

Compact Multi-pole SPD
SafeBloc B(R) 50 (3+1) TCG
Class I • Class II • Type 1 • Type 2



Location of Use: Main Distribution Boards
 Network Systems: TN-S, TT
 Mode of Protection: L - N, N - PE
 Surge Ratings: $I_{imp} = 12.5 \text{ kA} / 50 \text{ kA} (10/350 \mu\text{s})$
 $I_n = 20 \text{ kA} / 50 \text{ kA} (8/20 \mu\text{s})$
 IEC/EN Category: Class I, II / Type 1, 2
 Protective Elements: High Energy MOV and GDT
 Safety: High TOV Immunity
 Leakage Current: No Leakage Current
 Housing: Compact Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

SafeBloc B(R) 50/xxx (3+1) TCG

275

Electrical

Nominal AC Voltage (50/60 Hz)	U_o	230V
Maximum Continuous Operating Voltage (AC)	(L - N) U_c	275V
	(N - PE) U_c	255V
Nominal Discharge Current (8/20 μs)	(L - N)/(N - PE) I_n	20 kA / 50 kA
Maximum Discharge Current (8/20 μs)	(L - N)/(N - PE) I_{max}	50 kA / 100 kA
Impulse Discharge Current (10/350 μs)	(L - N)/(N - PE) I_{imp}	12.5 kA / 50 kA
Total Discharge Current (10/350 μs)	I_{total}	50 kA
Specific Energy	(L - N)/(N - PE) W/R	39 kJ/ Ω / 625 kJ/ Ω
Charge	(L - N)/(N - PE) Q	6.25 As / 25 As
Voltage Protection Level	(L - N)/(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 > 250 A)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	(L - N) U_T	438V
TOV Withstand 200ms	(N - PE) U_T	1200V / 300A
Number of Ports		1

Mechanical & Environmental

Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Humidity	RH	5%...95%
Terminal Screw Torque	M_{max}	26.5 lbf-in [3.0 Nm]
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)
		35mm ² (Solid, Stranded) / 25mm 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	(L - N)/(N - PE)	Yes/No
Fault Indication	(L - N)/(N - PE)	Red Flag/NO
Remote Contacts (RC)		Optional
RC Switching Capacity		AC: 250V/0.5A; 125V/3A
RC Terminal Cross Section (max)		1.5mm ² (Solid) / 16 AWG (Solid)
RC Terminal Screw Torque	M_{max}	2.2 lbf-in [0.25 Nm]

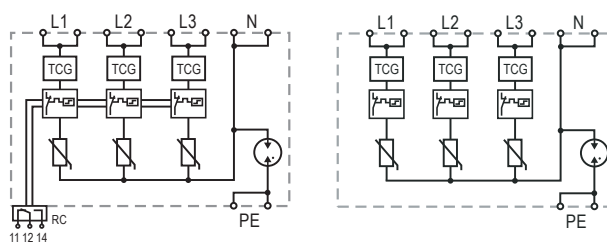
Order Information

Order Code	275
SafeBloc B 50/xxx (3+1) TCG	54.0533
SafeBloc B(R) 50/xxx (3+1) TCG (with remote contacts)	54.0534

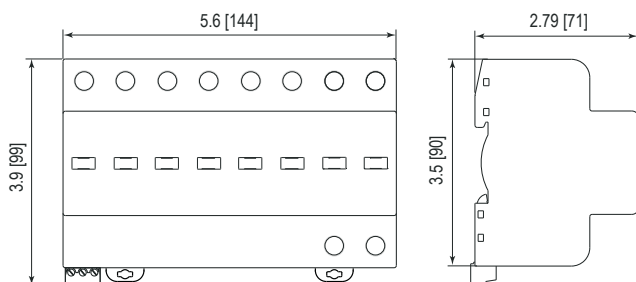
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- RC Remote Contacts Optional
- TCG Thermal Control Function with No Leakage



Dimensions & Packaging



Dimensions & Packaging

SafeBloc B 50/xxx (3+1) TCG		275
Single Unit Weight	pounds [grams]	1.984 [900]
Single Unit DIN 43880 Dimension		8 TE
Packaging Dimensions (H x W x L)		4.2 x 3 x 5.8" [109 x 77 x 148 mm]
Minimum Order Quantity		2 Units
SafeBloc BR 50/xxx (3+1) TCG		275
Single Unit Weight	pounds [grams]	2.006 [910]
Single Unit DIN 43880 Dimension		8 TE
Packaging Dimensions (H x W x L)		4.2 x 3 x 5.8" [109 x 77 x 148 mm]
Minimum Order Quantity		2 Units

inches
[mm]

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

