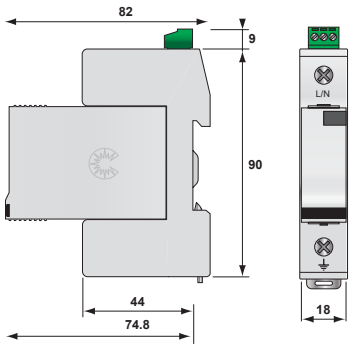
Surge arrester ETITEC V T12

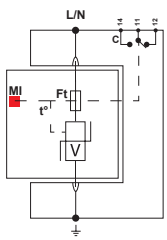
EN/IEC/VDE: T1,T2/I,II/B,C

ETITEC V T Iimp=12,5kA			
Type		**ETITEC V T12 280**	**ETITEC V T12 400**
Description		1+2 AC surge protector - 1-pole	
Network		230/400	230/400 V
Max. AC operating voltage	Uc	280 VAC	440 VAC
Temporary Over Voltage (TOV) Characteristics - 5 sec.	UT	335 Vac withstand	580 Vac withstand
Temporary Over Voltage (TOV) Characteristics -120 mn	UT	440 Vac disconnection	770 Vac disconnection
Residual current - Leakage current at Uc	Ipe	< 1 mA	< 1 mA
Follow current	If	x	x
Nominal discharge current - 15 x 8/20 µs impulses	In	20 kA	20 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	Imax	50 kA	50 kA
Impulse current by pole - max. withstand 10/350µs	Iimp	12,5 kA	12,5 kA
Specific energy by pole	W/R	40 kJ/ohm	40 kJ/ohm
Protection level	Up	1,3 kV	1,7 kV
Admissible short-circuit current	Isccr	25000 A	25000 A
Associated disconnectors			
Thermal disconnector		internal	
Fuses		Fuses Type gG - 125 A	
Installation ground fault breaker		Type "S" or delayed	
Mechnical characteristics			
Dimensions		see diagram	
Connection to Network		By screw terminals: 2,5-25 mm² / by bus	
Disconnection indicator		1 mechanical indicator	
Remote signaling of disconnection		output on changeover contact	
Mounting		Symmetrical rail 35 mm (EN60715)	
Operating temperature		-40 ... +85°C	
Protection rating		IP20	
Housing material		Thermoplastic UL94-V0	
Standards compliance		IEC 61643-11 / EN 61643-11	

Dimensions

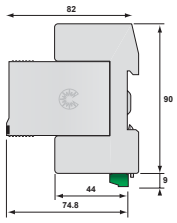
1+1, 3+1: 82mm
1+0, 2+0, 3+0, 4+0: 67mm

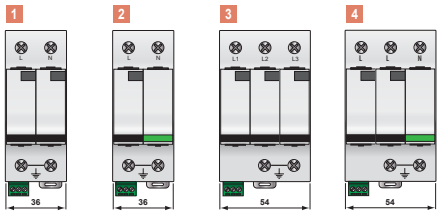


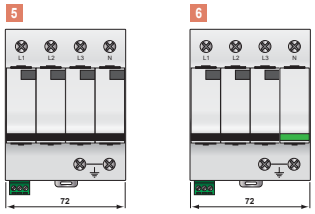


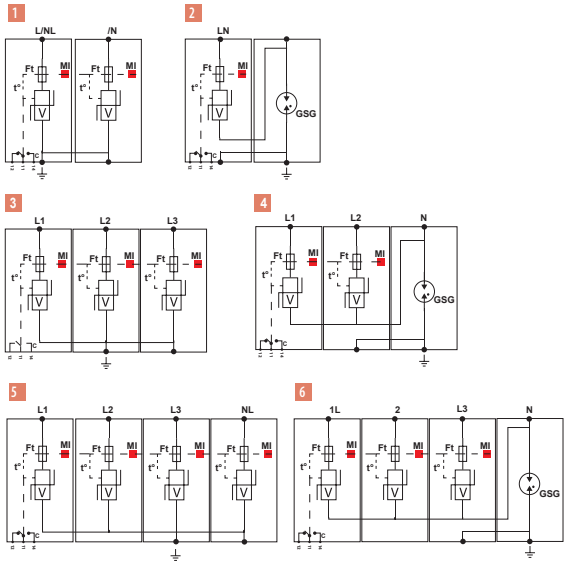
V: High energy MOV
Mi: Disconnection indicator
Ft: Thermal fuse
t°: Thermal disconnection mechanism
C: contac for remote signal

1+1, 3+1: 82mm
1+0, 2+0, 3+0, 4+0: 67mm









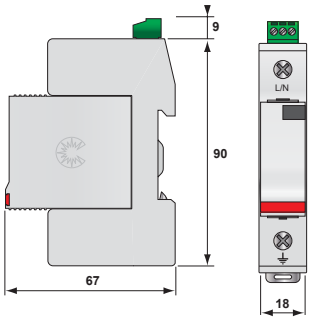
V: High energy MOV
GSG: Specific gas tube
Mi: Disconnection indicator
Ft: Thermal fuse
t°: Thermal disconnection mechanism
C: Contact for remote signal

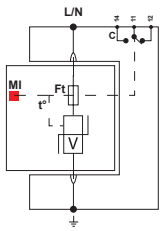
Surge arrester ETITEC V T2

EN/IEC/VDE: T2/II/C

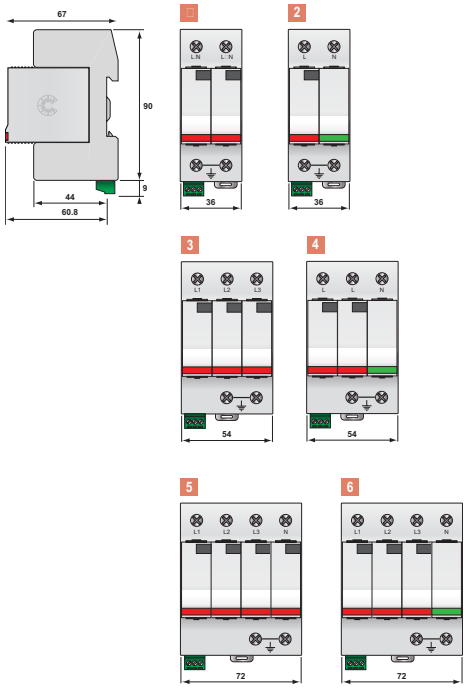
ETITEC V T2			
Type		**ETITEC V T2 255**	**ETITEC V T2 440**
Description		Type 2 AC surge protector - one-phase - pluggable	
Network		230/400 V	230/400 V
Max. AC operating voltage	Uc	255 VAC	440 VAC
Temporary Over Voltage (TOV) Characteristics - 5 sec.	UT	335 Vac withstand	580 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn	UT	440 Vac disconnection	770 Vac disconnection
Residual current - Leakage current at Uc	Ipe	< 1 mA	< 1 mA
Follow current	If	x	x
Nominal discharge current - 15 x 8/20 µs impulses	In	20 kA	20 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	Imax	40 kA	40 kA
Protection level	Up	1,25 kV	1,8 kV
Admissible short-circuit current	Isccr	25000 A	25000 A
Associated disconnectors			
Thermal disconnector		internal	
Fuses		Fuses Type gG - 50 A	
Installation ground fault breaker		Type "S" or delayed	
Mechnical characteristics			
Dimensions		see diagram	
Connection to Network		By screw terminals: 2,5-25 mm² / by bus	
Disconnection indicator		1 mechanical indicator	
Remote signaling of disconnection		output on changeover contact	
Mounting		Symmetrical rail 35 mm (EN60715)	
Operating temperature		-40 ... +85°C	
Protection rating		IP20	
Housing material		Thermoplastic UL94-V0	
Standards compliance		IEC 61643-11 / EN 61643-11	

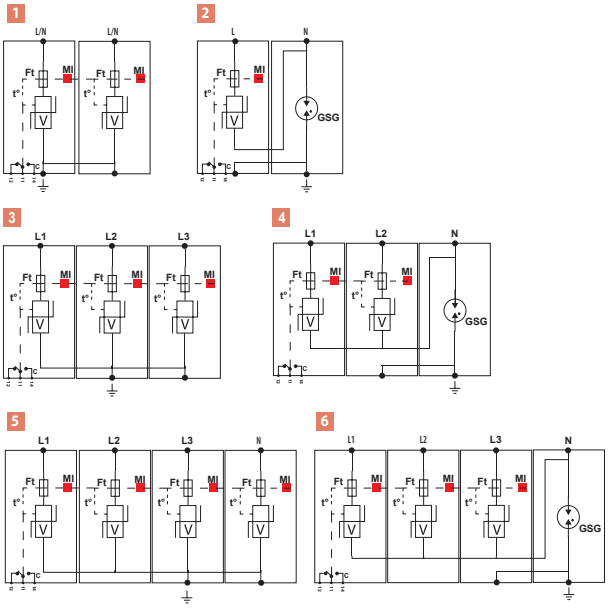
Dimensions





V: High-energy varistor
Ft: Thermal fuse
C: Remote signaling contact
t°: Thermal disconnection system
Mi : Disconnection indicator



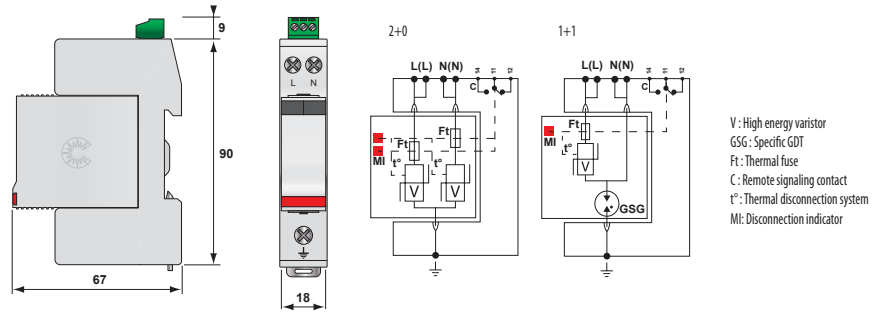


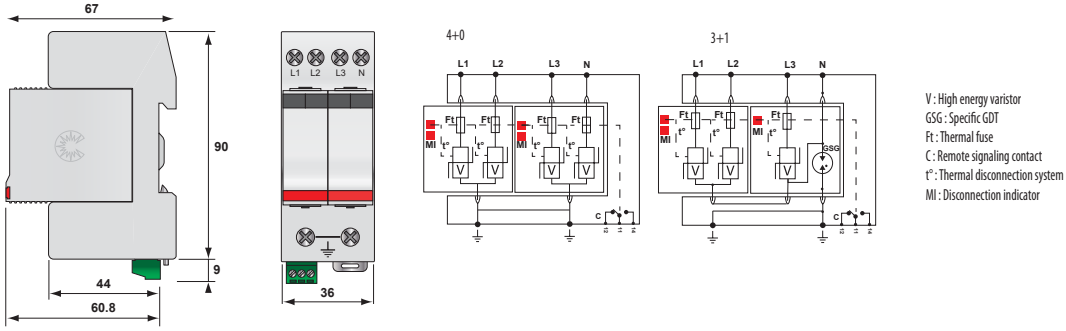
V: High-energy varistor
GSG: Specific gas tube
Ft: Thermal fuse
C: Remote signaling contact
t°: Thermal disconnection system
Mi: Disconnection indicator

