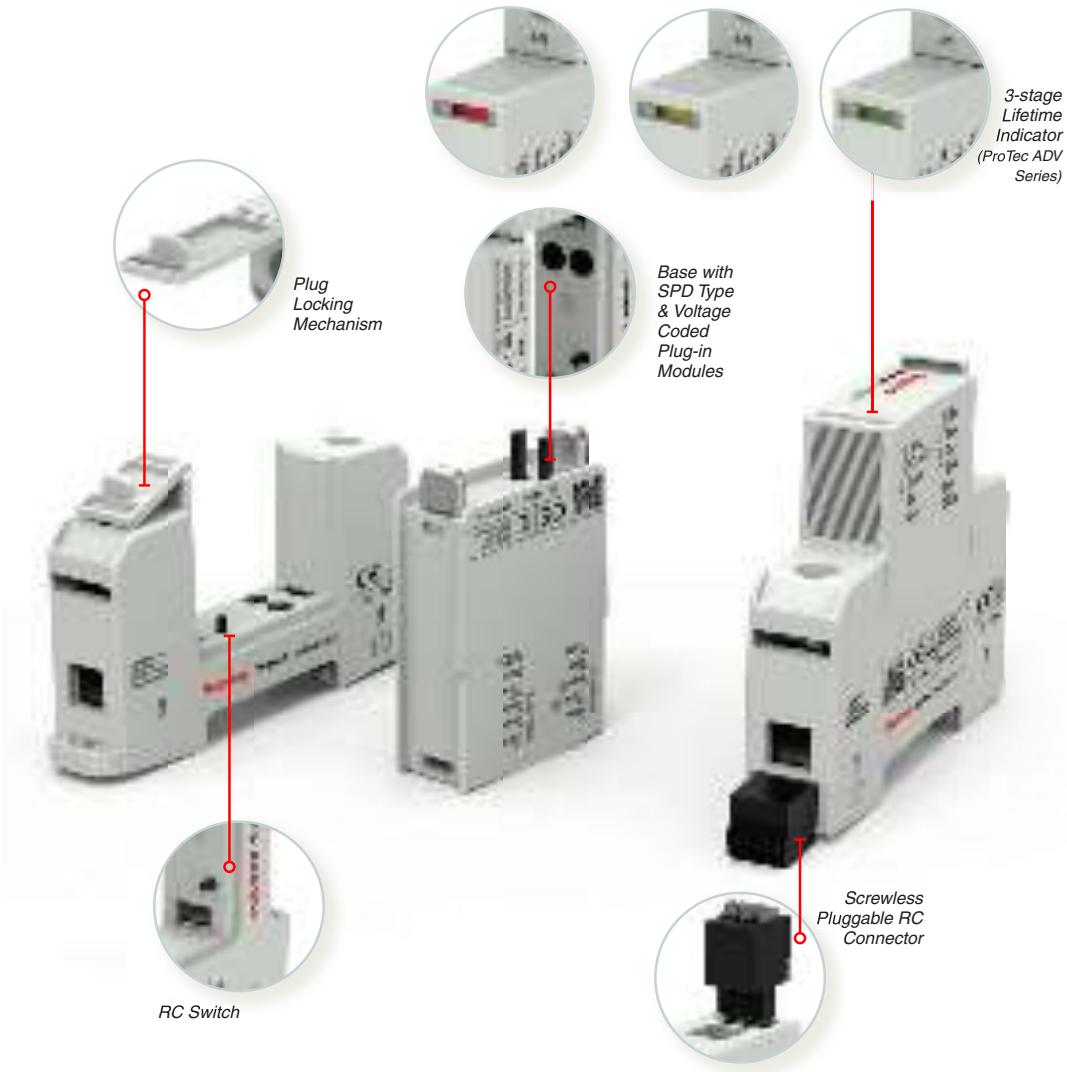
Surge Protection Devices

for Low Voltage Power Systems

CAPE
ELECTRIC

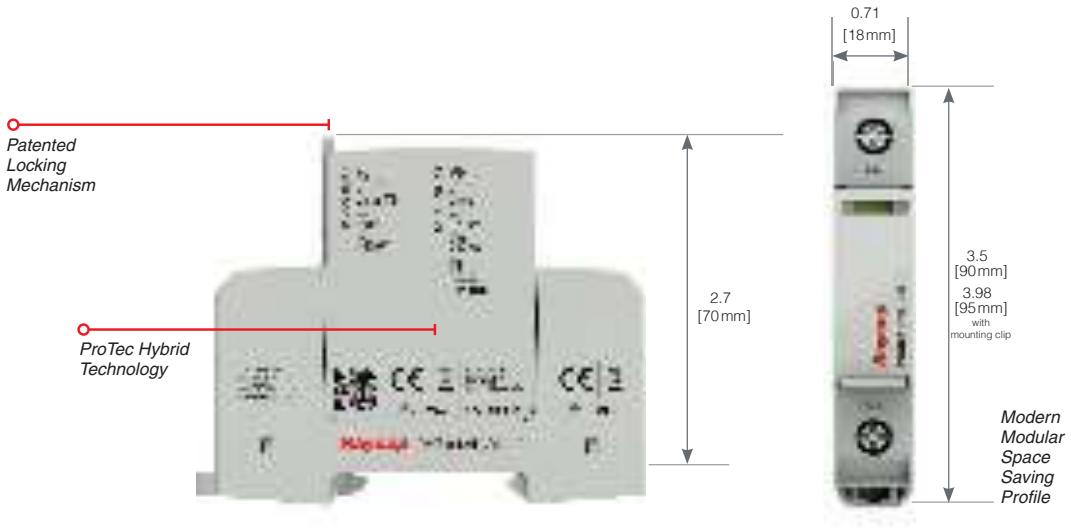


CAPE ELECTRIC Raycap



Housing Design Features

- Contemporary design
- Low residual protection level
- High durability due to redesigned thermal disconnection mechanism
- No external back-up fuse required up to 315 A
- Patented locking mechanism for secure placement in high vibration enviroments
- Remote signaling using tool-free remote contact
- Easily visible mechanical lifetime indicator
- Replacement plugs provide ease of installation and preventive maintenance
- Easy replacement during servicing
- Meets IEC/EN 61643-11 and UL 1449 4th Edition





ProTec T1-300-1+0-R



ProTec T2-300-2+0-R



ProTec T2H-300-3+0-R



ProTec T2-300-4+0-R

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Pluggable Single Pole & Multi-pole Surge Protective Devices

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Pluggable Multi-pole Surge Protective Devices

PHOTOVOLTAIC•TYPE 1•TYPE 2•UL TYPE 1 CA

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Miscellaneous Surge Protective Devices

CLASS II•TYPE 2

Isolating Spark Gap (ISG) Surge Protective Devices
EPZ 100/350 EX 78

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

Lightning and Overvoltage Protection
ProTec T1

Special features:

- Available in a wide variety of operating voltages, 75 V to 750 V
- High impulse current capability using single MOV– 480 V and 750 V versions comes with reduced impulse current
- Sensitive state-of-the-art thermal disconnector
- Back-up fuse up to 315 A gG, 750 V version comes with 250 A gG
- Short circuit current rating up to 50 kA
- Vibration and shock withstand capability
- VDE-IEC Class I & II / EN Type 1+2 certified and UL Type 1CA certified
- All modules, also 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 T1 Series	✓	✓	✓

The ProTec T1 series offers basic protection as a Type 1 surge protective device that comes with an extended maximum continuous operating voltage range span from 75 V to 750 V. Due to its Type 1 classification the product can be installed between boundaries OA – 1 and higher. The varistor based protection module features outstanding short-circuit currents up to 50 kA_{RMS} without using a back up to a main fuse nominal current of 315 A. All modules are equipped with state-of-the-art thermal disconnector and life-status monitoring (green-red). Due to a unique vibration-proof locking mechanism design, these products are suitable for use in high vibration environments. An optional remote contact (RC) feature offers a three-pole remote signaling terminal to remotely monitor the operating state of the device.

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

Lightning and Overvoltage Protection

ProTec T1H

Special features:

- Leakage free hybrid topology
- Energy coordinated with other ProTec families without additional cable length
- State-of-the-art thermal disconnector
- Backup fuse up to 315 A gG
- Short circuit current rating up to 50 kA
- Vibration and shock withstand capability
- All modules, also N-PE, with operating state green-red
- Optional remote contact signaling
- VDE-IEC Class I & II / EN Type 1+2 and UL Type 4CA certified



Compliance	IEC 61643-11:2011	EN 61643-11:2012	UL 1449 4th Edition
ProTec T1H Series	✓	✓	✓

The ProTec T1H modular surge protection device provides high durability due to its leakage-free performance ensured by a special series connection of a varistor and a gas discharge tube. The product family is ideal as a supplement to the basic ProTec T1 product family, available for single or three-phase TN-S, TT and TN-C systems, with a maximum continuous operating voltage of 300 V AC where a complete absence of leakage current is required. With its Type 1 classification, the ProTec T1H can be installed between boundaries 0b – 1 and higher. The varistor-based protection modules feature outstanding short-circuit currents up to 50 kA_{RMS} without using a back up to a main fuse, with a nominal current of 315 A. The device can be installed upstream of meter panels in low-voltage consumer installations. An optional remote contact (RC) features a three-pole remote signaling terminal that enables remote monitoring of the device's operating state.

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

Lightning and Overvoltage Protection

ProTec T1HS

Special features:

- Leakage free hybrid topology
- High discharge capacity due to unique design impulse discharge current of 25 kA
- Energy coordinated with other ProTec families without additional cable length
- State-of-the-art thermal disconnector
- Backup fuse up to 315 A gG
- Short circuit current rating up to 50 kA
- Vibration and shock withstand capability
- All modules, also N-PE, with operating state green-red
- Optional remote contact (RC) signaling
- VDE-IEC Class I & II / EN Type 1+2 and UL Type 4CA certified



Compliance	IEC 61643-11:2011	EN 61643-11:2012	UL 1449 4th Edition
ProTec T1HS Series	✓	✓	✓

The Type 1+2 surge protective device contains two high rated stand-alone varistors in series with a gas discharge tube that, in combination with a state-of-the-art space-saving thermal disconnection mechanism, ensure optimal system protection under all kinds of overloads. The series connection isolates the varistor from the grid, making it suitable for use upstream of meter panels in low-voltage consumer installations while making it immune to temporary overvoltage. The operating state requires no power to operate and instantly shows the health of the surge protective indicator. Besides a visual mechanical indicator, an optional remote contact (RC) device features a three-pole remote signaling terminal to remotely monitor the operating state of the device.

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

Overvoltage Protection
ProTec T2

Special features:

- Available in a wide variety of operating voltages 75 V to 750 V
- High Impulse Current capability using a single MOV
- Sensitive state-of-the-art thermal disconnector
- Backup fuse up to 315 A gG
- Short-circuit current rating up to 50 kA
- Vibration and shock withstand capability
- VDE-IEC Class II / Type 2 certified and UL Type 1CA certified
- 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 operationg voltages (U_c) range that spans 75 V up to 750 V. 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 50 kA_{RMS} without using a back-up to a main fuse nominal current of 315 A. All modules are equipped with a state-of-the-art thermal disconnector 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.

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

Overvoltage Protection
ProTec T2H

Special features:

- High maximum discharge current capacity (I_{max}) of 50 kA
- State-of-the-art thermal disconnector
- Leakage current-free technology
- Backup fuse up to 315 A gG
- Short-circuit current rating up to 50 kA
- Vibration and shock withstand capability
- VDE-IEC Class II / EN Type 2 certified and UL Type 1CA certified
- All modules including N-PE, with operating state green-red
- Optional remote contact signaling (RC)



Compliance	IEC 61643-11:2011	EN 61643-11:2012	UL 1449 4th Edition
ProTec T2H Series	✓	✓	✓

The ProTec T2H surge protection device provides high durability due to its leakage-free performance ensured by a special series connection of varistor and gas discharge tube. The ProTec T2H product family is an ideal supplement to the basic ProTec T2 product family, available for single or three-phase TN-S, TT and TN-C systems with a maximum continuous voltage of 300 V AC. The perfect solution for applications such as railway safety control systems where complete absence of leakage current, is required. With its Type 2 classification, the unit can be installed between boundaries 1 – 2 and higher. The varistor based protection module features outstanding short-circuit currents up to 50 kA_{RMS} without using a back-up to a main fuse and a nominal current of 315 A. All modules are equipped with a state-of-the-art thermal disconnector and life-status green-red monitoring indicator. A unique vibration-proof locking mechanism enables secure use in high vibration environments. An optional remote contact (RC) features a three-pole remote signaling terminal, which enables remote monitoring of the operating state of the device.

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

Overvoltage Protection
ProTec T2-ADV

Special features:

- Early warning system with clear green-yellow-red indicators
- Available in a wide variety of operating voltages from 75 V to 480 V
- High surge maximum discharge current capability of 50 kA
- State-of-the-art thermal disconnector
- Backup fuse up to 315 A gG
- Vibration and shock withstand capability
- Optional remote contact (RC) signaling
- VDE-IEC Class II / EN Type 2 certified and UL Type 1CA certified



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

ProTec T2-ADV features an advanced three-stage life status indicator showing an intermediate degradation status before the arrester's end-of-life state, thus indicating possible problems or needed maintenance from overvoltage activity, before complete failure. During the SPDs end-of-life transition, green yellow red, the connected equipment is continually protected against fatal overvoltage effects. The specially treated atonomous varistors provide reliable determination of the first switching disconnector, and the redundancy of two powerful separate varistors, both of which are functionally connected provide a unique safety advantage. These safety reserve systems are imperative for the growing need for notifications or alerts when changes in conditions occur, and are ideally suited in a variety of environments that protect critical infrastructure. In addition to the visual mechanical indicator, optional remote contacts (RC) feature a three-pole remote signaling terminal, enabling remote monitoring of the operating state of the device.

Pluggable Multi-pole Surge Protective Devices (SPDs) for Photovoltaic Systems (DC)

Lightning and Overvoltage Protection
ProTec T1-PV & ProTec T2-PV

Special features:

- Vibration and shock withstand capability
- Sensitive and reliable state-of-the-art disconnector
- Short circuit current rating of 11 kA

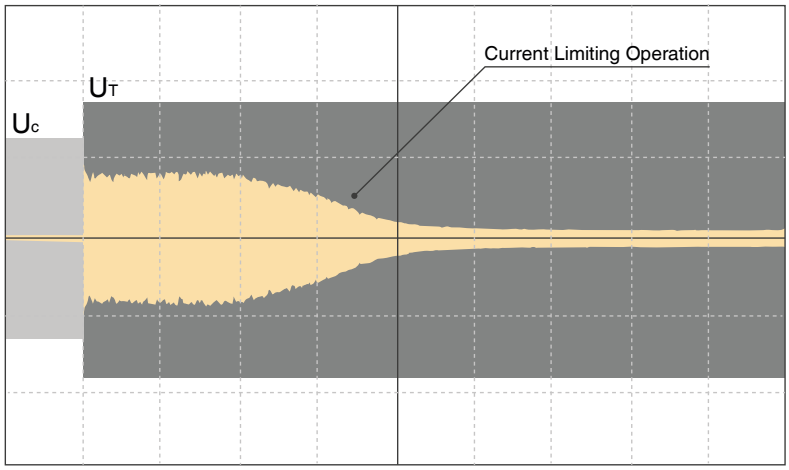


Compliance	EN 50539-11:2013+A1:2014	UL 1449 4th Edition
ProTec T1 PV Series	✓	✓
ProTec T2 PV Series	✓	✓

The ProTec PV product range provides powerful and pluggable protective devices for photovoltaic systems up to 1500 V DC either as Type 1 or Type 2. All devices have a short circuit current rating of 11 kA, the highest available on the market.

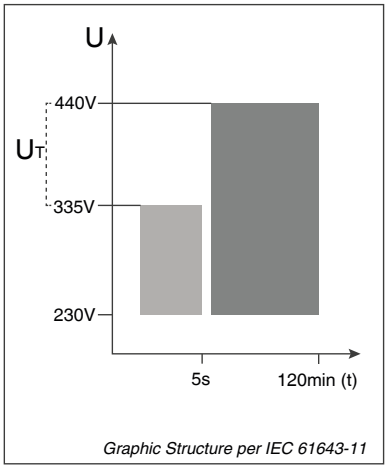
SafeTec Technology

- Good protection level
- Industry standard DIN rail technology for situations where TOVs or switching transients are present on a distribution network
- Open circuit mode in combination with patented current limiting technology offers great immunity to TOVs
- 5-year warranty, 10-year life span
- Low-maintenance cost
- Pluggable installation
- Modular, pluggable, field replaceable modules



Temporary Overvoltages (TOV)

- Maximum Countinious Operating Voltage
- Temporary Overvoltage (TOV)
- Current Through SPD



- SafeTec TC Technology
- Conventional Technology

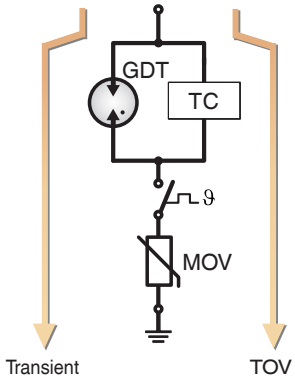
Two possible types of overvoltages may appear in the power supply network:

Transient overvoltages – switching operations, direct and indirect atmospheric discharges

Temporary overvoltages (TOVs) – last between 5 seconds and up to a few weeks, voltage amplitude can reach 173% U_{REF}

$U_{REF} = U_O \times 1,1$

U_O … Nominal Line Voltage



Legend

Transient	Short duration
TOV	Long duration
TC	Thermal control function
GDT	Gas discharge tube
MOV	Metal-oxide varistor
ϑ	Thermal disconnector

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

Overvoltage Protection
SafeTec T2

Special features:

- High temporary overvoltage (TOV) immunity
- High maximum discharge current capacity (I_{max}) of 50 kA
- State-of-the-art thermal disconnector
- Continuous power to the equipment at end-of-life (EOL)
- AC current up to 880 V
- Back-up fuse up to 315 A gG
- Short circuit current rating up to 50 kA
- Vibration and shock withstand capability
- All modules, including N-PE with operating state green-red
- Optional remote contact (RC) signaling
- VDE-IEC Class II / EN Type 2 certified and UL Type 1CA certified
- Worldwide patented thermal control (TC) technology
- Five year warranty



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

Temporary overvoltages (TOV) are by far the most frequent cause of arrester failure by abnormal overvoltages of the power network (50/60 Hz) with significant duration and amplitude. The SafeTec product family is a reliable solution for all transient overvoltages. This multi-purpose single pole arrester features the industry's widest range and an unprecedented level of integration, enabling power systems to have improved surge protection, simplified designs and lower overall costs. The patented thermal control (TC) technology function prolongs the lifespan of the SPDs, enables TOV immunity and provides low protection level, all at the same dimensions as conventional protective devices.
The universal features of SafeTec make the technology suitable for protection of electrical devices not only against overvoltages caused by lightning strikes, but also by switching operations that originate from the internal power system. In addition to the visual mechanical indicator, the optional remote contact (RC) features a three-pole remote signaling terminal enabling remote monitoring of the operating state of the device.

