

Overvoltage Protection ProTec T2 1+1

Class II • Type 2 • Type 1CA • Open Type 1 SPD Listed



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
 Open Type 1 SPD Listed
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th Edition

Technical Data

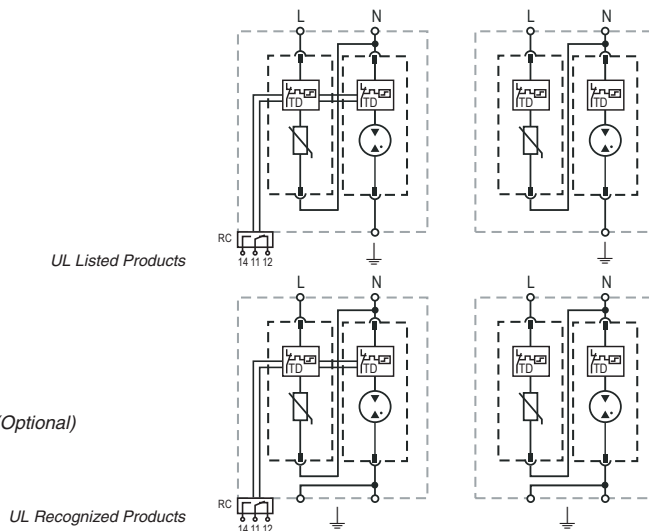
ProTec T2-xxx-1+1(-R) & ProTec T2-xxx-1+1-US(-R)

ProTec T2-xxx-1+1(-R) & ProTec T2-xxx-1+1-US(-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 (8/20μs)	(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 (8/20μs)	(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 / 1500V	1750 V / 1500 V
Follow Current Interrupt Rating	(N - PE)	I _{fi}	100 A			
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 (8/20μs)	(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
Additional Electrical Parameters - Standard (Tests performed within Raycap testing laboratory only)						
Residual Voltage at 5 kA (8/20 μs)		U _{res}	400V / 305 V	750V / 305 V	1000V / 305 V	1300V / 305 V
Overcurrent Protection (min)	80 A gG					
Additional Electrical Parameters - Extended (Additionally tested by VDE)						
Short-Circuit Current Rating (AC)		I _{SCCR}	100 kA			
Overcurrent Protection (max)	250 A gG					
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}	35 lbf-in per UL 1499 [4.5 Nm]			
Conductor Cross Section (max)	6 AWG (Solid, Stranded) per UL 1449					
	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/1 A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A					
RC Conductor Cross Section (max)	10 AWG (Solid, Stranded) per UL 1449 [1.5 mm² (Solid)]					

Internal Configuration

Legend

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



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

Order Information VDE Certified and UL Recognized Products

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-xxx-1+1-US(-R)

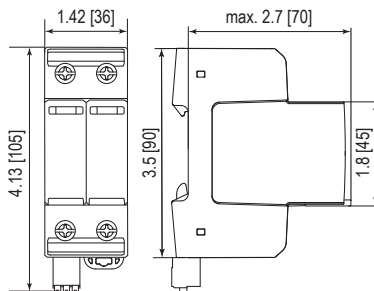
For UL Listed products one PE/G Conductor Terminal is covered/closed.

Order Information VDE Certified and Open Type 1 UL Listed Products

Order Code	75	150	300	350
ProTec T2-xxx-1+1-US	59.B121	59.B123	59.B125	59.B127
ProTec T2-xxx-1+1-US-R (with remote contacts)	59.B122	59.B124	59.B126	59.B128
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

Dimensions & Packaging

inches [mm]



Complete Unit UL Recognized Products

ProTec T2-xxx-1+1		75	150	300	350
Weight	pounds	.532	.547	.554	.565
	grams	241	248	251	256

ProTec T2-xxx-1+1-R

Weight	pounds	.541	.556	.563	.574
	grams	245	253	255	260

Complete Unit UL Listed Products

ProTec T2-xxx-1+1-US		75	150	300	350
Weight	pounds	.512	.527	.534	.545
	grams	232	239	242	247

ProTec T2-xxx-1+1-US-R

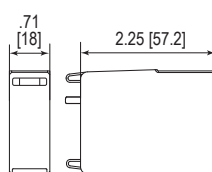
Weight	pounds	.521	.536	.543	.554
	grams	236	243	246	251

DIN 43880 Dimension 2 TE / 1.42" [36]

Packaging Dimensions (HxWxL) 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]

Standard Order Quantity 7 Units

Spare Plug



Single Unit

ProTec T2-xxx-P		75	150	300	350
Weight	pounds	.108	.123	.130	.141
	grams	49	56	59	64

ProTube T2-40-P

Weight	pounds	.093
	grams	42

DIN 43880 Dimension 1 TE / .71" [18]

Packaging Dimensions (HxWxL) 3.2 x 4.5 x 12" [83 x 116 x 305 mm]

Standard Order Quantity 24 Units

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G29-00-990-OTL 221222