

Lightning and Overvoltage Protection
SafeBloc B(R) 25/440 (1+0)
 Class I • Class II • Type 1 • Type 2

25 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TN-S, TN-C, TT (only L-N)
 Mode of Protection: L-PE, N-PE, L-PEN, L-N
 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) 25/xxx (1+0)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	U_c	440V
Nominal Discharge Current (8/20 μ s)	I_n	25 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	100 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	25 kA
Specific Energy	W/R	156 kJ/ Ω
Charge	Q	12.5 As
Voltage Protection Level	U_p	< 2.5 kV
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	U_T	762V
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		Yes
Fault Indication		Red Flag
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]

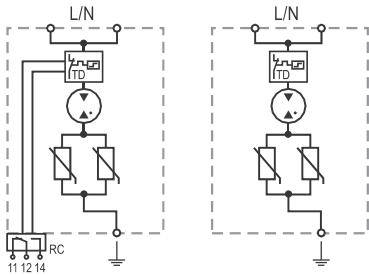
Order Information

Order Code	440
SafeBloc B 25/xxx (1+0)	54.0541
SafeBloc BR 25/xxx (1+0) (with remote contacts)	54.0542

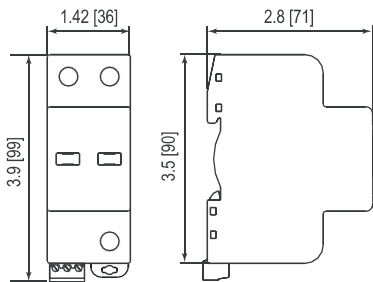
Internal Configuration

Legend

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



Complete Unit



Single Unit Dimensions & Packaging

SafeBloc B 25/xxx (1+0)		440
Weight	pounds [grams]	.734 [333]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H×W×L)		3.1 × 4.4 × 11.7" [79 × 112 × 298 mm]
Standard Order Quantity		7 Units
SafeBloc BR 25/xxx (1+0)		440
Weight	pounds [grams]	.778 [353]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H×W×L)		3.1 × 4.4 × 11.7" [79 × 112 × 298 mm]
Standard Order Quantity		7 Units

inches
[mm]

Lightning and Overvoltage Protection
SafeBloc B(R) 50/440 (2+0)
 Class I • Class II • Type 1 • Type 2

25 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 (2+0)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	U_c	440V
Nominal Discharge Current (8/20 μ s)	I_n	25 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	100 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	25 kA
Specific Energy	W/R	156 kJ/ Ω
Charge	Q	12.5 As
Voltage Protection Level	U_p	< 2.5 kV
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	U_T	762V
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		Yes
Fault Indication		Red Flag
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]

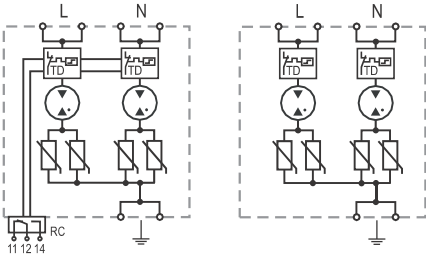
Order Information

Order Code	440
SafeBloc B 50/xxx (2+0)	54.0548
SafeBloc BR 50/xxx (2+0) (with remote contacts)	54.0549

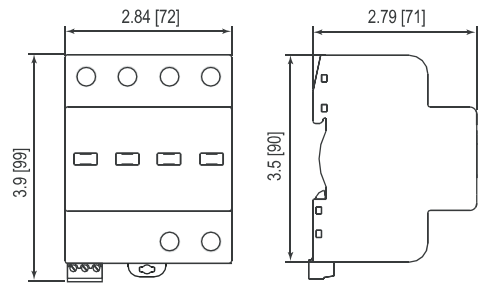
Internal Configuration

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

SafeBloc B 50/xxx (2+0)		440
Weight	pounds [grams]	1.398 [634]
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
SafeBloc BR 50/xxx (2+0)		440
Weight	pounds [grams]	1.415 [642]
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]

Lightning and Overvoltage Protection
SafeBloc B(R) 75/440 (3+0)
 Class I • Class II • Type 1 • Type 2

25 kA Series



Location of Use: Main Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L - PEN
 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) 75/xxx (3+0)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	U_c	440V
Nominal Discharge Current (8/20 μ s)	I_n	25 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	100 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	25 kA
Specific Energy	W/R	156 kJ/ Ω
Charge	Q	12.5 As
Voltage Protection Level	U_p	< 2.5 kV
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	U_T	762V
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		Yes
Fault Indication		Red Flag
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]

