-11:2011	EN 61643-11:2012	UL 1449 4th Edition
ProTec T2 Series	✓	✓	✓

ProTec T2 offers basic protection as a Type 2 surge protective device (SPD) that comes with an extended maximum continuous operating voltages (U_c) range that spans 75V up to 750V. With the Type 2 classification, ProTec T2 can be installed between boundaries Ob – 1 and higher. The varistor-based protection modules feature outstanding short-circuit currents up to 50kA_{RMS} without using a back-up to a main fuse nominal current of 315A. All modules are equipped with a state-of-the-art thermal disconnecter and life-status green-red monitoring indicators. A unique vibration-proof locking mechanism enables secure use in and high vibration environments. Besides the visual mechanical indicator, optional remote contacts (RC) feature a three-pole remote signaling terminal, which enables remote monitoring of the operating state of the device.

Overvoltage Protection

ProTec T2 1+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S, TN-C, TT (only L-N)
 Mode of Protection: L-PE, N-PE (only TN-S), L-PEN, L-N
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2-xxx-1+0(-R)		75	150	300	350	480	550*	750
IEC Electrical								
Nominal AC Voltage (50/60Hz)	U _o /U _n	60V	120V	240V	277V	400V	480V	600V
Maximum Continuous Operating Voltage (AC)	U _c	75V	150V	300V	350V	480V	550V	750V
Nominal Discharge Current (8/20μs)	I _n	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20μs)	I _{max}	50kA	50kA	50kA	50kA	50kA	50kA	35kA
Voltage Protection Level	U _p	800V	1250V	1500V	1750V	2300V	2500V	3400V
Response Time	t _A	< 25ns						
Overcurrent Protection (max)		315 A / 250 A gG						
Short-Circuit Current Rating (AC)	I _{SCCR}	25 kA / 50 kA						
TOV Withstand 5s	U _T	114V	229V	337V	403V	581V	697V	871V
TOV 120min	U _T	114V	229V	442V	529V	762V	915V	1143V
	mode	Withstand	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1						
UL Electrical								
Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V	550V	750V
Voltage Protection Rating	VPR	330V	600V	900V	1000V	1500V	2000V	2500V
Nominal Discharge Current (8/20μs)	I _n	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	100kA	200kA	150kA	200kA	200kA	200kA	200kA
Mechanical & Environmental								
Operating Temperature Range	T _a	-40 °F to +185 °F [-40 °C to +85 °C]						
Permissible Operating Humidity	RH	5%...95%						
Altitude (max)		13123 ft [4000 m]						
Terminal Screw Torque	M _{max}	39.9 lbf-in [4.5 Nm]						
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm² (Solid, Stranded) / 25 mm² (Flexible)						
Mounting		35mm DIN Rail, EN 60715						
Degree of Protection		IP 20 (built-in)						
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0						
Thermal Protection		Yes						
Operating State / Fault Indication		Green Flag / Not Green Flag						
Remote Contacts (RC)		Optional						
RC Switching Capacity		AC: 250V / 1A, 125V / 1A; DC: 48V / 0.5A, 24V / 0.5A, 12V / 0.5A						
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)						
Order Information								
Order Code		75	150	300	350	480	550*	750
ProTec T2-xxx-1+0		59.0069	59.0071	59.0073	59.0075	59.0077	59.0677	59.0079
ProTec T2-xxx-1+0-R (with remote contacts)		59.0070	59.0072	59.0074	59.0076	59.0078	59.0678	59.0080
ProTec T2-xxx-P (plug)		59.0063	59.0064	59.0065	59.0066	59.0067	59.0685	59.0068

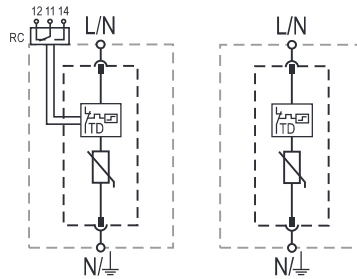
*UL listed, no IEC/EN certification.

