DATA SHEET

Lightning and Overvoltage Protection

ProBloc T1SG 3+0 E

Class I • Class II • Class III • Type 1 • Type 2 • Type 3

7.5 kA Series



Location of Use: Main Distribution Boards
Network Systems: TN-C
Mode of Protection: L-PEN
IEC/EN Category: Class I+II+III / Type 1+2+3
Technology: Spark Gap
Leakage Current Free: Yes
Housing: Compact Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

Technical Data

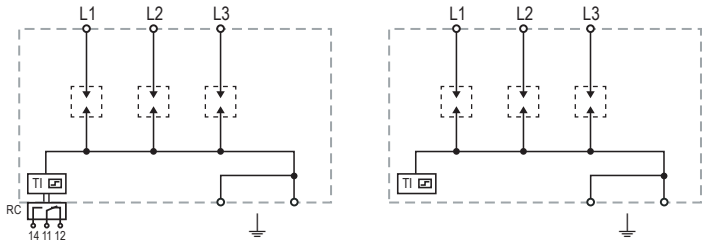
ProBloc T1SG-xxx-3+0-E(-R)		255
IEC Electrical		
Nominal AC Voltage (50/60Hz)	U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	U_c	255 V
Nominal Discharge Current (8/20 µs)	I_n	20 kA
Maximum Discharge Current (8/20 µs)	I_{max}	50 kA
Impulse Discharge Current (10/350 µs)	I_{imp}	7.5 kA
Specific Energy	W/R	14 kJ/Ω
Charge	Q	3.75 As
Open Circuit Voltage of Combination Wave Generator (1.2/50 µs)	U_{oc}	6 kV
Short Circuit Current of Combination Wave Generator (8/20µs)	I_{cw}	3 kA
Voltage Protection Level	U_p	1500 V
Response Time	t_A	< 100 ns
Overvoltage Category		III
Overcurrent Protection (max)		160 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA
Follow Current Interrupt Rating (AC)	I_{fi}	25 kA
TOV Withstand 120min	U_T	442 V
Number of Ports		1
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*		
Residual Voltage at 5 kA (8/20 µs)	U_{res}	1200 V
Mechanical & Environmental		
Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
Altitude (max)		13123 ft [4000 m]
Terminal Screw Torque	M_{max}	40 lbf·in [4.5 Nm]
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)
		35 mm² (Solid, Stranded) / 25 mm² (Flexible)
Mounting		35 mm DIN Rail, EN 60715
Degree of Protection		IP 20 (built-in)
Operating State / Fault Indication		Green Flag / Not Green Flag
Remote Contacts (RC)		Optional
RC Switching Capacity		AC: 250 V / 0.5 A, 125 V / 0.1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm² (Solid)
Overvoltage Category		III

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

Internal Configuration

Legend

L	*Line Conductor Terminal*
⏚	*PEN Conductor Terminal*
RC	*Remote Contacts Terminal (Optional)*
TI	*Thermal Indicator*

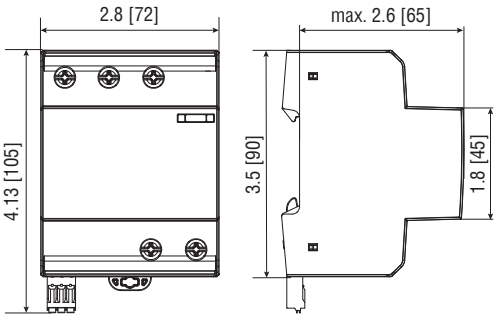


ProBloc T1SG-xxx-3+0-E(-R)

Order Information	
Order Code	**255**
ProBloc T1SG-xxx-3+0-E	53.0011
ProBloc T1SG-xxx-3+0-E-R (with remote contacts)	53.0012

Dimensions & Packaging

inches [mm]



Complete Unit Dimensions & Packaging		
ProBloc T1SG-xxx-3+0-E		**255**
Weight	pounds [grams]	0.860 [390]
ProBloc T1SG-xxx-3+0-E-R		
Weight	pounds [grams]	0.864 [392]
DIN 43880 Dimension		4 TE / 2.84 [72]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		4 Units

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DATA SHEET

Lightning and Overvoltage Protection

ProBloc T1SG 4+0 E

Class I • Class II • Class III • Type 1 • Type 2 • Type 3

7.5 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+III / Type 1+2+3
Technology: Spark Gap
Leakage Current Free: Yes
Housing: Compact Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