Type 2 multipole SPDs

ETITEC V 2T2							
Description		Compact 1-phase Type 2 Surge Protector - 230 V - Pluggable			Compact 3-phase+N Type 2 surge protector - 230/400 V - Pluggable		
Network		230 V 1-p	230 V 1-p	230 V 1-p	230/400 V 3-phase	230/400 V 3-phase	230/400 V 3-phase
Connection mode		L/PE & N/PE	L/PE & N/PE	L/N & N/PE	L/PE & N/PE	L/PE & N/PE	L/N & N/PE
AC system		IT	TN	TT-TN	IT	TN	TT-TN
Max. AC operating voltage	U_c	440 VAC	255 VAC	255 VAC	440 VAC	255 VAC	255 VAC
Temporary Over Voltage (TOV) Characteristics - 5 sec.	U_T	580 Vac withstand	335 Vac withstand	335 Vac withstand	580 Vac withstand	335 Vac withstand	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn	U_T	770 Vac disconnection	440 Vac disconnection	440 Vac disconnection	770 Vac disconnection	440 Vac disconnection	440 Vac disconnection
Temporary Over Voltage N/PE (TOV HT)	U_T	-	-	1200 V/300A/200 ms withstand	-	-	1200 V/300A/200 ms withstand
Residual current - Leakage current at Uc	I_{pe}	< 1 mA	< 1 mA	x	< 1 mA	< 1 mA	x
Max. Load current (if connection serie)	I_L	20 A	20 A	20 A	-	-	-
Nominal discharge current - 15 x 8/20 µs impulses	I_n	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	I_{max}	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
Protection level CM/DM* @In (8/20µs) and @ 6kV (1.2/50µs)	U_p	1,8 kV	1,25 kV	1,5/1,25 kV	1,8 kV	1,25 kV	1,5/1,25 kV
Admissible short-circuit current	I_{sccr}	10000 A	10000 A	10000 A	10000	10000 A	10000 A
Associated disconnectors							
Thermal disconnector		internal					
Fuses		Fuses Type gG - 50 A					
Installation ground fault breaker		Type "S" or delayed					
Mechnical characteristics							
Dimensions		see diagram					
Connection to Network		by screw terminals: 1,5-10mm² (L/N) or 2,5-25mm² (PE)					
Disconnection indicator		2 mechanical indicators					
Remote signaling of disconnection		output on changeover contact					
Mounting		Symmetrical rail 35 mm (EN60715)					
Operating temperature		-40 ... +85°C					
Protection rating		IP20					
Housing material		Thermoplastic UL94-V0					
Standards compliance		IEC 61643-11 / EN 61643-11					

Dimensions

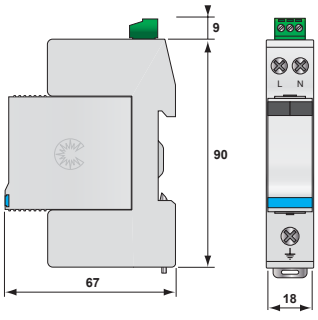


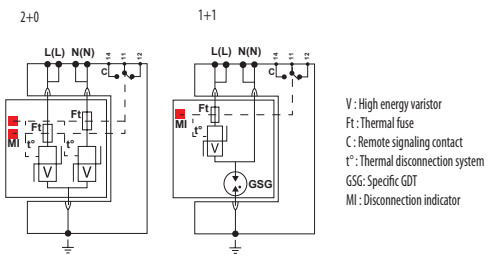


Type 3 (weak type2) multipole SPDs

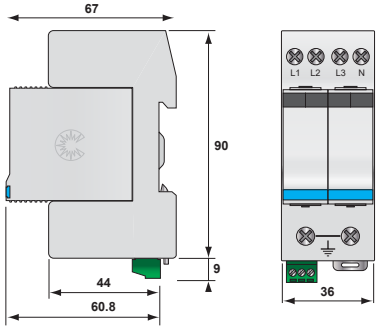
ETITEC V 2T3							
Description		Compact 1-phase Type 2 (or 3) surge protector - 230 V -Pluggable			Compact 3-phase+N Type 2 surge protector - 230/400 V - Pluggable		
Network		230 V single phase	230 V single phase	230 V single phase	230/400 V 3-phase	230/400 V 3-phase	230/400 V 3-phase
Connection mode		L/PE and N/PE	L/PE and N/PE	L/N and N/PE	L/N and N/PE	L/N and N/PE	L/N and N/PE
AC system		IT	TN	TT-TN	IT	TN	TT-TN
Max. AC operating voltage	U_c	440 VAC	255 VAC	255 VAC	440 VAC	255 VAC	255 VAC
Temporary Over Voltage (TOV) Charasteristics - 5 sec.	U_T	580 Vac withstand	335 Vac withstand	335 Vac withstand	580 Vac withstand	335 Vac withstand	335 Vac withstand
Temporary Over Voltage (TOV) Charasteristics - 120 mn	U_T	770 Vac disconnection	440 Vac disconnection	440 Vac disconnection	770 Vac disconnection	440 Vac disconnection	440 Vac disconnection
Temporary Over Voltage N/PE (TOV HT)	U_T	-	-	1200 V/300A/200 ms withstand	-	-	1200 V/300A/200 ms withstand
Residual current - Leakage current at Uc	I_{pe}	< 1 mA	< 1 mA	x	< 1 mA	< 1 mA	x
Max. Load current (if connection serie)	I_L	20 A	20 A	20 A	-	-	-
Nominal discharge current - 15 x 8/20 µs impulses	I_n	5 kA	5 kA	5 kA	5 kA	5 kA	5 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	I_{max}	15 kA	15 kA	15 kA	15 kA	15 kA	15 kA
Withstand on overvoltages IEEE C62.41.1	U_{oc}	10 kV	10 kV	10 kV	10 kV	10 kV	10 kV
Protection level CM/DM* @In (8/20µs) and @ 6kV (1.2/50µs)	U_p	1.3 kV	0.9 kV	1.5/0.9 kV	1.3 kV	0.9 kV	1.5/0.9 kV
Admissible short-circuit current	I_{sccr}	10000 A	10000 A	10000 A	10000 A	10000 A	10000 A
Associated disconnectors							
Thermal disconnector		internal					
Fuses		Fuses Type gG - 20 A					
Installation ground fault breaker		Type "S" or delayed					
Mechnical characteristics							
Dimensions		see diagram					
Connection to Network		by screw terminals: 1,5-10mm² (L/N) or 2,5-25mm² (PE)					
Disconnection indicator		4 mechanical indicators					
Remote signaling of disconnection		output on changeover contact					
Mounting		Symmetrical rail 35 mm (EN60715)					
Operating temperature		-40 ... +85°C					
Protection rating		IP20					
Housing material		Thermoplastic UL94-V0					
Standards compliance		IEC 61643-11 / EN 61643-11					

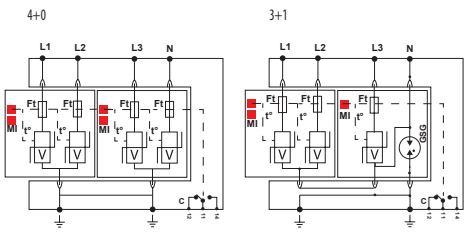
Dimensions





V : High energy varistor
Ft : Thermal fuse
C : Remote signaling contact
t° : Thermal disconnection system
GSG: Specific GDT
MI : Disconnection indicator



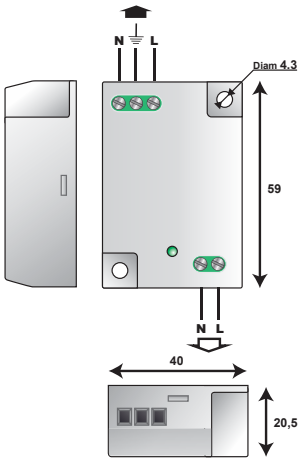


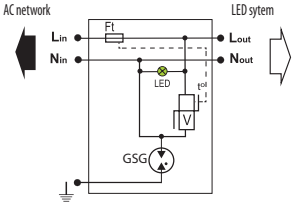
V : High energy varistor
Ft : Thermal fuse
C : Remote signaling contact
t° : Thermal disconnection system
GSG: Specific GDT
MI : Disconnection indicator

LED lighting protection

ETITEC LC1 IP20		
Description		**Surge protectors for LED lighting system Class 1**
Network		220-240 V single phase
AC system		TT/TN
Protection mode(s)		CM/DM
Max. AC operating voltage	U_c	320 VAC
Max. Load current	I_L	5 A
Residual current - Leakage current at Uc	I_{pe}	x
Temporary Over Voltage (TOV) Charasteristics - 5 sec.	U_T	335 Vac withstand
Temporary Over Voltage (TOV) Charasteristics - 120 mn	U_T	440 Vac disconnection
Temporary Over Voltage N/PE (TOV HT)	U_T	1200 V/300A/200 ms disconnection
Nominal discharge current - 15 x 8/20 µs impulses	I_n	5 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	I_{max}	10 kA
Total lightning current - max. total withstand @ 8/20 µs	I_{total}	20 kA
Withstand on Combination waveform - Class III test	U_{oc}	10 kV/5 kA
Withstand on overvoltages IEEE C62.41.1		10 kV/10 kA
Protection level CM/DM @In (8/20µs) and @ 6kV (1.2/50µs)	U_p	1.5 kV/ 1.5 kV
Admissible short-circuit current	I_{sccr}	10000 A
Admissible short-circuit current		25000 A
Associated disconnectors		
Thermal disconnector		internal
Installation ground fault breaker		Type "S" or delayed
Mechnical characteristics		
Dimensions		see diagram
Connection to Network		Screw (2.5 mm² max) or Spring (1.5 mm² max) contact terminal
Voltage/operating indicator		Green Led ON
Disconnection indicator		Disconnection
Failsafe behavior		Led green OFF and AC network cut-off
Remote signaling of disconnection		x
Mounting		on plate
Operating temperature		-40 ... +85°C
Protection rating		IP20
Housing material		Thermoplastic UL94-V0
Standards compliance		EN 61643-11 / IEC 61643-11