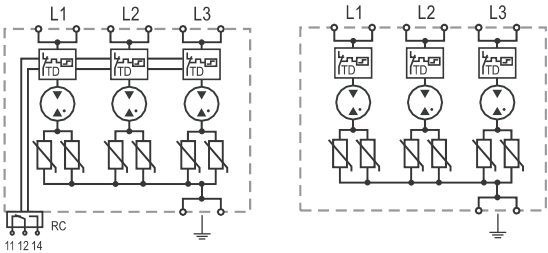
Order Information

Order Code	440
SafeBloc B 75/xxx (3+0)	54.0554
SafeBloc BR 75/xxx (3+0) (with remote contacts)	54.0555

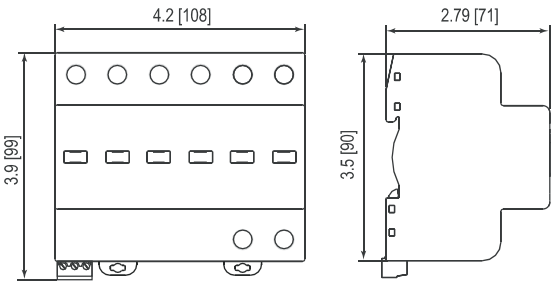
Internal Configuration

Legend

- L Line Conductor Terminal
- ⏏ PEN Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnect



Complete Unit



Single Unit Dimensions & Packaging

SafeBloc B 75/xxx (3+0)		440
Weight	pounds [grams]	2.247 [1019]
DIN 43880 Dimension		6 TE / 4.25" [108]
Packaging Dimensions (H×W×L)		3.1 × 4.4 × 11.7" [79 × 112 × 298 mm]
Standard Order Quantity		2 Units
SafeBloc BR 75/xxx (3+0)		440
Weight	pounds [grams]	2.250 [1021]
DIN 43880 Dimension		6 TE / 4.25" [108]
Packaging Dimensions (H×W×L)		3.1 × 4.4 × 11.7" [79 × 112 × 298 mm]
Standard Order Quantity		2 Units

inches
[mm]

Lightning and Overvoltage Protection
SafeBloc B(R) 100/440 (4+0)
 Class I • Class II • Type 1 • Type 2

25 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) 100/xxx (4+0)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	U_c	440V
Nominal Discharge Current (8/20 μ s)	I_n	25 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	100 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	25 kA
Specific Energy	W/R	156 kJ/ Ω
Charge	Q	12.5 As
Voltage Protection Level	U_p	< 2.5 kV
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	U_T	762V
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		Yes
Fault Indication		Red Flag
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]

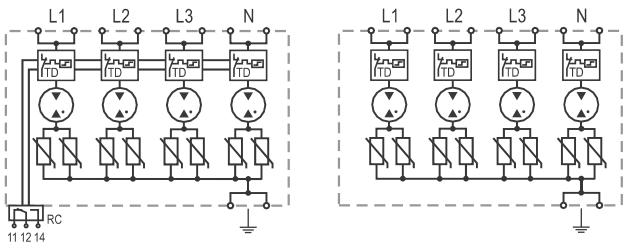
Order Information

Order Code	440
SafeBloc B 100/xxx (4+0)	54.0560
SafeBloc BR 100/xxx (4+0) (with remote contacts)	54.0561

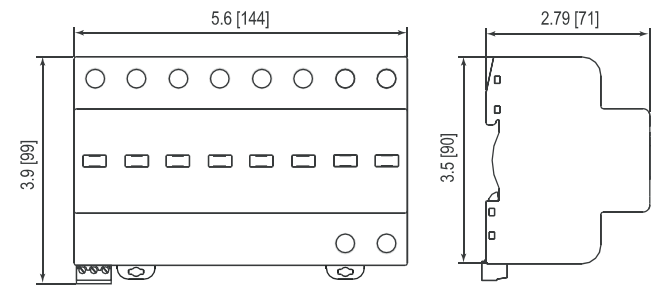
Internal Configuration

Legend

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



Complete Unit



Single Unit Dimensions & Packaging

SafeBloc B 100/xxx (4+0)		440
Weight	pounds [grams]	2.751 [1248]
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 100/xxx (4+0)		440
Weight	pounds [grams]	2.945 [1336]
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]