Lightning and Overvoltage Protection

ProTec T1 2+0

12.5 kA Series

Class I • Class II • Type 1 • Type 2 • Type 1CA



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

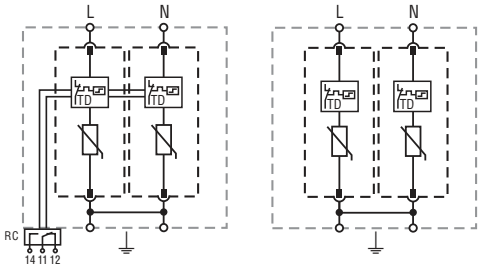
Technical Data

ProTec T1-xxx-2+0(-R)		75	150	300	350	480	750
IEC Electrical							
Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V	400V	600V
Maximum Continuous Operating Voltage (AC)	U_c	75V	150V	300V	350V	480V	750V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA	50kA	35kA
Impulse Discharge Current (10/350µs)	I_{imp}	12.5kA	12.5kA	12.5kA	12.5kA	10kA	5kA
Specific Energy	W/R	39kJ/Ω	39kJ/Ω	39kJ/Ω	39kJ/Ω	25kJ/Ω	6.25kJ/Ω
Charge	Q	6.25As	6.25As	6.25As	6.25As	5As	2.5As
Voltage Protection Level	U_p	700V	1000V	1500V	1750V	2100V	3200V
Response Time	t_A	< 25ns					
Overcurrent Protection (max)		315A / 250A gG					250A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25kA / 50kA					50kA
TOV Withstand 5s	U_T	114V	175V	337V	403V	581V	871V
TOV 120min	U_T	114V	229V	442V	529V	762V	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	75V	150V	300V	350V	480V	750V
Voltage Protection Rating	VPR	330V	600V	900V	1200V	1500V	2500V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	100kA	200kA	150kA	150kA	200kA	150kA
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 [4000m]					
Terminal Screw Torque	M_{max}	39.9 lbf·in [4.5Nm]					
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)					
		35mm² (Solid, Stranded) / 25mm² (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) / 1.5mm² (Solid)					
Order Information							
Order Code		**75**	**150**	**300**	**350**	**480**	**750**
ProTec T1-xxx-2+0		59.0349	59.0019	59.0021	59.0023	59.0025	59.0027
ProTec T1-xxx-2+0-R (with remote contacts)		59.0350	59.0020	59.0022	59.0024	59.0026	59.0028
ProTec T1-xxx-P (plug)		59.0001	59.0002	59.0003	59.0004	59.0005	59.0006

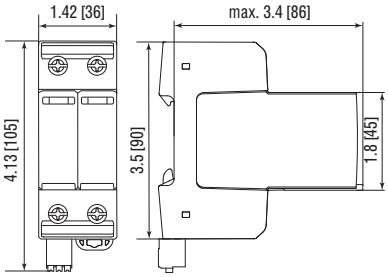
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



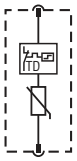
Complete Unit



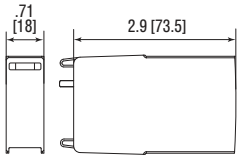
Complete Unit Dimensions & Packaging							
ProTec T1-xxx-2+0		**75**	**150**	**300**	**350**	**480**	**750**
Weight	pounds	.595	.697	.750	.833	.847	.860
	grams	270	316	340	378	384	390
ProTec T1-xxx-2+0-R							
Weight	pounds	.615	.717	.769	.853	.866	.880
	grams	279	325	349	387	393	399
DIN 43880 Dimension		2 TE / 1.42" [36]					
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]					
Standard Order Quantity		7 Units					

Plug Internal Configuration

ProTec T1-xxx-P



Spare Plug



Single Unit Dimensions & Packaging							
ProTec T1-xxx-P		**75**	**150**	**300**	**350**	**480**	**750**
Weight	pounds	.152	.203	.229	.271	.278	.284
	grams	69	92	104	123	126	129
DIN 43880 Dimension		1 TE / .71" [18]					
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]					
Standard Order Quantity		28 Units					

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1 4+0

12.5 kA Series

Class I • Class II • Type 1 • Type 2 • Type 1CA



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

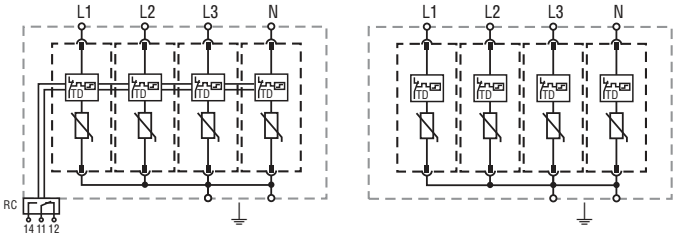
Technical Data

ProTec T1-xxx-4+0(-R)		150	300	350	480
IEC Electrical					
Nominal AC Voltage (50/60Hz)	U_o/U_n	120V	240V	277V	400V
Maximum Continuous Operating Voltage (AC)	U_c	150V	300V	350V	480V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA
Impulse Discharge Current (10/350µs)	I_{imp}	12.5kA	12.5kA	12.5kA	10kA
Specific Energy	W/R	39kJ/Ω	39kJ/Ω	39kJ/Ω	25kJ/Ω
Charge	Q	6.25As	6.25As	6.25As	5As
Voltage Protection Level	U_p	1000V	1500V	1750V	2100V
Response Time	t_A	< 25ns			
Overcurrent Protection (max)		315A / 250A gG			
Short-Circuit Current Rating (AC)	I_{SCCR}	25kA / 50kA			
TOV Withstand 5s	U_T	175V	337V	403V	581V
TOV 120min	U_T	229V	442V	529V	762V
	mode	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1			
UL Electrical					
Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	480V
Voltage Protection Rating	VPR	600V	900V	1200V	1500V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	200kA	150kA	150kA	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 [4000m]			
Terminal Screw Torque	M_{max}	39.9 lbf·in [4.5Nm]			
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)			
		35mm² (Solid, Stranded) / 25mm² (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) / 1.5mm² (Solid)			
Order Information					
Order Code		150	300	350	480
ProTec T1-xxx-4+0		59.0039	59.0041	59.0351	59.0043
ProTec T1-xxx-4+0-R (with remote contacts)		59.0040	59.0042	59.0352	59.0044
ProTec T1-xxx-P (plug)		59.0002	59.0003	59.0004	59.0005

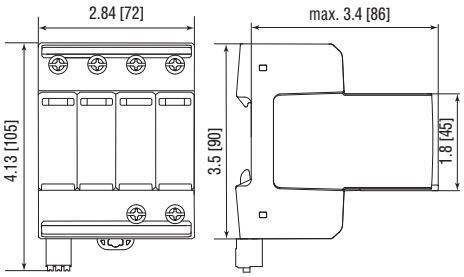
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



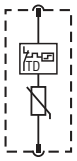
Complete Unit



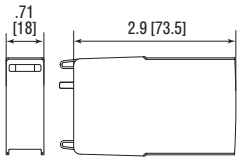
Complete Unit Dimensions & Packaging					
ProTec T1-xxx-4+0		**150**	**300**	**350**	**480**
Weight	pounds	1.310	1.415	1.583	1.609
	grams	594	642	718	730
ProTec T1-xxx-4+0-R					
Weight	pounds	1.329	1.435	1.603	1.629
	grams	603	651	727	739
DIN 43880 Dimension		4 TE / 2.84" [72]			
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]			
Standard Order Quantity		4 Units			

Plug Internal Configuration

ProTec T1-xxx-P



Spare Plug



Single Unit Dimensions & Packaging					
ProTec T1-xxx-P		**150**	**300**	**350**	**480**
Weight	pounds	.203	.229	.271	.278
	grams	92	104	123	126
DIN 43880 Dimension		1 TE / .71" [18]			
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]			
Standard Order Quantity		28 Units			

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1 1+1

12.5 kA Series

Class I • Class II • Type 1 • Type 2 • Type 1CA



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

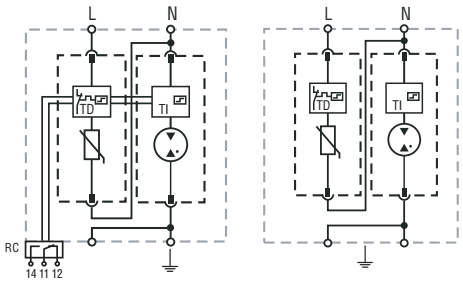
Technical Data

ProTec T1-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	(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 µs)	(L-N)/(N-PE)	I_n	20 kA / 50 kA			
Maximum Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_{max}	50 kA / 100 kA			
Impulse Discharge Current (10/350 µs)	(L-N)/(N-PE)	I_{imp}	12.5kA / 50 kA			
Specific Energy	(L-N)/(N-PE)	W/R	39 kJ/Ω / 625 kJ/Ω			
Charge	(L-N)/(N-PE)	Q	6.25 As / 25 As			
Voltage Protection Level	(L-N)/(N-PE)	U_p	700 V / 1500 V	1000 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	175 V	337 V	403 V
TOV 120min	(L-N)	U_T	114 V	229 V	442 V	529 V
		mode	Withstand	Safe Fail	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 / 1200 V	600 V / 1200 V	900 V / 1200 V	1200 V / 1200 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-G)	I_n	20 kA / 20 kA	20 kA / 20 kA	20 kA / 20 kA	20 kA / 20 kA
Short-Circuit Current Rating (AC)	(L-N)	SCCR	100 kA	200 kA	150 kA	150 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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A			
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)			
Order Information						
Order Code			75	150	300	350
ProTec T1-xxx-1+1			59.0047	59.0049	59.0051	59.0053
ProTec T1-xxx-1+1-R (with remote contacts)			59.0048	59.0050	59.0052	59.0054
ProTec T1-xxx-P (plug L-N)			59.0001	59.0002	59.0003	59.0004
ProTube T1-50-P (plug N-PE)			59.0269	59.0269	59.0269	59.0269

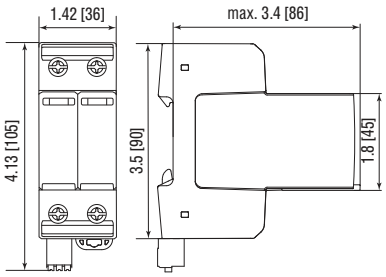
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*
TI	*Thermal Indication*



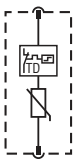
Complete Unit



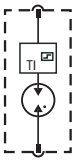
Complete Unit Dimensions & Packaging					
ProTec T1-xxx-1+1		**75**	**150**	**300**	**350**
Weight	pounds	.659	.710	.736	.778
	grams	299	322	334	353
ProTec T1-xxx-1+1-R					
Weight	pounds	.672	.723	.750	.791
	grams	305	328	340	359
DIN 43880 Dimension		2 TE / 1.42" [36]			
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]			
Standard Order Quantity		7 Units			

Plug Internal Configuration

ProTec T1-xxx-P



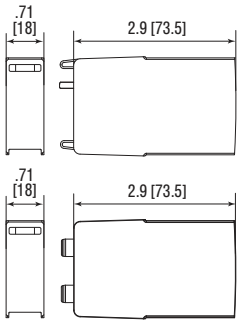
ProTube T1-50-P



Spare Plug

ProTec T1

ProTube T1



Single Unit Dimensions & Packaging					
ProTec T1-xxx-P		**75**	**150**	**300**	**350**
Weight	pounds	.152	.203	.229	.271
	grams	69	92	104	123
ProTube T1-50-P			**50**		
Weight	pounds		.214		
	grams		97		
DIN 43880 Dimension			1 TE / .71" [18]		
Packaging Dimensions (H x W x L)			4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]		
Standard Order Quantity			28 Units		

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1 3+1

12.5 kA Series

Class I • Class II • Type 1 • Type 2 • Type 1CA



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

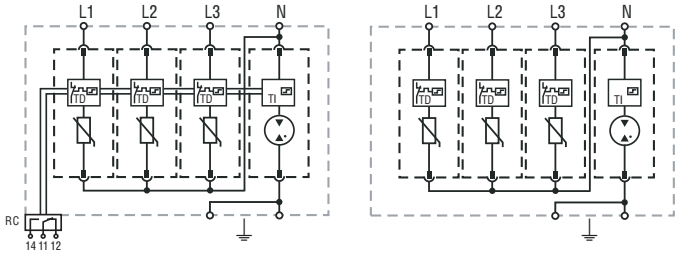
Technical Data

ProTec T1-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	(L-N)	U_c	300 V	350 V
	(N-PE)	U_c	305 V	305 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_n	20 kA / 50 kA	
Maximum Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_{max}	50 kA / 100 kA	
Impulse Discharge Current (10/350 µs)	(L-N)/(N-PE)	I_{imp}	12.5 kA / 50 kA	
Specific Energy	(L-N)/(N-PE)	W/R	39 kJ/Ω / 625 kJ/Ω	
Charge	(L-N)/(N-PE)	Q	6.25 As / 25 As	
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 / 1200 V	1200 V / 1200 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-G)	I_n	20 kA / 20 kA	20 kA / 20 kA
Short-Circuit Current Rating (AC)	(L-N)	SCCR	150 kA	150 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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A	
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)	
Order Information				
Order Code			300	350
ProTec T1-xxx-3+1			59.0059	59.0061
ProTec T1-xxx-3+1-R (with remote contacts)			59.0060	59.0062
ProTec T1-xxx-P (plug L-N)			59.0003	59.0004
ProTube T1-50-P (plug N-PE)			59.0269	59.0269

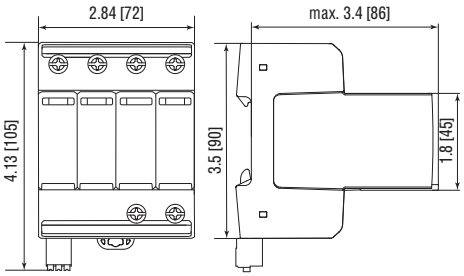
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*
TI	*Thermal Indication*



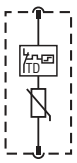
Complete Unit



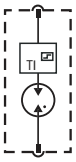
Complete Unit Dimensions & Packaging			
ProTec T1-xxx-3+1		**300**	**350**
Weight	pounds	1.466	1.592
	grams	665	722
ProTec T1-xxx-3+1-R			
Weight	pounds	1.486	1.612
	grams	674	724
DIN 43880 Dimension		4 TE / 2.84" [72]	
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]	
Standard Order Quantity		4 Units	

Plug Internal Configuration

ProTec T1-xxx-P



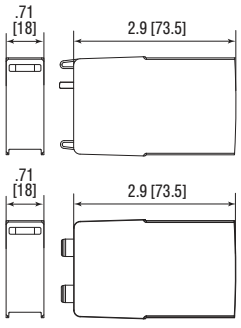
ProTube T1-50-P



Spare Plug

ProTec T1

ProTube T1



Single Unit Dimensions & Packaging			
ProTec T1-xxx-P		**300**	**350**
Weight	pounds	.229	.271
	grams	104	123
ProTube T1-50-P		**50**	
Weight	pounds	.214	
	grams	97	
DIN 43880 Dimension		1 TE / .71" [18]	
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]	
Standard Order Quantity		28 Units	

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1H 2+0

Class I • Class II • Type 1 • Type 2 • Type 4CA

12.5 kA Series



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

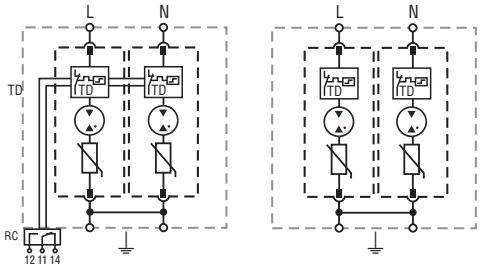
Technical Data

ProTec T1H-xxx-2+0(-R)		300
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	300 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	65 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	12.5 kA
Specific Energy	W/R	39 kJ/Ω
Charge	Q	6.25 As
Voltage Protection Level	U_p	1500 V
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		315 A / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	300 V
Measured Limiting Voltage	MLV	1220 V
Nominal Discharge Current (8/20 µs)	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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)
Order Information		
Order Code		**300**
ProTec T1H-xxx-2+0		59.0312
ProTec T1H-xxx-2+0-R (with remote contacts)		59.0313
ProTec T1H-xxx-P (plug)		59.0308