ProTec T2 1+0

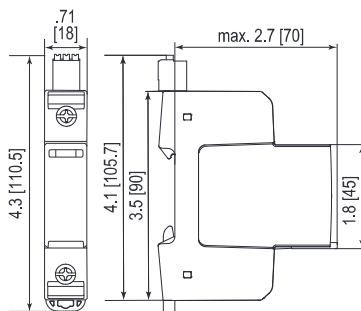
Internal Configuration

Legend

<i>L</i>	Line Conductor Terminal
<i>N</i>	Neutral Conductor Terminal
	PE/G Conductor Terminal
<i>RC</i>	Remote Contacts Terminal (Optional)
<i>TD</i>	Thermal Disconnect



Complete Unit

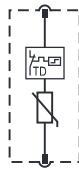


Complete Unit Dimensions & Packaging

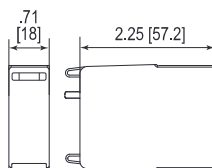
ProTec T2-xxx-1+0		75	150	300	350	480	550*	750
Weight	pounds	.259	.275	.281	.292	.306	.311	.336
	grams	118	125	128	133	139	141	153
ProTec T2-xxx-1+0-R		75	150	300	350	480	550*	750
Weight	pounds	.275	.290	.297	.308	.321	.326	.352
	grams	125	132	135	140	146	148	160
DIN 43880 Dimension		1 TE / .71" [18 mm]						
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]						
Standard Order Quantity		12 Units						

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

ProTec T2-xxx-P		75	150	300	350	480	550*	750
Weight	pounds	.108	.123	.130	.141	.154	.163	.185
	grams	49	56	59	64	70	74	84
DIN 43880 Dimension		1 TE / .71" [18 mm]						
Packaging Dimensions (HxWxL)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]						
Standard Order Quantity		24 Units						

inches
[mm]

Overvoltage Protection

ProTec T2 2+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2-xxx-2+0(-R)		75	150	300	350	480	550*	750
IEC Electrical								
Nominal AC Voltage (50/60Hz)	U _o /U _n	60V	120V	240V	277V	400V	480V	600V
Maximum Continuous Operating Voltage (AC)	U _c	75V	150V	300V	350V	480V	550V	750V
Nominal Discharge Current (8/20μs)	I _n	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20μs)	I _{max}	50kA	50kA	50kA	50kA	50kA	50kA	35kA
Voltage Protection Level	U _p	800V	1250V	1500V	1750V	2300V	2500V	3400V
Response Time	t _A	< 25ns						
Overcurrent Protection (max)		315 A / 250 A gG						
Short-Circuit Current Rating (AC)	I _{SCCR}	25 kA / 50 kA						
TOV Withstand 5s	U _T	114V	229V	337V	403V	581V	697V	871V
TOV 120min	U _T	114V	229V	442V	529V	762V	915V	1143V
	mode	Withstand	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1						
UL Electrical								
Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V	550V	750V
Voltage Protection Rating	VPR	330V	600V	900V	1000V	1500V	2000V	2500V
Nominal Discharge Current (8/20μs)	I _n	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	100kA	200kA	150kA	200kA	200kA	200kA	200kA
Mechanical & Environmental								
Operating Temperature Range	T _a	-40 °F to +185 °F [-40 °C to +85 °C]						
Permissible Operating Humidity	RH	5%...95%						
Altitude (max)		13123 ft [4000 m]						
Terminal Screw Torque	M _{max}	39.9 lbf-in [4.5 Nm]						
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)						
		35 mm² (Solid, Stranded) / 25 mm² (Flexible)						
Mounting		35mm DIN Rail, EN 60715						
Degree of Protection		IP 20 (built-in)						
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0						
Thermal Protection		Yes						
Operating State / Fault Indication		Green Flag / Not Green Flag						
Remote Contacts (RC)		Optional						
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A						
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)						
Order Information								
Order Code		75	150	300	350	480	550*	750
ProTec T2-xxx-2+0		59.0343	59.0081	59.0083	59.0085	59.0087	59.0679	59.0089
ProTec T2-xxx-2+0-R (with remote contacts)		59.0344	59.0082	59.0084	59.0086	59.0088	59.0680	59.0090
ProTec T2-xxx-P (plug)		59.0063	59.0064	59.0065	59.0066	59.0067	59.0685	59.0068

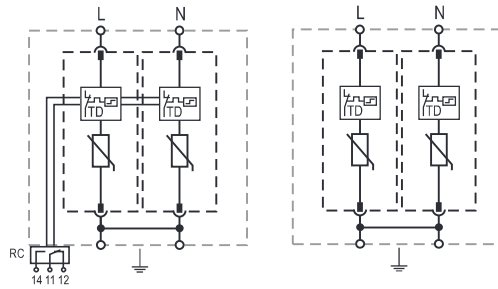
*UL listed, no IEC/EN certification.

