

DATA SHEET

SPD for DC Power Systems ProTec DMDR 20 Series Class III • Type 3 • Type 4CA

UL Recognized



IEC/EN/UL Category: Class III/Type 3/Type 4CA
 Surge Discharge Ratings: U_{oc}/I_{cw} = up to 6kV/3kA
 I_{max} = up to 4kA (8/20 μ s)
 Protection Element: High Energy MOV and GDT
 Voltages: 24, 48, 60, 120V AC
 34, 60, 75, 150 V DC
 Status Indication: Remote Contacts + LED
 Housing: Modular Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th Edition



Technical Data

ProTec DMDR 20 Series

		24*	48	60	120
IEC Electrical					
Nominal AC/DC Voltage	U_o	17V/17V	34V/48V	43V/60V	85V/120V
Maximum Continuous Operating Voltage (AC/DC)	U_c	24V/34V	48V/60V	60V/75V	120V/150V
Open Circuit Voltage of the Combination Wave Generator (1.2/50 μ s)	U_{oc}	2.4kV	2.4kV	6kV	6kV
Short Circuit Current of the Combination Wave Generator (8/20 μ s)	I_{cw}	1.2kA	1.2kA	3kA	3kA
Maximum Discharge Current (8/20 μ s)	I_{max}	2kA	2kA	4kA	4kA
Voltage Protection Level	(L - N) U_p	< 250V	< 500V	< 600V	< 1100V
	(L - PE)/(N - PE)	< 700V	< 800V	< 850V	< 1200V
Response Time of Overvoltage Protection	(L - N) t_A		< 25 ns		
	(L - PE)/(N - PE)		< 100 ns		
Overcurrent Protection (max)			32 A gG		
Short-Circuit Current Rating (AC)	I_{sccr}		2 kA		
TOV Withstand 5s (AC)	U_T	115V	148V	163V	225V
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	-	-	-

Mechanical

Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]			
Permissible Humidity	RH	5%...95%			
Terminal Screw Torque	M_{max}	4.5 lbf-in [0.5Nm]			
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			

Order Information

Order Code	24*	48	60	120
ProTec DMDR 20/xxx	510 783	510 833	510 834	510 835
ProTec DMDR 20/xxxM (module)	510 784	510 836	510 837	510 838

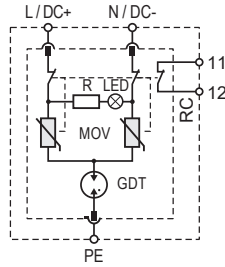
*UL Certification.

ProTec DMDR 20 Series

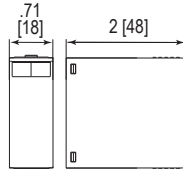
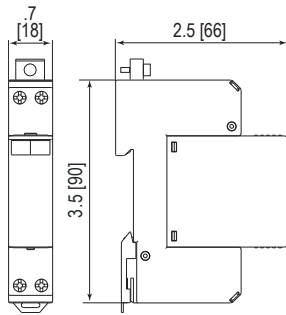
Internal Configuration

Legend

- GDT Gas Discharge Tube
- MOV Metal Oxide Varistor
- PE Ground
- R Resistor
- LED LED
- RC Remote Control (NC)



Dimensions & Packaging



ProTec DMDR 20 Series	24	48	60	120
Dimensions				
Weight per Unit	3.38 oz [96g]			
Dimensions DIN 43880	1 TE			
Packaging Dimensions (Single Unit)	4.2 x 3 x .9" [109 x 77 x 24 mm]			
Minimum Package Quantity	12 pieces			

ProTec DMDR 20/xxx M	24	48	60	120
Dimensions				
Weight per Unit	1.12 oz [32g]			
Packaging Dimensions (Single Unit)	3.8 x 3 x 4.3" [98 x 77 x 110 mm]			
Minimum Package Quantity	12 pieces			

inches
[mm]

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