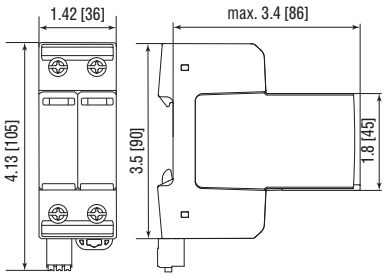
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



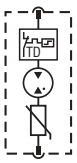
Complete Unit



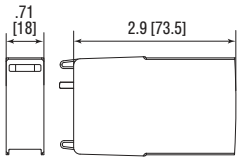
Complete Unit Dimensions & Packaging		
ProTec T1H-xxx-2+0		**300**
Weight	pounds [grams]	.736 [334]
ProTec T1H-xxx-2+0-R		
Weight	pounds [grams]	.756 [343]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		7 Units

Plug Internal Configuration

ProTec T1H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T1H-xxx-P		**300**
Weight	pounds [grams]	.223 [101]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		28 Units

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1H 4+0

Class I • Class II • Type 1 • Type 2 • Type 4CA

12.5 kA Series



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

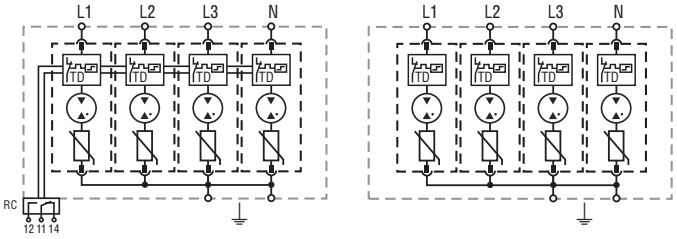
Technical Data

ProTec T1H-xxx-4+0(-R)		300
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	300 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	65 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	12.5 kA
Specific Energy	W/R	39 kJ/Ω
Charge	Q	6.25 As
Voltage Protection Level	U_p	1500 V
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		315 A / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	300 V
Measured Limiting Voltage	MLV	1220 V
Nominal Discharge Current (8/20 µs)	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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)
Order Information		
Order Code		**300**
ProTec T1H-xxx-4+0		59.0316
ProTec T1H-xxx-4+0-R (with remote contacts)		59.0317
ProTec T1H-xxx-P (plug)		59.0308

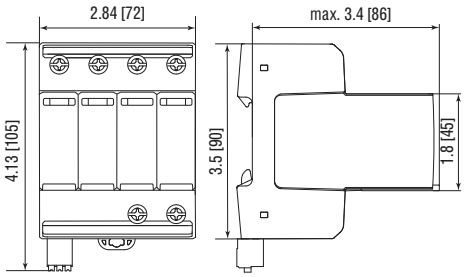
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



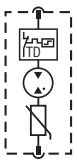
Complete Unit



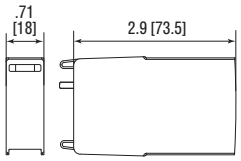
Complete Unit Dimensions & Packaging		
ProTec T1H-xxx-4+0		**300**
Weight	pounds [grams]	1.389 [630]
ProTec T1H-xxx-4+0-R		
Weight	pounds [grams]	1.409 [639]
DIN 43880 Dimension		4 TE / 2.84" [72]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		4 Units

Plug Internal Configuration

ProTec T1H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T1H-xxx-P		**300**
Weight	pounds [grams]	.223 [101]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		28 Units

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1H 1+1

Class I • Class II • Type 1 • Type 2 • Type 4CA

12.5 kA Series



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

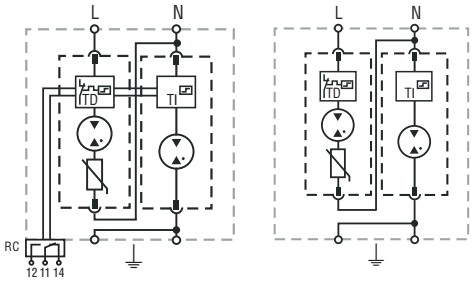
Technical Data

ProTec T1H-xxx-1+1(-R)			300
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE)	U_c	300 V / 305 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_n	20 kA / 50 kA
Maximum Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_{max}	65 kA / 100 kA
Impulse Discharge Current (10/350 µs)	(L-N) / (N-PE)	I_{imp}	12.5 kA / 50 kA
Specific Energy	(L-N) / (N-PE)	W/R	39 kJ/Ω / 625 kJ/Ω
Charge	(L-N) / (N-PE)	Q	6.25 As / 25 As
Voltage Protection Level	(L-N) / (N-PE)	U_p	1500 V / 1500 V
Response Time	(L-N) / (N-PE)	t_A	< 100 ns / < 100 ns
Overcurrent Protection (max)			315 A / 250 A gG
Short-Circuit Current Rating (AC)	(L-N)	I_{SCCR}	25 kA / 50 kA
Follow Current Interrupt Rating	(N-PE)	I_{fi}	100 A_{RMS}
TOV Withstand 120min	(L-N)	U_T	442 V
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
Measured Limiting Voltage	(L-N) / (N-G)	MLV	1220 V / 1800 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-G)	I_n	20 kA / 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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)
Order Information			
Order Code			**300**
ProTec T1H-xxx-1+1			59.0318
ProTec T1H-xxx-1+1-R (with remote contacts)			59.0319
ProTec T1H-xxx-P (plug L-N)			59.0308
ProTube T1H-50-P (plug N-PE)			59.0309

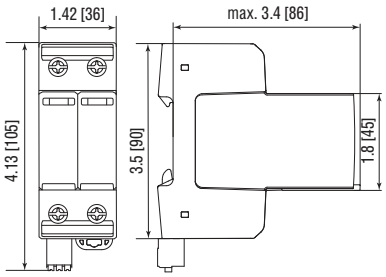
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*
TI	*Thermal Indication*



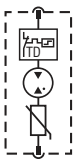
Complete Unit



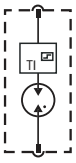
Complete Unit Dimensions & Packaging		
ProTec T1H-xxx-1+1		**300**
Weight	pounds [grams]	.730 [331]
ProTec T1H-xxx-1+1-R		
Weight	pounds [grams]	.743 [337]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		7 Units

Plug Internal Configuration

ProTec T1H-xxx-P

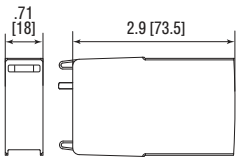


ProTube T1H-50-P

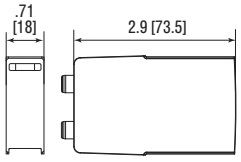


Spare Plug

ProTec T1H



ProTube T1H



Single Unit Dimensions & Packaging		
ProTec T1H-xxx-P		**300**
Weight	pounds [grams]	.223 [101]
ProTube T1H-50-P		**50**
Weight	pounds [grams]	.214 [97]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		28 Units

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1H 3+1

12.5 kA Series

Class I • Class II • Type 1 • Type 2 • Type 4CA



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

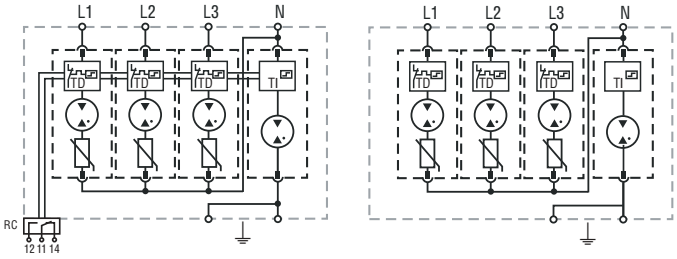
Technical Data

ProTec T1H-xxx-3+1(-R)			300
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE)	U_c	300 V / 305 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_n	20 kA / 50 kA
Maximum Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_{max}	65 kA / 100 kA
Impulse Discharge Current (10/350 µs)	(L-N) / (N-PE)	I_{imp}	12.5 kA / 50 kA
Specific Energy	(L-N) / (N-PE)	W/R	39 kJ/Ω / 625 kJ/Ω
Charge (L-N) / (N-PE)		Q	6.25 As / 25 As
Voltage Protection Level	(L-N) / (N-PE)	U_p	1500 V / 1500 V
Response Time	(L-N) / (N-PE)	t_A	< 100 ns / < 100 ns
Overcurrent Protection (max)			315 A / 250 A gG
Short-Circuit Current Rating (AC)	(L-N)	I_{SCCR}	25 kA / 50 kA
Follow Current Interrupt Rating	(N-PE)	I_{fi}	100 A_{RMS}
TOV Withstand 120min	(L-N)	U_T	442 V
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
Measured Limiting Voltage	(L-N) / (N-G)	MLV	1220 V / 1800 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-G)	I_n	20 kA / 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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm² (Solid)
Order Information			
Order Code			**300**
ProTec T1H-xxx-3+1			59.0320
ProTec T1H-xxx-3+1-R (with remote contacts)			59.0321
ProTec T1H-xxx-P (plug L-N)			59.0308
ProTube T1H-50-P (plug N-PE)			59.0309

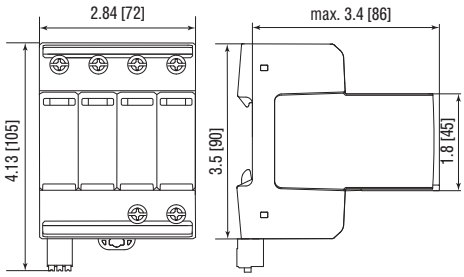
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*
TI	*Thermal Indication*



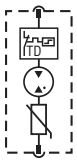
Complete Unit



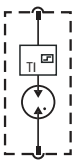
Complete Unit Dimensions & Packaging		
ProTec T1H-xxx-3+1		**300**
Weight	pounds [grams]	1.446 [656]
ProTec T1H-xxx-3+1-R		
Weight	pounds [grams]	1.466 [665]
DIN 43880 Dimension		4 TE / 2.84 [72]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		4 Units

Plug Internal Configuration

ProTec T1H-xxx-P

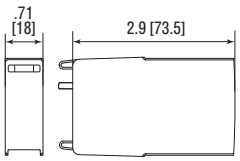


ProTube T1H-50-P

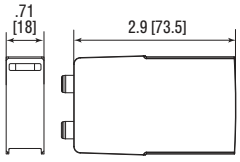


Spare Plug

ProTec T1H



ProTube T1H



Single Unit Dimensions & Packaging		
ProTec T1H-xxx-P		**300**
Weight	pounds [grams]	.223 [101]
ProTube T1H-50-P		**50**
Weight	pounds [grams]	.214 [97]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		28 Units

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1HS 4+0

Class I • Class II • Type 1 • Type 2 • Type 4CA

25 kA Series



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

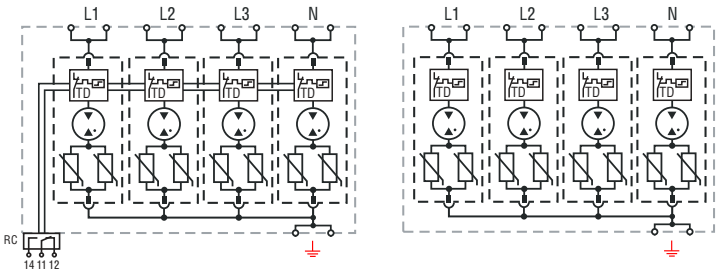
Technical Data

ProTec T1HS-xxx-4+0(-R)		300
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	300 V
Nominal Discharge Current (8/20 µs)	I_n	25 kA
Maximum Discharge Current (8/20 µs)	I_{max}	65 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	25 kA
Specific Energy	W/R	156.2 kJ/Ω
Charge	Q	12.5 As
Voltage Protection Level	U_p	1500 V
Rated Load Current	I_L	100 A
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		315 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	300 V
Measured Limiting Voltage	MLV	1280 V
Nominal Discharge Current (8/20 µs)	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		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		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: 250 V / 1A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)
Order Information		
Order Code		**300**
ProTec T1HS-xxx-4+0		59.0260
ProTec T1HS-xxx-4+0-R (with remote contacts)		59.0261
ProTec T1HS-xxx-P (plug)		59.0302

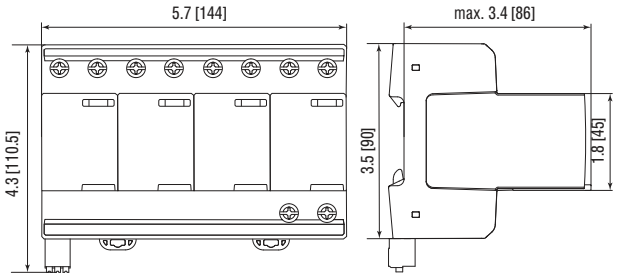
Internal Configuration

Legend

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



Complete Unit



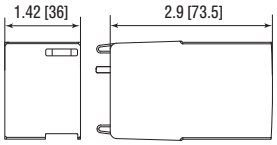
Complete Unit Dimensions & Packaging		
ProTec T1HS-xxx-4+0		**300**
Weight	pounds [grams]	2.502 [1135]
ProTec T1HS-xxx-4+0-R		
Weight	pounds [grams]	2.522 [1144]
DIN 43880 Dimension		8 TE / 5.7" [144]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		2 Units

Plug Internal Configuration

ProTec T1HS-xxx-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T1HS-xxx-P		**300**
Weight	pounds [grams]	.364 [165]
DIN 43880 Dimension		2 TE / 1.42 [36]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		14 Units

inches
[mm]

RoHS COMPLIANT

Lightning and Overvoltage Protection

ProTec T1HS 3+1

Class I • Class II • Type 1 • Type 2 • Type 4CA

25 kA Series



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

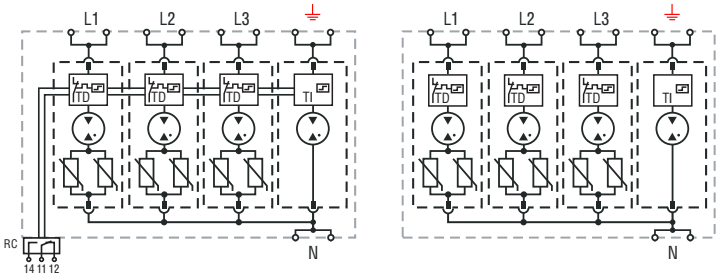
Technical Data

ProTec T1HS-xxx-3+1(-R)			300
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE)	U_c	300 V / 305 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_n	25 kA / 100 kA
Maximum Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_{max}	65 kA / 130 kA
Impulse Discharge Current (10/350 µs)	(L-N) / (N-PE)	I_{imp}	25 kA / 100 kA
Specific Energy	(L-N) / (N-PE)	W/R	156.2 kJ/Ω / 2500 kJ/Ω
Charge	(L-N) / (N-PE)	Q	12.5 As / 50 As
Voltage Protection Level	(L-N) / (N-PE)	U_p	1500 V / 1500 V
Rated Load Current		I_L	100 A
Response Time	(L-N) / (N-PE)	t_A	< 100 ns / < 100 ns
Overcurrent Protection (max)			315 A gG
Short-Circuit Current Rating (AC)		I_{SCCR}	50 kA
Follow Current Interrupt Rating	(N-PE)	I_{fi}	100 A_{RMS}
TOV Withstand 120min	(L-N)	U_T	442 V
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
Measured Limiting Voltage	(L-N)/(N-G)	MLV	1280 V / 1000 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-G)	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			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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)
Order Information			
Order Code			300
ProTec T1HS-xxx-3+1			59.0306
ProTec T1HS-xxx-3+1-R (with remote contacts)			59.0307
ProTec T1HS-xxx-P (plug L-N)			59.0302
ProTube T1HS-100-P (plug N-PE)			59.0303

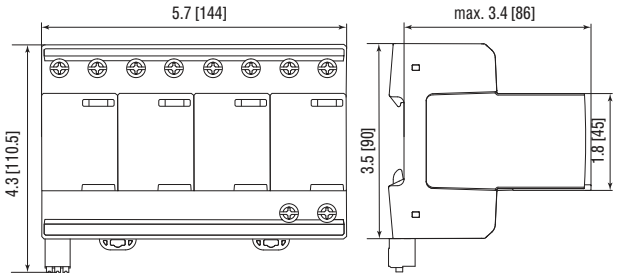
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*
TI	*Thermal Indication*



Complete Unit



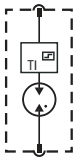
Complete Unit Dimensions & Packaging		
ProTec T1HS-xxx-3+1		**300**
Weight	pounds [grams]	2.348 [1065]
ProTec T1HS-xxx-3+1-R		
Weight	pounds [grams]	2.368 [1074]
DIN 43880 Dimension		8 TE / 5.7 [144]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		2 Units

Plug Internal Configuration

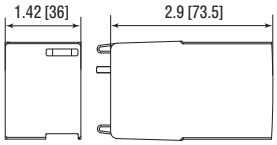
ProTec T1HS-xxx-P



ProTube T1HS-100-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T1HS-xxx-P		**300**
Weight	pounds [grams]	.364 [165]
ProTube T1HS-100-P		**100**
Weight	pounds [grams]	0.209 [95]
DIN 43880 Dimension		2 TE / 1.42 [36]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		14 Unit

inches
[mm]

RoHS COMPLIANT

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

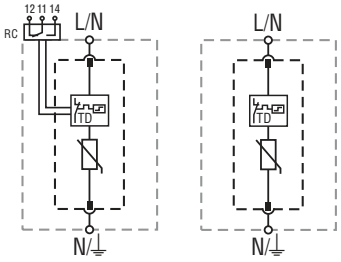
Technical Data

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)		315A / 250A gG						
Short-Circuit Current Rating (AC)	I_{SCCR}	25kA / 50kA						
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		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 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 recognized, no IEC/EN certification.*