ProTec T2 2+0

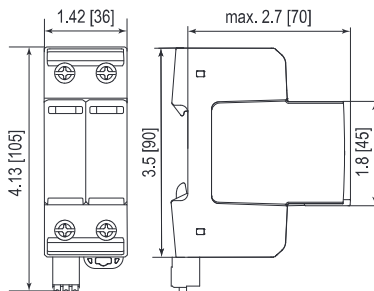
Internal Configuration

Legend

<i>L</i>	Line Conductor Terminal
<i>N</i>	Neutral Conductor Terminal
	PE/G Conductor Terminal
<i>RC</i>	Remote Contacts Terminal (Optional)
<i>TD</i>	Thermal Disconnecter



Complete Unit

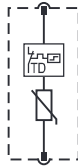


Complete Unit Dimensions & Packaging

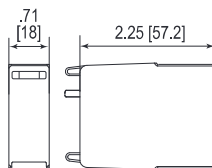
ProTec T2-xxx-2+0		75	150	300	350	480	550 *	750
Weight	pounds	.505	.536	.549	.571	.598	.608	.660
	grams	229	243	249	259	271	276	299
ProTec T2-xxx-2+0-R		75	150	300	350	480	550 *	750
Weight	pounds	.525	.556	.569	.591	.618	.639	.679
	grams	238	252	258	268	280	290	308
DIN 43880 Dimension		2 TE / 1.42" [36]						
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]						
Standard Order Quantity		7 Units						

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

ProTec T2-xxx-P		75	150	300	350	480	550 *	750
Weight	pounds	.108	.123	.130	.141	.154	.163	.185
	grams	49	56	59	64	70	74	84
DIN 43880 Dimension		1 TE / .71" [18]						
Packaging Dimensions (HxWxL)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]						
Standard Order Quantity		24 Units						

inches
[mm]

Overvoltage Protection

ProTec T2 3+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2-xxx-3+0(-R)		150	300	350	480	550 *	750
IEC Electrical							
Nominal AC Voltage (50/60Hz)	U_o/U_n	120V	240V	277V	400V	480V	600V
Maximum Continuous Operating Voltage (AC)	U_c	150V	300V	350V	480V	550V	750V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA	35 kA
Voltage Protection Level	U_p	1250V	1500V	1750V	2300V	2500V	3400V
Response Time	t_A	< 25 ns					
Overcurrent Protection (max)		315 A / 250 A gG					
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA					
TOV Withstand 5s	U_T	229V	337V	403V	581V	697V	871V
TOV 120min	U_T	229V	442V	529V	762V	915V	1143V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1					

UL Electrical							
Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	480V	550V	750V
Voltage Protection Rating	VPR	600V	900V	1000V	1500V	2000V	2500V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Short-Circuit Current Rating (AC)	SCCR	200 kA	150 kA	200 kA	200 kA	200 kA	200 kA

Mechanical & Environmental							
Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]					
Permissible Operating Humidity	RH	5%...95%					
Altitude (max)		13123 ft [4000 m]					
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]					
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)					
Mounting		35 mm DIN Rail, EN 60715					
Degree of Protection		IP 20 (built-in)					
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0					
Thermal Protection		Yes					
Operating State / Fault Indication		Green Flag / Not Green Flag					
Remote Contacts (RC)		Optional					
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A					
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)					

Order Information							
Order Code		150	300	350	480	550 *	750
ProTec T2-xxx-3+0		59.0091	59.0093	59.0095	59.0097	59.0681	59.0099
ProTec T2-xxx-3+0-R (with remote contacts)		59.0092	59.0094	59.0096	59.0098	59.0682	59.0100
ProTec T2-xxx-P (plug)		59.0064	59.0065	59.0066	59.0067	59.0685	59.0068

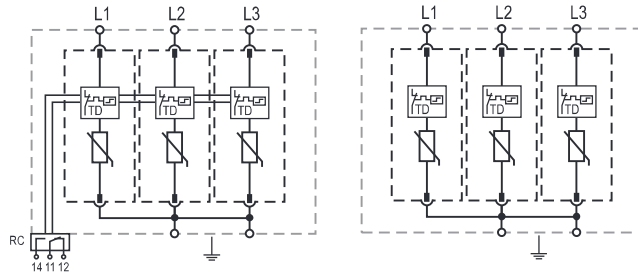
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ProTec T2 3+0

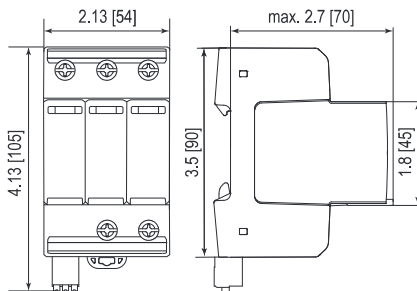
Internal Configuration

Legend

L	Line Conductor Terminal
⏏	PE/G Conductor Terminal
RC	Remote Contacts Terminal (Optional)
TD	Thermal Disconnect