Technical Data

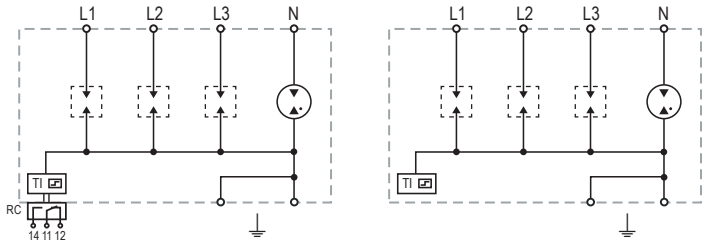
ProBloc T1SG-xxx-4+0-E(-R)			255
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)		U_c	255 V
Nominal Discharge Current (8/20 µs)		I_n	20 kA
Maximum Discharge Current (8/20 µs)		I_{max}	50 kA
Impulse Discharge Current (10/350 µs)		I_{imp}	7.5 kA
Specific Energy		W/R	14 kJ/Ω
Charge		Q	3.75 As
Open Circuit Voltage of Combination Wave Generator (1.2/50 µs)		U_{oc}	6 kV
Short Circuit Current of Combination Wave Generator (8/20µs)		I_{cw}	3 kA
Voltage Protection Level		U_p	1500 V
Response Time		t_A	< 100 ns
Overvoltage Category			III
Overcurrent Protection (max)			160 A gG
Short-Circuit Current Rating (AC)		I_{SCCR}	25 kA
Follow Current Interrupt Rating (AC)	(L-PE) / (N-PE)	I_{fi}	25 kA / 100 A
TOV Withstand 120min	(L-PE)	U_T	442 V
Number of Ports			1
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*			
Residual Voltage at 5 kA (8/20 µs)	(L-PE) / (N-PE)	U_{res}	1200 V / 255 V
Mechanical & Environmental			
Operating Temperature Range		T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity		RH	5%...95%
Altitude (max)			13123 ft [4000 m]
Terminal Screw Torque		M_{max}	40 lbf·in [4.5 Nm]
Conductor Cross Section (max)			2 AWG (Solid, Stranded) / 4 AWG (Flexible)
			35 mm² (Solid, Stranded) / 25 mm² (Flexible)
Mounting			35 mm DIN Rail, EN 60715
Degree of Protection			IP 20 (built-in)
Operating State / Fault Indication			Green Flag / Not Green Flag
Remote Contacts (RC)			Optional
RC Switching Capacity			AC: 250 V / 0.5 A, 125 V / 0.1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm² (Solid)
Overvoltage Category			III

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)*
TI	*Thermal Indicator*

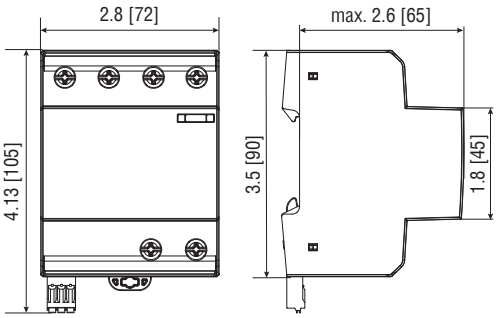


ProBloc T1SG-xxx-4+0-E(-R)

Order Information	
Order Code	**255**
ProBloc T1SG-xxx-4+0-E	53.0013
ProBloc T1SG-xxx-4+0-E-R (with remote contacts)	53.0014

Dimensions & Packaging

inches [mm]



Complete Unit Dimensions & Packaging		
ProBloc T1SG-xxx-4+0-E		**255**
Weight	pounds [grams]	0.917 [416]
ProBloc T1SG-xxx-4+0-E-R		
Weight	pounds [grams]	0.924 [419]
DIN 43880 Dimension		4 TE / 2.84 [72]
Packaging Dimensions (HxWxL)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		4 Units

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DATA SHEET

Lightning and Overvoltage Protection

ProBloc T1SG 1+1 E

Class I • Class II • Class III • Type 1 • Type 2 • Type 3

7.5 kA Series



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
IEC/EN Category: Class I+II+III / Type 1+2+3
Technology: Spark Gap
Leakage Current Free: Yes
Housing: Compact Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

