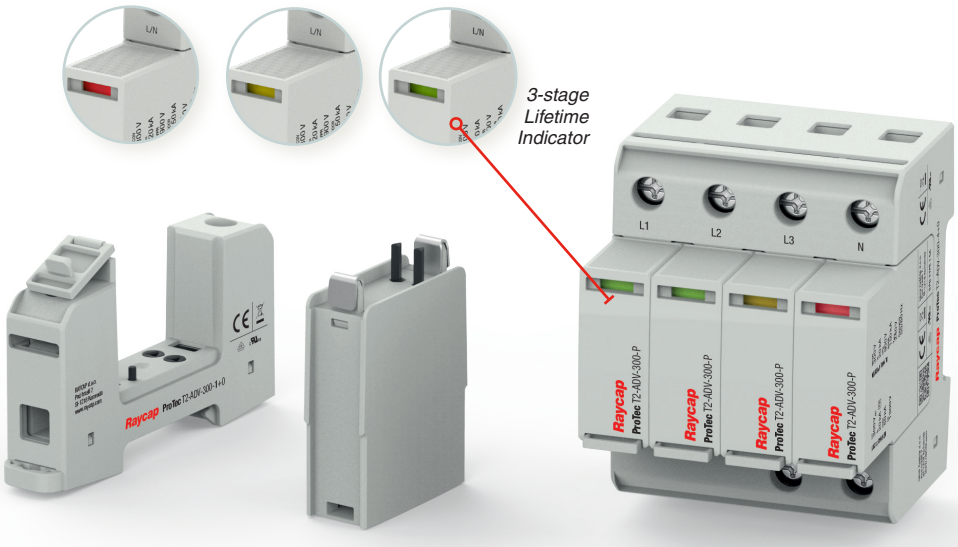
Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

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 Open Type 1 SPD Listed



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.

RoHS COMPLIANT

DATA SHEET

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

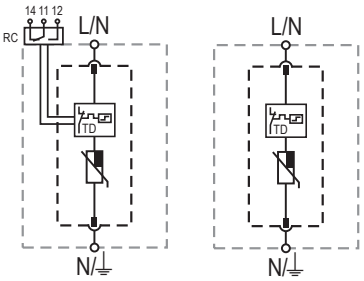
Technical Data

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 [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
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

Information contained in this document is subject to change at any time without notice.

ProTec T2-ADV 1+0

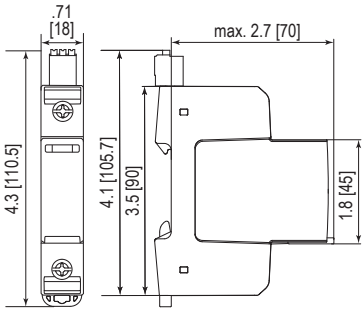
Internal Configuration



Legend

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

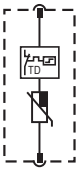
Complete Unit



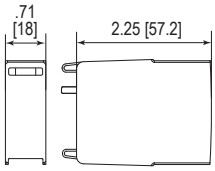
Complete Unit Dimensions & Packaging						
ProTec T2-ADV-xxx-1+0		**75**	**150**	**300**	**350**	**480**
Weight	pounds	.266	.275	.291	.302	.304
	grams	121	125	132	137	144
ProTec T2-ADV-xxx-1+0-R						
Weight	pounds	.283	.291	.306	.317	.328
	grams	128	132	139	144	149
DIN 43880 Dimension		1 TE / .71" [18]				
Packaging Dimensions (H x W x L)		4.3 x 4.5 x 13.8" [109 x 115 x 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 x W x L)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]				
Standard Order Quantity		24 Units				

inches
[mm]

Information contained in this document is subject to change at any time without notice.

RoHS COMPLIANT

DATA SHEET

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

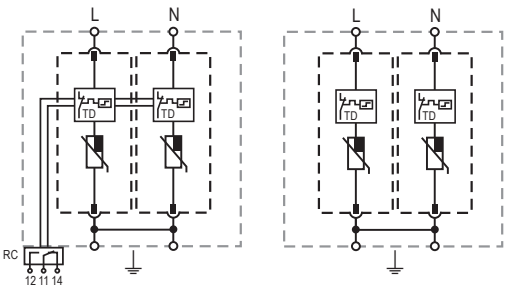
ProTec T2-ADV-xxx-2+0(-R)		75	150	300	350	480
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V	400V
Maximum Continuous Operating Voltage (AC)	U_c	75V	150V	300V	350V	480V
Nominal Discharge Current (8/20µs)	I_n	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20µs)	I_{max}	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 [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
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

Information contained in this document is subject to change at any time without notice.