Complete Unit

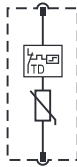


Complete Unit Dimensions & Packaging

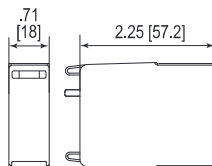
ProTec T2-xxx-3+0		150	300	350	480	550 *	750
Weight	pounds	.780	.800	.833	.873	.890	.965
	grams	354	363	378	396	404	438
ProTec T2-xxx-3+0-R							
Weight	pounds	.800	.820	.853	.892	.913	.985
	grams	363	372	387	405	414	447
DIN 43880 Dimension		3 TE / 2.13" [54]					
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]					
Standard Order Quantity		5 Units					

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

ProTec T2-xxx-P		150	300	350	480	550 *	750
Weight	pounds	.123	.130	.141	.154	.163	.185
	grams	56	59	64	70	74	84
DIN 43880 Dimension		1 TE / .71" [18]					
Packaging Dimensions (HxWxL)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]					
Standard Order Quantity		24 Units					

inches
[mm]

Overvoltage Protection

ProTec T2 4+0

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2-xxx-4+0(-R)

		150	300	350	480	550*
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	120V	240V	277V	400V	480V
Maximum Continuous Operating Voltage (AC)	U_c	150V	300V	350V	480V	550V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA
Voltage Protection Level	U_p	1250V	1500V	1750V	2300V	2500V
Response Time	t_A	< 25 ns				
Overcurrent Protection (max)		315 A / 250 A gG				
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA				
TOV Withstand 5s	U_T	229V	337V	403V	581 V	697V
TOV 120min	U_T	229V	442V	529V	762V	915V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1				

UL Electrical

Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	480V	550V
Voltage Protection Rating	VPR	600V	900V	1000V	1500V	2000V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA
Short-Circuit Current Rating (AC)	SCCR	200 kA	150 kA	200 kA	200 kA	200 kA

Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]				
Permissible Operating Humidity	RH	5%...95%				
Altitude (max)		13123 ft [4000 m]				
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]				
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)				
Mounting		35 mm DIN Rail, EN 60715				
Degree of Protection		IP 20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		Green Flag / Not Green Flag				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A				
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)				

Order Information

Order Code	150	300	350	480	550*
ProTec T2-xxx-4+0	59.0101	59.0103	59.0300	59.0105	59.0683
ProTec T2-xxx-4+0-R (with remote contacts)	59.0102	59.0104	59.0301	59.0106	59.0684
ProTec T2-xxx-P (plug)	59.0064	59.0065	59.0066	59.0067	59.0685

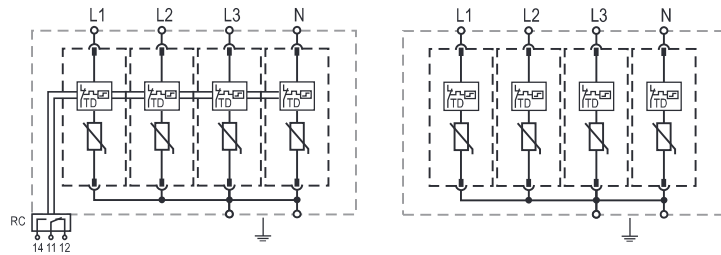
*UL listed, no IEC/EN certification.

ProTec T2 4+0

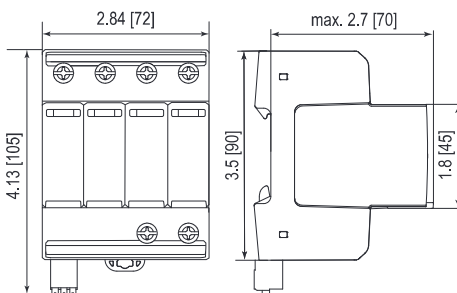
Internal Configuration

Legend

L	Line Conductor Terminal
N	Neutral Conductor Terminal
⏏	PE/G Conductor Terminal
RC	Remote Contacts Terminal (Optional)
TD	Thermal Disconnect



Complete Unit

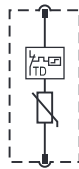


Complete Unit Dimensions & Packaging

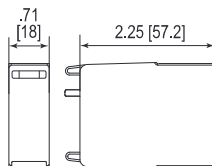
ProTec T2-xxx-4+0		150	300	350	480	550 *
Weight	pounds	.989	1.015	1.059	1.112	1.208
	grams	448	460	480	504	548
ProTec T2-xxx-4+0-R		150	300	350	480	550 *
Weight	pounds	1.008	1.035	1.079	1.132	1.228
	grams	457	469	489	513	557
DIN 43880 Dimension		4 TE / 2.84" [72]				
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]				
Standard Order Quantity		4 Units				