ETITEC LC1 IP20

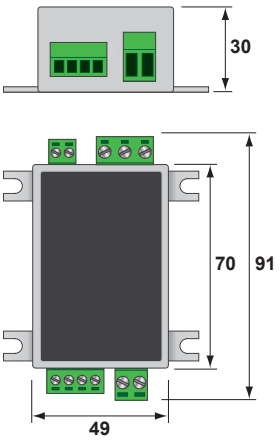


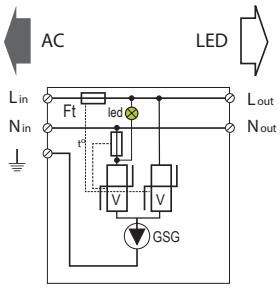


Ft: Thermal fuse
Led: Status indicator
V: MOV
GSG: Specific Gas Tube
T°: Thermal system disconnection

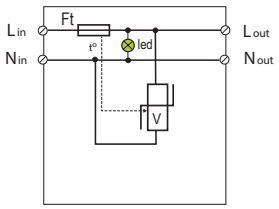
ETITEC LP		
Type	**ETITEC LP1 IP20**	**ETITEC LP2 IP20**
Network	220-240 V single phase	
Protection mode(s)	CM/DM	
Max. AC operating voltage	305 VAC	
Max. Load current	2,5 A	
Residual current - Leakage current at Uc	x	
Nominal discharge current - 15 x 8/20 µs impulses	5 kA	
Max. discharge current -max. withstand @ 8/20 µs by pole	10 kA	
Total lightning current - max. total withstand @ 8/20 µs	20 kA	
Withstand on Combination waveform - Class III test	10 kV/5 kA	
Withstand on overvoltages IEEE C62.41.1	10 kV/10 kA	
Protection level CM/DM @In (8/20µs) and @ 6kV (1.2/50µs)	1.5 kV/ 1.5 kV	
Admissible short-circuit current	10000 A	
Mechnical characteristics		
Connection to Network	Screw or spring terminal - 1.5 mm^2 max	
Voltage/operating indicator	Green Led ON	
Failsafe behavior	Led green OFF and AC network cut-off	
Disconnection indicator	Led green OFF and AC network cut-off or remote signal (option)	
Remote signaling of disconnection	Option	
Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 ed.4	
Description	Surge protector for LED lighting system Class 1	Surge protector for LED lighting system Class 2
AC voltage specifications		
Description	220-240 V single phase	220-240 V single phase
AC system	TT-TN	TT-TN
Protection mode(s)	CM/DM	DM
Max. AC operating voltage	305 Vac	305 Vac
Max. Load current	2,5 A	2,5 A
Residual current - Leakage current at Uc	x	x
Temporary Over Voltage (TOV) Charasteristics - 5 sec.	335 Vac withstand	335 Vac withstand
Temporary Over Voltage (TOV) Charasteristics - 120 mn	440 Vac dIsconnection	440 Vac dIsconnection
Nominal discharge current - 15 x 8/20 µs impulses	5 kA	5 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	10 kA	10 kA
Total lightning current - max. total withstand @ 8/20 µs	20 kA	20 kA
Withstand on Combination waveform - Class III test	10 kV/5 kA	10 kV/5 kA
Withstand on overvoltages IEEE C62.41.1	10 kV/10 kA	10 kV/10 kA
Protection level CM/DM @In (8/20µs) and @ 6kV (1.2/50µs)	1.5 kV/ 1.5 kV	1.5 kV
Admissible short-circuit current	10000 A	10000 A
Connection to Network	screw 1.5mm^2 max	screw 1.5mm^2 max
Voltage/operating indicator	Green Led ON	Green Led ON
Failsafe behavior	Disconnection from AC line	Disconnection from AC line
Disconnection indicator	Green Led OFF and AC line cut-off	Green Led OFF and AC line cut-off
Remote signaling of disconnection	none	yes : output on contact NO
Associated disconnectors		
Thermal disconnector	internal	internal
Installation ground fault breaker	Type "S" or delayed	Type "S" or delayed
Mechnical characteristics		
Dimensions	see diagram	see diagram
Mounting	on plate	on plate
Operating temperature	-40/+85°C	-40/+85°C
Protection rating	IP65	IP20
Housing material	Thermoplastic UL94-V0	Thermoplastic UL94-V0
Standards compliance	IEC 61643-11 / EN 61643-11	

ETITEC LP1 IP20
ETITEC LP2 IP20





ETITEC LP1 IP20

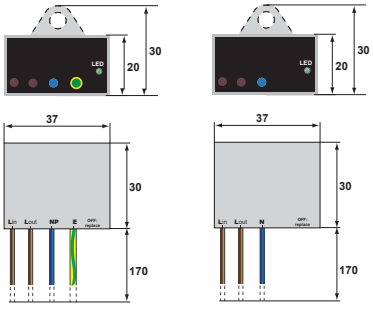


ETITEC LP2 IP20

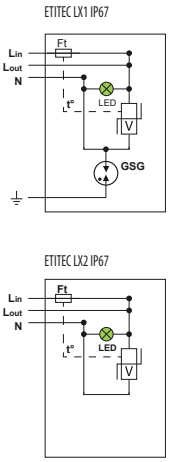
Ft : Thermal fuse
Led : Status indicator
V : MOV
GSG : Specific Gas Tube
G3 : 3-pole Gas Tube
D : Clamping diode network
Remote : Dry contact for remote signalling

ETITEC LX

Type	ETITEC LX1 IP67	ETITEC LX2 IP67
Description	Compact Type 2 +3 hard-wired surge protector	
Application (Classe)	I	II
Network	230-277 V single phase	230-277 V single phase
AC system	TT/TN	TT/TN
Protection mode(s)	CM/DM	DM
Max. AC operating voltage	320 VAC	320 VAC
Max. Load current	10A	10A
Temporary Over Voltage (TOV) Charasteristics - 5 sec.	335 Vac withstand	335 Vac withstand
Temporary Over Voltage (TOV) Charasteristics - 120 mn	440 Vac dIsconnection	440 Vac dIsconnection
Temporary Over Voltage N/PE (TOV HT)	1200 V/300A/200 ms disconnection	x
Nominal discharge current - 15 x 8/20 µs impulses	5 kA	5 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	10 kA	10 kA
Total max. discharge current - max. total withstand @ 8/20 µs	20 kA	NA
Withstand on Combination waveform - Class III test	10 kV	10 kV
Withstand on overvoltages IEEE C62.41.1	10 kV/10 kA	10 kV/10 kA
Protection level CM/DM @In (8/20µs) and @ 6kV (1.2/50µs)	1.5 kV/1.5 kV	1.5 kV
Admissible short-circuit current	10000 A	10000 A
Associated disconnectors		
Thermal disconnector	internal	
Installation ground fault breaker	Type "S" or delayed	
Mechnical characteristics		
Dimensions	see diagram	
Connection to Network	by wires :1.5 mm^2 (L/N) & 2.5 mm^2 (PE)	by wires :1.5 mm^2 (L/N)
Voltage/operating indicator	Green Led ON	
Disconnection indicator	Disconnection	
Failsafe behavior	Led green OFF and AC network cut-off	
Remote signaling of disconnection	x	
Mounting	wall or plate	
Operating temperature	-40/+85°C	
Protection rating	IP67	
Housing material	Thermoplastic UL94-V0	
Standards compliance	EN 61643-11 / IEC 61643-11	

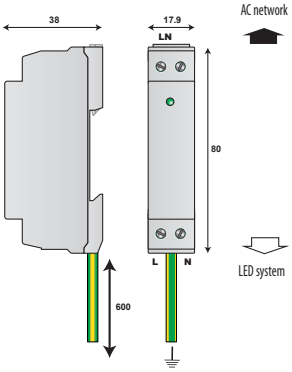


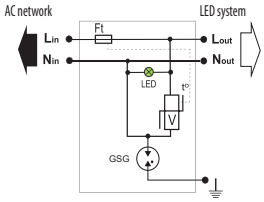
ETITEC LX1 IP67 ETITEC LX2 IP67



V : Varistor
GSG: Specific gas tube
Ft : Thermal fuse
LED : Disconnection indicator
t° : Thermal system disconnection

ETITEC L1 DIN	
Description	Surge protectors for LED lighting system Class 1
Network	220-240 V single phase
AC system	TT/TN
Protection mode(s)	CM/DM
Max. AC operating voltage	320 VAC
Max. Load current	10A
Residual current - Leakage current at Uc	x
Temporary Over Voltage (TOV) Charasteristics - 5 sec.	335 Vac withstand
Temporary Over Voltage (TOV) Charasteristics - 120 mn	440 Vac disconnection
Temporary Over Voltage N/PE (TOV HT)	1200 V/300A/200 ms disconnection
Nominal discharge current - 15 x 8/20 µs impulses	5 kA
Max. discharge current -max. withstand @ 8/20 µs by pole	10 kA
Total lightning current - max. total withstand @ 8/20 µs	20 kA
Withstand on Combination waveform - Class III test	10 kV / 5 kA
Withstand on overvoltages IEEE C62.41.1	10 kV/10 kA
Protection level CM/DM @In (8/20µs) and @ 6kV (1.2/50µs)	1.5 kV/ 1.5 kV
Admissible short-circuit current	10000 A
Associated disconnectors	
Thermal disconnector	internal
Installation ground fault breaker	Type «S» or delayed
Mechnical characteristics	
Dimensions	see diagram
Connection to Network	Screw terminal 2.5 mm^2 max., Earthing conductor 2 mm^2 - length 60 cm
Voltage/operating indicator	Led green ON
Disconnection indicator	Disconnection and AC line cut-off
Failsafe behavior	Led green OFF and AC network cut-off
Remote signaling of disconnection	x
Mounting	Symmetrical rail 35mm (EN60715)
Operating temperature	-40 ... +85°C
Protection rating	IP20
Housing material	Thermoplastic UL94-V0
Standards compliance	EN 61643-11 / IEC 61643-11