Lightning and Overvoltage Protection

SafeBloc B(R) 50/440 (1+1)

Class I • Class II • Type 1 • Type 2

25 kA Series



Location of Use: Main Distribution Boards
 Network Systems: 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 (1+1)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	(L-N) U_c	440V
	(N-PE) U_c	440V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	25 kA / 100 kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	100 kA / 100 kA
Impulse Discharge Current (10/350 μ s)	(L-N)/(N-PE) I_{imp}	25 kA / 100 kA
Specific Energy	(L-N)/(N-PE) W/R	156 kJ/ Ω / 2.5 MJ/ Ω
Charge	(L-N)/(N-PE) Q	12.5 As / 50 As
Voltage Protection Level	(L-N)/(N-PE) U_p	< 2.5 kV / < 2.5 kV
Follow Current Interrupt Rating	(N-PE) I_{fi}	100 A _{RMS}
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	(L-N) U_T	762V
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]

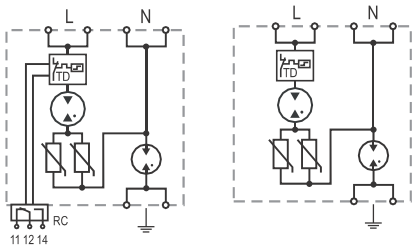
Order Information

Order Code	440
SafeBloc B 50/xxx (1+1)	54.0566
SafeBloc BR 50/xxx (1+1) (with remote contacts)	54.0567

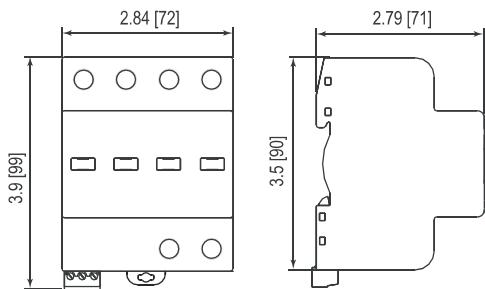
Internal Configuration

Legend

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



Complete Unit



Single Unit Dimensions & Packaging

SafeBloc B 50/xxx (1+1)		440
Weight	pounds [grams]	1.089 [494]
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
SafeBloc B(R) 50/xxx (1+1)		440
Weight	pounds [grams]	1.135 [515]
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]

Lightning and Overvoltage Protection

SafeBloc B(R) 100/440 (3+1)

Class I • Class II • Type 1 • Type 2

25 kA Series



Location of Use: Main Distribution Boards
 Network Systems: 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) 100/xxx (3+1)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	(L-N) U_c	440V
	(N-PE) U_c	440V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	25 kA / 100 kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	100 kA / 100 kA
Impulse Discharge Current (10/350 μ s)	(L-N)/(N-PE) I_{imp}	25 kA / 100 kA
Specific Energy	(L-N)/(N-PE) W/R	156 kJ/ Ω / 2.5 MJ/ Ω
Charge	(L-N)/(N-PE) Q	12.5 As / 50 As
Voltage Protection Level	(L-N)/(N-PE) U_p	< 2.5 kV / < 2.5 kV
Follow Current Interrupt Rating	(N-PE) I_{fi}	100 A _{RMS}
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	(L-N) U_T	762V
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]

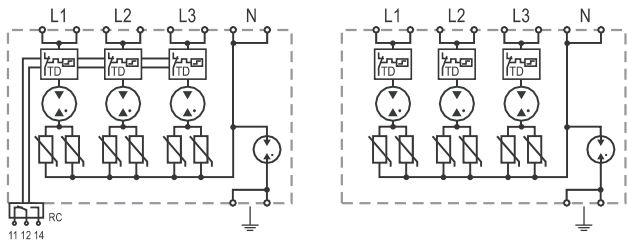
Order Information

Order Code	440
SafeBloc B 100/xxx (3+1)	54.0572
SafeBloc BR 100/xxx (3+1) (with remote contacts)	54.0573

