DATA SHEET

Lightning and Overvoltage Protection

SafeBloc B(R) 50 (4+0) TCG

Class I • Class II • Type 1 • Type 2

12.5 kA Series

Location of Use: Main Distribution Boards
Network Systems: TN-S
Mode of Protection: L-PE, 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 (4+0) TCG		150	275*
IEC Electrical			
Nominal AC Voltage (50/60 Hz)	U_o	120 V	230 V
Maximum Continuous Operating Voltage (AC)	U_c	150 V	275 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA	
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA	
Impulse Discharge Current (10/350 µs)	I_{imp}	12.5 kA	
Total Discharge Current (10/350 µs)	I_{total}	50 kA	
Specific Energy	W/R	39 kJ/Ω	
Charge	Q	6.25 As	
Voltage Protection Level	U_p	< 1.2 kV	< 1.5 kV
Response Time	t_A	< 25 ns	
Overcurrent Protection (max)		250 A gG	
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA	
TOV Withstand 120min	U_T	229 V	438 V
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		Yes	
Fault Indication		Red Flag	
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		**150**	**275***
SafeBloc B 50/xxx (4+0) TCG		54.0519	54.0521
SafeBloc BR 50/xxx (4+0) TCG (with remote contacts)		54.0520	54.0522

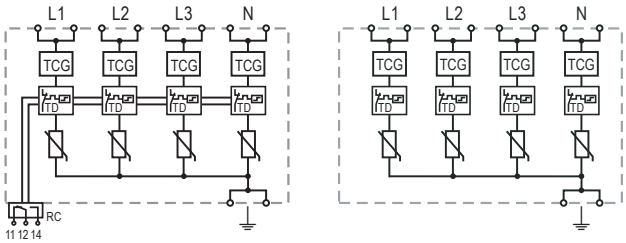
**OVE Certified*

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

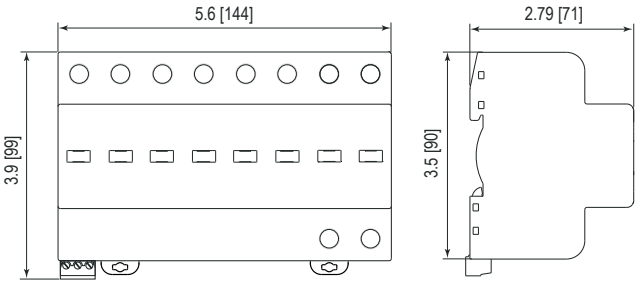
Internal Configuration

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 (4+0) TCG		**150**	**275***
Weight	pounds [grams]	1.763 [800]	2.204 [1000]
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 (4+0) TCG		**150**	**275***
Weight	pounds [grams]	1.796 [815]	2.237 [1015]
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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