V: Varistor
Ft: Thermal fuse
LED: Disconnection indicator
MI: Mechanical disconnection indicator
t°: Thermal system disconnection
GSG: Specific Gas Tube

Surge arrester ETITEC T WENT group B, EN/IEC/VDE: T1, T2/I,II/B+C

ETITEC T WENT		
Type	**320/12,5**	**320/25**
In accordance with	IEC/EN 61643-11	
Category IEC/EN/VDE	I, II/ T1, T2 / B+C	
Max. continuous operating voltage (AC) U_c	320 V	
Nominal AC voltage U_o	230V 50-60 Hz	
TOV immunity U_T (AC)	334 V/5s withstand	
	438 V/120 min safe failure	
Impulse current (10/350) I_{imp}	12,5 kA	25 kA
Nominal discharge current (8/20) I_n	20 kA	25 kA
Max. discharge current (8/20) I_{max}	50 kA	100 kA
Protection level Up - at I_n	<1,5 kV	
Follow current I_{fi}	100 A_{RMS}	
Response time t_A	< 25 ns	
Residual current I_{pe} at U_{ref}	< 0,3 mA	
Current source generator	1 mA	
Un min (MOV)	459 V	459
Un max (MOV)	561 V	561 V
Voltage step generator*	100 V/s	100 V/s
Un min (GDT)*	480 V	480 V
Un max (GDT)*	720 V	720 V
Thermal decoupler	✓	
Torque	3,0 Nm	
Back-up fuse (if mains > 160A)	250 A gG	
Short-circuit current rating I_{SCCR}	50 kA / 50 Hz	
Temperature range	- 40°C ...+70°C	
Cross-section of connection wire	min. 6mm²; max. solid, rigid strended 35mm²; flexible 25mm²	
Mounting	indoors on top hat fixing rail 35 mm (EN 60715)	
Degree of protection	IP 20	
Casing material	PA	
Dimensions	2 TE ... 8 TE	
Indication of disconnector operation		
Permissible humidity	5% - 95%	
Additional data for ETITEC T WENT-RC		
Remote signalisation (RC)	✓	
Switching capability (RC)	AC: 250V/0,5A; DC:125V/0,2A	
Cross-section of connection wire (RC)	max. 1.5 mm²	
Torque (RC)	0,25 Nm	

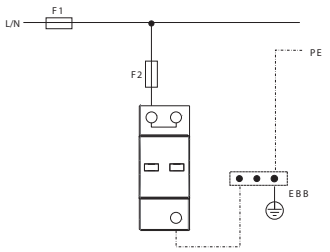
Type of network and nr. of SPD poles	
Network	**Nr of poles (SPD configuration)**
TNC 1 phase	1+0
TNC 3 phase	3+0
TNS 1 phase	2+0 / 1+1
TNS 3 phase	4+0 / 3+1
TT 1 phase	1+1
TT 3 phase	3+1

At TNC, TNS, TT systems with Un=230V, recommended Uc value of SPD is 275V.

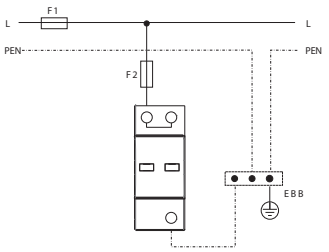
Protection configurations for various power systems

ETITEC T WENT Iimp=25 kA

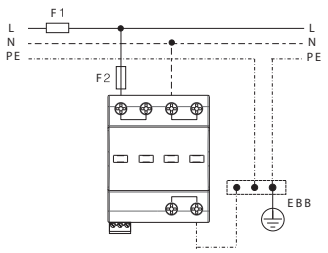
TN-S Network - Single-phase, 1+0 (T-connection)



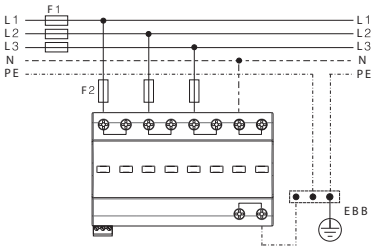
TN-C Network - Single-phase, 1+0 (T-connection)



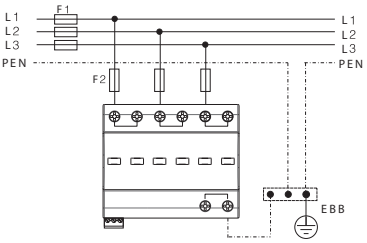
TN-S Network - Single-phase, 2+0 (T-connection)



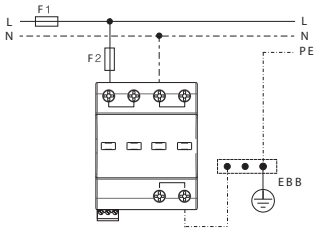
TN-S Network - Three-phase, 4+0 (T-connection)



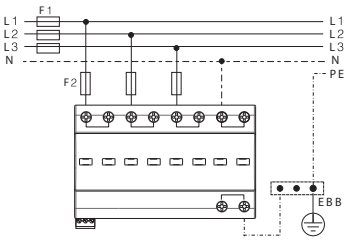
TN-C Network - Three-phase, 3+0 (T-connection)



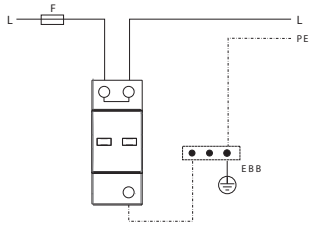
TT Network - Single-phase, 1+1 (T-connection)



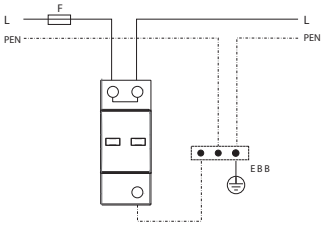
TT Network - Three-phase, 3+1 (T-connection)



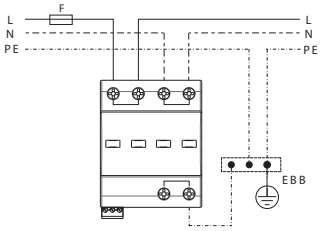
TN-S Network - Single-phase, 1+0 (V-connection)



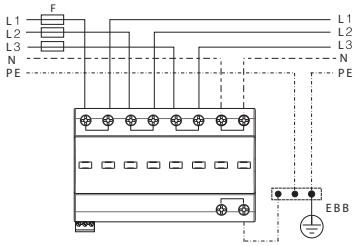
TN-C Network - Single-phase, 1+0 (V-connection)



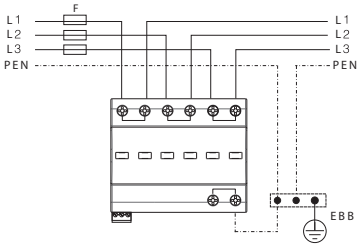
TN-S Network - Single-phase, 2+0 (V-connection)



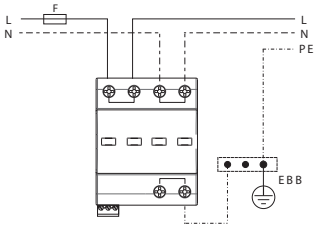
TN-S Network - Three-phase, 4+0 (V-connection)



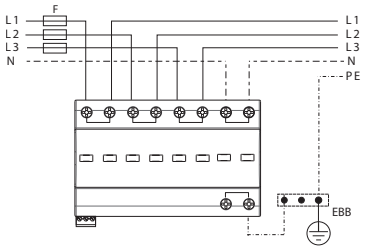
TN-C Network - Three-phase, 3+0 (V-connection)



TT Network - Single-phase, 1+1 (V-connection)



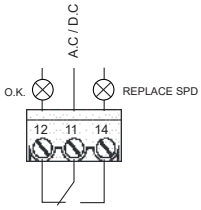
TT Network - Three-phase, 3+1 (V-connection)



Remote signalization connection / Back-up fuse

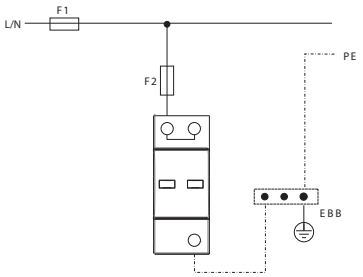
Back-up fuse
F1 > 250 A gG → F2 = 250 A gG
F1 ≤ 250 A gG → F2 = not needed
F ≤ 100 A gG

A.C.	250V / 0.5A
D.C.	250V / 0.1A
	125V / 0.2A
	75V / 0.5A

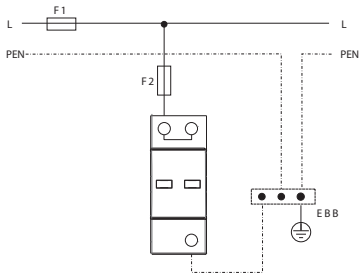


ETITEC T WENT Iimp=12,5 kA

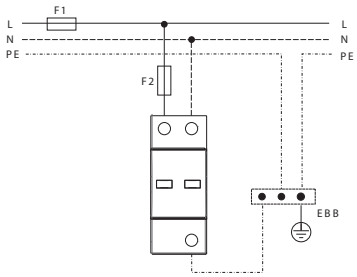
TN-S Network - Single-phase, 1+0 (T-connection)



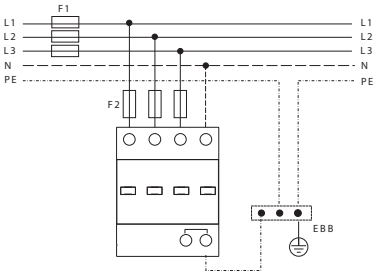
TN-C Network - Single-phase, 1+0 (T-connection)