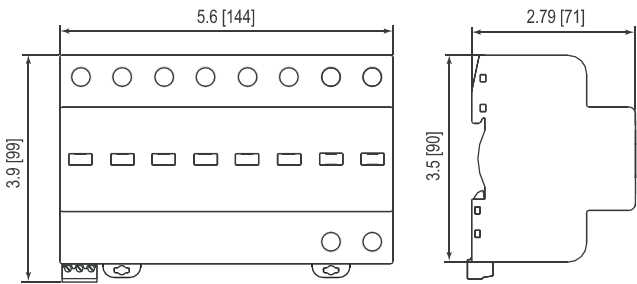
Internal Configuration

Legend

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



Complete Unit



Single Unit Dimensions & Packaging

SafeBloc B 100/xxx (3+1)		440
Weight	pounds [grams]	2.401[1089]
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 B(R) 100/xxx (3+1)		440
Weight	pounds [grams]	2.566 [1164]
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]

Compact Single Pole SPD
SafeTube B 100/440
 Class I • Class II • Type 1 • Type 2



Location of Use: Main Distribution Boards
 Network Systems: TT
 Mode of Protection: 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

SafeTube B 100/xxx

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o	400V
Maximum Continuous Operating Voltage (AC)	U_c	440V
Nominal Discharge Current (8/20 μ s)	I_n	100 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	100 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	100 kA
Specific Energy	W/R	2.5 MJ/ Ω
Charge	Q	50 As
Voltage Protection Level	U_p	< 2.5 kV
Follow Current Interrupt Rating	I_{fi}	100 A _{RMS}
Response Time	t_A	< 100 ns
TOV withstand 200ms	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

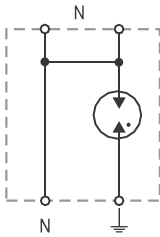
Order Information

Order Code	440
SafeTube B 100/xxx	54.0624

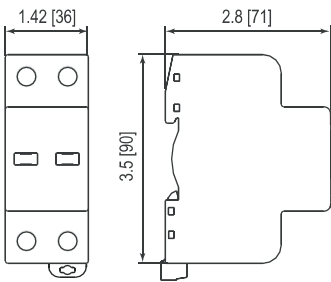
SafeTube B 100

Internal Configuration

Legend
N Neutral Conductor Terminal
PE PE Conductor Terminal



Complete Unit



Single Unit Dimensions & Packaging		
SafeTube B 100/xxx		440
Weight	pounds [grams]	.397 [180]
DIN 43880 Dimension	2 TE / 1.42" [36]	
Packaging Dimensions (H×W×L)	3.1 × 4.4 × 11.7" [79 × 112 × 298 mm]	
Standard Order Quantity	7 Units	

inches
[mm]

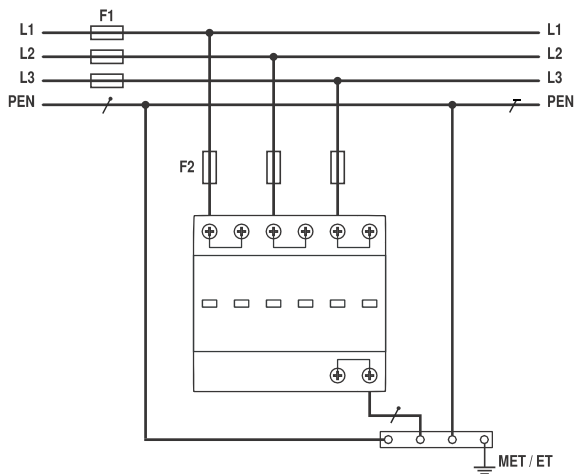
Compact Multi-pole SPD Connection Configurations

SafeBloc B(R) TCG 12.5kA & 25kA Series

SafeBloc B(R) 25kA Series

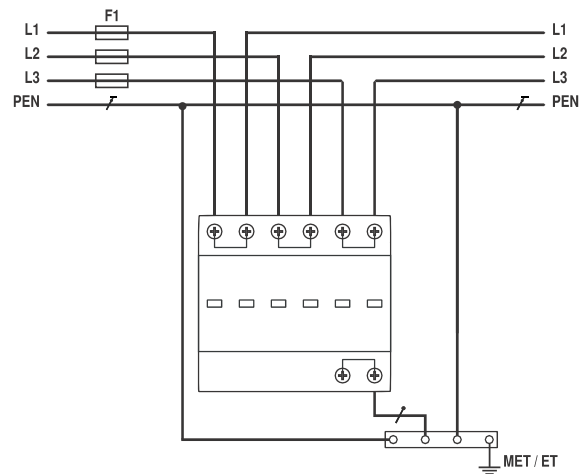
TN-C (Three-phase, 3+0)

