

Modular Multi-pole SPD

ProTec CM(R) 80 (2+0)

Class II•Type 2



Location of Use: Sub-distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 Surge Ratings: $I_n = 15 \text{ kA (8/20}\mu\text{s)}$
 $I_{max} = 40 \text{ kA (8/20}\mu\text{s)}$
 IEC/EN Category: Class II / Type 2
 Protective Elements: High Energy MOV
 Housing: Modular Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

ProTec CM(R) 80/xxx (2+0)

275

320

Electrical

Nominal AC Voltage (50/60 Hz)	U_o	230V	230V
Maximum Continuous Operating Voltage (AC/DC)	U_c	275V	320V
Nominal Discharge Current (8/20 μs)	I_n	15 kA	
Maximum Discharge Current (8/20 μs)	I_{max}	40 kA	
Voltage Protection Level	U_p	< 1.5 kV	< 1.5 kV
Response Time	t_A	< 25 ns	
Back-Up Fuse (if mains > 125 A)		100 A gG/gL	
Short-Circuit Current Rating	I_{SCCR}	25 kA/50 Hz	
TOV Withstand 5s	U_T	335V	335V
Number of Ports		1	

Mechanical & Environmental

Temperature Range	T_a	-40 °C to +85 °C
Permissible Humidity	RH	5%...95%
Terminal Screw Torque	L, N M_{max}	2.0 Nm
	PE M_{max}	3.0 Nm
Conductor Cross Section	L, N	6 mm ² (solid) / 4 mm ² (stranded)
	PE	35 mm ² (solid) / 25 mm ² (stranded)
Degree of Protection		IP 20
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0
Thermal Protection		Yes
Fault Indication		Red Flag
Remote Contacts (RC)		Optional
RC Switching Capacity		AC: 250V/0.5 A; 125V/3 A
RC Terminal Cross Section (max)		1.5 mm ²
RC Terminal Screw Torque		0.25 Nm

Order Information

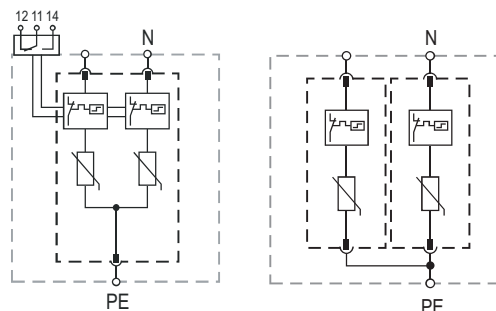
Order Code	275	320
PROTEC CM 80/xxx (2+0)	508.315	508.316
PROTEC CMR 80/xxx (2+0) (with remote contacts)	508.320	508.321
Module PROTEC CM(R) 80/xxx (2+0)	508.325	508.326

ProTec CM(R) 80 (2+0)

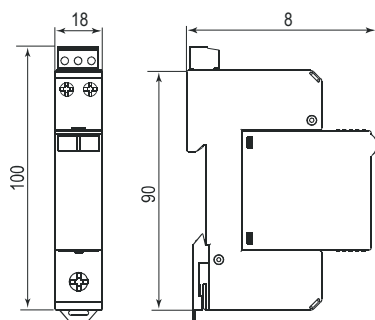
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- RC Remote Contacts Optional



Dimensions & Packaging [mm]

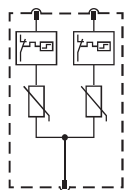


Dimensions & Packaging

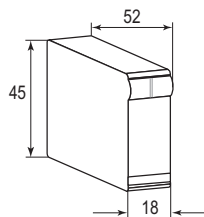
Dimensions & Packaging		
ProTec CM 80/xxx (2+0)	275	320
Single Unit Weight	144g	144g
Single Unit DIN 43880 Dimension	1 TE	
Packaging Dimensions (H x W x L)	109 x 77 x 24 mm	
Minimum Order Quantity	12 Units	
ProTec CMR 80/xxx (2+0)	275	320
Single Unit Weight	149g	149g
Single Unit DIN 43880 Dimension	1 TE	
Packaging Dimensions (H x W x L)	109 x 77 x 24 mm	
Minimum Order Quantity	12 Units	

Module Internal Configuration

Module ProTec CM(R) 80/xxx (2+0)



Dimensions & Packaging [mm]



Dimensions & Packaging

Dimensions & Packaging		
Module ProTec CM(R) 80/xxx (2+0)	275	320
Single Unit Weight	63g	79g
Single Unit DIN 43880 Dimension	1 TE	
Packaging Dimensions (H x W x L)	98 x 77 x 110 mm	
Minimum Order Quantity	12 Units	

Applicable connection configurations can be found on page 179.