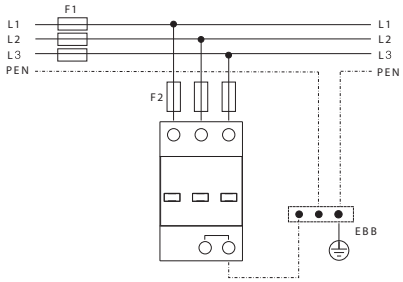
TN-S Network - Single-phase, 2+0 (T-connection)



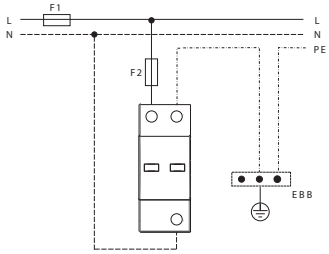
TN-S Network - Three-phase, 4+0 (T-connection)



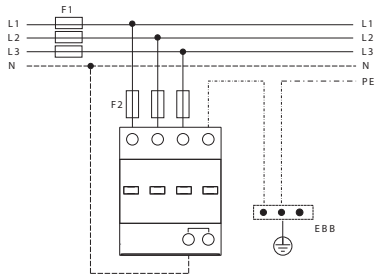
TN-C Network - Three-phase 3+0 (T-connection)



TT Network - Single-phase 1+1 (T-connection)



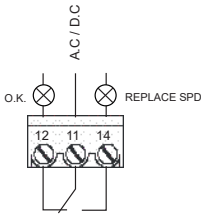
TT Network - Three-phase 3+1 (T-connection)



Remote signalization connection / Back-up fuse

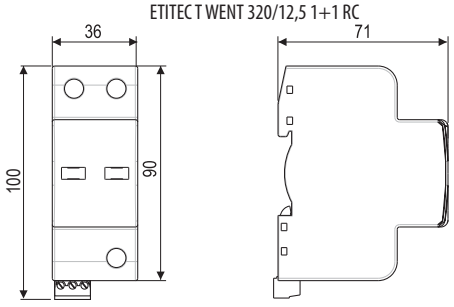
Back-up fuse
F1 > 250 A gG → F2 = 250 A gG
F1 ≤ 250 A gG → F2 = not needed

A.C.	250V / 0.5A
D.C.	250V / 0.1A
	125V / 0.2A
	75V / 0.5A

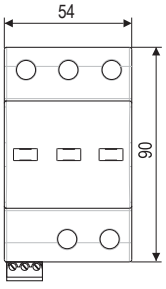


Dimensions

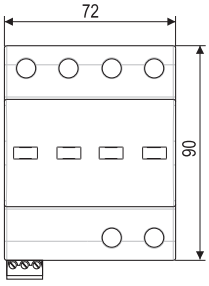
ETITEC T WENT 320/25 1+0 RC
ETITEC T WENT 320/12,5 1+0 RC
ETITEC T WENT 320/12,5 2+0 RC
ETITEC T WENT 320/12,5 1+1 RC



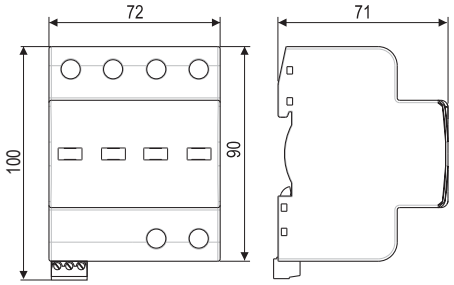
ETITEC T WENT 320/12,5 3+0 RC



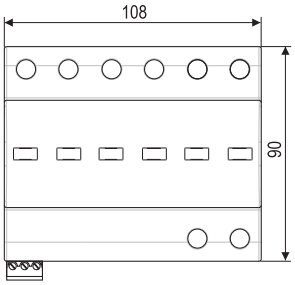
ETITEC T WENT 320/12,5 4+0 RC
ETITEC T WENT 320/12,5 3+1 RC



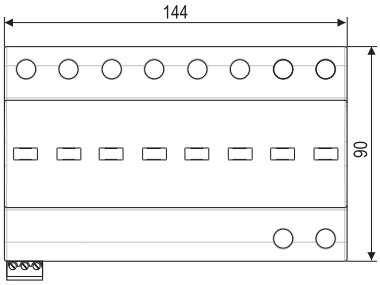
ETITEC T WENT 320/25 2+0 RC
ETITEC T WENT 320/25 1+1 RC



ETITEC T WENT 320/25 3+0 RC



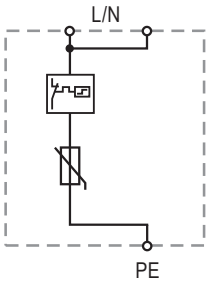
ETITEC T WENT 320/25 4+0 RC
ETITEC T WENT 320/25 3+1 RC