T Connection



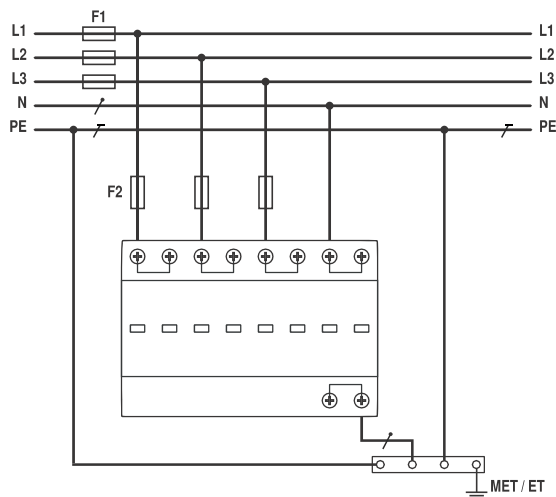
TN-C (Three-phase, 3+0)

V Connection



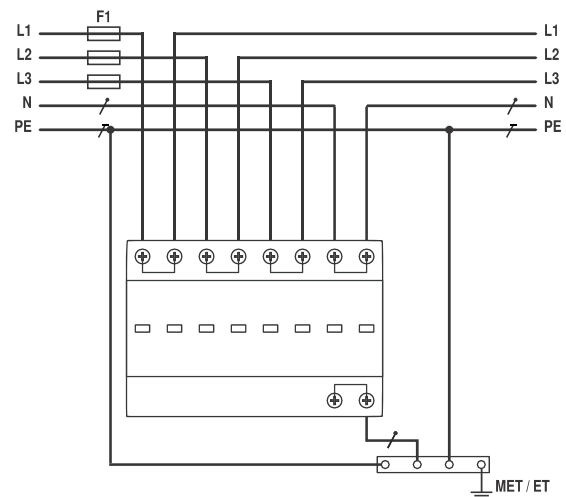
TN-S (Three-phase, 4+0, 3+1)

T Connection



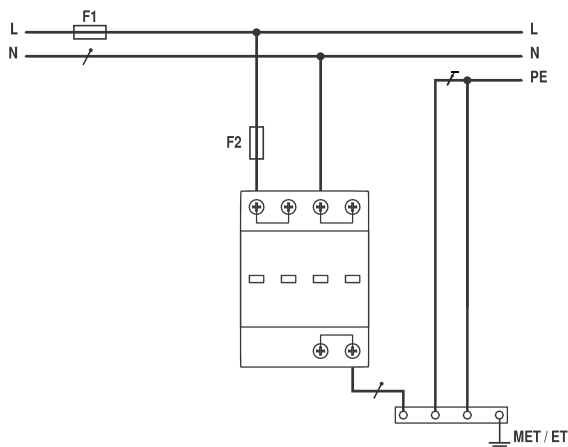
TN-S (Three-phase, 4+0, 3+1)

V Connection



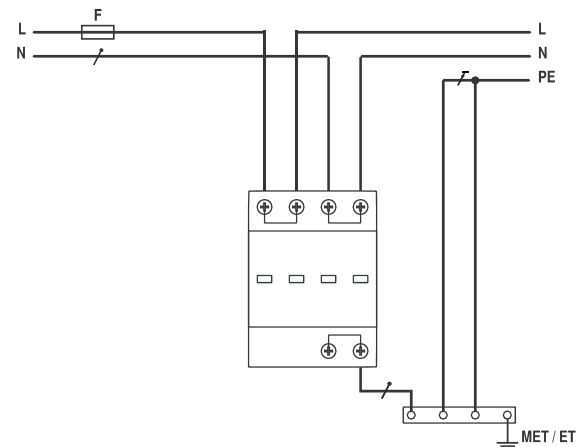
TT (Single-phase, 1+1)

T Connection



TT (Single-phase, 1+1)