Plug Internal Configuration

ProTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging

ProTec T2-xxx-P		150	300	350	480	550 *
Weight	pounds	.123	.130	.141	.154	.163
	grams	56	59	64	70	74
DIN 43880 Dimension		1 TE / .71" [18]				
Packaging Dimensions (HxWxL)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]				
Standard Order Quantity		24 Units				

inches
[mm]

Overvoltage Protection

ProTec T2 1+1

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2-xxx-1+1(-R)

75 150 300 350

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	60 V	120 V	240 V	277 V
Maximum Continuous Operating Voltage (AC)	(L-N) U_c	75 V	150 V	300 V	350 V
	(N-PE) U_c	305 V	305 V	305 V	305 V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	20 kA / 40 kA	20 kA / 40 kA	20 kA / 40 kA	20 kA / 40 kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50 kA / 65 kA	50 kA / 65 kA	50 kA / 65 kA	50 kA / 65 kA
Voltage Protection Level	(L-N)/(N-PE) U_p	800 V / 1500 V	1250 V / 1500 V	1500 V / 1500 V	1750 V / 1500 V
Follow Current Interrupt Rating	(N-PE) I_{fi}	100 A _{RMS}			
Response Time	(L-N)/(N-PE) t_A	< 25 ns / < 100 ns			
Overcurrent Protection (max)		315 A / 250 A gG			
Short-Circuit Current Rating (AC)	(L-N) I_{SCCR}	25 kA / 50 kA			
TOV Withstand 5s	(L-N) U_T	114 V	229 V	337 V	403 V
TOV 120min	(L-N) U_T	114 V	229 V	442 V	529 V
	mode	Withstand	Withstand	Safe Fail	Safe Fail
TOV Withstand 200ms	(N-PE) U_T	1200 V			
Number of Ports		1			

UL Electrical

Maximum Continuous Operating Voltage (AC)	(L-N)/(N-G) MCOV	75 V / 305 V	150 V / 305 V	300 V / 305 V	350 V / 305 V
Voltage Protection Rating	(L-N)/(N-G) VPR	330 V / 1000 V	600 V / 1000 V	900 V / 1000 V	1000 V / 1000 V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-G) I_n	20 kA / 20 kA			
Short-Circuit Current Rating (AC)	(L-N) SCCR	100 kA	200 kA	150 kA	200 kA

Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]			
Permissible Operating Humidity	RH	5%...95%			
Altitude (max)		13123 ft [4000 m]			
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]			
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)			
Mounting		35 mm DIN Rail, EN 60715			
Degree of Protection		IP 20 (built-in)			
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0			
Thermal Protection		Yes			
Operating State / Fault Indication		Green Flag / Not Green Flag			
Remote Contacts (RC)		Optional			
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A			
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)			

Order Information

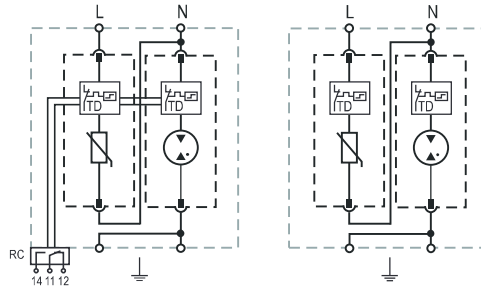
Order Code	75	150	300	350
ProTec T2-xxx-1+1	59.0109	59.0111	59.0113	59.0115
ProTec T2-xxx-1+1-R (with remote contacts)	59.0110	59.0112	59.0114	59.0116
ProTec T2-xxx-P (plug L-N)	59.0063	59.0064	59.0065	59.0066
ProTube T2-40-P (plug N-PE)	59.0273	59.0273	59.0273	59.0273

ProTec T2 1+1

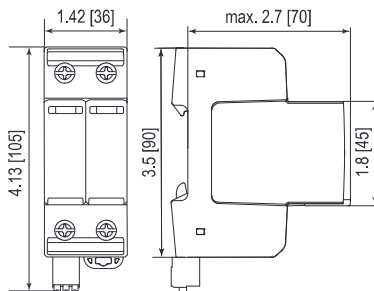
Internal Configuration

Legend

<i>L</i>	Line Conductor Terminal
<i>N</i>	Neutral Conductor Terminal
	PE/G Conductor Terminal
<i>RC</i>	Remote Contacts Terminal (Optional)
<i>TD</i>	Thermal Disconnect