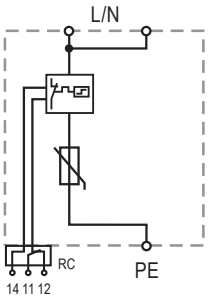
Connection diagram

ETITEC T WENT Iimp=12,5 kA

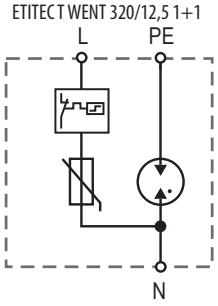
ETITEC T WENT 320/12,5 1+0



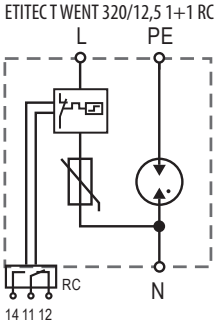
ETITEC T WENT 320/12,5 1+0 RC



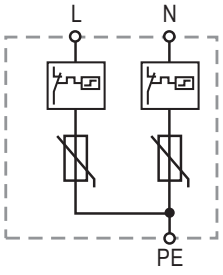
ETITEC T WENT 320/12,5 1+1



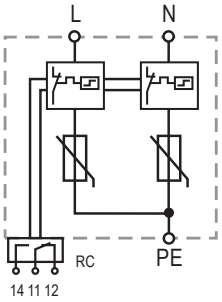
ETITEC T WENT 320/12,5 1+1 RC



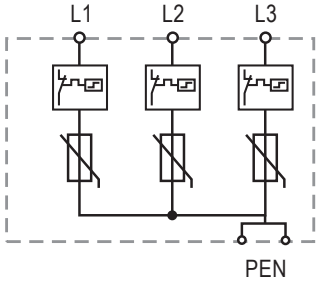
ETITEC T WENT 320/12,5 2+0



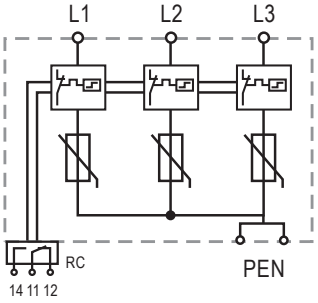
ETITEC T WENT 320/12,5 2+0 RC



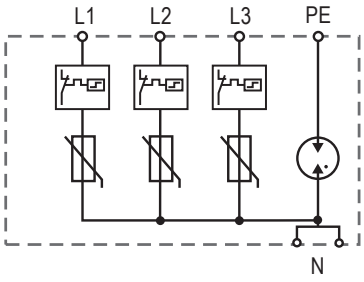
ETITEC T WENT 320/12,5 3+0



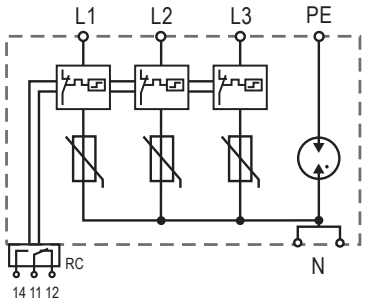
ETITEC T WENT 320/12,5 3+0 RC



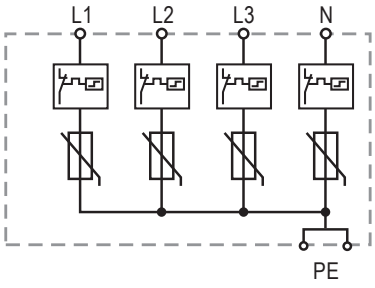
ETITEC T WENT 320/12,5 3+1



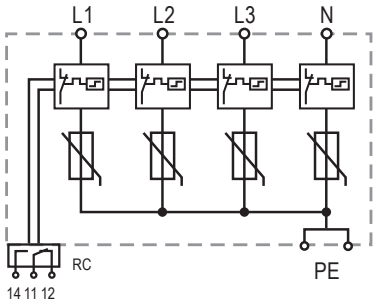
ETITEC T WENT 320/12,5 3+1 RC



ETITEC T WENT 320/12,5 4+0

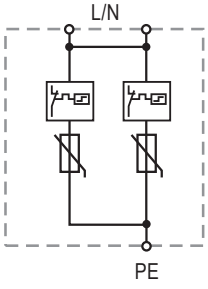


ETITEC T WENT 320/12,5 4+0 RC

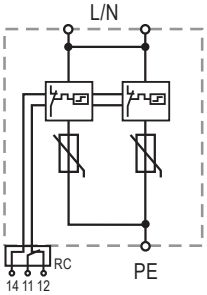


ETITEC T WENT Iimp=25 kA

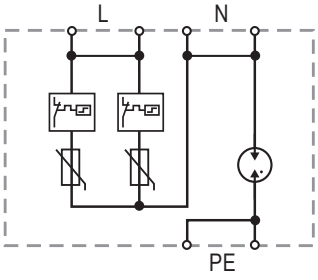
ETITEC T WENT 320/25 1+0



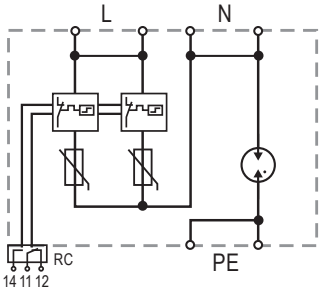
ETITEC T WENT 320/25 1+0 RC



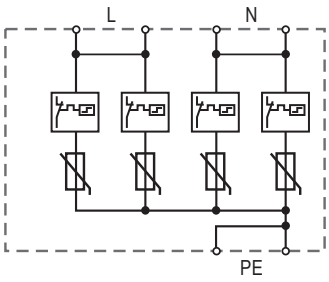
ETITEC T WENT 320/25 1+1 RC



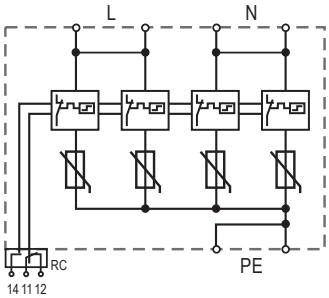
ETITEC T WENT 320/25 1+1 RC



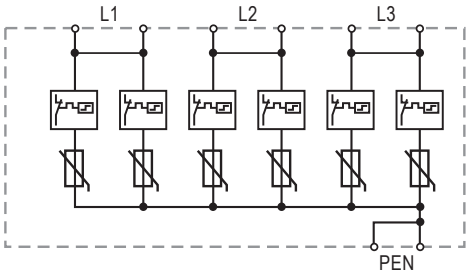
ETITEC T WENT 320/25 2+0 RC



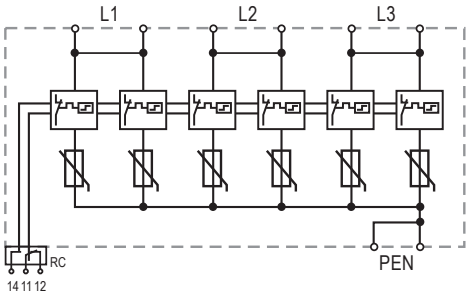
ETITEC T WENT 320/25 2+0 RC



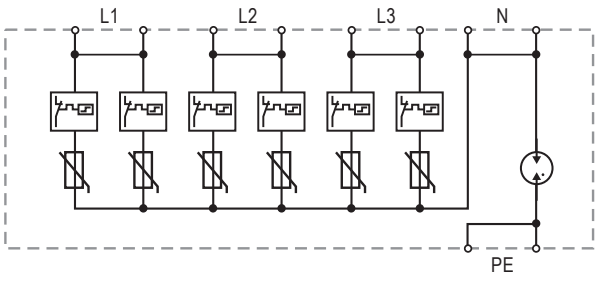
ETITEC T WENT 320/25 3+0



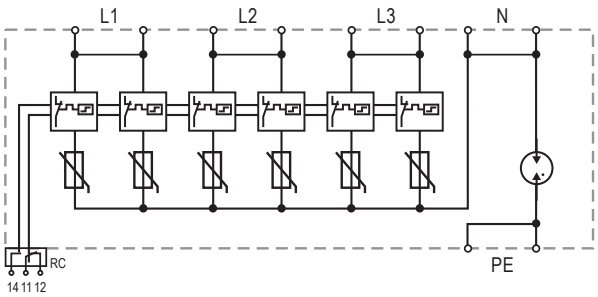
ETITEC T WENT 320/25 3+0 RC



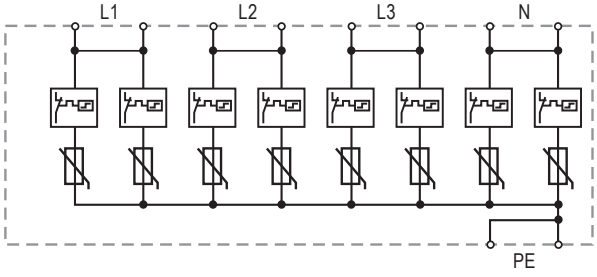
ETITEC T WENT 320/25 3+1



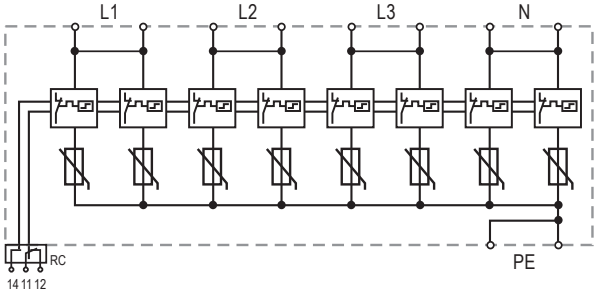
ETITEC T WENT 320/25 3+1 RC



ETITEC T WENT 320/25 4+0



ETITEC T WENT 320/25 4+0 RC

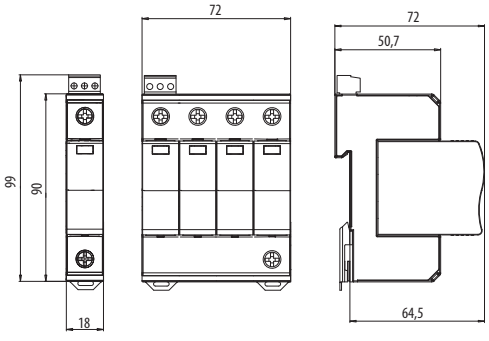


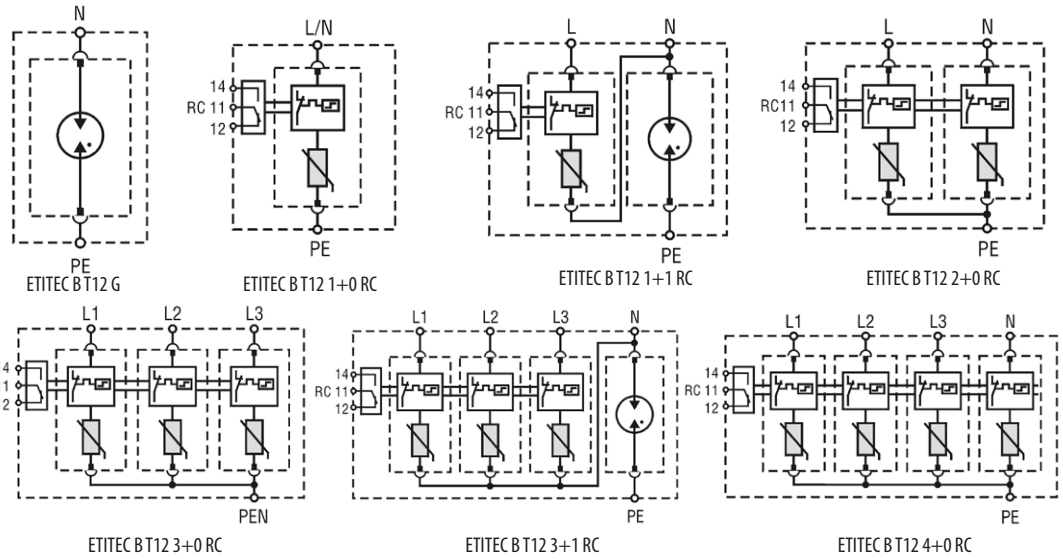
Surge arrester ETITEC group B EN/IEC/VDE: T1,T2, T3/I,II, III/B+C+D

ETITEC B T12 Iimp=12,5kA			
Type	**150/12,5**	**275/12,5**	**440/12,5**
In accordance with	IEC/EN 61643-11		
Category IEC/EN/VDE	I, II, III / T1, T2, T3 / B, C, D		
Max. continuous operating voltage (AC) Uc	150 V	275 V	440 V
Nominal discharge current (8/20) In	25 kA		
Max. discharge current (8/20) Imax	60 kA		
Impulse current (10/350) Iimp	12,5 kA		
Nominal AC voltage Uo	230V 50-60 Hz		
TOV immunity UT (AC)	334 V/5s withstand		
	438 V/120 min safe disconnection		
Charge			
Protection level Up - at In (8/20)	<1,0 kV	<1,4 kV	<2,0 kV
Follow current Ifi	x		
Response time tA	< 25 ns		
Residual current Ipe at Uref	< 0,3 mA		
Thermal decoupler	✓		
Torque	3,0 Nm		
Back-up fuse (if mains > 160A)	160 A gG		
Short-circuit current rating IsCCR	25 kA / 50 Hz		
Temperature range	- 40°C ...+70°C		
Cross-section of connection wire	min. 4mm², max. single strand 35mm², multi-strand 25mm²		
Mounting	indoors on top hat fixing rail 35 mm (EN 60715)		
Degree of protection	IP 20		
Casing material	thermoplastic; extinguishing degree UL 94 V-0		
Dimensions	1 TE ... 4 TE		
Indication of disconnector operation	red flag		
Permissible humidity	5% - 95%		
Additional data for ETITEC B-RC			
Remote signalisation (RC)	✓		
Switching capability (RC)	AC: 250V/0.5A; 125V/3A		
Cross-section of connection wire (RC)	max. 1.5 mm²		
Torque (RC)	0,25 Nm		

Type of network and nr. of SPD poles	
Network	**Nr of poles (SPD configuration)**
TNC 1 phase	1+0
TNC 3 phase	3+0
TNS 1 phase	2+0 / 1+1
TNS 3 phase	4+0 / 3+1
TT 1 phase	1+1
TT 3 phase	3+1
IT 1 phase	2+0
IT 3 phase	4+0

At TNC, TNS, TT systems with Un=230V, recommended Uc value of SPD is 275V. At IT system, recommended Uc value of SPD is 440V.



