

Overvoltage Protection ProTec T2H 3+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
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th Edition

Technical Data

ProTec T2H-xxx-3+1(-R) & ProTec T2H-xxx-3+1-US(-R)

300

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o / U_n	240V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE) U_c	300V / 305V
Nominal Discharge Current (8/20 μ s)	(L-N) / (N-PE) I_n	20kA / 40kA
Maximum Discharge Current (8/20 μ s)	(L-N) / (N-PE) I_{max}	50kA / 65kA
Voltage Protection Level	(L-N) / (N-PE) U_p	1500V / 1500V
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
TOV Withstand 120min	(L-N) U_T	442V
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
Voltage Protection Rating	(L-N)/(N-G) VPR	1200V / 1000V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-G) I_n	20kA / 20kA
Short-Circuit Current Rating (AC)	(L-N) SCCR	200kA

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

Residual Voltage at 5 kA (8/20 μ s)	(L-N) / (N-PE) U_{res}	1000V / 305V
Overcurrent Protection (min)		80A gG

Additional Electrical Parameters - Extended (Additionally tested by VDE)

Short-Circuit Current Rating (AC)	I_{SCCR}	100kA
Overcurrent Protection (max)		250A gG

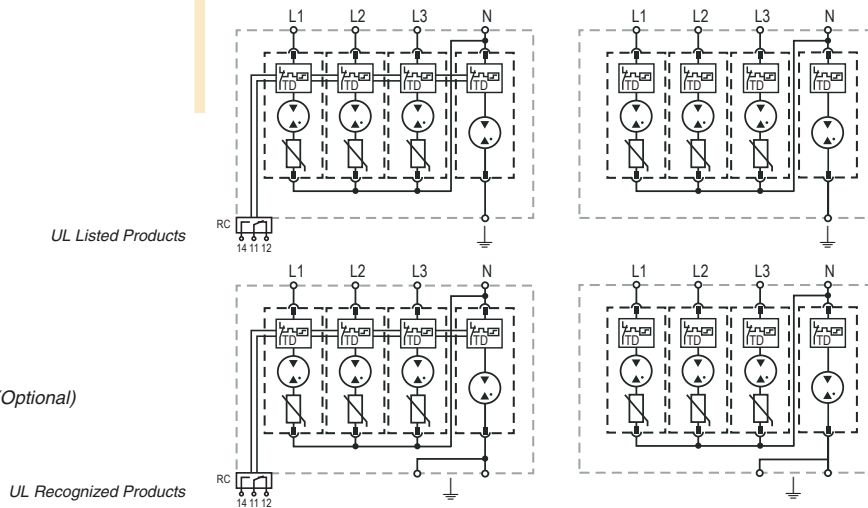
Mechanical & Environmental

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 [4000m]
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 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)

Internal Configuration

Legend

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



ProTec T2H-xxx-3+1(-R)

Order Information VDE Certified and UL Recognized Products

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-xxx-3+1-US(-R)

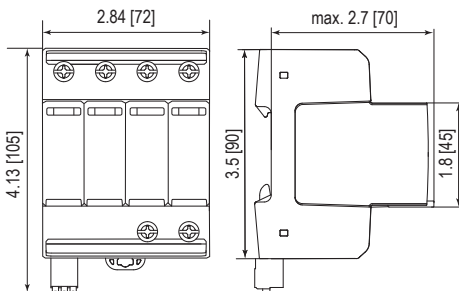
For UL Listed products one PE/G Conductor Terminal is covered/closed.

Order Information VDE Certified and Open Type 1 UL Listed Products

Order Code	300
ProTec T2H-xxx-3+1-US	59.B067
ProTec T2H-xxx-3+1-US-R (with remote contacts)	59.B068
ProTec T2H-xxx-P (plug L-N)	59.0322
ProTube T2H-40-P (plug N-PE)	59.0323

Dimensions & Packaging

inches [mm]



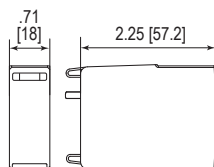
Complete Unit UL Recognized Products

ProTec T2H-xxx-3+1	300
Weight	pounds [grams] .947 [429]
ProTec T2H-xxx-3+1-R	
Weight	pounds [grams] .958 [434]

Complete Unit UL Listed Products

ProTec T2H-xxx-3+1-US	300
Weight	pounds [grams] .927 [420]
ProTec T2H-xxx-3+1-US-R	
Weight	pounds [grams] .938 [425]
DIN 43880 Dimension	4 TE / 2.84" [72]
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Standard Order Quantity	4 Units

Spare Plug



Single Unit

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 (HxWxL)	3.2 x 4.5 x 12" [83 x 116 x 305 mm]
Standard Order Quantity	24 Units