DATA SHEET

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 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			
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
Additional Electrical Parameters *(Tests performed within Raycap testing laboratory only)*						
Residual Voltage at 5 kA (8/20 µs)	(L-N)/(N-PE)	U_{res}	400 V/305 V	750 V/305 V	1000 V/305 V	1300 V/305 V
Overcurrent Protection (min)			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%			
Altitude (max)			13123 ft [4000 m]			
Terminal Screw Torque		M_{max}	40 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)			

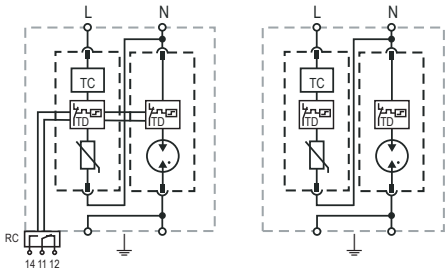
RoHS COMPLIANT

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

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*



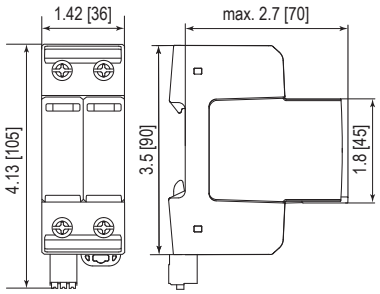
SafeTec T2-xxx-1+1(-R)

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

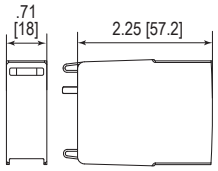
inches [mm]



Complete Unit

SafeTec T2-xxx-1+1		**75**	**150**	**300**	**350**
Weight	pounds	.552	.563	.569	.587
	grams	250	255	258	266
SafeTec T2-xxx-1+1-R					
Weight	pounds	.561	.572	.578	.596
	grams	254	259	262	270
DIN 43880 Dimension		2 TE / 1.42" [36]			
Packaging Dimensions (H x W x L)		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	.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 x 4.5 x 12" [83 x 116 x 305 mm]		
Standard Order Quantity			24 Units		

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