Complete Unit

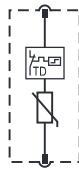


Complete Unit Dimensions & Packaging

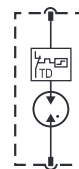
ProTec T2-xxx-1+1		75	150	300	350
Weight	pounds	.512	.527	.534	.545
	grams	232	239	242	247
ProTec T2-xxx-1+1-R					
Weight	pounds	.521	.536	.543	.554
	grams	236	243	246	251
DIN 43880 Dimension		2 TE / 1.42" [36]			
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]			
Standard Order Quantity		7 Units			

Plug Internal Configuration

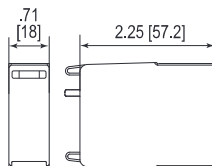
ProTec T2-xxx-P



ProTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

ProTec T2-xxx-P		75	150	300	350
Weight	pounds	.108	.123	.130	.141
	grams	49	56	59	64
ProTube T2-40-P			40		
Weight	pounds		.093		
	grams		42		
DIN 43880 Dimension		1 TE / .71" [18]			
Packaging Dimensions (HxWxL)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]			
Standard Order Quantity		24 Units			

inches
[mm]

Overvoltage Protection

ProTec T2 3+1

Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T2-xxx-3+1(-R)

300

350

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V	277 V
Maximum Continuous Operating Voltage (AC)	(L-N) U_c	300 V	350 V
	(N-PE) U_c	305 V	305 V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	20 kA / 40 kA	20 kA / 40 kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50 kA / 65 kA	50 kA / 65 kA
Voltage Protection Level	(L-N)/(N-PE) U_p	1500 V / 1500 V	1750 V / 1500 V
Follow Current Interrupt Rating	(N-PE) I_{fi}	100 A _{RMS}	
Response Time	(L-N)/(N-PE) t_A	< 25 ns / < 100 ns	
Overcurrent Protection (max)		315 A / 250 A gG	
Short-Circuit Current Rating (AC)	(L-N) I_{SCCR}	25 kA / 50 kA	
TOV Withstand 5s	(L-N) U_T	337 V	403 V
TOV 120min	(L-N) U_T	442 V	529 V
	mode	Safe Fail	Safe Fail
TOV Withstand 200ms	(N-PE) U_T	1200 V	
Number of Ports		1	

UL Electrical

Maximum Continuous Operating Voltage (AC)	(L-N)/(N-G) MCOV	300 V / 305 V	350 V / 305 V
Voltage Protection Rating	(L-N)/(N-G) VPR	900 V / 1000 V	1000 V / 1000 V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-G) I_n	20 kA / 20 kA	
Short-Circuit Current Rating (AC)	(L-N) SCCR	150 kA	200 kA

Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]	
Permissible Operating Humidity	RH	5%...95%	
Altitude (max)		13123 ft [4000 m]	
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]	
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)	
		35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)	
Mounting		35 mm DIN Rail, EN 60715	
Degree of Protection		IP 20 (built-in)	
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0	
Thermal Protection		Yes	
Operating State / Fault Indication		Green Flag / Not Green Flag	
Remote Contacts (RC)		Optional	
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A	
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)	

Order Information

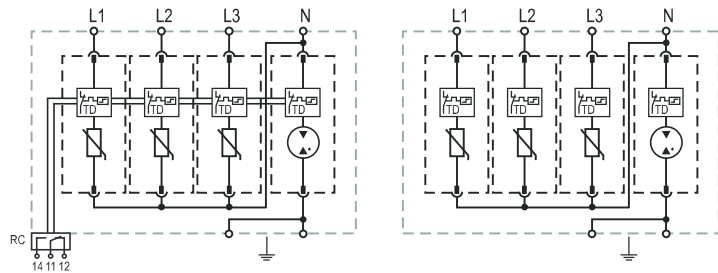
Order Code	300	350
ProTec T2-xxx-3+1	59.0121	59.0123
ProTec T2-xxx-3+1-R (with remote contacts)	59.0122	59.0124
ProTec T2-xxx-P (plug L-N)	59.0065	59.0066
ProTube T2-40-P (plug N-PE)	59.0273	59.0273

ProTec T2 3+1

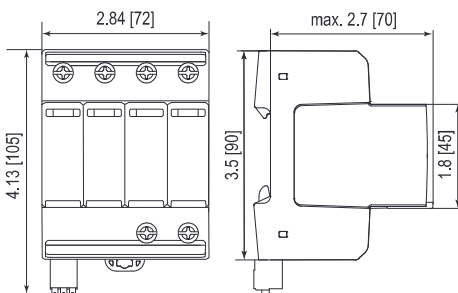
Internal Configuration

Legend

L	Line Conductor Terminal
N	Neutral Conductor Terminal
⏏	PE/G Conductor Terminal
RC	Remote Contacts Terminal (Optional)
TD	Thermal Disconnect



