

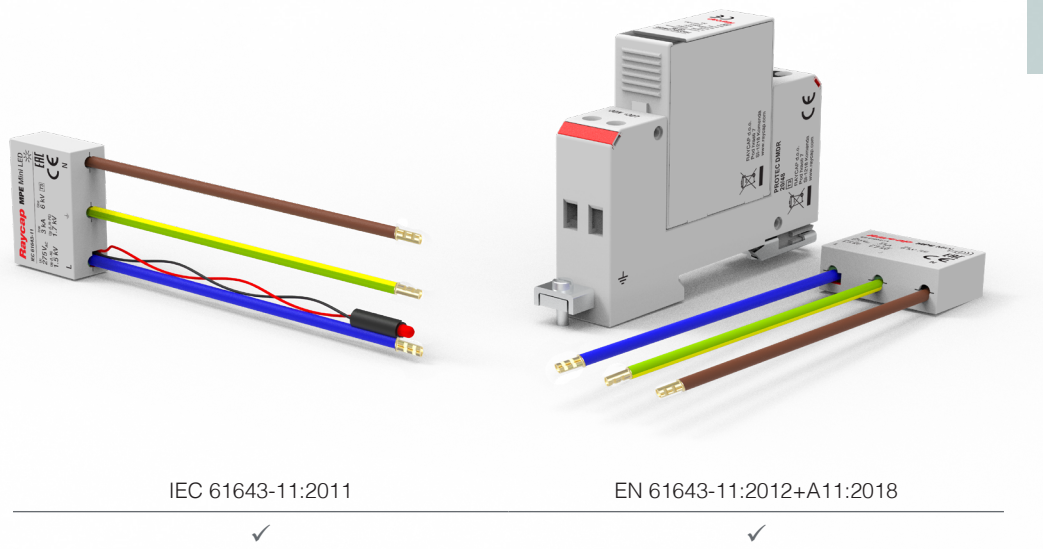
Pluggable Single Pole & Multi-pole Surge Protective Devices (SPDs)

Lightning and Overvoltage Protection

ProTec DMDR, MPE Mini & MPE Mini LED

Class I and Class II SPDs are not enough to protect sensitive electronic elements. Overvoltage waves are slowly increasing at greater frequency, reoccurring and threatening smart devices. Incidences of low value surges are still too high for electronic elements and are often caused by activation switching of major appliances, inductive devices and motors, or industrial system operation failures. SPDs in this classification are intended to protect sensitive electronic installations in Zones 2-3 per IEC 62305.

The MPE Mini series is designed for installation into electrical installation systems, cable ducts and wiring sockets.



ProTec DMDR



MPE Mini & MPE Mini LED



More Product Information



Pluggable Multi-pole SPD

ProTec DMDR 20 Series

Class III • Type 3 • DC SPD Type 4CA



Location of Use: Sub-distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE, L-N
 IEC/EN/UL Category: Class III/Type 3/DC SPD Type 4CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th Edition



Technical Data

ProTec DMDR 20 Series

24

IEC Electrical

Nominal AC/DC Voltage	U_o	17V/17V
Maximum Continuous Operating Voltage (AC/DC)	U_c	24V/34V
Open Circuit Voltage of the Combination Wave Generator (1.2/50 μ s)	U_{oc}	2.4 kV
Short Circuit Current of the Combination Wave Generator (8/20 μ s)	I_{cw}	1.2 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	2 kA
Voltage Protection Level	(L-N) U_p	< 250V
	(L-PE)/(N-PE)	< 700V
Response Time of Overvoltage Protection	(L-N) t_A	< 25 ns
	(L-PE)/(N-PE)	< 100 ns
Maximum Backup fuse, if required		32 A gG
Short-Circuit Current Rating (AC)	I_{sccr}	2 kA
TOV Withstand 5s (AC)	U_T	115V
Number of Ports		1

UL Electrical

Maximum Continuous Operating Voltage (AC)	MCOV	24V
Maximum Continuous Operating Voltage (DC)	(+)-(-) V_{dcmcov}	34V
	(+/-)-(G)	17V
Measured Limiting Voltage	(L-N)/(+)-(-) MLV	190V/230V
	(L/N-G)/(+/-)-(G)	580V/540V
Nominal Discharge Current (8/20 μ s)	I_n	1 kA