Modular Multi-pole SPD

ProTec CM(R) 80 (1+1)

Class II•Type 2



Location of Use: Sub-distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 Surge Ratings: $I_n = 15\text{ kA}/20\text{ kA}$ (8/20 μs)
 $I_{max} = 40\text{ kA}/40\text{ kA}$ (8/20 μs)
 IEC/EN Category: Class II / Type 2
 Protective Elements: High Energy MOV and GDT
 Housing: Modular Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

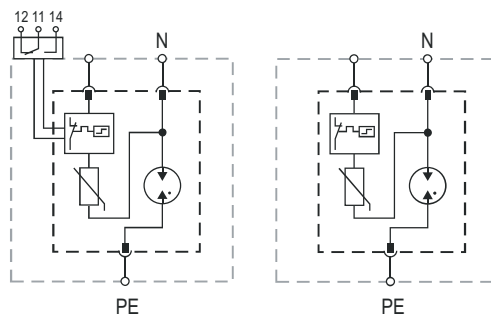
ProTec CM(R) 80/xxx (1+1)		275	320
Electrical			
Nominal AC Voltage (50/60 Hz)	(L-N) U_o	230V	230V
	(N-PE) U_o	230V	230V
Maximum Continuous Operating Voltage (AC)	U_c	275V	320V
Nominal Discharge Current (8/20 μs)	(L-N)/(N-PE) I_n	15 kA/20 kA	
Maximum Discharge Current (8/20 μs)	(L-N)/(N-PE) I_{max}	40 kA/40 kA	
Voltage Protection Level	(L-N) U_p	1,5 kV	1,5 kV
	(N-PE) U_p	1,5 kV	1,5 kV
Follow Current Interrupt Rating	(N-PE) I_{fi}	100 A _{RMS}	
Response Time	(L-N)/(N-PE) t_A	< 25 ns / < 100 ns	
Back-Up Fuse (if mains > 125 A)		63 A gG	
Short-Circuit Current Rating	I_{SCCR}	25 kA	
TOV Withstand 5s	(L-N) U_T	335V	335V
TOV Withstand 200 ms	(N-PE) U_T	1200V/300 A	
Number of Ports		1	
Mechanical & Environmental			
Temperature Range	T_a	-40 °C to +85 °C	
Permissible Humidity	RH	5%...95%	
Terminal Screw Torque	L, N M_{max}	2.0 Nm	
	PE M_{max}	3.0 Nm	
Conductor Cross Section	L, N	6 mm ² (solid) / 4 mm ² (stranded)	
	PE	35 mm ² (solid) / 25 mm ² (stranded)	
Mounting		35 mm DIN Rail, EN 60715	
Degree of Protection		IP 20	
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0	
Thermal Protection		Yes	
Fault Indication		Red Flag	
Remote Contacts (RC)		Optional	
RC Switching Capacity		AC: 250V/0.5 A; 125V/3 A	
RC Terminal Cross Section (max)		1.5 mm ²	
RC Terminal Screw Torque		0.25 Nm	
Order Information			
Order Code		275	320
PROTEC CM 80/xxx (1+1)		508.330	508.331
PROTEC CMR 80/xxx (1+1) (with remote contacts)		508.335	508.336
Module PROTEC CM(R) 80/xxx (1+1)		508.340	508.341

ProTec CM(R) 80 (1+1)

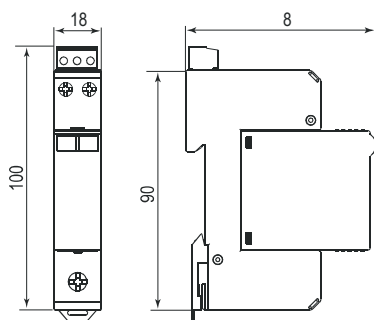
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- RC Remote Contacts Optional



Dimensions & Packaging [mm]

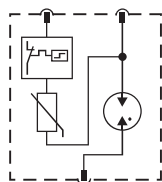


Dimensions & Packaging

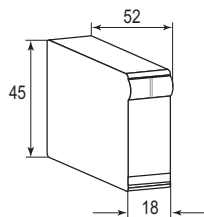
ProTec CM 80/xxx (1+1)		
Single Unit Weight	275	320
Single Unit DIN 43880 Dimension	126g	126g
Single Unit DIN 43880 Dimension	1 TE	
Packaging Dimensions (H x W x L)	109 x 77 x 24 mm	
Minimum Order Quantity	12 Units	
ProTec CMR 80/xxx (1+1)		
Single Unit Weight	275	320
Single Unit DIN 43880 Dimension	131g	131g
Single Unit DIN 43880 Dimension	1 TE	
Packaging Dimensions (H x W x L)	109 x 77 x 24 mm	
Minimum Order Quantity	12 Units	

Module Internal Configuration

Module ProTec CM(R) 80/xxx (1+1)



Dimensions & Packaging [mm]



Dimensions & Packaging

Module ProTec CM(R) 80/xxx (1+1)		
Single Unit Weight	275	320
Single Unit Weight	59g	59g
Single Unit DIN 43880 Dimension	1 TE	
Packaging Dimensions (H x W x L)	98 x 77 x 110 mm	
Minimum Order Quantity	12 Units	

Applicable connection configurations can be found on page 179.