ProTec T2-ADV 2+0

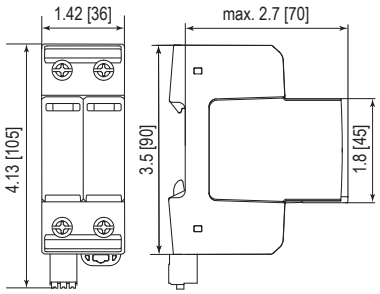
Internal Configuration



Legend

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

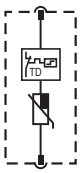
Complete Unit



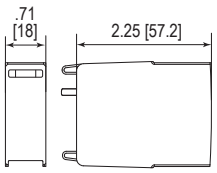
Complete Unit Dimensions & Packaging						
ProTec T2-ADV-xxx-2+0		**75**	**150**	**300**	**350**	**480**
Weight	pounds	.524	.542	.573	.595	.617
	grams	238	246	260	270	280
ProTec T2-ADV-xxx-2+0-R						
Weight	pounds	.555	.573	.590	.626	.648
	grams	252	260	268	284	294
DIN 43880 Dimension		2 TE / 1.42" [36]				
Packaging Dimensions (H x W x 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 x W x L)		3.2 × 4.5 × 12" [83 × 115 × 305 mm]				
Standard Order Quantity		24 Units				

inches
[mm]

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RoHS COMPLIANT

DATA SHEET

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

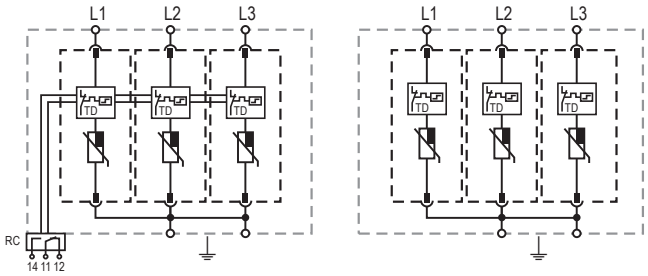
Technical Data

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

Information contained in this document is subject to change at any time without notice.

ProTec T2-ADV 3+0

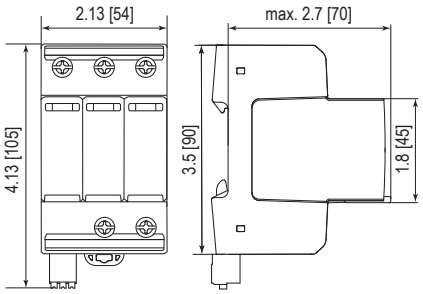
Internal Configuration



Legend

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

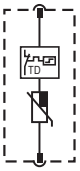
Complete Unit



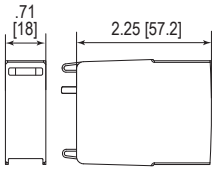
Complete Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-3+0		**150**	**300**	**350**	**480**
Weight	pounds	.787	.833	.866	.899
	grams	357	378	393	408
ProTec T2-ADV-xxx-3+0-R					
Weight	pounds	.809	.855	.888	.921
	grams	367	388	403	418
DIN 43880 Dimension		3 TE / 2.13" [54]			
Packaging Dimensions (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]

Information contained in this document is subject to change at any time without notice.

RoHS COMPLIANT

DATA SHEET

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

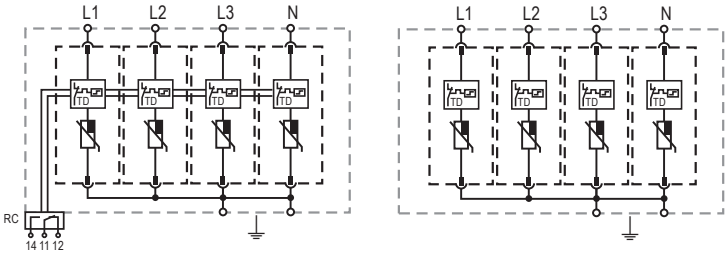
Information contained in this document is subject to change at any time without notice.