Complete Unit

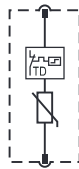


Complete Unit Dimensions & Packaging

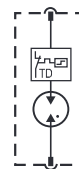
		300	350
ProTec T2-xxx-3+1	Weight	pounds 1.000	1.033
		grams 453	468
ProTec T2-xxx-3+1-R			
Weight	pounds	1.011	1.044
	grams	458	473
DIN 43880 Dimension		4 TE / 2.84" [72]	
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity		4 Units	

Plug Internal Configuration

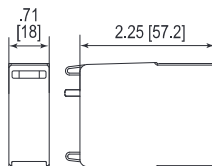
ProTec T2-xxx-P



ProTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

		300	350
ProTec T2-xxx-P	Weight	pounds .130	.141
		grams 59	64
ProTube T2-40-P		40	
Weight	pounds	.093	
	grams	42	
DIN 43880 Dimension		1 TE / .71" [18]	
Packaging Dimensions (HxWxL)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]	
Standard Order Quantity		24 Units	

inches
[mm]

Overvoltage Protection
ProTube T2 40 0+1
 Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTube T2-xxx-0+1(-R)

40

IEC Electrical

Maximum Continuous Operating Voltage	U_c	305V
Nominal Discharge Current (8/20 μ s)	I_n	40 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	65 kA
Voltage Protection Level	U_p	1500V
Follow Current Interrupt Rating	I_{fi}	100 A _{RMS}
Response Time	t_A	< 100 ns
TOV Withstand 200ms	U_T	1200 V
Number of Ports		1

UL Electrical

Maximum Continuous Operating Voltage (AC)	MCOV	305V
Voltage Protection Rating	VPR	1000V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA

Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
Altitude (max)		13123 ft [4000 m]
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)
Mounting		35 mm DIN Rail, EN 60715
Degree of Protection		IP 20 (built-in)
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0
Thermal Protection		Yes
Operating State / Fault Indication		Green Flag / Not Green Flag
Remote Contacts (RC)		Optional
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)

Order Information

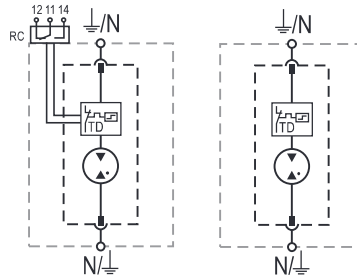
Order Code	40
ProTube T2-xxx-0+1	59.0280
ProTube T2-xxx-0+1-R (with remote contacts)	59.0336
ProTube T2-40-P (plug)	59.0273

ProTube T2 40 0+1

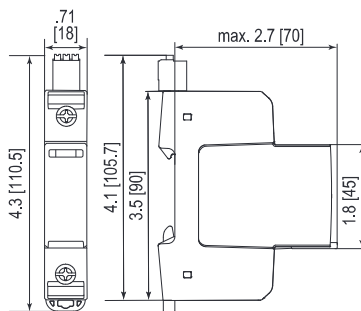
Internal Configuration

Legend

N	Neutral Conductor Terminal
⏏	PE/G Conductor Terminal
RC	Remote Contacts Terminal (Optional)
TD	Thermal Disconnect



Complete Unit

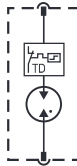


Complete Unit Dimensions & Packaging

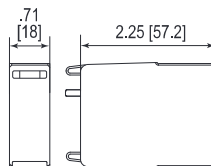
ProTube T2-xxx-0+1	40
Weight	pounds .244
	grams 111
ProTube T2-xxx-0+1-R	
Weight	pounds .259
	grams 118
DIN 43880 Dimension	1 TE / .71" [18]
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Standard Order Quantity	12 Units

Plug Internal Configuration

ProTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging

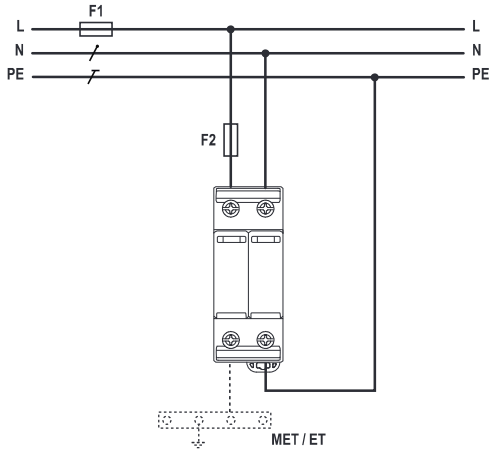
ProTube T2-40-P	40
Weight	pounds .093
	grams 42
DIN 43880 Dimension	1 TE / .71" [18]
Packaging Dimensions (HxWxL)	3.2 x 4.5 x 12" [83 x 115 x 305 mm]
Standard Order Quantity	24 Units

inches
[mm]