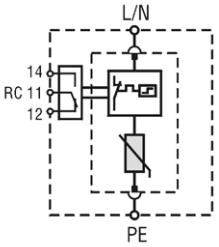


Surge arrester ETITEC group B T12 EN/IEC/VDE: T1,T2/I,II/B,C

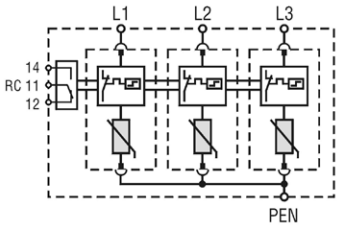
ETITEC B T12	
Type	**275/7**
In accordance with	IEC/EN 61643-11
Category IEC/EN/VDE	I, II / T1,T2 / B,C
Max. continuous operating voltage (AC) U_c	275
Nominal AC voltage U_o	230V 50-60 Hz
TOV immunity U_T (AC)	335 V/5s withstand
	440 V/120 min safe disconnection
Impulse current (10/350) I_{imp}	7 kA
Nominal discharge current (8/20) I_n	25 kA
Max. discharge current (8/20) I_{max}	50 kA
Charge	
Protection level Up - at I_n (8/20)	<1,5 kV
Follow current I_{fi}	x
Response time t_A	< 25 ns
Residual current I_{pe} at U_{ref}	< 0,2 mA
Thermal decoupler	✓
Torque	3,0 Nm
Back-up fuse (if mains > 125A)	125 A gG
Short-circuit current rating I_{SCCR}	25 kA / 50 Hz
Temperature range	- 40°C ...+70°C
Cross-section of connection wire	min. 6mm^2, max. single strand 35mm^2, multi-strand 25mm^2
Mounting	indoors on top hat fixing rail 35 mm (EN 60715)
Degree of protection	IP 20
Casing material	thermoplastic; extinguishing degree UL 94 V-0
Dimensions	1 TE ... 4 TE
Indication of disconnector operation	red flag
Permissible humidity	5% - 95%
Additional data for ETITEC B-RC	
Remote signalisation (RC)	✓
Switching capability (RC)	AC: 250V/0.5A; 125V/3A
Cross-section of connection wire (RC)	max. 1.5 mm^2
Torque (RC)	0,25 Nm

Type of network and nr. of SPD poles	
Network	**Nr of poles (SPD configuration)**
TNC 1 phase	1+0
TNC 3 phase	3+0
TNS 1 phase	2+0 / 1+1
TNS 3 phase	4+0 / 3+1
TT 1 phase	1+1
TT 3 phase	3+1
IT 1 phase	2+0
IT 3 phase	4+0

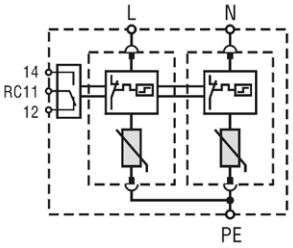
At TNC, TNS, TT systems with Un=230V, recommended Uc value of SPD is 275V.
At IT system, recommended Uc value of SPD is 440V.



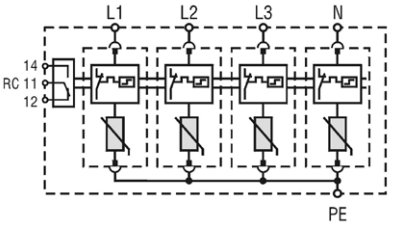
ETITEC B T12 275/7 1+0 RC



ETITEC B T12 275/7 3+0 RC

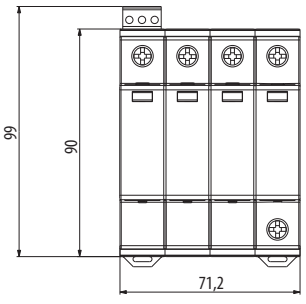


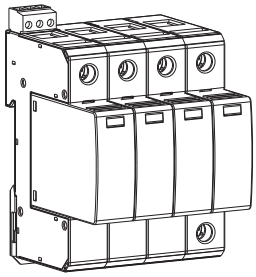
ETITEC B T12 275/7 2+0 RC



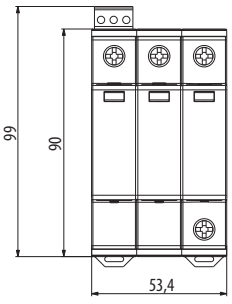
ETITEC B T12 275/7 4+0 RC

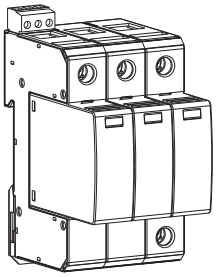
ETITEC B T12 275/7 4+0 RC



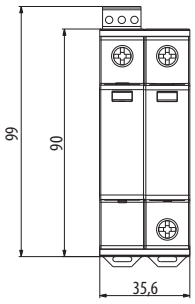


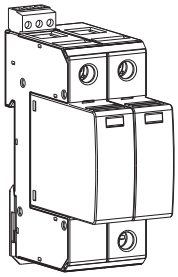
ETITEC B T12 275/7 3+0 RC



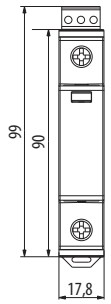


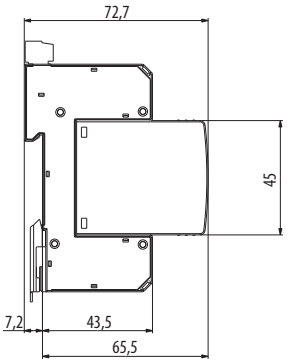
ETITEC B T12 275/7 2+0 RC





ETITEC B T12 275/7 1+0 RC



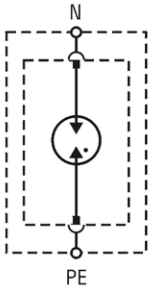


Surge arrester ETITEC group C T2 EN/IEC/VDE: T2/II/C

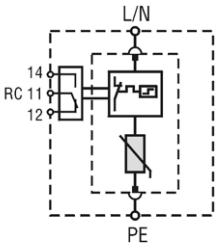
ETITEC C T2			
Type	**275/20**	**440/20**	**255/20 G**
In accordance with	IEC/EN 61643-11		
Category IEC/EN/VDE	II/T2/C		
Max. continuous operating voltage (AC) Uc	275	440	255
Nominal AC voltage Uo	230 V 50-60 Hz		
TOV immunity UT (AC)	335 V/5s withstand	335 V/5s withstand	1200 V
	440 V/120 min safe disconnection	440 V/120 min withstand	-
Nominal discharge current (8/20) In	20 kA		
Max. discharge current (8/20) Imax	40 kA		
Charge			
Protection level Up - at In (8/20)	<1,5 kV	<2,0 kV	<1,5 kV
Follow current Ifi	x		>100 A
Response time tA	< 25 ns		< 100 ns
Residual current Ipe at Uref	< 0,2 mA		-
Thermal decoupler	✓		-
Torque	3,0 Nm		
Back-up fuse (if mains > 125A)	125 A gG		-
Short-circuit current rating ISCCR	25 kA / 50 Hz		-
Temperature range	- 40°C ...+70°C		
Cross-section of connection wire	min. 6mm², max. single strand 35mm², multi-strand 25mm²		
Mounting	indoors on top hat fixing rail 35 mm (EN 60715)		
Degree of protection	IP 20		
Casing material	thermoplastic; extinguishing degree UL 94 V-0		
Dimensions	1 TE ... 4 TE		
Indication of disconnector operation	red flag		
Permissible humidity	5% - 95%		
Additional data for ETITEC C-RC			
Remote signalisation (RC)	✓		-
Switching capability (RC)	AC: 250V/0.5A; 125V/3A		-
Cross-section of connection wire (RC)	max. 1.5 mm²		-
Torque (RC)	0,25 Nm		-

Type of network and nr. of SPD poles	
Network	**Nr of poles (SPD configuration)**
TNC 1phase	1+0
TNC 3 phase	3+0
TNS 1 phase	2+0 / 1+1
TNS 3 phase	4+0 / 3+1
TT 1 phase	1+1
TT 3 phase	3+1
IT 1 phase	2+0
IT 3 phase	4+0

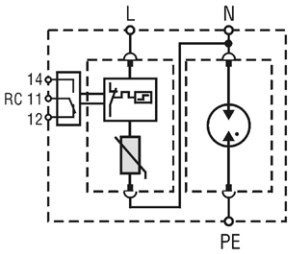
At TNC, TNS, TT systems with Un=230V, recommended Uc value of SPD is 275V.
At IT system, recommended Uc value of SPD is 440V.



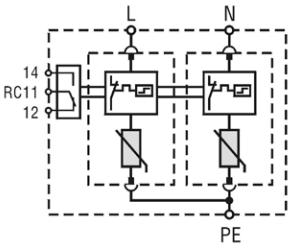
ETITEC C T2 G



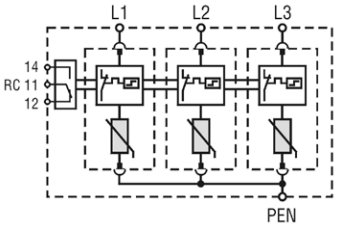
ETITEC C T2 1+0 RC



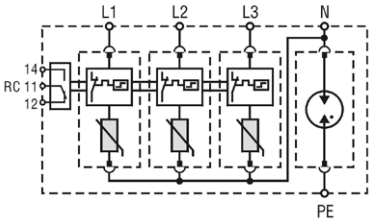
ETITEC C T2 1+1 RC



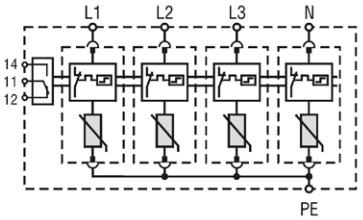
ETITEC C T2 2+0 RC



ETITEC C T2 3+0 RC

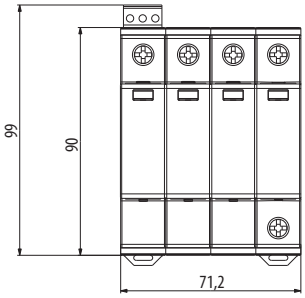


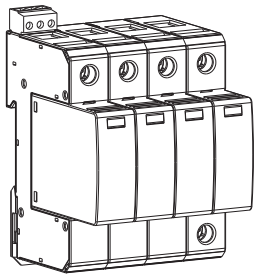
ETITEC C T2 3+1 RC



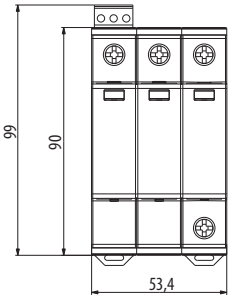
ETITEC C T2 4+0 RC

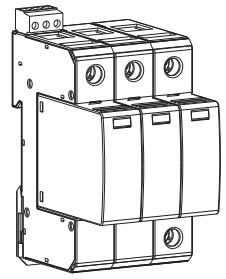
ETITEC C T2 275/20 4+0 RC
ETITEC C T2 275/20 3+1 RC



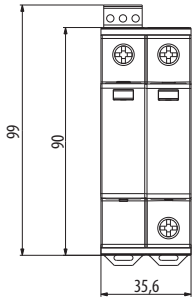


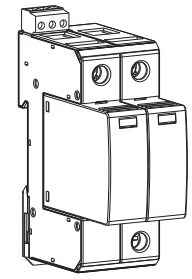
ETITEC C T2 275/20 3+0 RC



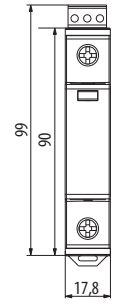


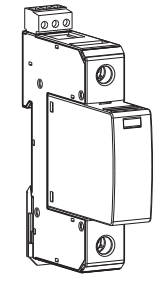
ETITEC C T2 275/20 2+0 RC
ETITEC C T2 275/20 1+1 RC