ProTec T2-ADV 4+0

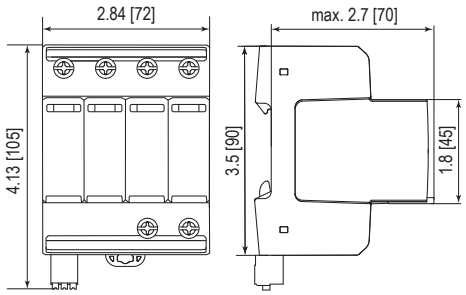
Internal Configuration

Legend

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



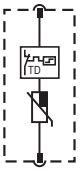
Complete Unit



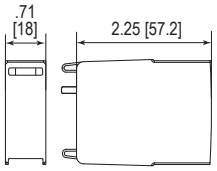
Complete Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-4+0		**150**	**300**	**350**	**480**
Weight	pounds	1.067	1.128	1.172	1.216
	grams	484	512	532	552
ProTec T2-ADV-xxx-4+0-R					
Weight	pounds	1.086	1.148	1.192	1.236
	grams	493	521	541	561
DIN 43880 Dimension		4 TE / 2.84" [72]			
Packaging Dimensions (H x W x L)		4.3 x 4.5 x 13.8" [109 x 115 x 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 x W x L)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]			
Standard Order Quantity		24 Units			

inches
[mm]

Information contained in this document is subject to change at any time without notice.

RoHS COMPLIANT

DATA SHEET

Overvoltage Protection

ProTec T2-ADV 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
Housing: Pluggable Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012
UL 1449 4th Edition

Technical Data

ProTec T2-ADV-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)	$U_{p.}$	600 V / 1500 V	1000 V / 1500 V	1300 V / 1500 V	1700 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)			160A gG			
Short-Circuit Current Rating (AC)		I_{SCCR}	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	528 V
		mode	Withstand	Withstand	Safe Fail	Safe Fail
TOV Withstand 200ms	(N-PE)	U_T	1200 V			
Number of Ports			1			
UL Electrical						
Maximum Continuous Operating Voltage (AC)	(L-N)/(N-G)	MCOV	75 V / 305 V	150 V / 305 V	300 V / 305 V	350 V / 305 V
Voltage Protection Rating	(L-N)/(N-G)	VPR	400 V / 1000 V	600 V / 1000 V	900 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	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-ADV-xxx-1+1			59.0244	59.0246	59.0248	59.0250
ProTec T2-ADV-xxx-1+1-R (with remote contacts)			59.0245	59.0247	59.0249	59.0251
ProTec T2-ADV-xxx-P (plug L-N)			59.0202	59.0203	59.0204	59.0205
ProTube T2-ADV-40-P (plug N-PE)			59.0275	59.0275	59.0275	59.0275

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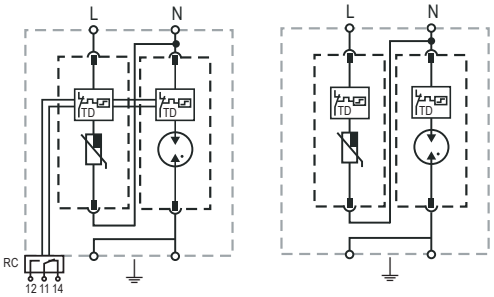
ProTec T2-ADV 1+1

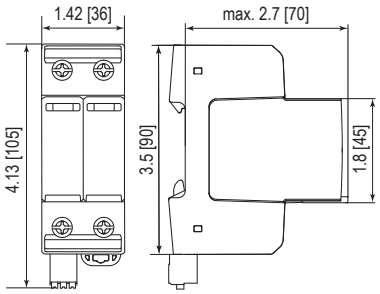
Internal Configuration



Legend

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

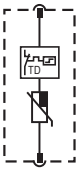
Complete Unit



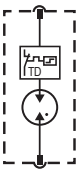
Complete Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-1+1		**75**	**150**	**300**	**350**
Weight	pounds	.500	.509	.524	.535
	grams	227	231	238	243
ProTec T2-ADV-xxx-1+1-R					
Weight	pounds	.513	.522	.537	.548
	grams	233	237	244	249
DIN 43880 Dimension		2 TE / 1.42" [36]			
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]			
Standard Order Quantity		7 Units			

Plug Internal Configuration

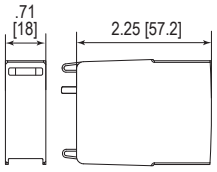
ProTec T2-ADV-xxx-P



ProTube T2-ADV-40-P



Spare Plug



Single Unit Dimensions & Packaging					
ProTec T2-ADV-xxx-P		**75**	**150**	**300**	**350**
Weight	pounds	.120	.127	.143	.154
	grams	54	58	65	70
ProTube T2-ADV-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]