V Connection



Overcurrent Protection Rating for I_{SCCR}

- F1 > 250 A gG → — F2 = 250 A gG
- F1 ≤ 250 A gG → ~~— F2~~
- F ≤ 100 A gG

/ N Neutral

/ PE Protective Earth

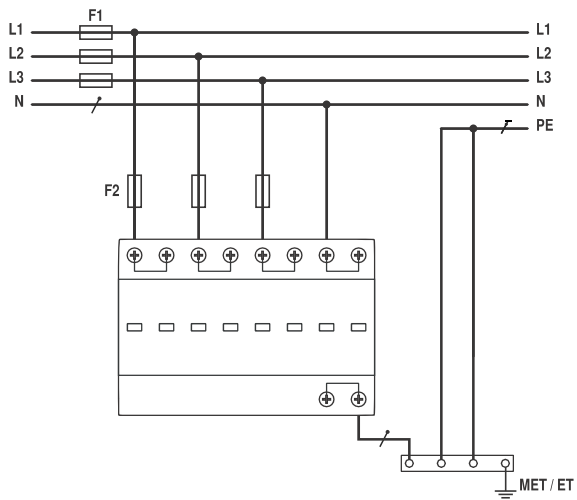
/ PEN Protective Earth & Neutral

Compact Multi-pole SPD Connection Configurations

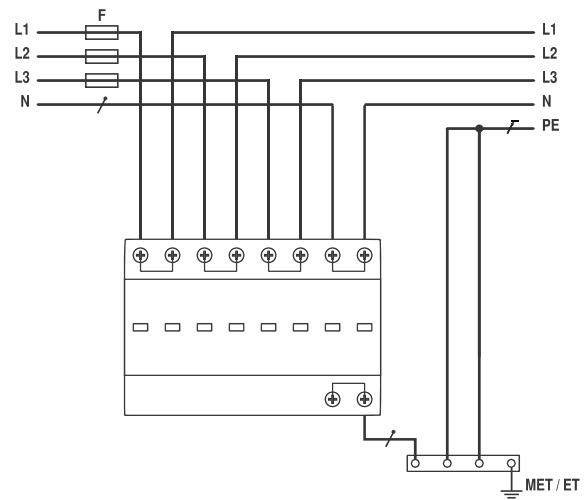
SafeBloc B(R) TCG 12.5kA & 25kA Series

SafeBloc B(R) 25kA Series

TT (Three-phase, 3+1)
T Connection



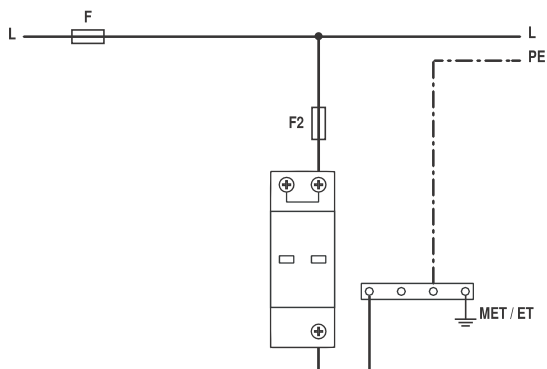
TT (Three-phase, 3+1)
V Connection



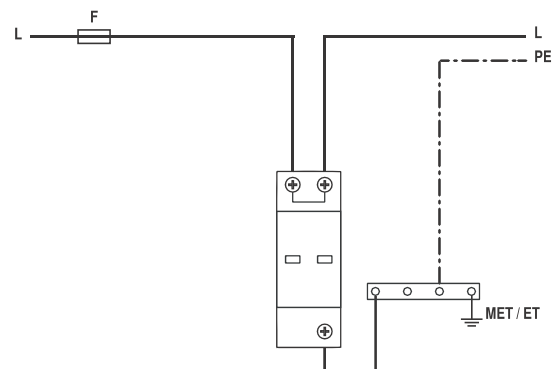
WT Compact Single Pole SPD Connection Configurations

