

SPD for DC Power Systems
Protec DMDR 20 Series
 Class III



IEC/EN Category: Class III/Type 3
 Mode of Protection: L/N – PE
 Location of Use: DC Power Systems
 Protection Element: MOV + GDT
 Voltages: 24, 48, 60, 120V AC
 Surge Discharge Ratings: I_n : up to 4kA, I_{max} : up to 10kA
 Status Indication: Remote Contacts + LED
 Enclosure: DIN 43880 1TE, DIN Rail Mount
 Terminals: Stranded to 6 mm²
 Housing: Modular Design
 Compliance: IEC 61643-1: 2005, EN 61643-11:2005

The Protec DMDR Series has been designed to meet the unique requirements of protection of DC power systems found in Telepower and railway applications.

Protec DMDR Series provides both common and differential mode protection using high nominal discharge rating for extended operating life under DC conditions.

Technical Data

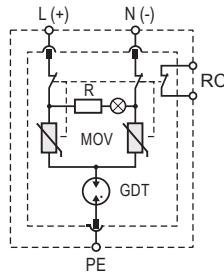
Protec DMDR 20 Series		24V	48V	60V	120V
Electrical					
Nominal Operating Voltage (AC)	U_n	24V	48V	60V	120V
Maximum Continuous Operating Voltage (DC)	U_c	34V / 44V	60V	75V	150V
Open Circuit Voltage of Combination Wave Generator	U_{oc}	4kV	4kV	6kV	6kV
Nominal Discharge Current (8/20 μ s)	I_n	1.2kA	2.5kA	2.5kA	4kA
Maximum Discharge Current (8/20 μ s)	I_{max}	3kA	6kA	6kA	10kA
Protection Level	(L-N) U_p	<180V	<370V	<400V	<600V
	(L-PE/N-PE)	<550V	<650V	<700V	<850V
Response Time Overvoltage Protection	(L-N) t_A			<25ns	
	(L-PE/N-PE)			<100ns	
Thermal Protection				Yes	
Mechanical					
Temperature Range				-40 °C to +80 °C	
Terminal Cross Section Multi-strand				6 mm ²	
Terminal Screw Torque				2.0 Nm	
Degree of Protection IEC/EN 60529				IP 20	
Housing Material				Thermoplastic; Grey; Extinguishing Degree V-0	
Mounting IEC/EN 60715				35mm DIN Rail	
Order Information					
Order Code		24V	48V	60V	120V
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

Protec DMDR 20 Series

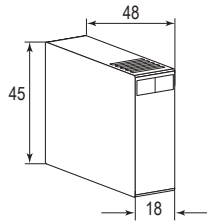
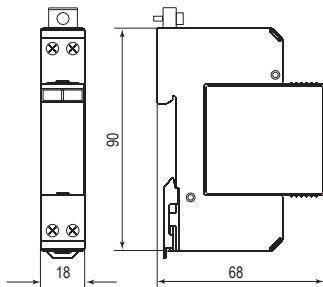
Internal Configuration

Legend

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



Dimensions & Packaging



Protec DMDR 20 Series	24V	48V	60V	120V
Dimensions				
Weight per Unit			96 g	
Dimensions DIN 43880			1 TE	
Packaging Dimensions (Single Unit)			78 × 23 × 108 mm	
Minimum Package Quantity			12 pieces	

Protec DMDR 20/xxx M	24V	48V	60V	120V
Dimensions				
Weight per Unit			32 g	
Packaging Dimensions (Single Unit)			61 × 49 × 21 mm	
Minimum Package Quantity			15 pieces	