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RoHS COMPLIANT

DATA SHEET

Overvoltage Protection

ProTec T2-ADV 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-ADV-xxx-3+1(-R)			300	350
IEC Electrical				
Nominal AC Voltage (50/60Hz)		U_o/U_n	240V	277V
Maximum Continuous Operating Voltage (AC)	(L-N)	U_c	300V	350V
	(N-PE)	U_c	305V	305V
Nominal Discharge Current (8/20µs)	(L-N)/(N-PE)	I_n	20kA / 40kA	20kA / 40kA
Maximum Discharge Current (8/20µs)	(L-N)/(N-PE)	I_{max}	50kA / 65kA	50kA / 65kA
Voltage Protection Level	(L-N)/(N-PE)	U_p	1300V / 1500V	1700V / 1500V
Follow Current Interrupt Rating	(N-PE)	I_{fi}	100 A_{RMS}	
Response Time	(L-N)/(N-PE)	t_A	< 25ns / < 100ns	
Overcurrent Protection (max)			160A gG	
Short-Circuit Current Rating (AC)		I_{SCCR}	50kA	
TOV Withstand 5s	(L-N)	U_T	337V	403V
TOV 120min	(L-N)	U_T	442V	528V
		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	300V / 305V	350V / 305V
Voltage Protection Rating	(L-N)/(N-G)	VPR	900V / 1000V	1200V / 1000V
Nominal Discharge Current (8/20µs)	(L-N)/(N-G)	I_n	20kA / 20kA	
Short-Circuit Current Rating (AC)	(L-N)	SCCR	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			**300**	**350**
ProTec T2-ADV-xxx-3+1			59.0256	59.0258
ProTec T2-ADV-xxx-3+1-R (with remote contacts)			59.0257	59.0259
ProTec T2-ADV-xxx-P (plug L-N)			59.0204	59.0205
ProTube T2-ADV-40-P (plug N-PE)			59.0275	59.0275

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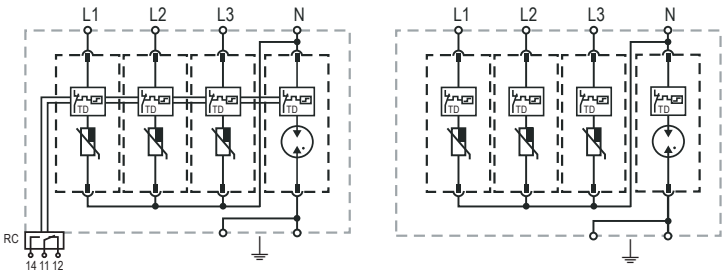
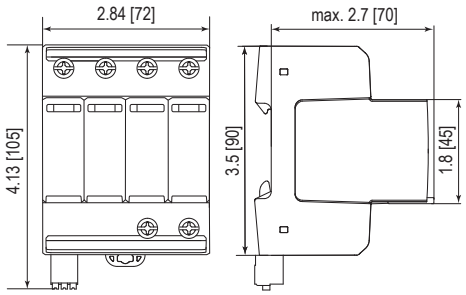
Internal Configuration

Legend

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



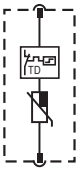
Complete Unit



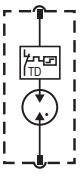
Complete Unit Dimensions & Packaging			
ProTec T2-ADV-xxx-3+1		**300**	**350**
Weight	pounds	1.060	1.093]
	grams	481	496
ProTec T2-ADV-xxx-3+1-R			
Weight	pounds	1.080	1.113
	grams	490	505
DIN 43880 Dimension		4 TE / 2.84" [72]	
Packaging Dimensions (H x W x L)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity		4 Units	

Plug Internal Configuration

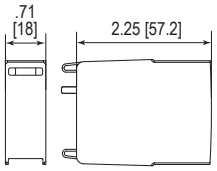
ProTec T2-ADV-xxx-P



ProTube T2-ADV-40-P



Spare Plug



Single Unit Dimensions & Packaging			
ProTec T2-ADV-xxx-P		**300**	**350**
Weight	pounds	.143	.154
	grams	65	70
ProTube T2-ADV-40-P		**40**	
Weight	pounds	.093	
	grams	42	
DIN 43880 Dimension		1 TE / .71" [18]	
Packaging Dimensions (H x W x L)		3.2 x 4.5 x 12" [83 x 115 x 305 mm]	
Standard Order Quantity		24 Units	

inches
[mm]