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

Minimum Backup fuse, if required	8 A gG
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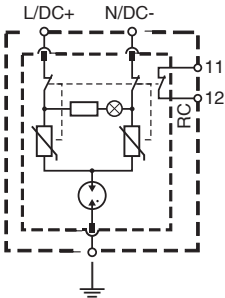
Mechanical & Environmental

Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Humidity	RH	5%...95%
Pollution Degree		2
Terminal Screw Torque	M_{max}	4.5 lbf-in [0.5 Nm]
Conductor Cross Section (max.)		10 AWG (Solid, Stranded) / 12 AWG (Flexible)
		6 mm ² (Solid, Stranded) / 4 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 Status Indication		Green LED

Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- PE/G Conductor Terminal
- RC Remote Contacts Terminal



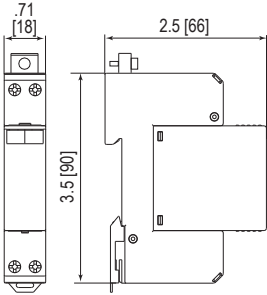
ProTec DMDR 20 Series

Order Information

Order Code	24
ProTec DMDR 20/xxx	510 783
ProTec DMDR 20/xxxM (module)	510 784

Dimensions & Packaging

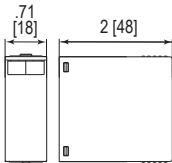
inches [mm]



Complete Unit

ProTec DMDR 20/xxx	24
Weight pounds [grams]	.211 [96]
DIN 43880 Dimension	1 TE / .71" [18 mm]
Packaging Dimensions (H x W x L)	3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]
Standard Order Quantity	12 Units

Spare Plug



Single Unit

Plug ProTec DMDR 20/xxx	24
Weight pounds [grams]	.070 [32]
DIN 43880 Dimension	1 TE / .71" [18 mm]
Packaging Dimensions (H x W x L)	3.8 x 3 x 4.3" [98 x 77 x 110 mm]
Standard Order Quantity	12 Units

Pluggable Multi-pole SPD

ProTec DMDR 20 Series

Class III • Type 3 • DC SPD Type 4CA



Location of Use: Sub-distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE, L-N
 IEC/EN/UL Category: Class III/Type 3/DC SPD Type 4CA
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th Edition



Technical Data

ProTec DMDR 20 Series

IEC Electrical

		48	60	120
Nominal AC/DC Voltage	U_o	34V/48V	43V/60V	85V/120V
Maximum Continuous Operating Voltage (AC/DC)	U_c	48V/60V	60V/75V	120V/150V
Open Circuit Voltage of the Combination Wave Generator (1.2/50 μ s)	U_{oc}	2.4 kV	6 kV	6 kV
Short Circuit Current of the Combination Wave Generator (8/20 μ s)	I_{cw}	1.2 kA	3 kA	3 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	2 kA	4 kA	4 kA
Voltage Protection Level	(L-N) U_p	< 500V	< 600V	< 1100V
	(L-PE)/(N-PE)	< 800V	< 850V	< 1200V
Response Time of Overvoltage Protection	(L-N) t_A		< 25 ns	
	(L-PE)/(N-PE)		< 100 ns	
Maximum Backup fuse, if required			32 A gG	
Short-Circuit Current Rating (AC)	I_{SCCR}		2 kA	
TOV Withstand 5s (AC)	U_T	148V	163V	225V
Number of Ports			1	

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

Minimum Backup fuse, if required	8 A gG	16 A gG	16 A gG
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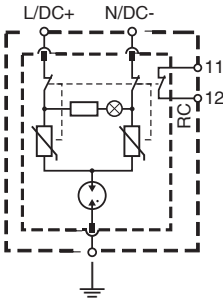
Mechanical & Environmental

Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Humidity	RH	5%...95%
Pollution Degree		2
Terminal Screw Torque	M_{max}	4.5 lbf-in [0.5 Nm]
Conductor Cross Section (max.)		10 AWG (Solid, Stranded) / 12 AWG (Flexible) 6 mm ² (Solid, Stranded) / 4 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 Status Indication		Green LED

Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- PE/G Conductor Terminal
- RC Remote Contacts Terminal



