

# Lightning and Overvoltage Protection

## ProBloc B(R) 50 (1+1)

### Class I • Class II • Type 1 • Type 2

25 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  
 Housing: Compact Design  
 Compliance: IEC 61643-11:2011  
 EN 61643-11:2012

### Technical Data

#### ProBloc B(R) 50/xxx (1+1)

		150	275*	320*
<b>IEC Electrical</b>				
Nominal AC Voltage (50/60 Hz)	$U_o$	120V	230V	230V
Maximum Continuous Operating Voltage (AC)	(L-N) $U_c$	150V	275V	320V
	(N-PE) $U_c$		255V	
Nominal Discharge Current (8/20 $\mu$ s)	(L-N)/(N-PE) $I_n$		25 kA / 50 kA	
Maximum Discharge Current (8/20 $\mu$ s)	(L-N)/(N-PE) $I_{max}$		100 kA / 100 kA	
Impulse Discharge Current (10/350 $\mu$ s)	(L-N)/(N-PE) $I_{imp}$		25 kA / 50 kA	
Total Discharge Current (10/350 $\mu$ s)	$I_{total}$		50 kA	
Specific Energy	(L-N)/(N-PE) W/R		156 kJ/ $\Omega$ / 625 kJ/ $\Omega$	
Charge	(L-N)/(N-PE) Q		12.5 As / 25 As	
Voltage Protection Level	(L-N)/(N-PE) $U_p$	< 1.0 kV / < 1.5 kV	< 1.5 kV / < 1.5 kV	< 1.5 kV / < 1.5 kV
Follow Current Interrupt Rating	(N-PE) $I_{fi}$		100 A <sub>RMS</sub>	
Response Time	(L-N)/(N-PE) $t_A$		< 25 ns / < 100 ns	
Overcurrent Protection (max)	(L-N)		250 A gG	
Short-Circuit Current Rating (AC)	$I_{SCCR}$		50 kA	
TOV Withstand 5s	(L-N) $U_T$	174V	334V	334V
TOV Safe Fail 120min	(L-N) $U_T$	229V	438V	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 <sup>2</sup> (Solid, Stranded) / 25mm <sup>2</sup> (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 <sup>2</sup> (Solid) / 16 AWG (Solid)		
RC Terminal Screw Torque	$M_{max}$	2.2 lbf-in [0.25 Nm]		

#### Order Information

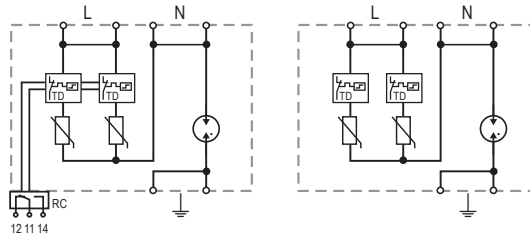
Order Code	150	275*	320*
ProBloc B 50/xxx (1+1)	56.0602	56.0604	56.0606
ProBloc BR 50/xxx (1+1) (with remote contacts)	56.0603	56.0605	56.0607

\*OVE Certified

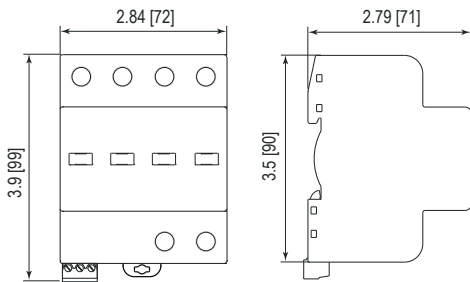
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- PE Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect



Complete Unit



Single Unit Dimensions & Packaging

		150	275*	320*
<b>ProBloc B 50/xxx (1+1)</b>				
Weight	pounds	.98	1.06	1.06
	grams	445	485	485
DIN 43880 Dimension		4 TE / 2.84" [72]		
Packaging Dimensions (H x W x L)		3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]		
Standard Order Quantity		3 Units		
<b>ProBloc BR 50/xxx (1+1)</b>				
Weight	pounds	.99	1.06	1.06
	grams	450	490	490
DIN 43880 Dimension		4 TE / 2.84" [72]		
Packaging Dimensions (H x W x L)		3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]		
Standard Order Quantity		3 Units		



inches  
[mm]



Applicable connection configurations can be found beginning on page 98.