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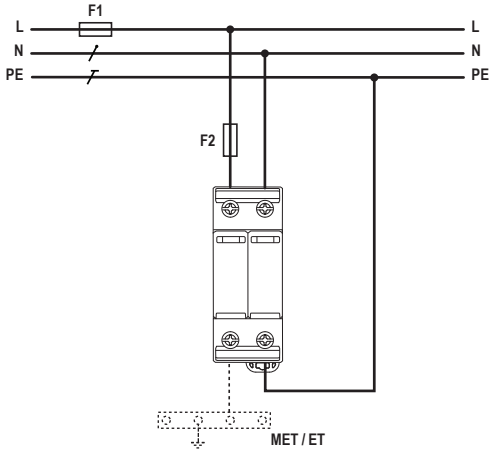
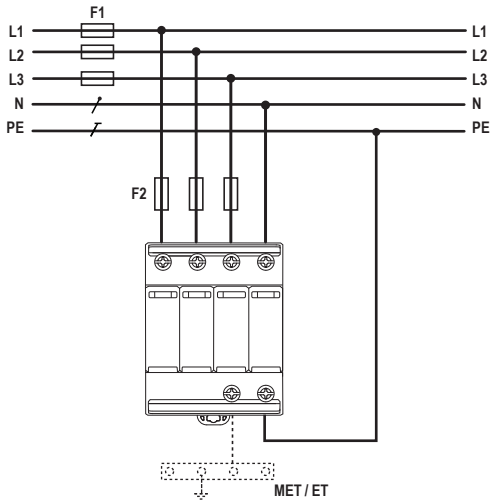
RoHS COMPLIANT

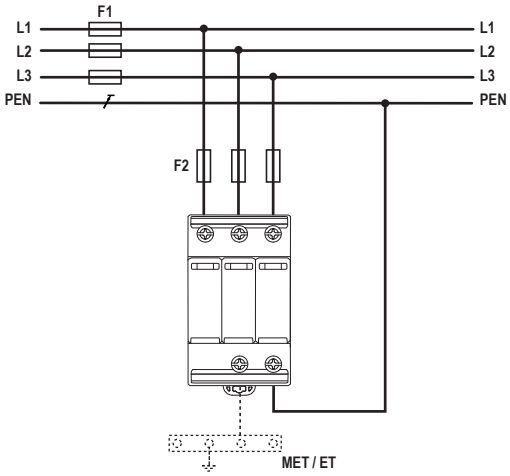
TN-S (Single-phase, 2+0, 1+1)



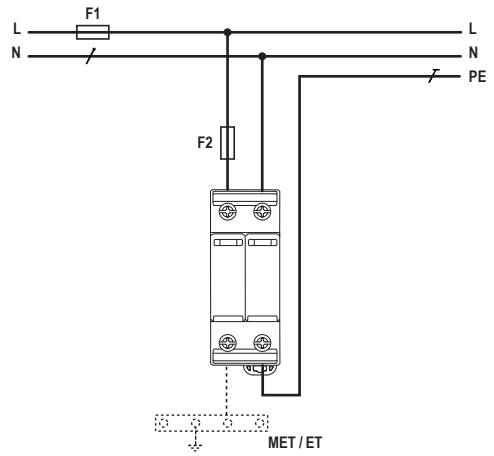
TN-S (Three-phase, 4+0, 3+1)



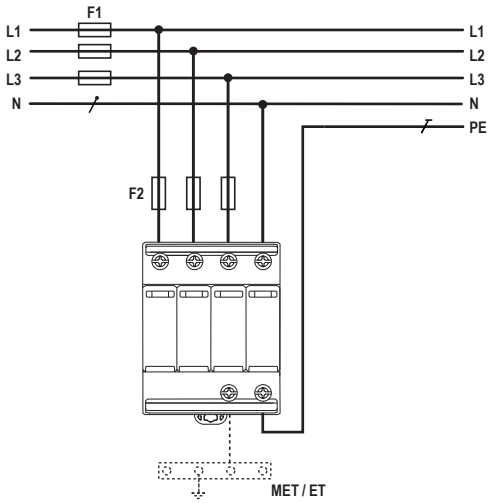
TN-C (Three-phase, 3+0)



TT (Single-phase, 1+1)



TT (Three-phase, 3+1)



/ N Neutral
/ PE Protective Earth
/ PEN Protective Earth & Neutral

Overcurrent Protection Rating for I_{SCCR} = 50 kA

F1 > 160 A gG → F2 = 160 A gG
F1 ≤ 160 A gG → ~~F2~~

Raycap

www.raycap.com

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