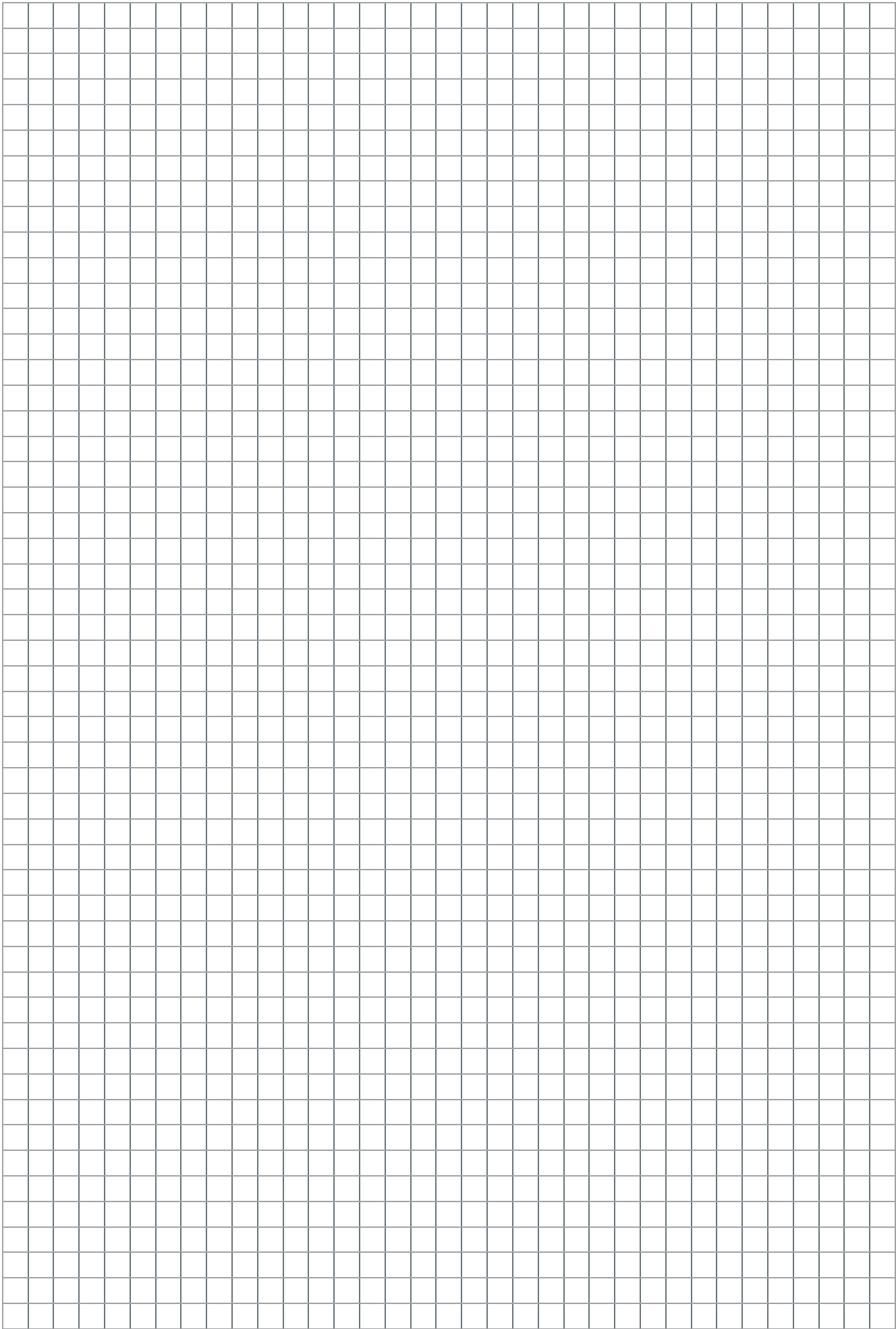
SafeBloc B(R) WT TCG Series

SafeBloc B(R) 12.5 WT TCG
T Connection



V Connection





Lightning and Overvoltage Protection

SafeBloc B(R) 12.5/440 (1+0)

Class I • Class II • Type 1 • Type 2



Location of Use: Main Distribution Boards
 Network Systems: TN-S, TN-C, TT (only L-N)
 Mode of Protection: L-PE, N-PE, L-PEN, L-N
 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) 12.5/xxx (1+0)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	U_c	440V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	12.5 kA
Specific Energy	W/R	39 kJ/ Ω
Charge	Q	6.25 As
Voltage Protection Level	U_p	< 2.5 kV
Rated Load Current	I_L	100 A
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	U_T	762V
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		Yes
Fault Indication		Red Flag
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]

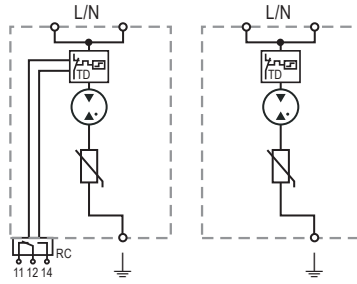
Order Information

Order Code	440
SafeBloc B 12.5/xxx (1+0)	54.0504
SafeBloc BR 12.5/xxx (1+0) (with remote contacts)	54.0505