Technical Data

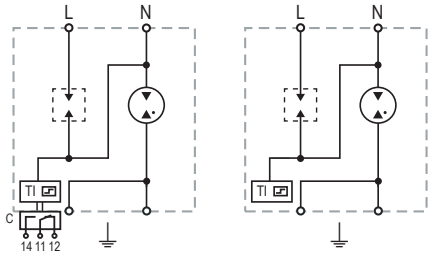
ProBloc T1SG-xxx-1+1-E(-R)			255
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o/U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE)	U_c	255 V / 305 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_n	20 kA / 50 kA
Maximum Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_{max}	50 kA / 100 kA
Impulse Discharge Current (10/350 µs)	(L-N) / (N-PE)	I_{imp}	7.5 kA / 30 kA
Specific Energy	(L-N) / (N-PE)	W/R	39 kJ/Ω / 625 kJ/Ω
Charge	(L-N) / (N-PE)	Q	3.75 As / 15 As
Open Circuit Voltage of Combination Wave Generator (1.2/50 µs)	(L-N) / (N-PE)	U_{oc}	6 kV / 6 kV
Short Circuit Current of Combination Wave Generator (8/20µs)	(L-N) / (N-PE)	I_{cw}	3 kA / 3 kA
Voltage Protection Level	(L-N) / (N-PE)	U_p	1500 V / 1500 V
Response Time	(L-N) / (N-PE)	t_A	< 100 ns / < 100 ns
Overvoltage Category			III
Overcurrent Protection (max)			160 A gG
Short-Circuit Current Rating (AC)	(L-N)	I_{SCCR}	25 kA
Follow Current Interrupt Rating (AC)	(L-N) / (N-PE)	I_{fi}	25 kA / 100 A
TOV Withstand 120min	(L-N)	U_T	442 V
TOV Withstand 200ms	(N-PE)	U_T	1200 V
Number of Ports			1
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*			
Residual Voltage at 5 kA (8/20 µs)	(L-N) / (N-PE)	U_{res}	1200 V / 305 V
Mechanical & Environmental			
Operating Temperature Range		T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity		RH	5%...95%
Altitude (max)			13123 ft [4000 m]
Terminal Screw Torque		M_{max}	40 lbf·in [4.5 Nm]
Conductor Cross Section (max)			2 AWG (Solid, Stranded) / 4 AWG (Flexible)
			35 mm² (Solid, Stranded) / 25 mm² (Flexible)
Mounting			35 mm DIN Rail, EN 60715
Degree of Protection			IP 20 (built-in)
Operating State / Fault Indication			Green Flag / Not Green Flag
Remote Contacts (RC)			Optional
RC Switching Capacity			AC: 250 V / 0.5 A, 125 V / 0.1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm² (Solid)
Overvoltage Category			III

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)*
TI	*Thermal Indicator*

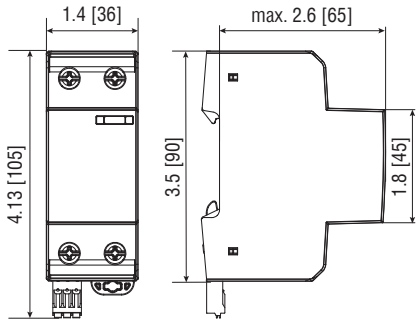


ProBloc T1SG-xxx-1+1-E(-R)

Order Information	
Order Code	**255**
ProBloc T1SG-xxx-1+1-E	53.0015
ProBloc T1SG-xxx-1+1-E-R (with remote contacts)	53.0016

Dimensions & Packaging

inches [mm]



Complete Unit Dimensions & Packaging		
ProBloc T1SG-xxx-1+1-E		**255**
Weight	pounds [grams]	0.503 [228]
ProBloc T1SG-xxx-1+1-E-R		
Weight	pounds [grams]	0.507 [230]
DIN 43880 Dimension		2 TE / 1.42 [36]
Packaging Dimensions (HxWxL)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		7 Units

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DATA SHEET

Lightning and Overvoltage Protection

ProBloc T1SG 3+1 E

Class I • Class II • Class III • Type 1 • Type 2 • Type 3

7.5 kA Series



Location of Use: Main Distribution Boards
Network Systems: TT, TN-S
Mode of Protection: L-N, N-PE
IEC/EN Category: Class I+II+III / Type 1+2+3
Technology: Spark Gap
Leakage Current Free: Yes
Housing: Compact Design
Compliance: IEC 61643-11:2011
EN 61643-11:2012+A11:2018