ProTec T2 1+0

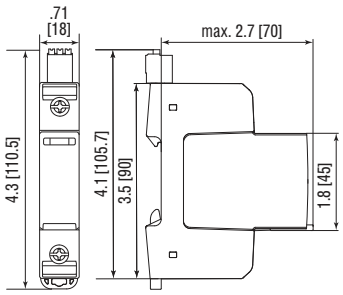
Internal Configuration



Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*

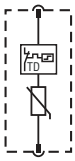
Complete Unit



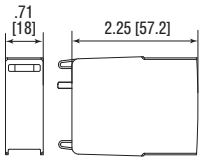
Complete Unit Dimensions & Packaging								
ProTec T2-xxx-1+0		**75**	**150**	**300**	**350**	**480**	**550***	**750**
Weight	pounds	.259	.275	.281	.292	.306	.311	.336
	grams	118	125	128	133	139	141	153
ProTec T2-xxx-1+0-R								
Weight	pounds	.275	.290	.297	.308	.321	.326	.352
	grams	125	132	135	140	146	148	160
DIN 43880 Dimension		1 TE / .71" [18 mm]						
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 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 (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]						
Standard Order Quantity		24 Units						

inches
[mm]

RoHS COMPLIANT

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)		315A / 250A gG						
Short-Circuit Current Rating (AC)	I_{SCCR}	25kA / 50kA						
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		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 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

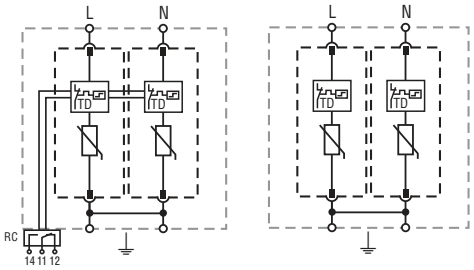
**UL recognized, no IEC/EN certification.*

ProTec T2 2+0

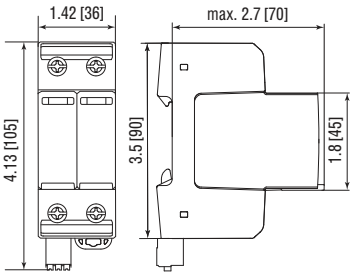
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



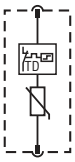
Complete Unit



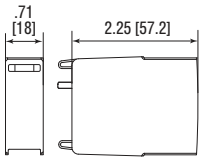
Complete Unit Dimensions & Packaging								
ProTec T2-xxx-2+0		**75**	**150**	**300**	**350**	**480**	**550***	**750**
Weight	pounds	.505	.536	.549	.571	.598	.608	.660
	grams	229	243	249	259	271	276	299
ProTec T2-xxx-2+0-R								
Weight	pounds	.525	.556	.569	.591	.618	.639	.679
	grams	238	252	258	268	280	290	308
DIN 43880 Dimension		2 TE / 1.42" [36]						
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 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 (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]						
Standard Order Quantity		24 Units						

inches
[mm]

RoHS COMPLIANT

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 (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA	50kA	35kA
Voltage Protection Level	U_p	1250V	1500V	1750V	2300V	2500V	3400V
Response Time	t_A	< 25ns					
Overcurrent Protection (max)		315A / 250A gG					
Short-Circuit Current Rating (AC)	I_{SCCR}	25kA / 50kA					
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 (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	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 [4000m]					
Terminal Screw Torque	M_{max}	39.9 lbf·in [4.5Nm]					
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)					
		35mm² (Solid, Stranded) / 25mm² (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) / 1.5mm² (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

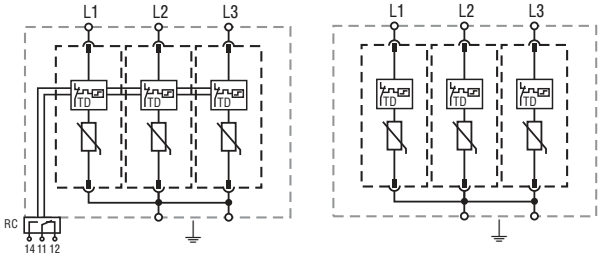
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ProTec T2 3+0

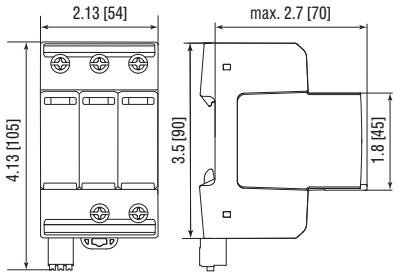
Internal Configuration

Legend

L	*Line Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



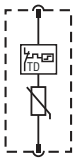
Complete Unit



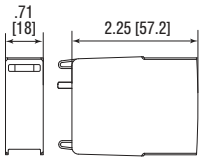
Complete Unit Dimensions & Packaging							
ProTec T2-xxx-3+0		**150**	**300**	**350**	**480**	**550***	**750**
Weight	pounds	.780	.800	.833	.873	.890	.965
	grams	354	363	378	396	404	438
ProTec T2-xxx-3+0-R							
Weight	pounds	.800	.820	.853	.892	.913	.985
	grams	363	372	387	405	414	447
DIN 43880 Dimension		3 TE / 2.13" [54]					
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 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 (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]					
Standard Order Quantity		24 Units					

inches
[mm]

RoHS COMPLIANT

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 (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA	50kA
Voltage Protection Level	U_p	1250V	1500V	1750V	2300V	2500V
Response Time	t_A			< 25ns		
Overcurrent Protection (max)				315A / 250A gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			25kA / 50kA		
TOV Withstand 5s	U_T	229V	337V	403V	581V	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 (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	200kA	150kA	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 [4000m]		
Terminal Screw Torque	M_{max}			39.9 lbf·in [4.5Nm]		
Conductor Cross Section (max)				2 AWG (Solid, Stranded) / 4 AWG (Flexible)		
				35mm² (Solid, Stranded) / 25mm² (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) / 1.5mm² (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

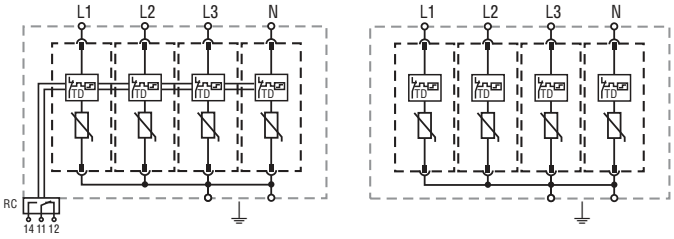
**UL recognized, no IEC/EN certification.*

ProTec T2 4+0

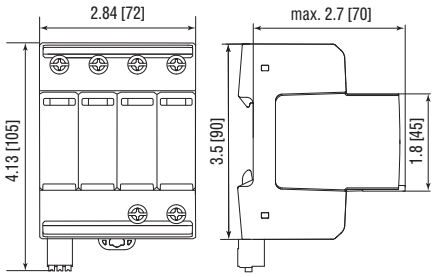
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



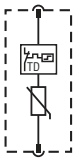
Complete Unit



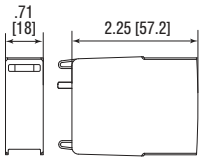
Complete Unit Dimensions & Packaging						
ProTec T2-xxx-4+0		**150**	**300**	**350**	**480**	**550***
Weight	pounds	.989	1.015	1.059	1.112	1.208
	grams	448	460	480	504	548
ProTec T2-xxx-4+0-R						
Weight	pounds	1.008	1.035	1.079	1.132	1.228
	grams	457	469	489	513	557
DIN 43880 Dimension		4 TE / 2.84" [72]				
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 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 (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]				
Standard Order Quantity		24 Units				

inches
[mm]

RoHS COMPLIANT

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

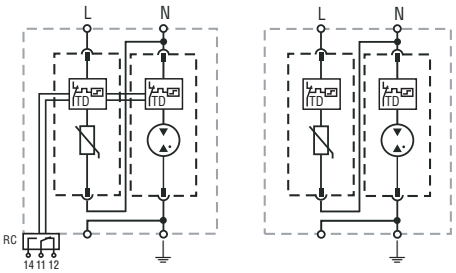
ProTec T2-xxx-1+1(-R)			75	150	300	350
IEC Electrical						
Nominal AC Voltage (50/60Hz)		U_o/U_n	60 V	120 V	240 V	277 V
Maximum Continuous Operating Voltage (AC)	(L-N)	U_c	75 V	150 V	300 V	350 V
	(N-PE)	U_c	305 V	305 V	305 V	305 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_n	20 kA / 40 kA	20 kA / 40 kA	20 kA / 40 kA	20 kA / 40 kA
Maximum Discharge Current (8/20 µs)	(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 / 1500V	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	1200V			
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 µs)	(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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A			
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

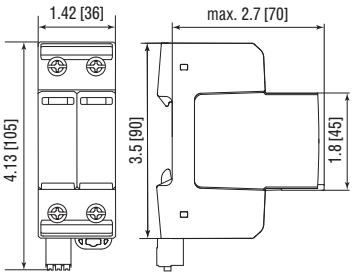
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



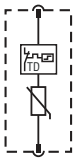
Complete Unit



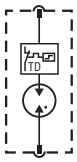
Complete Unit Dimensions & Packaging					
ProTec T2-xxx-1+1		**75**	**150**	**300**	**350**
Weight	pounds	.512	.527	.534	.545
	grams	232	239	242	247
ProTec T2-xxx-1+1-R					
Weight	pounds	.521	.536	.543	.554
	grams	236	243	246	251
DIN 43880 Dimension		2 TE / 1.42" [36]			
Packaging Dimensions (H x W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

Plug Internal Configuration

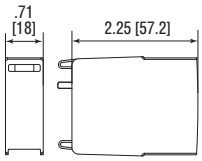
ProTec T2-xxx-P



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 (H x W x L)			3.2 × 4.5 × 12" [83 × 115 × 305 mm]		
Standard Order Quantity			24 Units		

inches
[mm]

RoHS COMPLIANT

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

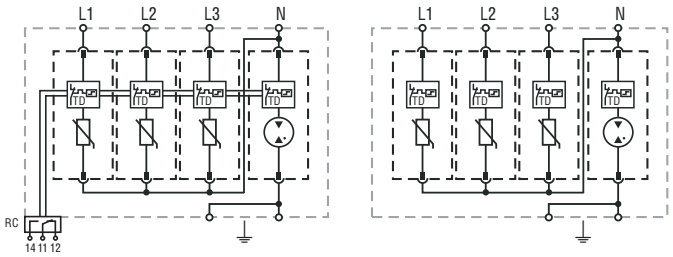
ProTec T2-xxx-3+1(-R)			300	350
IEC Electrical				
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V	277 V
Maximum Continuous Operating Voltage (AC)	(L-N)	U_c	300 V	350 V
	(N-PE)	U_c	305 V	305 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_n	20 kA / 40 kA	20 kA / 40 kA
Maximum Discharge Current (8/20 µs)	(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	1200V	
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 µs)	(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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A	
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

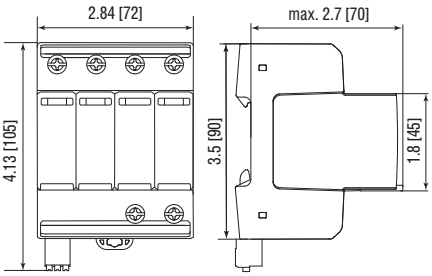
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



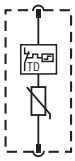
Complete Unit



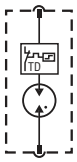
Complete Unit Dimensions & Packaging			
ProTec T2-xxx-3+1		**300**	**350**
Weight	pounds	1.000	1.033
	grams	453	468
ProTec T2-xxx-3+1-R			
Weight	pounds	1.011	1.044
	grams	458	473
DIN 43880 Dimension		4 TE / 2.84" [72]	
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]	
Standard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

Plug Internal Configuration

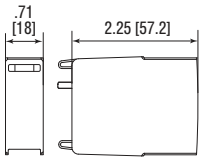
ProTec T2-xxx-P



ProTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging			
ProTec T2-xxx-P		**300**	**350**
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 (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]	
Standard Order Quantity		24 Units	

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTube T2 40 0+1

Class II • Type 2 • Type 1CA



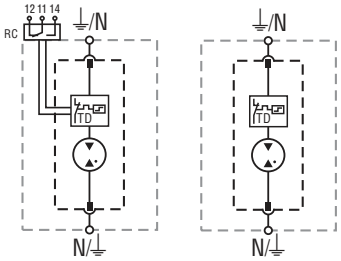
Location of Use: Sub-Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: N-PE
IEC/EN/UL Category: Class II / Type 2 / Type 1CA
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

ProTube T2-xxx-0+1(-R)		40
IEC Electrical		
Maximum Continuous Operating Voltage	U_c	305V
Nominal Discharge Current (8/20µs)	I_n	40kA
Maximum Discharge Current (8/20µs)	I_{max}	65kA
Voltage Protection Level	U_p	1500V
Follow Current Interrupt Rating	I_{fi}	100 A_{RMS}
Response Time	t_A	< 100ns
TOV Withstand 200ms	U_T	1200V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	305V
Voltage Protection Rating	VPR	1000V
Nominal Discharge Current (8/20µs)	I_n	20kA
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 [4000m]
Terminal Screw Torque	M_{max}	39.9 lbf·in [4.5Nm]
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)
		35mm² (Solid, Stranded) / 25mm² (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) / 1.5mm² (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

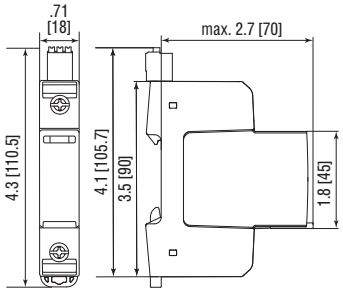
Internal Configuration



Legend

N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*

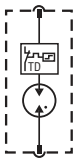
Complete Unit



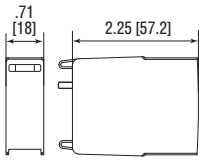
Complete Unit Dimensions & Packaging		
ProTube T2-xxx-0+1		**40**
Weight	pounds	.244
	grams	111
ProTube T2-xxx-0+1-R		
Weight	pounds	.259
	grams	118
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		12 Units

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 (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]
Standard Order Quantity		24 Units

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2-ADV 1+0

Class II • Type 2 • Type 1CA



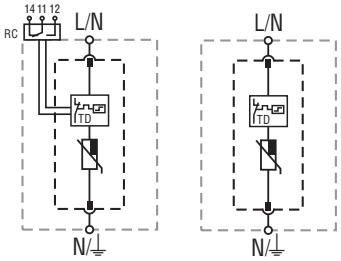
Location of Use: Sub-Distribution Boards
Network Systems: TN-S, TN-C, TT (only L-N)
Mode of Protection: L-PE, N-PE (only TN-S), L-PEN, L-N
IEC/EN/UL Category: Class II / Type 2 / Type 1CA
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

ProTec T2-ADV-xxx-1+0(-R)		75	150	300	350	480
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V	400V
Maximum Continuous Operating Voltage (AC)	U_c	75V	150V	300V	350V	480V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA	50kA
Voltage Protection Level	U_p	600V	1000V	1300V	1700V	2000V
Response Time	t_A			< 25ns		
Overcurrent Protection (max)				160A gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			50kA		
TOV Withstand 5s	U_T	114V	229V	337V	403V	581V
TOV 120min	U_T	114V	229V	442V	528V	762V
	mode	Withstand	Withstand	Safe Fail	Safe Fail	Safe Fail
Number of Ports				1		
UL Electrical						
Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V
Voltage Protection Rating	VPR	400V	600V	900V	1200V	1500V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	100kA	200kA	150kA	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 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	480
ProTec T2-ADV-xxx-1+0		59.0208	59.0210	59.0212	59.0214	59.0216
ProTec T2-ADV-xxx-1+0-R (with remote contacts)		59.0209	59.0211	59.0213	59.0215	59.0217
ProTec T2-ADV-xxx-P (plug)		59.0202	59.0203	59.0204	59.0205	59.0206

ProTec T2-ADV 1+0

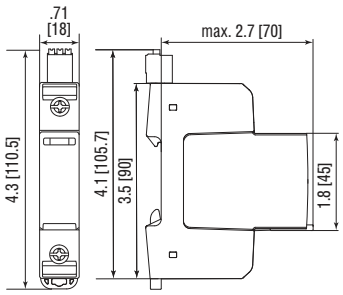
Internal Configuration



Legend

L	*Line Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*

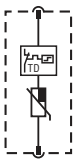
Complete Unit



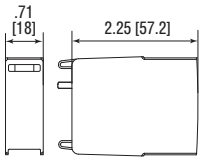
Complete Unit Dimensions & Packaging						
ProTec T2-ADV-xxx-1+0		**75**	**150**	**300**	**350**	**480**
Weight	pounds	.266	.275	.291	.302	.304
	grams	121	125	132	137	144
ProTec T2-ADV-xxx-1+0-R						
Weight	pounds	.283	.291	.306	.317	.328
	grams	128	132	139	144	149
DIN 43880 Dimension		1 TE / .71" [18]				
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]				
Standard Order Quantity		12 Units				

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging						
ProTec T2-ADV-xxx-P		**75**	**150**	**300**	**350**	**480**
Weight	pounds	.120	.127	.143	.154	.165
	grams	54	58	65	70	75
DIN 43880 Dimension		1 TE / .71" [18]				
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]				
Standard Order Quantity		24 Units				

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2-ADV 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

