

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: Current Limiting Technology
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th 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 μ s)	(L-N)/(N-PE) I_n	20 kA/40 kA	20 kA/40 kA	20 kA/40 kA	20 kA/40 kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50 kA/65 kA	50 kA/65 kA	50 kA/65 kA	50 kA/65 kA
Voltage Protection Level	(L-N)/(N-PE) U_p	800 V/1500 V	1250 V/1500 V	1650 V/1500 V	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			
Overvoltage Category		III			
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 μ s)	(L-N)/(N-G) I_n	20 kA/20 kA			
Short-Circuit Current Rating (AC)	(L-N) SCCR	100 kA	200 kA	150 kA	200 kA

Additional Electrical Parameters (Tests performed within Raycap testing laboratory only)

Residual Voltage at 5 kA (8/20 μ s)	(L-N)/(N-PE) U_{res}	400 V/305 V	750 V/305 V	1000 V/305 V	1300 V/305 V
Minimum Backup fuse, if required		80 A gG			

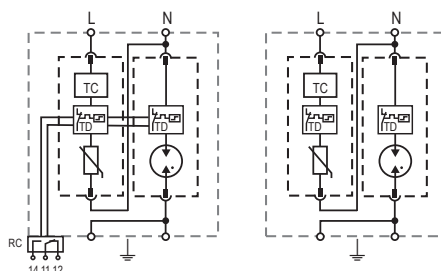
Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]			
Permissible Operating Humidity	RH	5%...95%			
Pollution Degree		2			
Altitude (max)		13123 ft [4000m]			
Terminal Screw Torque	M_{max}	40 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)			
Overvoltage Category		III			

Internal Configuration

Legend

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

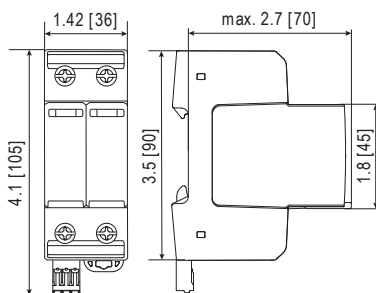


Order Information

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

Dimensions & Packaging

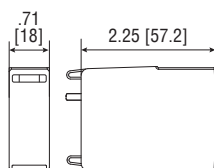
inches [mm]



Complete Unit

SafeTec T2-xxx-1+1	75	150	300	350
Weight	pounds	.552	.563	.569
	grams	250	255	258
SafeTec T2-xxx-1+1-R				
Weight	pounds	.561	.572	.578
	grams	254	259	262
DIN 43880 Dimension	2 TE / 1.42" [36 mm]			
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

SafeTec T2-xxx-P	75	150	300	350
Weight	pounds	.128	.139	.146
	grams	58	63	66
SafeTube T2-40-P				
Weight	pounds	.093		
	grams	42		
DIN 43880 Dimension	1 TE / .71" [18 mm]			
Packaging Dimensions (HxWxL)	3.2 x 4.5 x 12" [83 x 116 x 305 mm]			
Standard Order Quantity	24 Units			