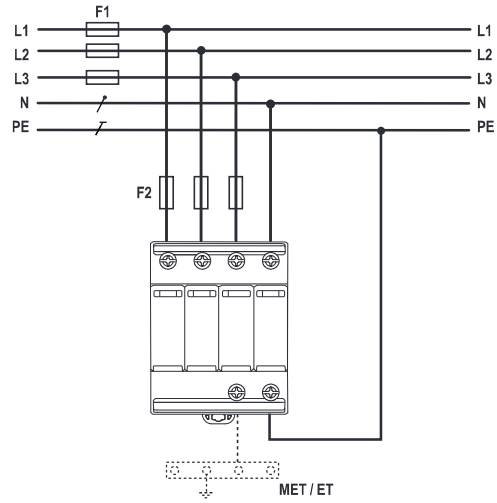
Pluggable Multi-pole SPD Connection Configurations

ProTec T2 Series

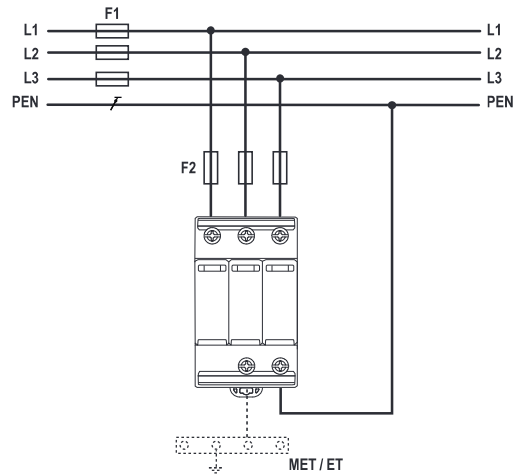
TN-S (Single-phase, 2+0, 1+1)



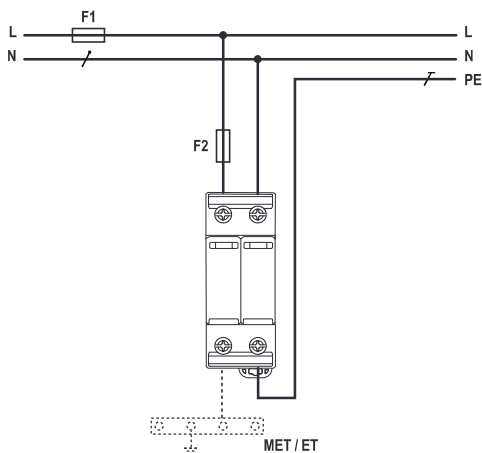
TN-S (Three-phase, 4+0, 3+1)



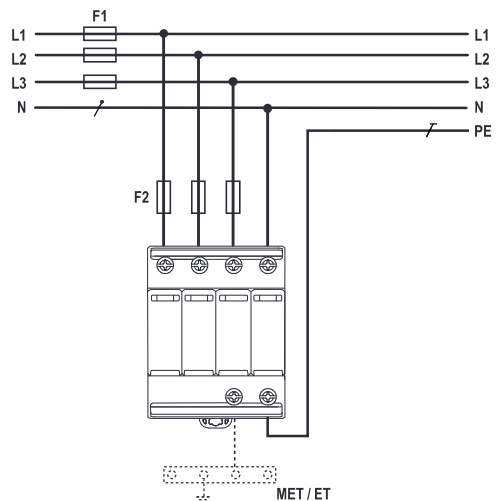
TN-C (Three-phase, 3+0)



TT (Single-phase, 1+1)



TT (Three-phase, 3+1)



/ N Neutral

/ PE Protective Earth

/ PEN Protective Earth & Neutral

Overcurrent Protection Rating for $I_{SCCR} = 50 \text{ kA}$

$F1 > 250 \text{ A gG} \rightarrow$ $F2 = 250 \text{ A gG}$

$F1 \leq 250 \text{ A gG} \rightarrow$ $F2$

Overcurrent Protection Rating for $I_{SCCR} = 25 \text{ kA}$

$F1 > 315 \text{ A gG} \rightarrow$ $F2 = 315 \text{ A gG}$

$F1 \leq 315 \text{ A gG} \rightarrow$ $F2$