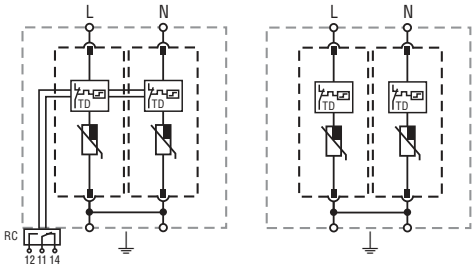
ProTec T2-ADV-xxx-2+0(-R)		75	150	300	350	480
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V	400V
Maximum Continuous Operating Voltage (AC)	U_c	75V	150V	300V	350V	480V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA	50kA
Voltage Protection Level	U_p	600V	1000V	1300V	1700V	2000V
Response Time	t_A			< 25ns		
Overcurrent Protection (max)				160A gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			50kA		
TOV Withstand 5s	U_T	114V	229V	337V	403V	581V
TOV 120min	U_T	114V	229V	442V	528V	762V
	mode	Withstand	Withstand	Safe Fail	Safe Fail	Safe Fail
Number of Ports				1		
UL Electrical						
Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V
Voltage Protection Rating	VPR	400V	600V	900V	1200V	1500V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	100kA	200kA	150kA	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 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	480
ProTec T2-ADV-xxx-2+0		59.0347	59.0220	59.0222	59.0224	59.0226
ProTec T2-ADV-xxx-2+0-R (with remote contacts)		59.0348	59.0221	59.0223	59.0225	59.0227
ProTec T2-ADV-xxx-P (plug)		59.0202	59.0203	59.0204	59.0205	59.0206

ProTec T2-ADV 2+0

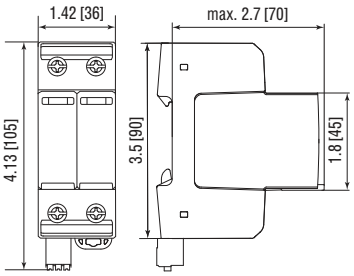
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



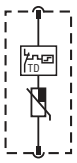
Complete Unit



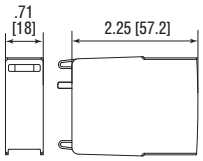
Complete Unit Dimensions & Packaging						
ProTec T2-ADV-xxx-2+0		**75**	**150**	**300**	**350**	**480**
Weight	pounds	.524	.542	.573	.595	.617
	grams	238	246	260	270	280
ProTec T2-ADV-xxx-2+0-R						
Weight	pounds	.555	.573	.590	.626	.648
	grams	252	260	268	284	294
DIN 43880 Dimension		2 TE / 1.42" [36]				
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]				
Standard Order Quantity		7 Units				

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging						
ProTec T2-ADV-xxx-P		**75**	**150**	**300**	**350**	**480**
Weight	pounds	.120	.127	.143	.154	.165
	grams	54	58	65	70	75
DIN 43880 Dimension		1 TE / .71" [18]				
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]				
Standard Order Quantity		24 Units				

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2-ADV 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

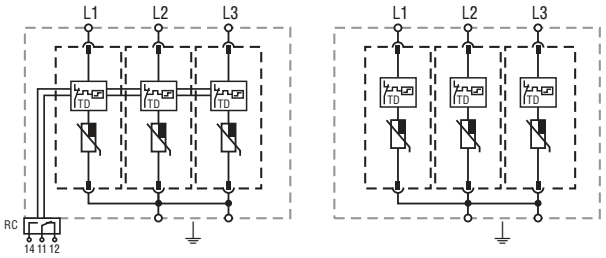
ProTec T2-ADV-xxx-3+0(-R)		150	300	350	480
IEC Electrical					
Nominal AC Voltage (50/60Hz)	U_o/U_n	120V	240V	277V	400V
Maximum Continuous Operating Voltage (AC)	U_c	150V	300V	350V	480V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA
Voltage Protection Level	U_p	1000V	1300V	1700V	2000V
Response Time	t_A	< 25ns			
Overcurrent Protection (max)		160A gG			
Short-Circuit Current Rating (AC)	I_{SCCR}	50kA			
TOV Withstand 5s	U_T	229V	337V	403V	581V
TOV 120min	U_T	229V	442V	528V	762V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1			
UL Electrical					
Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	480V
Voltage Protection Rating	VPR	600V	900V	1200V	1500V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	200kA	150kA	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		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 mm² (Solid)			
Order Information					
Order Code		**150**	**300**	**350**	**480**
ProTec T2-ADV-xxx-3+0		59.0228	59.0230	59.0232	59.0234
ProTec T2-ADV-xxx-3+0-R (with remote contacts)		59.0229	59.0231	59.0233	59.0235
ProTec T2-ADV-xxx-P (plug)		59.0203	59.0204	59.0205	59.0206

ProTec T2-ADV 3+0

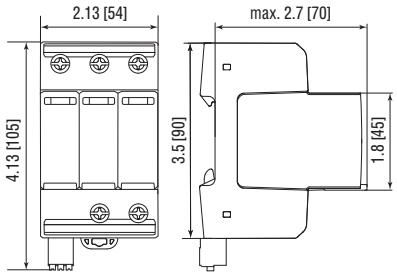
Internal Configuration

Legend

L	*Line Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



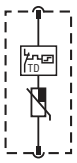
Complete Unit



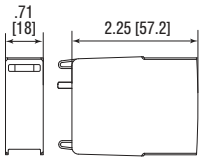
Complete Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-3+0		**150**	**300**	**350**	**480**
Weight	pounds	.787	.833	.866	.899
	grams	357	378	393	408
ProTec T2-ADV-xxx-3+0-R					
Weight	pounds	.809	.855	.888	.921
	grams	367	388	403	418
DIN 43880 Dimension		3 TE / 2.13" [54]			
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]			
Standard Order Quantity		5 Units			

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-P		**150**	**300**	**350**	**480**
Weight	pounds	.127	.143	.154	.165
	grams	58	65	70	75
DIN 43880 Dimension		1 TE / .71" [18]			
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]			
Standard Order Quantity		24 Units			

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2-ADV 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

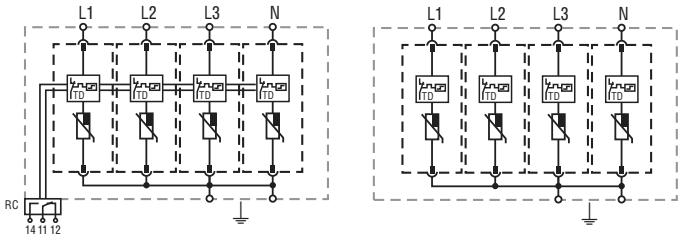
ProTec T2-ADV-xxx-4+0(-R)		150	300	350	480
IEC Electrical					
Nominal AC Voltage (50/60Hz)	U_o/U_n	120V	240V	277V	400V
Maximum Continuous Operating Voltage (AC)	U_c	150V	300V	350V	480V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA
Voltage Protection Level	U_p	1000V	1300V	1700V	2000V
Response Time	t_A	< 25ns			
Overcurrent Protection (max)		160A gG			
Short-Circuit Current Rating (AC)	I_{SCCR}	50kA			
TOV Withstand 5s	U_T	229V	337V	403V	581V
TOV 120min	U_T	229V	442V	528V	762V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1			
UL Electrical					
Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	480V
Voltage Protection Rating	VPR	600V	900V	1200V	1500V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	200kA	150kA	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		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 mm² (Solid)			
Order Information					
Order Code		**150**	**300**	**350**	**480**
ProTec T2-ADV-xxx-4+0		59.0236	59.0238	59.0240	59.0242
ProTec T2-ADV-xxx-4+0-R (with remote contacts)		59.0237	59.0239	59.0241	59.0243
ProTec T2-ADV-xxx-P (plug)		59.0203	59.0204	59.0205	59.0206

ProTec T2-ADV 4+0

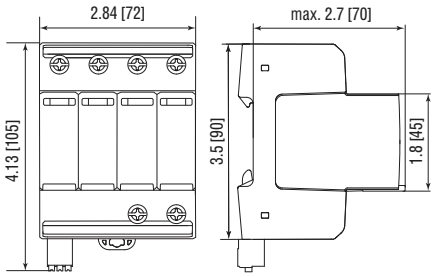
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



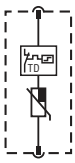
Complete Unit



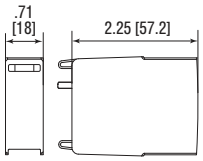
Complete Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-4+0		**150**	**300**	**350**	**480**
Weight	pounds	1.067	1.128	1.172	1.216
	grams	484	512	532	552
ProTec T2-ADV-xxx-4+0-R					
Weight	pounds	1.086	1.148	1.192	1.236
	grams	493	521	541	561
DIN 43880 Dimension		4 TE / 2.84" [72]			
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]			
Standard Order Quantity		4 Units			

Plug Internal Configuration

ProTec T2-ADV-xxx-P



Spare Plug



Single Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-P		**150**	**300**	**350**	**480**
Weight	pounds	.127	.143	.154	.165
	grams	58	65	70	75
DIN 43880 Dimension		1 TE / .71" [18]			
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]			
Standard Order Quantity		24 Units			

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2H 2+0

Class II • Type 2 • Type 1 • 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
Technology: Hybrid
Leakage Current Free: Yes
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

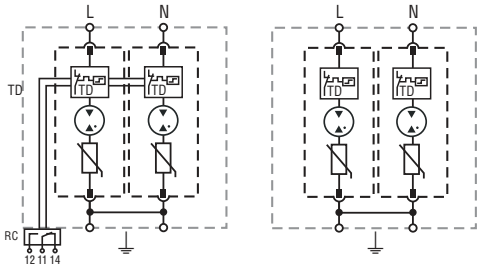
ProTec T2H-xxx-2+0(-R)		300
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	300 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA
Voltage Protection Level	U_p	1500 V
Response Time	t_A	< 25 ns
Overcurrent Protection (max)		315 A / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	300 V
Voltage Protection Rating	VPR	1200 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Short-Circuit Current Rating (AC)	SCCR	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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)
Order Information		
Order Code		**300**
ProTec T2H-xxx-2+0		59.0326
ProTec T2H-xxx-2+0-R (with remote contacts)		59.0327
ProTec T2H-xxx-P (plug)		59.0322

ProTec T2H 2+0

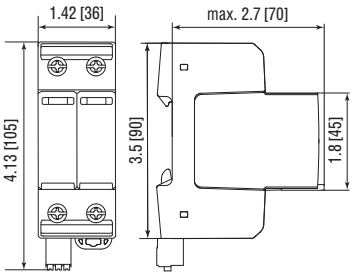
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



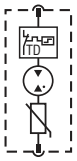
Complete Unit



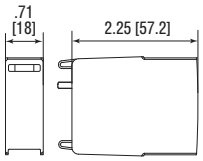
Complete Unit Dimensions & Packaging		
ProTec T2H-xxx-2+0		**300**
Weight	pounds [grams]	.514 [233]
ProTec T2H-xxx-2+0-R		
Weight	pounds [grams]	.534 [242]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		7 Units

Plug Internal Configuration

ProTec T2H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T2H-xxx-P		**300**
Weight	pounds [grams]	.112 [51]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]
Standard Order Quantity		24 Units

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2H 3+0

Class II • Type 2 • Type 1 • 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
Technology: Hybrid
Leakage Current Free: Yes
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

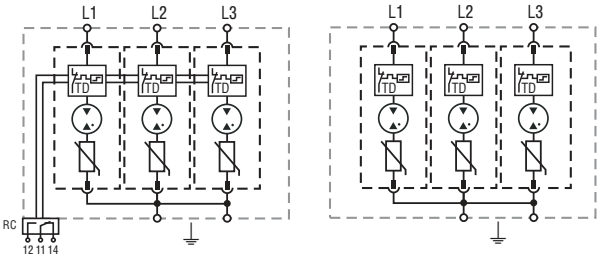
ProTec T2H-xxx-3+0(-R)		300
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	300 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA
Voltage Protection Level	U_p	1500 V
Response Time	t_A	< 25 ns
Overcurrent Protection (max)		315 A / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	300 V
Voltage Protection Rating	VPR	1200 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Short-Circuit Current Rating (AC)	SCCR	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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)
Order Information		
Order Code		**300**
ProTec T2H-xxx-3+0		59.0328
ProTec T2H-xxx-3+0-R (with remote contacts)		59.0329
ProTec T2H-xxx-P (plug)		59.0322

ProTec T2H 3+0

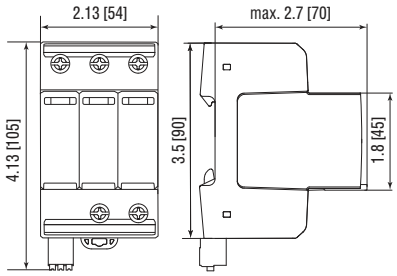
Internal Configuration

Legend

L	*Line Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



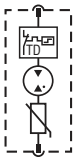
Complete Unit



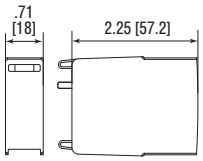
Complete Unit Dimensions & Packaging		
ProTec T2H-xxx-3+0		**300**
Weight	pounds [grams]	.747 [339]
ProTec T2H-xxx-3+0-R		
Weight	pounds [grams]	.767 [348]
DIN 43880 Dimension		3 TE / 2.13" [54]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		5 Units

Plug Internal Configuration

ProTec T2H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T2H-xxx-P		**300**
Weight	pounds [grams]	.112 [51]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]
Standard Order Quantity		24 Units

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2H 4+0

Class II • Type 2 • Type 1 • 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
Technology: Hybrid
Leakage Current Free: Yes
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

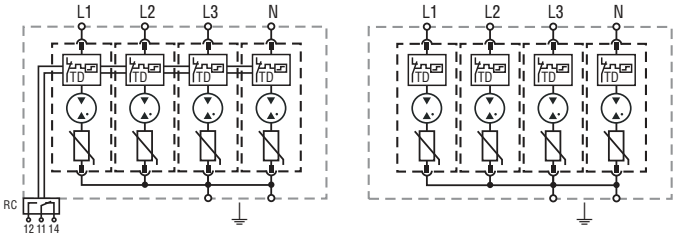
ProTec T2H-xxx-4+0(-R)		300
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	300 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA
Voltage Protection Level	U_p	1500 V
Response Time	t_A	< 25 ns
Overcurrent Protection (max)		315 A / 250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
UL Electrical		
Maximum Continuous Operating Voltage (AC)	MCOV	300 V
Voltage Protection Rating	VPR	1200 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Short-Circuit Current Rating (AC)	SCCR	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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)
Order Information		
Order Code		**300**
ProTec T2H-xxx-4+0		59.0330
ProTec T2H-xxx-4+0-R (with remote contacts)		59.0331
ProTec T2H-xxx-P (plug)		59.0322

ProTec T2H 4+0

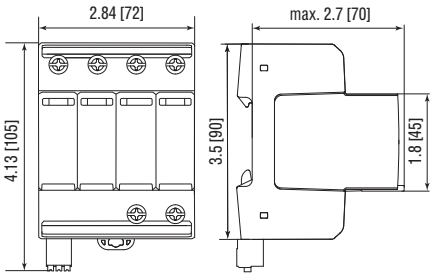
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



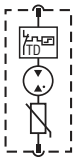
Complete Unit



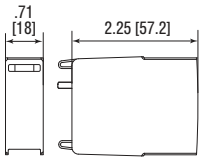
Complete Unit Dimensions & Packaging		
ProTec T2H-xxx-4+0		**300**
Weight	pounds [grams]	.944 [428]
ProTec T2H-xxx-4+0-R		
Weight	pounds [grams]	.964 [437]
DIN 43880 Dimension		4 TE / 2.84" [72]
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		4 Units

Plug Internal Configuration

ProTec T2H-xxx-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T2H-xxx-P		**300**
Weight	pounds [grams]	.112 [51]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]
Standard Order Quantity		24 Units

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2H 1+1

Class II • Type 2 • Type 1 • 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
Technology: Hybrid
Leakage Current Free: Yes
Housing: Pluggable Design
Compliance: IEC 61643-11: 2011
EN 61643-11: 2012
UL 1449 4th Edition

Technical Data

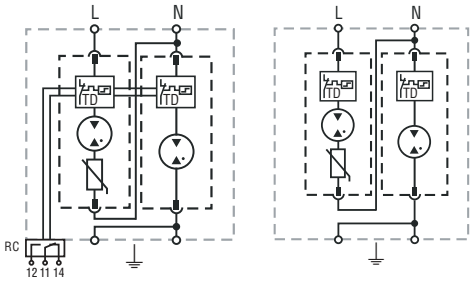
ProTec T2H-xxx-1+1(-R)			300
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE)	U_c	300 V / 305 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_n	20 kA / 40 kA
Maximum Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_{max}	50 kA / 65 kA
Voltage Protection Level	(L-N) / (N-PE)	U_p	1500 V / 1500 V
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
Follow Current Interrupt Rating	(N-PE)	I_{fi}	100 A_{RMS}
TOV Withstand 120min	(L-N)	U_T	442 V
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
Voltage Protection Rating	(L-N)/(N-G)	VPR	1200 V / 1000 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-G)	I_n	20 kA / 20 kA
Short-Circuit Current Rating (AC)	(L-N)	SCCR	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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)
Order Information			
Order Code			**300**
ProTec T2H-xxx-1+1			59.0332
ProTec T2H-xxx-1+1-R (with remote contacts)			59.0333
ProTec T2H-xxx-P (plug L-N)			59.0322
ProTube T2H-40-P (plug N-PE)			59.0323

ProTec T2H 1+1

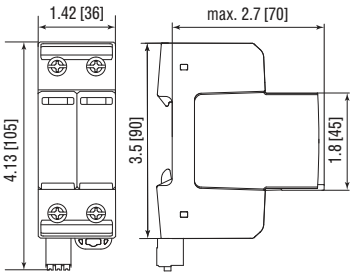
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