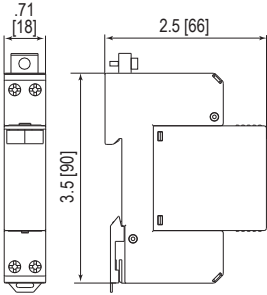
ProTec DMDR 20 Series

Order Information

Order Code	48	60	120
ProTec DMDR 20/xxx	510 833	510 834	510 835
ProTec DMDR 20/xxxM (module)	510 836	510 837	510 838

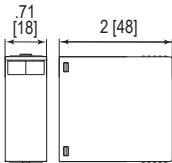
Dimensions & Packaging

inches [mm]



Complete Unit			
ProTec DMDR 20/xxx	48	60	120
Weight	pounds [grams]	.211 [96]	
DIN 43880 Dimension	1 TE / .71" [18 mm]		
Packaging Dimensions (H x W x L)	3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]		
Standard Order Quantity	12 Units		

Spare Plug



Single Unit			
Plug ProTec DMDR 20/xxx	48	60	120
Weight	pounds [grams]	.070 [32]	
DIN 43880 Dimension	1 TE / .71" [18 mm]		
Packaging Dimensions (H x W x L)	3.8 x 3 x 4.3" [98 x 77 x 110 mm]		
Standard Order Quantity	12 Units		

Compact Multi-pole SPD MPE Mini & MPE Mini LED Class III • Type 3



Location of Use: Cable Ducts & Wiring Outlets
 Network Systems: TN-S
 Mode of Protection: L - PE, L - N, N - PE
 IEC/EN Category: Class III / Type 3
 Safety: Buzzer, LED
 Housing: Compact Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018



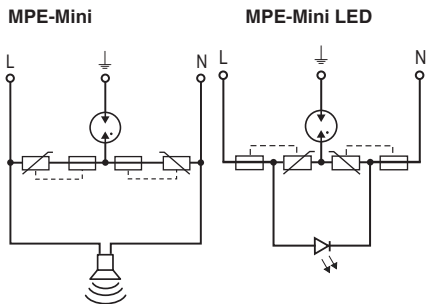
Technical Data

	MPE-Mini	MPE-Mini LED
IEC Electrical		
Nominal AC Voltage (50/60 Hz)	U_o	230 V
Maximum Continuous Operating Voltage (AC)	U_c	275 V
Open Circuit Voltage of the Combination Wave Generator (1.2/50 μ s)	U_{oc}	6 kV
(L + N - PE) $U_{oc total}$		10 kV
Short-Circuit Current of the Combination Wave Generator (8/20 μ s)	I_{cw}	3 kA
Voltage Protection Level (L - N) U_p		1.5 kV
(L - PE)/(N - PE) U_p		1.7 kV
Response Time	t_A	< 100 ns
Maximum Backup fuse, if required		MCB/B 16 A
Short-Circuit Current Rating	I_{SCCR}	1 kA
TOV Withstand 5s	U_T	337 V
Number of Ports		1
Additional Electrical Parameters (Tests performed within Raycap testing laboratory only)		
Minimum Backup fuse, if required		MCB/B 16 A
Mechanical & Environmental		
Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Humidity	RH	5%...95%
Pollution Degree		2
Conductor Cross Section		17 AWG (Flexible) / 1.0 mm ² (Flexible)
Mounting		Cable Ducts
Degree of Protection		IP 20 (built-in)
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0
Thermal Protection		Yes
Fault Indication	Buzzer	LED

Internal Configuration

Legend

- L Line Conductor
- N Neutral Conductor
- PE/G Conductor

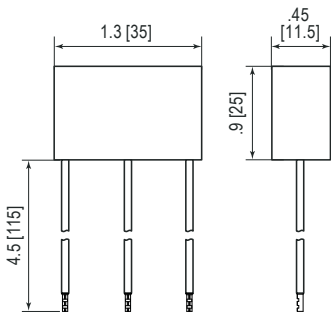


Order Information

Order Code	MPE-Mini	MPE-Mini LED
MPE-Mini	121 280	
MPE-Mini LED		121 282

Dimensions & Packaging

inches [mm]



Complete Unit

MPE-Mini & MPE-Mini LED

Weight	pounds [grams]	.114 [52]
Packaging Dimensions (H x W x L)	12 x 4.5 x 3.2"	[305 x 116 x 83 mm]
Standard Order Quantity	30 Units	