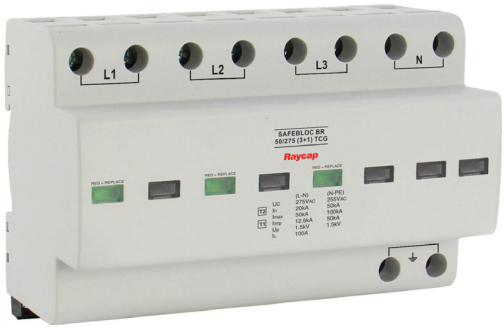
DATA SHEET

Lightning and Overvoltage Protection

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

Class I • Class II • Type 1 • Type 2

12.5 kA Series



Location of Use: Main Distribution Boards
Network Systems: TN-S, TT
Mode of Protection: L-N, N-PE
IEC/EN Category: Class I+II / Type 1+2
Safety: High TOV Immunity
Technology: Hybrid
Leakage Current Free: Yes
Housing: Compact Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012

Technical Data

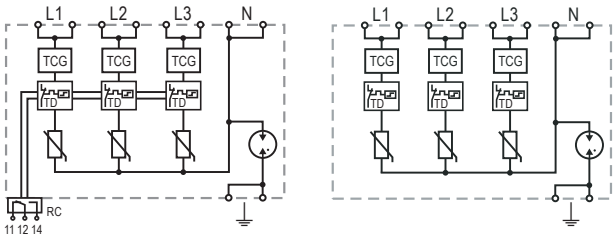
SafeBloc B(R) 50/xxx (3+1) TCG			275
IEC Electrical			
Nominal AC Voltage (50/60 Hz)		U_o	230 V
Maximum Continuous Operating Voltage (AC)	(L-N)	U_c	275 V
	(N-PE)	U_c	255 V
Nominal Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_n	20 kA / 50 kA
Maximum Discharge Current (8/20 µs)	(L-N)/(N-PE)	I_{max}	50 kA / 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
Overcurrent Protection (max)			250 A gG
Short-Circuit Current Rating (AC)		I_{SCCR}	50 kA
TOV Withstand 120min	(L-N)	U_T	438 V
TOV Withstand 200ms	(N-PE)	U_T	1200 V / 300 A
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)
			35mm² (Solid, Stranded) / 25mm² (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: 250 V / 0.5 A; 125 V / 3 A
RC Terminal Cross Section (max)			1.5mm² (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

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

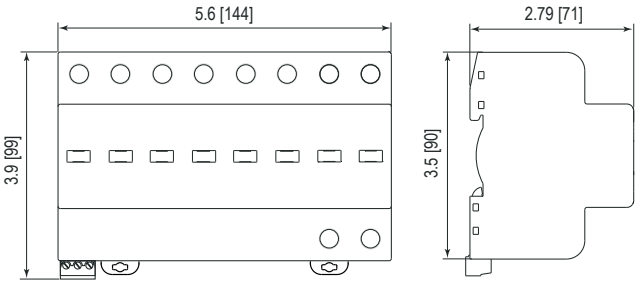
Internal Configuration

Legend

L	*Line Conductor Terminal*
N	*Neutral Conductor Terminal*
⏚	*PE Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TCG	*Thermal Control Function with No Leakage*
TD	*Thermal Disconnector*



Complete Unit



Single Unit Dimensions & Packaging		
SafeBloc B 50/xxx (3+1) TCG		**275**
Weight	pounds [grams]	1.984 [900]
DIN 43880 Dimension		8 TE / 5.66" [144]
Packaging Dimensions (H×W×L)		3.1 × 4.4 × 11.7" [79 × 112 × 298 mm]
Standard Order Quantity		2 Units
SafeBloc BR 50/xxx (3+1) TCG		**275**
Weight	pounds [grams]	2.006 [910]
DIN 43880 Dimension		8 TE / 5.66" [144]
Packaging Dimensions (H×W×L)		3.1 × 4.4 × 11.7" [79 × 112 × 298 mm]
Standard Order Quantity		2 Units

inches
[mm]

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