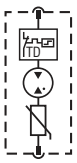
Complete Unit



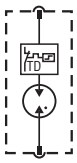
Complete Unit Dimensions & Packaging		
ProTec T2H-xxx-1+1		**300**
Weight	pounds [grams]	.516 [234]
ProTec T2H-xxx-1+1-R		
Weight	pounds [grams]	.525 [238]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		7 Units

Plug Internal Configuration

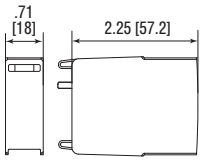
ProTec T2H-xxx-P



ProTube T2H-40-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T2H-xxx-P		**300**
Weight	pounds [grams]	.112 [51]
ProTube T2H-40-P		**40**
Weight	pounds [grams]	.093 [42]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]
Standard Order Quantity		24 Units

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

ProTec T2H 3+1

Class II • Type 2 • Type 1 • 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
Technology: Hybrid
Leakage Current Free: Yes
Housing: Pluggable Design
Compliance: IEC 61643-11: 2011
EN 61643-11: 2012
UL 1449 4th Edition

Technical Data

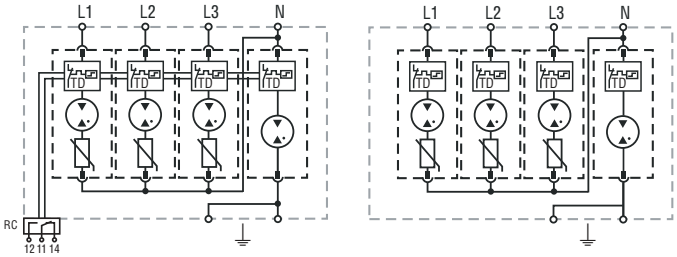
ProTec T2H-xxx-3+1(-R)			300
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE)	U_c	300 V / 305 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_n	20 kA / 40kA
Maximum Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_{max}	50 kA / 65 kA
Voltage Protection Level	(L-N) / (N-PE)	U_p	1500 V / 1500 V
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
Follow Current Interrupt Rating	(N-PE)	I_{fi}	100 A_{RMS}
TOV Withstand 120min	(L-N)	U_T	442 V
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
Voltage Protection Rating	(L-N)/(N-G)	VPR	1200 V / 1000 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-G)	I_n	20 kA / 20 kA
Short-Circuit Current Rating (AC)	(L-N)	SCCR	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: 250 V / 1A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)
Order Information			
Order Code			**300**
ProTec T2H-xxx-3+1			59.0334
ProTec T2H-xxx-3+1-R (with remote contacts)			59.0335
ProTec T2H-xxx-P (plug L-N)			59.0322
ProTube T2H-40-P (plug N-PE)			59.0323

ProTec T2H 3+1

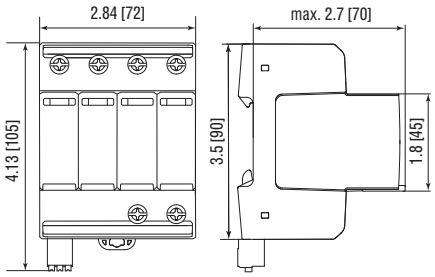
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TD	*Thermal Disconnector*



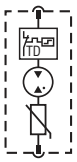
Complete Unit



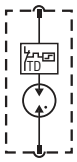
Complete Unit Dimensions & Packaging		
ProTec T2H-xxx-3+1		**300**
Weight	pounds [grams]	.947 [429]
ProTec T2H-xxx-3+1-R		
Weight	pounds [grams]	.958 [434]
DIN 43880 Dimension		4 TE / 2.84" [72]
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		4 Units

Plug Internal Configuration

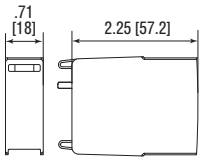
ProTec T2H-xxx-P



ProTube T2H-40-P



Spare Plug



Single Unit Dimensions & Packaging		
ProTec T2H-xxx-P		**300**
Weight	pounds [grams]	.112 [51]
ProTube T2H-40-P		**40**
Weight	pounds [grams]	.093 [42]
DIN 43880 Dimension		1 TE / .71" [18]
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]
Standard Order Quantity		24 Units

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

SafeTec T2 2+0

Class II • Type 2 • Type 1CA



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

Technical Data

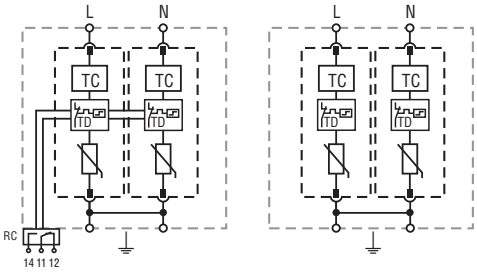
SafeTec T2-xxx-2+0(-R)		75	150	300	350	480	550	750	880
IEC Electrical									
Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V	400V	400V	600V	600V
Maximum Continuous Operating Voltage (AC)	U_c	75V	150V	300V	350V	480V	550V	750V	880V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	50kA	50kA	50kA	50kA	50kA	50kA	35kA	35kA
Voltage Protection Level	U_p	800V	1250V	1650V	1750V	2300V	2500V	3500V	3600V
Response Time	t_A	< 25ns							
Overcurrent Protection (max)		315A/250A gG							
Short-Circuit Current Rating (AC)	I_{SCCR}	25kA/50kA							
TOV Withstand 120min	U_T	150V	255V	442V	529V	762V	918V	1200V	1250V
Number of Ports		1							
UL Electrical									
Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V	550V	750V	880V
Voltage Protection Rating	VPR	600V	700V	1200V	1200V	1500V	1800V	2500V	2500V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	85kA	200kA	150kA	200kA	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 [4000m]							
Terminal Screw Torque	M_{max}	39.9 lbf·in [4.5Nm]							
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)							
		35mm² (Solid, Stranded) / 25mm² (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) / 1.5mm² (Solid)							
Order Information									
Order Code		**75**	**150**	**300**	**350**	**480**	**550**	**750**	**880**
SafeTec T2-xxx-2+0		59.0345	59.0148	59.0150	59.0152	59.0154	59.0156	59.0158	59.0160
SafeTec T2-xxx-2+0-R (with remote contacts)		59.0346	59.0149	59.0151	59.0153	59.0155	59.0157	59.0159	59.0161
SafeTec T2-xxx-P (plug)		59.0125	59.0126	59.0127	59.0128	59.0129	59.0299	59.0130	59.0131

SafeTec T2 2+0

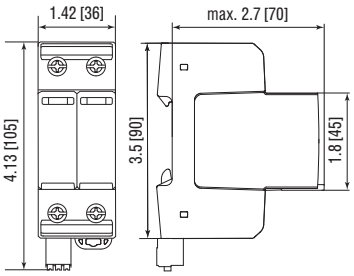
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TC	*Thermal Control Function*
TD	*Thermal Disconnector*



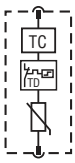
Complete Unit



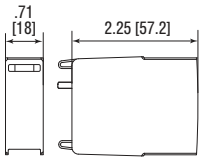
Complete Unit Dimensions & Packaging									
SafeTec T2-xxx-2+0		**75**	**150**	**300**	**350**	**480**	**550**	**750**	**880**
Weight	pounds	.545	.567	.580	.616	.620	.642	.677	.686
	grams	247	257	263	279	281	291	307	311
SafeTecT2-xxx-2+0-R									
Weight	pounds	.565	.587	.600	.635	.640	.662	.697	.706
	grams	256	266	272	288	290	300	316	320
DIN 43880 Dimension		2 TE / 1.42" [36]							
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]							
Standard Order Quantity		7 Units							

Plug Internal Configuration

SafeTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging									
SafeTec T2-xxx-P		**75**	**150**	**300**	**350**	**480**	**550**	**750**	**880**
Weight	pounds	.128	.139	.146	.163	.165	.176	.194	.198
	grams	58	63	66	74	75	80	88	90
DIN 43880 Dimension		1 TE / .71" [18]							
Packaging Dimensions (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]							
Standard Order Quantity		24 Units							

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

SafeTec 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
Safety: Patented Current Limiting Technology
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

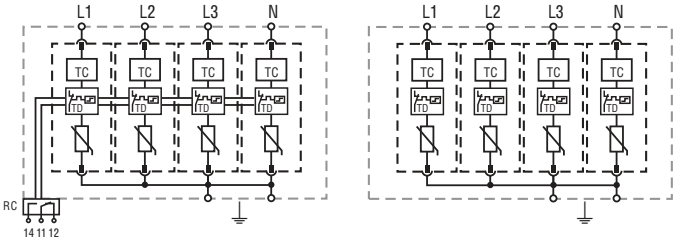
SafeTec T2-xxx-4+0(-R)		150	300	350	480	550
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	120 V	240 V	277 V	400 V	400 V
Maximum Continuous Operating Voltage (AC)	U_c	150 V	300 V	350 V	480 V	550 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA
Voltage Protection Level	U_p	1250 V	1650 V	1750 V	2300 V	2500 V
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 120min	U_T	255 V	442 V	529 V	762 V	918 V
Number of Ports				1		
UL Electrical						
Maximum Continuous Operating Voltage (AC)	MCOV	150 V	300 V	350 V	480 V	550 V
Voltage Protection Rating	VPR	700 V	1200 V	1200 V	1500 V	1800 V
Nominal Discharge Current (8/20 µs)	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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A				
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)				
Order Information						
Order Code		**150**	**300**	**350**	**480**	**550**
SafeTec T2-xxx-4+0		59.0176	59.0178	59.0180	59.0182	59.0184
SafeTec T2-xxx-4+0-R (with remote contacts)		59.0177	59.0179	59.0181	59.0183	59.0185
SafeTec T2-xxx-P (plug)		59.0126	59.0127	59.0128	59.0129	59.0299

SafeTec T2 4+0

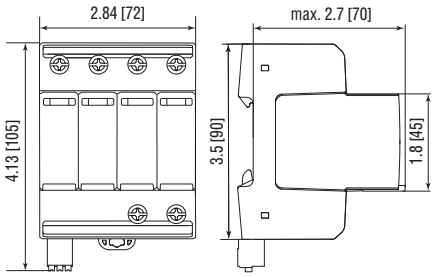
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TC	*Thermal Control Function*
TD	*Thermal Disconnector*



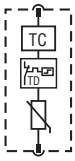
Complete Unit



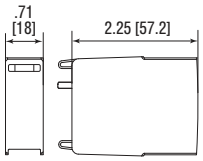
Complete Unit Dimensions & Packaging						
SafeTec T2-xxx-4+0		**150**	**300**	**350**	**480**	**550**
Weight	pounds	1.050	1.077	1.147	1.156	1.200
	grams	476	488	520	524	544
SafeTec T2-xxx-4+0-R						
Weight	pounds	1.070	1.097	1.167	1.176	1.220
	grams	485	497	529	533	553
DIN 43880 Dimension		4 TE / 2.84" [72]				
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]				
Standard Order Quantity		4 Units				

Plug Internal Configuration

SafeTec T2-xxx-P



Spare Plug



Single Unit Dimensions & Packaging						
SafeTec T2-xxx-P		**150**	**300**	**350**	**480**	**550**
Weight	pounds	.139	.146	.163	.165	.176
	grams	63	66	74	75	80
DIN 43880 Dimension		1 TE / .71" [18]				
Packaging Dimensions (H×W×L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]				
Standard Order Quantity		24 Units				

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

SafeTec 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
Safety: Patented Current Limiting Technology
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

SafeTec 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 µs)	(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 µs)	(L-N)/(N-PE)	I_{max}	50 kA/65kA	50 kA/65kA	50 kA/65kA	50 kA/65kA
Voltage Protection Level	(L-N)/(N-PE)	U_p	800 V/1500 V	1250 V/1500 V	1650 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 120min	(L-N)	U_T	150 V	255 V	442 V	529 V
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	600 V/1000 V	700 V/1000 V	1200 V/1000 V	1200 V/1000 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-G)	I_n	20 kA/20 kA			
Short-Circuit Current Rating (AC)	(L-N)	SCCR	85kA	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: 250 V/1A, 125 V/1 A; DC: 48 V/0.5 A, 24 V/0.5 A, 12 V/0.5 A			
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)			

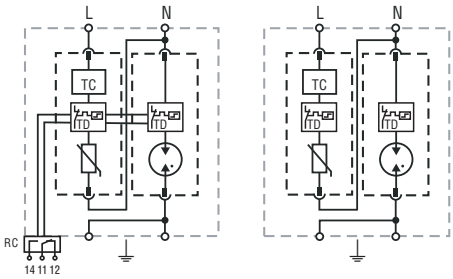
Order Information					
Order Code	**75**	**150**	**300**	**350**
SafeTec T2-xxx-1+1	59.0186	59.0188	59.0190	59.0192
SafeTec T2-xxx-1+1-R (with remote contacts)	59.0187	59.0189	59.0191	59.0193
SafeTec T2-xxx-P (plug L-N)	59.0125	59.0126	59.0127	59.0128
SafeTube T2-40-P (plug N-PE)	59.0274	59.0274	59.0274	59.0274

SafeTec T2 1+1

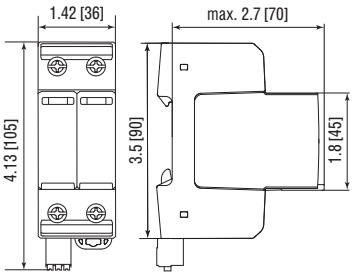
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TC	*Thermal Control Function*
TD	*Thermal Disconnector*



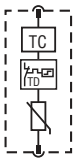
Complete Unit



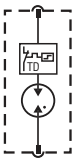
Complete Unit Dimensions & Packaging					
SafeTec T2-xxx-1+1		**75**	**150**	**300**	**350**
Weight	pounds	.532	.543	.549	.567
	grams	241	246	249	257
SafeTec T2-xxx-1+1-R					
Weight	pounds	.541	.552	.558	.576
	grams	245	250	253	261
DIN 43880 Dimension		2 TE / 1.42" [36]			
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]			
Standard Order Quantity		7 Units			

Plug Internal Configuration

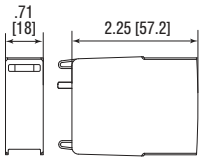
SafeTec T2-xxx-P



SafeTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging					
SafeTec T2-xxx-P		**75**	**150**	**300**	**350**
Weight	pounds	.128	.139	.146	.163
	grams	58	63	66	74
SafeTube T2-40-P		**40**			
Weight	pounds	.093			
	grams	42			
DIN 43880 Dimension		1 TE / .71" [18]			
Packaging Dimensions (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]			
Standard Order Quantity		24 Units			

inches
[mm]

RoHS COMPLIANT

Overvoltage Protection

SafeTec 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
Safety: Patented Current Limiting Technology
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

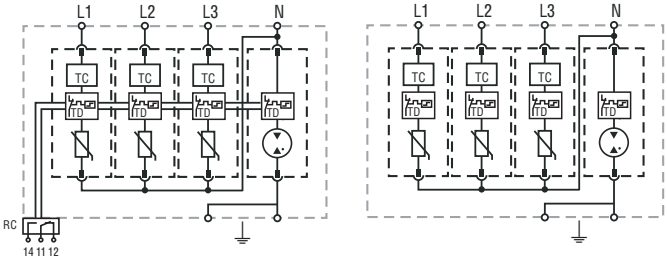
SafeTec T2-xxx-3+1(-R)			300	350
IEC Electrical				
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V	277 V
Maximum Continuous Operating Voltage (AC)	(L-N)	U_c	300 V	350 V
	(N-PE)	U_c	305 V	305 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_n	20 kA/40 kA	20 kA/40 kA
Maximum Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_{max}	50 kA/65kA	50 kA/65kA
Voltage Protection Level	(L-N)/(N-PE)	U_p	1650 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 120min	(L-N)	U_T	442 V	529 V
TOV Withstand 200ms	(N-PE)	U_T	1200 V	
Number of Ports			1	
UL Electrical				
Maximum Continuous Operating Voltage (AC)	(L-N)/(N-PE)	MCOV	300 V/305 V	350 V/305 V
Voltage Protection Rating	(L-N)/(N-PE)	VPR	1200 V/1000 V	1200 V/1000 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	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: 250 V/1A, 125 V/1 A; DC: 48 V/0.5 A, 24 V/0.5 A, 12 V/0.5 A	
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm^2 (Solid)	
Order Information				
Order Code			300	350
SafeTec T2-xxx-3+1			59.0198	59.0200
SafeTec T2-xxx-3+1-R (with remote contacts)			59.0199	59.0201
SafeTec T2-xxx-P (plug L-N)			59.0127	59.0128
SafeTube T2-40-P (plug N-PE)			59.0274	59.0274

SafeTec T2 3+1

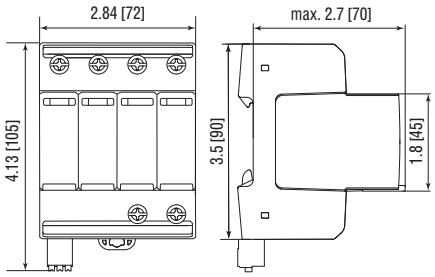
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE/G Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TC	*Thermal Control Function*
TD	*Thermal Disconnector*



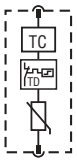
Complete Unit



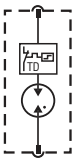
Complete Unit Dimensions & Packaging			
SafeTec T2-xxx-3+1		**300**	**350**
Weight	pounds	1.046	1.099
	grams	474	498
SafeTec T2-xxx-3+1-R			
Weight	pounds	1.057	1.110
	grams	479	503
DIN 43880 Dimension		4 TE / 2.84" [72]	
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]	
Standard Order Quantity		4 Units	