Technical Data

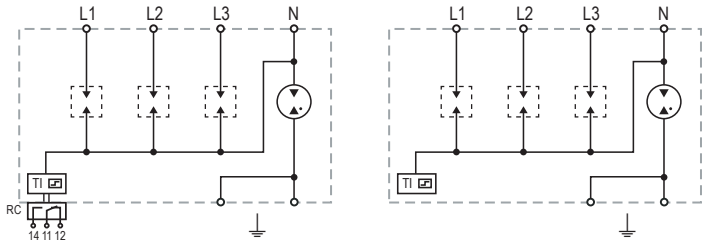
ProBloc T1SG-xxx-3+1-E(-R)			255
IEC Electrical			
Nominal AC Voltage (50/60Hz)		U_o / U_n	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE)	U_c	255 V / 305 V
Nominal Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_n	20 kA / 50 kA
Maximum Discharge Current (8/20 µs)	(L-N) / (N-PE)	I_{max}	50 kA / 100 kA
Impulse Discharge Current (10/350 µs)	(L-N) / (N-PE)	I_{imp}	7.5 kA / 30 kA
Specific Energy	(L-N) / (N-PE)	W/R	39 kJ/Ω / 625 kJ/Ω
Charge	(L-N) / (N-PE)	Q	3.75 As / 15 As
Open Circuit Voltage of Combination Wave Generator (1.2/50 µs)	(L-N) / (N-PE)	U_{oc}	6 kV / 6 kV
Short Circuit Current of Combination Wave Generator (8/20µs)	(L-N) / (N-PE)	I_{cw}	3 kA / 3 kA
Voltage Protection Level	(L-N) / (N-PE)	U_p	1500 V / 1500 V
Response Time	(L-N) / (N-PE)	t_A	< 100 ns / < 100 ns
Overvoltage Category			III
Overcurrent Protection (max)			160 A gG
Short-Circuit Current Rating (AC)	(L-N)	I_{SCCR}	25 kA
Follow Current Interrupt Rating (AC)	(L-N) / (N-PE)	I_{fi}	25 kA / 100 A
TOV Withstand 120min	(L-N)	U_T	442 V
TOV Withstand 200ms	(N-PE)	U_T	1200 V
Number of Ports			1
Additional Electrical Parameters - Standard *(Tests performed within Raycap testing laboratory only)*			
Residual Voltage at 5 kA (8/20 µs)	(L-N) / (N-PE)	U_{res}	1200 V / 305 V
Mechanical & Environmental			
Operating Temperature Range		T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity		RH	5%...95%
Altitude (max)			13123 ft [4000 m]
Terminal Screw Torque		M_{max}	40 lbf·in [4.5 Nm]
Conductor Cross Section (max)			2 AWG (Solid, Stranded) / 4 AWG (Flexible)
			35 mm² (Solid, Stranded) / 25 mm² (Flexible)
Mounting			35 mm DIN Rail, EN 60715
Degree of Protection			IP 20 (built-in)
Operating State / Fault Indication			Green Flag / Not Green Flag
Remote Contacts (RC)			Optional
RC Switching Capacity			AC: 250 V / 0.5 A, 125 V / 0.1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm² (Solid)
Overvoltage Category			III

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)*
TI	*Thermal Indicator*

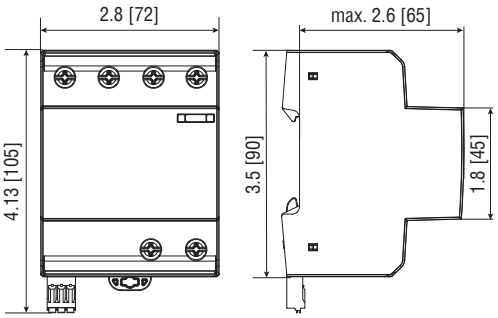


ProBloc T1SG-xxx-3+1-E(-R)

Order Information	
Order Code	**255**
ProBloc T1SG-xxx-3+1-E	53.0017
ProBloc T1SG-xxx-3+1-E-R (with remote contacts)	53.0018

Dimensions & Packaging

inches [mm]



Complete Unit Dimensions & Packaging		
ProBloc T1SG-xxx-3+1-E		**255**
Weight	pounds [grams]	0.948 [430]
ProBloc T1SG-xxx-3+1-E-R		
Weight	pounds [grams]	0.952 [432]
DIN 43880 Dimension		4 TE / 2.84 [72]
Packaging Dimensions (H x W x L)		4.3 × 4.5 × 13.8" [109 × 115 × 352 mm]
Standard Order Quantity		4 Units

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