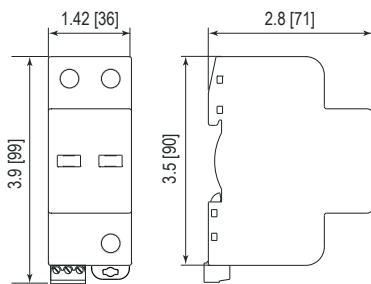
Internal Configuration

Legend

<i>L</i>	Line Conductor Terminal
<i>N</i>	Neutral Conductor Terminal
$\perp$	PE Conductor Terminal
<i>RC</i>	Remote Contacts Terminal (Optional)
<i>TD</i>	Thermal Disconnecter



Complete Unit



Single Unit Dimensions & Packaging

SafeBloc B 12.5/xxx (1+0)		440
Weight	pounds [grams]	.602 [273]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H x W x L)		3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]
Standard Order Quantity		7 Units
SafeBloc BR 12.5/xxx (1+0)		440
Weight	pounds [grams]	.580 [263]
DIN 43880 Dimension		2 TE / 1.42" [36]
Packaging Dimensions (H x W x L)		3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]
Standard Order Quantity		7 Units

inches
[mm]

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



Lightning and Overvoltage Protection

SafeBloc B(R) 37.5/440 (3+0)

Class I • Class II • Type 1 • Type 2



Location of Use: Main Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L - PEN
 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) 37.5/xxx (3+0)

440

IEC Electrical

Nominal AC Voltage (50/60 Hz)	U_o / U_n	400V
Maximum Continuous Operating Voltage (AC)	U_c	440V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	12.5 kA
Total Discharge Current (10/350 μ s)	I_{total}	37.5 kA
Specific Energy	W/R	39 kJ/ Ω
Charge	Q	6.25 As
Voltage Protection Level	U_p	< 2.5 kV
Rated Load Current	I_L	100 A
Response Time	t_A	< 100 ns
Overcurrent Protection (max)		250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA
TOV Withstand 120min	U_T	762V
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		Yes
Fault Indication		Red Flag
Remote Contacts (RC)		Optional
RC Switching Capacity		AC: 250V/0.5 A; 125V/3 A
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]

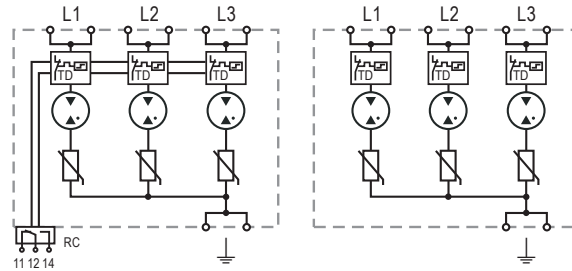
Order Information

Order Code	440
SafeBloc B 37.5/xxx (3+0)	54.0517
SafeBloc BR 37.5/xxx (3+0) (with remote contacts)	54.0518

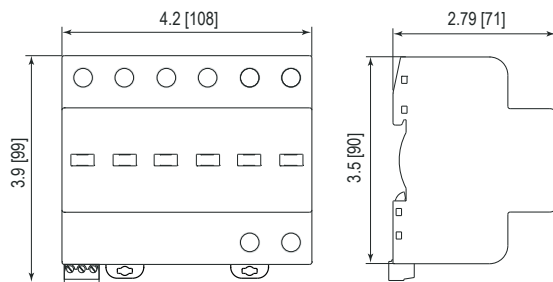
Internal Configuration

Legend

L	Line Conductor Terminal
⏏	PEN Conductor Terminal
RC	Remote Contacts Terminal (Optional)
TD	Thermal Disconnect



Complete Unit



Single Unit Dimensions & Packaging

SafeBloc B 37.5/xxx (3+0)		440
Weight	pounds [grams]	1.389 [630]
DIN 43880 Dimension		6 TE / 4.25" [108]
Packaging Dimensions (H x W x L)		3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]
Standard Order Quantity		2 Units
SafeBloc BR 37.5/xxx (3+0)		440
Weight	pounds [grams]	1.411 [640]
DIN 43880 Dimension		6 TE / 4.25" [108]
Packaging Dimensions (H x W x L)		3.1 x 4.4 x 11.7" [79 x 112 x 298 mm]
Standard Order Quantity		2 Units

inches
[mm]

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