Plug Internal Configuration

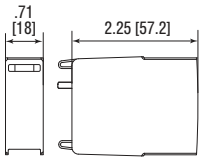
SafeTec T2-xxx-P



SafeTube T2-40-P



Spare Plug



Single Unit Dimensions & Packaging			
SafeTec T2-xxx-P		**300**	**350**
Weight	pounds	.146	.163
	grams	66	74
SafeTube T2-40-P		**40**	
Weight	pounds	.093	
	grams	42	
DIN 43880 Dimension		1 TE / .71" [18]	
Packaging Dimensions (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]	
Standard Order Quantity		24 Units	

inches
[mm]

RoHS COMPLIANT

Pluggable Multi-Pole SPD for Photovoltaic Systems

ProTec T1-PV 3+0

Type 1 • Type 2 • Type 1CA



Location of Use: String box, Inverter
Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
EN/UL Category: Type 1, Type 2 / Type 1CA
Housing: Pluggable Design
Compliance: EN 50539-11:2013+A1:2014
UL 1449 4th Edition

ProTec T1-xxxxPV-3+0(-R)			1100	1500
EN Electrical				
Maximum Continuous Operating Voltage (PV)		U_{CPV}	1100 V	1500 V
Nominal Discharge Current (8/20 µs)		I_n	20 kA	20 kA
Impulse Discharge Current (10/350 µs)		I_{imp}	6.25 kA	5 kA
Specific Energy		W/R	9.77 kJ/Ω	6.25 kJ/Ω
Charge		Q	3.125 As	2.5 As
Total Discharge Current (10/350 µs)		I_{Total}	12.5 kA	10 kA
Total Discharge Current (8/20 µs)		I_{Total}	50 kA	40 kA
Maximum Discharge Current (8/20 µs)		I_{max}	40 kA	30 kA
Voltage Protection Level	(+)-PE, (-)-PE	U_p	3800 V	5000 V
	(+)-(-)	U_p	3800 V	5000 V
Response Time		t_A	< 25 ns	
Short-Circuit Current Rating		I_{SCPV}	11 kA	
Number of Ports			1	
UL Electrical				
Maximum Permitted DC Voltage		V_{pvdc}	1100 V	1500 V
Voltage Protection Rating	(+)-G, (-)-G	VPR	2500 V	4000 V
	(+)-(-)	VPR	2500 V	4000 V
Nominal Discharge Current (8/20 µs)		I_n	20 kA	
Short-Circuit Current Rating		SCCR	50 kA	65 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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A	
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm² (Solid)	

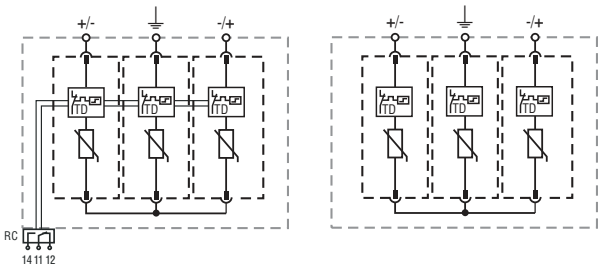
Order Information		
Order Code	**1100**	**1500**
ProTec T1-xxxxPV-3+0	59.0285	59.0289
ProTec T1-xxxxPV-3+0-R (with remote contacts)	59.0286	59.0290
ProTec T1-550PV-P (middle plug)	59.0283	-
ProTec T1-550PV-M-P (side plug)	59.0284	-
ProTec T1-750PV-P (middle plug)	-	59.0287
ProTec T1-750PV-M-P (side plug)	-	59.0288

ProTec T1-PV 3+0

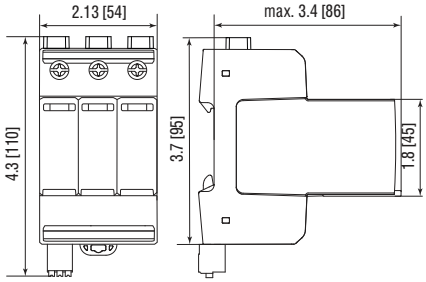
Internal Configuration

Legend

+/-, -/+ + or - Conductor Terminal
⏚ PE/G Conductor Terminal
RC Remote Contacts Terminal (Optional)
TD Thermal Disconnector



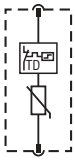
Complete Unit



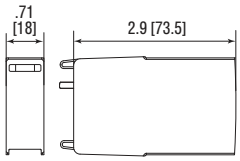
Complete Unit Dimensions & Packaging			
ProTec T1-xxxxPV-3+0		**1100**	**1500**
Weight	pounds	.968	1.034
	grams	439	469
ProTec T1-xxxxPV-3+0-R			
Weight	pounds	.979	1.045
	grams	444	474
DIN 43880 Dimension		3 TE / 2.13" [54]	
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]	
Standard Order Quantity		5 Units	

Plug Internal Configuration

ProTec T1-xxxPV-P
ProTec T1-xxxPV-M-P



Spare Plug



Single Unit Dimensions & Packaging			
ProTec T1-xxxPV-P		**550**	**750**
Weight	pounds	.220	.282
	grams	100	128
ProTec T1-xxxPV-M-P		**550**	**750**
Weight	pounds	.194	.196
	grams	88	89
DIN 43880 Dimension		1 TE / .71" [18]	
Packaging Dimensions (H×W×L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]	
Standard Order Quantity		28 Units	

inches
[mm]

RoHS COMPLIANT

Pluggable Multi-Pole SPD for Photovoltaic Systems

ProTec T2-PV 3+0

Type 2 • Type 1CA



Location of Use: String box, Inverter
Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
EN/UL Category: Type 2 / Type 1CA
Housing: Pluggable Design
Compliance: EN 50539-11:2013+A1:2014
UL 1449 4th Edition

Technical Data

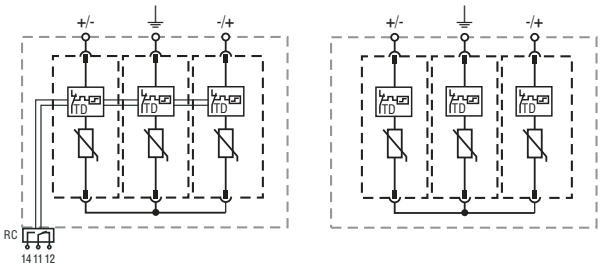
ProTec T2-xxxxPV-3+0(-R)		1100	1500
EN Electrical			
Maximum Continuous Operating Voltage (PV)	U_{CPV}	1100 V	1500 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA	
Maximum Discharge Current (8/20 µs)	I_{max}	40 kA	30 kA
Total Discharge Current	I_{Total}	50 kA	40 kA
Voltage Protection Level	U_p	3800 V	5000 V
Response Time	t_A	< 25 ns	
Short-Circuit Current Rating	I_{SCPV}	11 kA	
Number of Ports		1	
UL Electrical			
Maximum Permitted DC Voltage	V_{pvdc}	1100 V	1500 V
Voltage Protection Rating	VPR	2500 V	4000 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA	
Short-Circuit Current Rating	SCCR	50 kA	65 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 mm² (Solid, Stranded) / 25 mm² (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: 250 V / 1 A, 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A	
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)	
Order Information			
Order Code		**1100**	**1500**
ProTec T2-xxxxPV-3+0		59.0292	59.0295
ProTec T2-xxxxPV-3+0-R (with remote contacts)		59.0293	59.0296
ProTec T2-550PV-P (plug)		59.0291	-
ProTec T2-750PV-P (plug)		-	59.0294

ProTec T2-PV 3+0

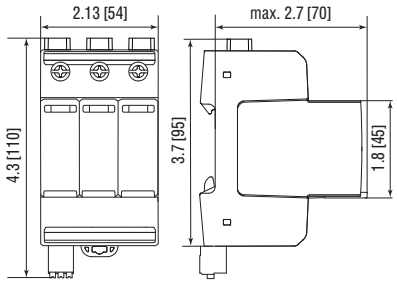
Internal Configuration

Legend

+/-, -/+ *+ or - Conductor Terminal*
PE/G Conductor Terminal
RC *Remote Contacts Terminal (Optional)*
TD *Thermal Disconnector*



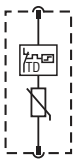
Complete Unit



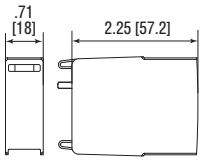
Complete Unit Dimensions & Packaging			
ProTec T2-xxxxPV-3+0		**1100**	**1500**
Weight	pounds	.806	.879
	grams	366	399
ProTec T2-xxxxPV-3+0-R			
Weight	pounds	.817	.890
	grams	371	404
DIN 43880 Dimension		3 TE / 2.13" [54]	
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]	
Standard Order Quantity		5 Units	

Plug Internal Configuration

ProTec T2-XXXPV-P



Spare Plug



Single Unit Dimensions & Packaging			
ProTec T2-xxxPV-P		**550**	**750**
Weight	pounds	.150	.174
	grams	68	79
DIN 43880 Dimension		1 TE / .71" [18]	
Packaging Dimensions (H x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]	
Standard Order Quantity		24 Units	

inches
[mm]

RoHS COMPLIANT

Isolating Spark Gaps (ISG)

EPZ 100/350 Ex

Class 1L for Light Duty



Corrosion resistant enclosure with hermetic environmental seal and flying leads for ease of connection. Use in places in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas or vapour is not likely to occur in normal operation, but if it does occur, will persist for short period only (usually no longer than two hours).

Location of Use: Explosive atmosphere, Zone 2, Group II, Category 3
Type of Protection: Equipment Producing Operational Sparks
IEC/EN Category: Class 1L
Housing: Corrosion resistant enclosure
Compliance: IEC 60079-0:2011
CE 0598 IEC 60079-15:2010
EN 60079-0:2012+A11:2013
Ex EN 60079-15:2010
EN 62561-3:2017

Technical Data

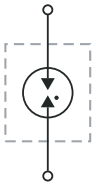
EPZ 100/350 Ex		350
Intrinsic Safety Parameters		
IECEx BAS 15.0069X		Ex nC IIC T5 Gc (-30°C ≤ 70°C)
Basefa15ATEX0102X		II 3G Ex nC IIC T5 Gc (-30°C ≤ 70°C)
Electrical		
Rated Power Frequency Withstand Voltage	$U_{W\,AC}$	240 V
Rated DC Withstand Voltage	$U_{W\,DC}$	350 V
Rated Impulse Sparkover Voltage	$U_{r\,imp}$	1000 V
Maximum Discharge Current (8/20 µs)	I_{max}	100 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	25 kA
Specific Energy	W/R	156 kJ/Ω
Charge	Q	12.5 As
Residual Voltage at 5 kA (8/20 µs)	U_{res}	1.6 kV
ISG Classification		1 L
Capacitance at 1 MHz	C	< 10 pF
Mechanical & Environmental		
Temperature Range	Ta	-40 °F to +158 °F [-40 °C to +70 °C]
Nominal Outer Diameter		1.102" [28 mm]
Nominal Length		5.511" [140 mm]
Length With Cables (approx)		37.402" [950 mm]
Cross Sectional Area		6 AWG [16 mm²]
Number of Conductors		≥ 465 / 0.21
Insulation		Double Insulated
Enviromental Protection		UV Stabilized, Flame Retardant
Resistant		Acids, Solvents and Oils
Connection		Suitable for Screw or Lug Termination
Degree of Protection		IP 67
Housing Material		Metal Tube
Location		Indoor/Outdoor

Specifications for Use	
Environmental	Local heating by pipelines and other hot surfaces in vicinity of the installation of the product must be considered by the installer to ensure that specified maximum ambient temperature is not exceeded.
Wiring	Connection of the interal cables must be in accordance with the applicable requirement of IEC 60079-0 and IEC 60079-15 for field wiring connections.
Safety	EPZ has an external non-metallic heat shrink sleeve which may provide a potential electrostatic charging hazard. See installation instructions for further information.

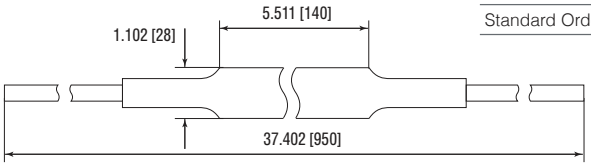
Order Information	
Order Code	**350**
EPZ 100/350 Ex	509 521

EPZ 100/350 Ex

Internal Configuration



Complete Unit



Complete Unit Dimensions & Packaging		
EPZ 100/350 Ex		**350**
Weight	pounds [grams]	1.103 [500]
Packaging Dimensions (H × W × L)		13.7 × 4.9 × 2.1" [350 × 125 × 55 mm]
Standard Order Quantity		27 Units

inches
[mm]

RoHS COMPLIANT

Pluggable Single Pole & Multi-pole Surge Protective Devices

		Product Name	Order Code	Dimensions DIN 43880	Catalog Page(s)
ProTec T1 2+0 (R)		ProTec T1-75-2+0	59.0349	2 TE	14
		ProTec T1-75-2+0-R	59.0350	2 TE	14
		ProTec T1-150-2+0	59.0019	2 TE	14
		ProTec T1-150-2+0-R	59.0020	2 TE	14
		ProTec T1-300-2+0	59.0021	2 TE	14
		ProTec T1-300-2+0-R	59.0022	2 TE	14
		ProTec T1-350-2+0	59.0023	2 TE	14
		ProTec T1-350-2+0-R	59.0024	2 TE	14
		ProTec T1-480-2+0	59.0025	2 TE	14
		ProTec T1-480-2+0-R	59.0026	2 TE	14
		ProTec T1-750-2+0	59.0027	2 TE	14
		ProTec T1-750-2 +0-R	59.0028	2 TE	14
ProTec T1 4+0 (R)		ProTec T1-150-4+0	59.0039	4 TE	16
		ProTec T1-150-4+0-R	59.0040	4 TE	16
		ProTec T1-300-4+0	59.0041	4 TE	16
		ProTec T1-300-4+0-R	59.0042	4 TE	16
		ProTec T1-350-4+0	59.0351	4 TE	16
		ProTec T1-350-4+0-R	59.0352	4 TE	16
		ProTec T1-480-4+0	59.0043	4 TE	16
		ProTec T1-480-4+0-R	59.0044	4 TE	16
ProTec T1 1+1 (R)		ProTec T1-75-1+1	59.0047	2 TE	18
		ProTec T1-75-1+1-R	59.0048	2 TE	18
		ProTec T1-150-1+1	59.0049	2 TE	18
		ProTec T1-150-1+1-R	59.0050	2 TE	18
		ProTec T1-300-1+1	59.0051	2 TE	18
		ProTec T1-300-1+1-R	59.0052	2 TE	18
		ProTec T1-350-1+1	59.0053	2 TE	18
		ProTec T1-350-1+1-R	59.0054	2 TE	18
ProTec T1 3+1 (R)		ProTec T1-300-3+1	59.0059	4 TE	20
		ProTec T1-300-3+1-R	59.0060	4 TE	20
		ProTec T1-350-3+1	59.0061	4 TE	20
		ProTec T1-350-3+1-R	59.0062	4 TE	20
ProTec T1-xxx-P		ProTec T1-75-P	59.0001	1 TE plug	14, 18
		ProTec T1-150-P	59.0002	1 TE plug	14-18
		ProTec T1-300-P	59.0003	1 TE plug	54-64
		ProTec T1-350-P	59.0004	1 TE plug	14-20
		ProTec T1-480-P	59.0005	1 TE plug	14,16
		ProTec T1-750-P	59.0006	1 TE plug	14
ProTec T1H 2+0 (R)		ProTec T1H-300-2+0	59.0312	2 TE	22
		ProTec T1H-300-2+0-R	59.0313	2 TE	22
ProTec T1H 4+0 (R)		ProTec T1H-300-4+0	59.0316	4 TE	24
		ProTec T1H-300-4+0-R	59.0317	4 TE	24

Class I • Class II • Type 1 • Type 2 • Type 1 CA

		Product Name	Order Code	Dimensions DIN 43880	Catalog Page(s)
Pluggable Single Pole & Multi-pole Surge Protective Devices					*(continued)*
ProTec T1H 1+1 (R)		ProTec T1H-300-1+1	59.0318	2 TE	26
		ProTec T1H-300-1+1-R	59.0319	2 TE	26
ProTec T1H 3+1 (R)		ProTec T1H-300-3+1	59.0320	4 TE	28
		ProTec T1H-300-3+1-R	59.0321	4 TE	28
ProTec T1H-300-P		ProTec T1H-300-P	59.0308	1 TE plug	22-28
ProTec T1HS 4+0 (R)		ProTec T1HS-300-4+0	59.0260	8 TE	30
		ProTec T1HS-300-4+0-R	59.0261	8 TE	30
ProTec T1HS 3+1 (R)		ProTec T1HS-300-3+1	59.0306	8 TE	32
		ProTec T1HS-300-3+1-R	59.0307	8 TE	32
ProTec T1HS-300-P		ProTec T1HS-300-P	59.0302	1 TE plug	30-32

Class II • Type 2 • Type 1 CA

Pluggable Single Pole & Multi-pole Surge Protective Devices

		Product Name	Order Code	Dimensions DIN 43880	Catalog Page(s)
ProTec T2 1+0 (R)		ProTec T2-75-1+0	59.0069	1 TE	34
		ProTec T2-75-1+0-R	59.0070	1 TE	34
		ProTec T2-150-1+0	59.0071	1 TE	34
		ProTec T2-150-1+0-R	59.0072	1 TE	34
		ProTec T2-300-1+0	59.0073	1 TE	34
		ProTec T2-300-1+0-R	59.0074	1 TE	34
		ProTec T2-350-1+0	59.0075	1 TE	34
		ProTec T2-350-1+0-R	59.0076	1 TE	34
		ProTec T2-480-1+0	59.0077	1 TE	34
		ProTec T2-480-1+0-R	59.0078	1 TE	34
		ProTec T2-550-1+0	59.0677	1 TE	34
		ProTec T2-550-1+0-R	59.0678	1 TE	34
		ProTec T2-750-1+0	59.0079	1 TE	34
		ProTec T2-750-1+0-R	59.0080	1 TE	34
ProTec T2 2+0 (R)		ProTec T2-75-2+0	59.0343	2 TE	36
		ProTec T2-75-2+0-R	59.0344	2 TE	36
		ProTec T2-150-2+0	59.0081	2 TE	36
		ProTec T2-150-2+0-R	59.0082	2 TE	36
		ProTec T2-300-2+0	59.0083	2 TE	36
		ProTec T2-300-2+0-R	59.0084	2 TE	36
		ProTec T2-350-2+0	59.0085	2 TE	36
		ProTec T2-350-2+0-R	59.0086	2 TE	36
		ProTec T2-480-2+0	59.0087	2 TE	36
		ProTec T2-480-2+0-R	59.0088	2 TE	36
		ProTec T2-550-2+0	59.0679	2 TE	36
		ProTec T2-550-2+0-R	59.0680	2 TE	36
		ProTec T2-750-2+0	59.0089	2 TE	36
		ProTec T2-750-2 +0-R	59.0090	2 TE	36
ProTec T2 3+0 (R)		ProTec T2-150-3+0	59.0091	3 TE	38
		ProTec T2-150-3+0-R	59.0092	3 TE	38
		ProTec T2-300-3+0	59.0093	3 TE	38
		ProTec T2-300-3+0-R	59.0094	3 TE	38
		ProTec T2-350-3+0	59.0095	3 TE	38
		ProTec T2-350-3+0-R	59.0096	3 TE	38
		ProTec T2-480-3+0	59.0097	3 TE	38
		ProTec T2-480-3+0-R	59.0098	3 TE	38
		ProTec T2-550-3+0	59.0681	3 TE	38
		ProTec T2-550-3+0-R	59.0682	3 TE	38
		ProTec T2-750-3+0	59.0099	3 TE	38
		ProTec T2-750-3+0-R	59.0100	3 TE	38
ProTec T2 4+0 (R)		ProTec T2-150-4+0	59.0101	4 TE	40
		ProTec T2-150-4+0-R	59.0102	4 TE	40
		ProTec T2-300-4+0	59.0103	4 TE	40
		ProTec T2-300-4+0-R	59.0104	4 TE	40
		ProTec T2-350-4+0	59.0300	4 TE	40
		ProTec T2-350-4+0-R	59.0301	4 TE	40
		ProTec T2-480-4+0	59.0105	4 TE	40
		ProTec T2-480-4+0-R	59.0106	4 TE	40
		ProTec T2-550-4+0	59.0683	4 TE	40
		ProTec T2-550-4+0-R	59.0684	4 TE	40
ProTec T2 1+1 (R)		ProTec T2-75-1+1	59.0109	2 TE	42
		ProTec T2-75-1+1-R	59.0110	2 TE	42
		ProTec T2-150-1+1	59.0111	2 TE	42
		ProTec T2-150-1+1-R	59.0112	2 TE	42
		ProTec T2-300-1+1	59.0113	2 TE	42
		ProTec T2-300-1+1-R	59.0114	2 TE	42
		ProTec T2-350-1+1	59.0115	2 TE	42
		ProTec T2-350-1+1-R	59.0116	2 TE	42

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

		Product Name	Order Code	Dimensions DIN 43880	Catalog Page(s)
ProTec T2 3+1 (R)		ProTec T2-300-3+1	59.0121	4 TE	44
		ProTec T2-300-3+1-R	59.0122	4 TE	44
		ProTec T2-350-3+1	59.0123	4 TE	44
		ProTec T2-350-3+1-R	59.0124	4 TE	44
ProTec T2-xxx-P		ProTec T2-75-P	59.0063	1 TE plug	34-26, 42
		ProTec T2-150-P	59.0064	1 TE plug	34-42
		ProTec T2-300-P	59.0065	1 TE plug	34-44
		ProTec T2-350-P	59.0066	1 TE plug	34-44
		ProTec T2-480-P	59.0067	1 TE plug	34-40
		ProTec T2-550-P	59.0685	1 TE plug	34-40
		ProTec T2-750-P	59.0068	1 TE plug	34-38
ProTec T2-ADV 1+0 (R)		ProTec T2-ADV-75-1+0	59.0208	1 TE	48
		ProTec T2-ADV-75-1+0-R	59.0209	1 TE	48
		ProTec T2-ADV-150-1+0	59.0210	1 TE	48
		ProTec T2-ADV-150-1+0-R	59.0211	1 TE	48
		ProTec T2-ADV-300-1+0	59.0212	1 TE	48
		ProTec T2-ADV-300-1+0-R	59.0213	1 TE	48
		ProTec T2-ADV-350-1+0	59.0214	1 TE	48
		ProTec T2-ADV-350-1+0-R	59.0215	1 TE	48
		ProTec T2-ADV-480-1+0	59.0216	1 TE	48
		ProTec T2-ADV-480-1+0-R	59.0217	1 TE	48
ProTec T2-ADV 2+0 (R)		ProTec T2-ADV-75-2+0	59.0347	2 TE	50
		ProTec T2-ADV-75-2+0-R	59.0348	2 TE	50
		ProTec T2-ADV-150-2+0	59.0220	2 TE	50
		ProTec T2-ADV-150-2+0-R	59.0221	2 TE	50
		ProTec T2-ADV-300-2+0	59.0222	2 TE	50
		ProTec T2-ADV-300-2+0-R	59.0223	2 TE	50
		ProTec T2-ADV-350-2+0	59.0224	2 TE	50
		ProTec T2-ADV-350-2+0-R	59.0225	2 TE	50
		ProTec T2-ADV-480-2+0	59.0226	2 TE	50
		ProTec T2-ADV-480-2+0-R	59.0227	2 TE	50
ProTec T2-ADV 3+0 (R)		ProTec T2-ADV-150-3+0	59.0228	3 TE	52
		ProTec T2-ADV-150-3+0-R	59.0229	3 TE	52
		ProTec T2-ADV-300-3+0	59.0230	3 TE	52
		ProTec T2-ADV-300-3+0-R	59.0231	3 TE	52
		ProTec T2-ADV-350-3+0	59.0232	3 TE	52
		ProTec T2-ADV-350-3+0-R	59.0233	3 TE	52
		ProTec T2-ADV-480-3+0	59.0234	3 TE	52
		ProTec T2-ADV-480-3+0-R	59.0235	3 TE	52
ProTec T2-ADV 4+0 (R)		ProTec T2-ADV-150-4+0	59.0236	4 TE	54
		ProTec T2-ADV-150-4+0-R	59.0237	4 TE	54
		ProTec T2-ADV-300-4+0	59.0238	4 TE	54
		ProTec T2-ADV-300-4+0-R	59.0239	4 TE	54
		ProTec T2-ADV-350-4+0	59.0240	4 TE	54
		ProTec T2-ADV-350-4+0-R	59.0241	4 TE	54
		ProTec T2-ADV-480-4+0	59.0242	4 TE	54
		ProTec T2-ADV-480-4+0-R	59.0243	4 TE	54
ProTec T2-ADV-xxx-P		ProTec T2-ADV-75-P	59.0202	1 TE plug	48-50
		ProTec T2-ADV-150-P	59.0203	1 TE plug	48-54
		ProTec T2-ADV-300-P	59.0204	1 TE plug	48-54
		ProTec T2-ADV-350-P	59.0205	1 TE plug	48-54
		ProTec T2-ADV-480-P	59.0206	1 TE plug	48-54

ProTec T2H 2+0 (R)		ProTec T2H-300-2+0	59.0326	2 TE	56
		ProTec T2H-300-2+0-R	59.0327	2 TE	56
ProTec T2H 3+0 (R)		ProTec T2H-300-3+0	59.0328	3 TE	58
		ProTec T2H-300-3+0-R	59.0329	3 TE	58
ProTec T2H 4+0 (R)		ProTec T2H-300-4+0	59.0330	4 TE	60
		ProTec T2H-300-4+0-R	59.0331	4 E	60
ProTec T2H 1+1 (R)		ProTec T2H-300-1+1	59.0332	2 TE	62
		ProTec T2H-300-1+1-R	59.0333	2 TE	62
ProTec T2H 3+1 (R)		ProTec T2H-300-3+1	59.0334	4 TE	64
		ProTec T2H-300-3+1-R	59.0335	4 TE	64
ProTec T2H-300-P		ProTec T2H-300-P	59.0322	1 TE plug	56-64
ProTube T2 0+1 (R)		ProTube T2-40-0+1	59.0280	1 TE	46
		ProTube T2-40-0+1-R	59.0336		46
SafeTec T2 2+0 (R)		SafeTec T2-75-2+0	59.0345	2 TE	66
		SafeTec T2-75-2+0-R	59.0346	2 TE	66
		SafeTec T2-150-2+0	59.0148	2 TE	66
		SafeTec T2-150-2+0-R	59.0149	2 TE	66
		SafeTec T2-300-2+0	59.0150	2 TE	66
		SafeTec T2-300-2+0-R	59.0151	2 TE	66
		SafeTec T2-350-2+0	59.0152	2 TE	66
		SafeTec T2-350-2+0-R	59.0153	2 TE	66
		SafeTec T2-480-2+0	59.0154	2 TE	66
		SafeTec T2-480-2+0-R	59.0155	2 TE	66
		SafeTec T2-550-2+0	59.0156	2 TE	66
		SafeTec T2-550-2+0-R	59.0157	2 TE	66
		SafeTec T2-750-2+0	59.0158	2 TE	66
		SafeTec T2-750-2+0-R	59.0159	2 TE	66
		SafeTec T2-880-2+0	59.0160	2 TE	66
		SafeTec T2-880-2+0-R	59.0161	2 TE	66
SafeTec T2 4+0 (R)		SafeTec T2-150-4+0	59.0176	4 TE	68
		SafeTec T2-150-4+0-R	59.0177	4 TE	68
		SafeTec T2-300-4+0	59.0178	4 TE	68
		SafeTec T2-300-4+0-R	59.0179	4 TE	68
		SafeTec T2-350-4+0	59.0180	4 TE	68
		SafeTec T2-350-4+0-R	59.0181	4 TE	68
		SafeTec T2-480-4+0	59.0182	4 TE	68
		SafeTec T2-480-4+0-R	59.0183	4 TE	68
		SafeTec T2-550-4+0	59.0184	4 TE	68
		SafeTec T2-550-4+0-R	59.0185	4 TE	68

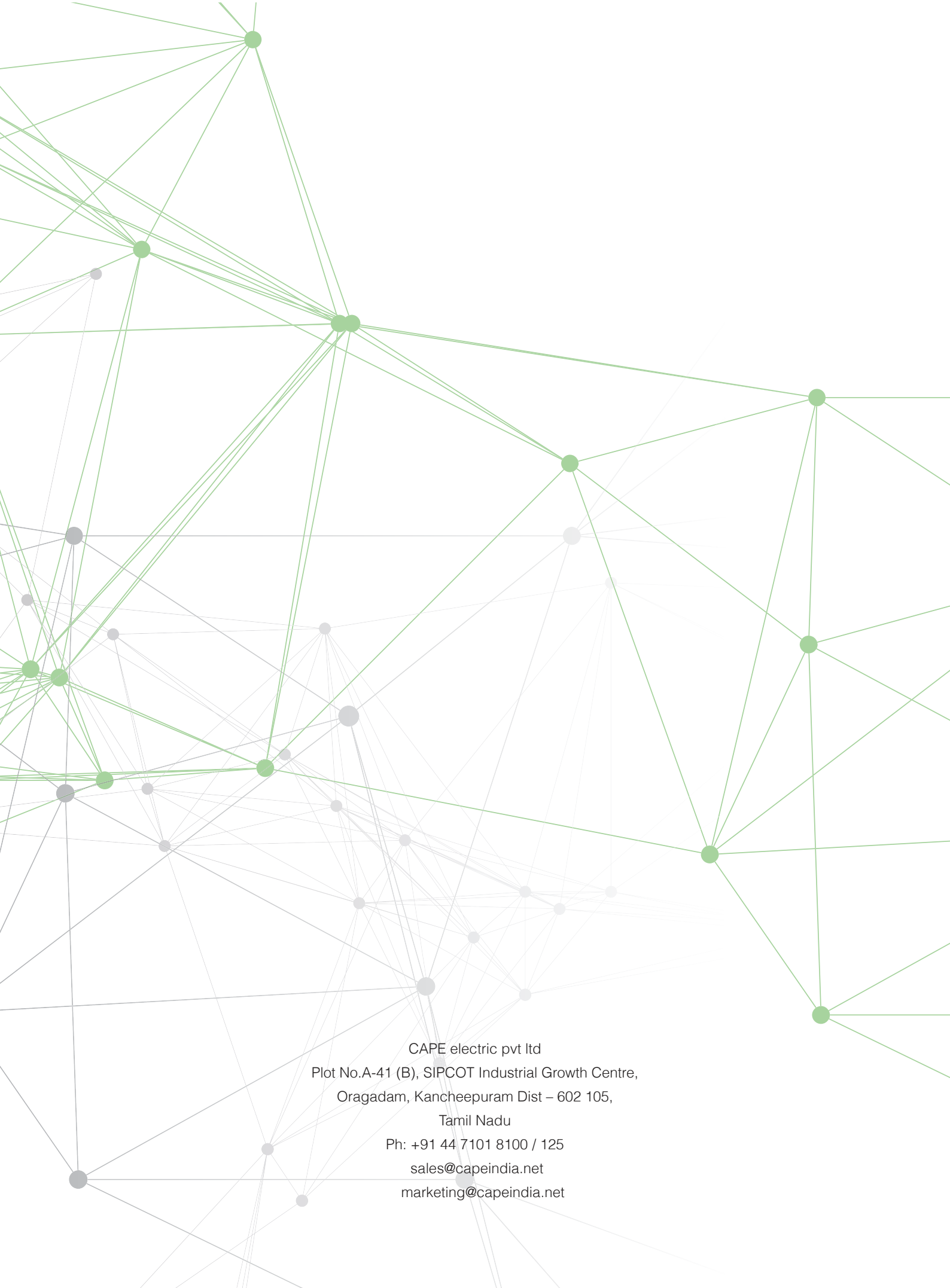
SafeTec T2 1+1 (R) 	SafeTec T2-75-1+1	59.0186	2 TE	70
	SafeTec T2-75-1+1-R	59.0187	2 TE	70
	SafeTec T2-150-1+1	59.0188	2 TE	70
	SafeTec T2-150-1+1-R	59.0189	2 TE	70
	SafeTec T2-300-1+1	59.0190	2 TE	70
	SafeTec T2-300-1+1-R	59.0191	2 TE	70
	SafeTec T2-350-1+1	59.0192	2 TE	70
	SafeTec T2-350-1+1-R	59.0193	2 TE	70
SafeTec T2 3+1 (R) 	SafeTec T2-300-3+1	59.0198	4 TE	72
	SafeTec T2-300-3+1-R	59.0199	4 TE	72
	SafeTec T2-350-3+1	59.0200	4 TE	72
	SafeTec T2-350-3+1-R	59.0201	4 TE	72
SafeTec T2-xxx-P	SafeTec T2-75-P	59.0125	1 TE plug	66,70
	SafeTec T2-150-P	59.0126	1 TE plug	66-70
	SafeTec T2-300-P	59.0127	1 TE plug	66-72
	SafeTec T2-350-P	59.0128	1 TE plug	66-72
	SafeTec T2-480-P	59.0129	1 TE plug	66,68
	SafeTec T2-550-P	59.0299	1 TE plug	66,68
	SafeTec T2-750-P	59.0130	1 TE plug	66
	SafeTec T2-880-P	59.0131	1 TE plug	66

Type 1 • Type 2 • Type 1 CA

	Product Name	Order Code	Dimensions DIN 43880	Catalog Page(s)
Pluggable Multi-Pole SPD for Photovoltaic Systems				
ProTec T1-PV-3+0 (R) 	ProTec T1-1100PV-3+0	59.0285	3 TE	74
	ProTec T1-1100PV-3+0-R	59.0286	3 TE	74
	ProTec T1-1500PV-3+0	59.0289	3 TE	74
	ProTec T1-1500PV-3+0-R	59.0290	3 TE	74
ProTec T1-xxx-PV-(M)-P	ProTec T1-550PV-P	59.0283	1 TE plug	74
	ProTec T1-550PV-M-P	59.0284	1 TE plug	74
	ProTec T1-750PV-P	59.0287	1 TE plug	74
	ProTec T1-750PV-M-P	59.0288	1 TE plug	74
ProTec T2-PV-3+0 (R) 	ProTec T2-1100PV-3+0	59.0292	3 TE	76
	ProTec T2-1100PV-3+0-R	59.0293	3 TE	76
	ProTec T2-1500PV-3+0	59.0295	3 TE	76
	ProTec T2-1500PV-3+0-R	59.0296	3 TE	76
ProTec T2-xxx-PV-P	ProTec T2-550PV-P	59.0291	1 TE plug	76
	ProTec T2-750PV-P	59.0294	1 TE plug	76

Class 1L

	Product Name	Order Code	Dimensions DIN 43880	Catalog Page(s)
Isolating Spark Gap				
EPZ 100/350 Ex 	EPZ 100/350	509 521		78



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