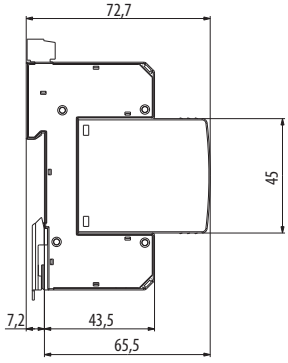




ETITEC C T2 275/20 1+0 RC



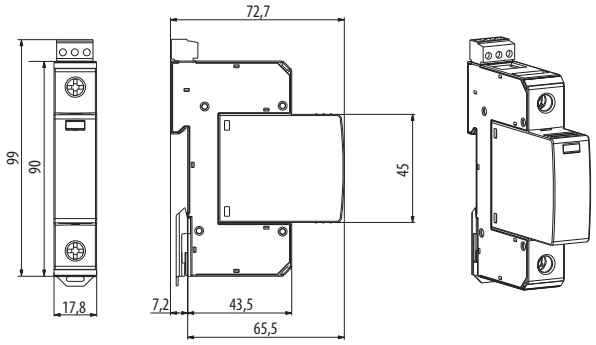


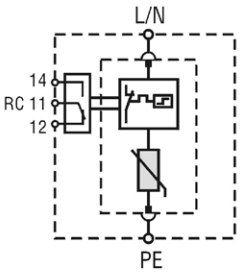


Surge arrester ETITEC group D T3 EN/IEC/VDE: T3/III/D

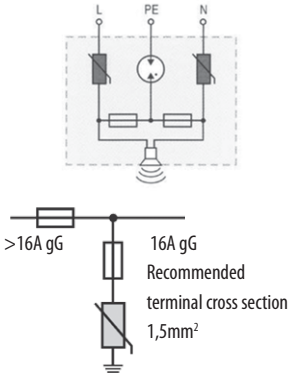
ETITEC D T3		
Type	**275/3**	**440/3**
In accordance with	IEC/EN 61643-11	
Category IEC/EN/VDE	III/T3/D	
Max. continuous operating voltage (AC) U_c	275	440
Nominal AC voltage U_o	230 V 50-60 Hz	
TOV immunity U_T (AC)	335 V/5s withstand	335 V/5s withstand
	440 V/120 min safe disconnection	440 V/120 min withstand
U_{oc}	10 kV	
Max. discharge current (8/20) I_{max}	10 kA	
Charge		
Protection level Up - at I_n (8/20)	<1,4 kV	<1,6 kV
Follow current I_{fi}	x	
Response time t_A	< 25 ns	
Residual current I_{pe} at U_{ref}	< 0,3 mA	
Thermal decoupler	✓	
Torque	3,0 Nm	
Back-up fuse (if mains > 63A)	125 A gG	
Short-circuit current rating I_{SCCR}	25 kA / 50 Hz	
Temperature range	- 40°C ...+70°C	
Cross-section of connection wire	min. 6mm², max. single strand 35mm², multi-strand 25mm²	
Mounting	indoors on top hat fixing rail 35 mm (EN 60715)	
Degree of protection	IP 20	
Casing material	thermoplastic; extinguishing degree UL 94 V-0	
Dimensions	1 TE	
Indication of disconnector operation	red flag	
Permissible humidity	5% - 95%	
Additional data for ETITEC D-RC		
Remote signalisation (RC)	✓	
Switching capability (RC)	AC: 250V/0.5A; 125V/3A	
Cross-section of connection wire (RC)	max. 1.5 mm²	
Torque (RC)	0,25 Nm	

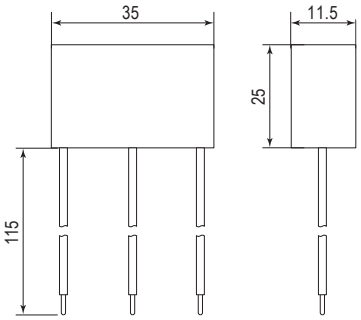
ETITEC D T3 275/3 1+0 RC



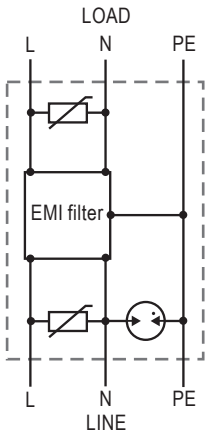


ETITEC D 255/3 MINI	
Electrical	
Nominal AC voltage U_0	230V
Max. continuous operating voltage (AC) U_c	275V
Open Circuit Voltage of the Combination Wave Generator (1,2/50 µs) Uoc	U_{oc}=6kV
	(L+N-PE) $U_{oc\ total}$=10kV
Short-Circuit Current of the Combination Wave Generator (8/20 µs) Icw	3kA
Protection level Up - at I_n (8/20)	(L-N) U_p=1,5kV
	(L-PE)/(N-PE) U_p=1,7kV
Response time t_A	<100ns
Back-up fuse (if mains > 16A)	B 16 A
Short-circuit current rating I_{SCCR}	1 kA
TOV immunity U_T (AC)	337 V/5s withstand
Mechanical and Environmental	
Temperature range	-40°C ... +85°C
Permissible humidity	5% ... 95%
Cross-section of connection wire	1 mm²(stranded)
Mounting	cable ducts
Degree of protection	IP 20
Housing material	thermoplastic; extinguishing degree UL 94 V-0
Thermal decoupler	✓
Fault Indication	Buzzer





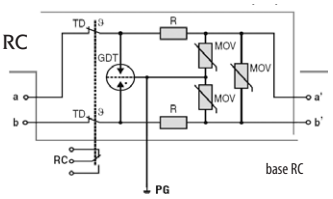
Technical data ETITEC FILT D	
In accordance with	IEC-61643-1
Category IEC / VDE	III / D
Connection:	TN-S, TT
Protecting:	L/N-PE
Protective elements:	GDT, MOV & EMI filter
Max. continuous operating voltage (AC/DC) U_c	275/50 Hz
Combination wave(1.2/50-8/20)Uoc/Isc	6kV/3kA
Max. Load current I_L	8A
Protection level U_p	≥800V
Asymetrical attenuation	<70 dB at 5MHz
Terminal cross section	1,5 mm²(stranded)
Indication	Light
Housing	Thermoplastic
Dimensions (w*h*d)	33*90*57mm



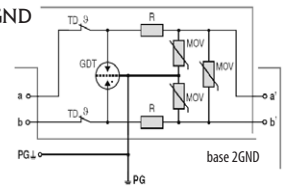
Surge protection of SIGNAL/CONTROL lines type EM-TD

Technical data		
Type	ETITEC EM-TD 110 V	ETITEC EM-TD 24 V
Protection construction	two parts: base extractable insert	
Number of protected pairs	1 (2 conductors)	
Nominal operating voltage Un	110V DC	24V DC
Max. continous operating voltage	170V DC	28V DC
Rated spark overvoltage	184-264 V	30-36 V
Rated operating current IL at 25°C	1A	145 mA
Nominal discharge current In (8/20)	10kA	10 kA
Max. discharge current Imax (8/20)	20 kA	20 kA
Residual voltage at 5kA (8/20)	< 450 V	< 65 V
Response time t_A	< 25ns	< 1ns
Thermal protection	thermal disconnection in lines a and b	
Overcurrent protection	PTC resistor at I > 0,3A	
Insulation resistance	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Serial resistance R	cca. 1ohm	cca. 9-11 ohm
Transverse capacitance C	90 pF	2,9 pF
Limit frequency f_G	10 Mhz	1,4 Mhz
Terminal cross section	Multi-strand to 6 mm^2	
Operating temperature J	- 40°C ...+80°C	- 25°C ...+50°C
Degree of protection	IP 20	
Casing material	thermoplastic; extinguishing degreeV-0	
Housing colour	yellow	
Dimensions DIN 43880	1 TE	
Mounting	on 35 mm DIN rail	

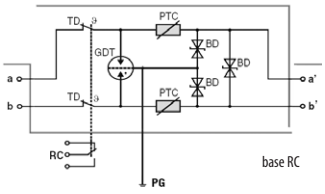
ETITEC EM-TD 110V RC



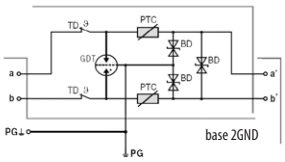
ETITEC EM-TD 110V 2 GND



ETITEC EM-TD 24V RC



ETITEC EM-TD 24V 2 GND

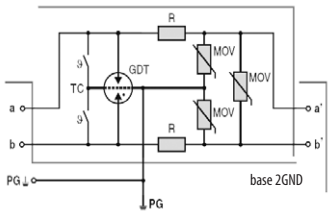


LEGEND
TD - termal decoupler
GDT - gas discharge tube
MOV - varistor
PTC - resistor with a positive temperature coeficient
R - resistor
BD - bi-directional diode
SG - signal grounding
PG - protective grounding

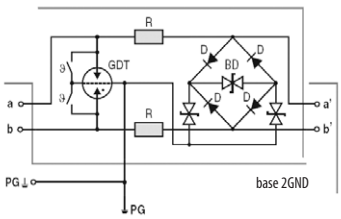
Surge protection of SIGNAL/CONTROL lines type EMH-TC

Technical data		
Type	ETITEC EMH-TC 110 V	ETITEC EMH-TC 24 V
Protection construction	two parts: base extractable insert	
Number of protected pairs	1 (2 conductors)	
Nominal operating voltage Un	110V DC	24V DC
Max. continous operating voltage	170V DC	28V DC
Rated spark overvoltage	184-264 V	30-36 V
Rated operating current IL at 25°C	1A	1 A
Nominal discharge current In (8/20)	10kA	10 kA
Max. discharge current Imax (8/20)	20 kA	20 kA
Residual voltage at 5kA (8/20)	< 450 V	< 65 V
Response time t_A	< 25ns	< 1ns
Thermal protection	thermo clip	
Insulation resistance	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Serial resistance R	cca. 1ohm	cca. 1ohm
Transverse capacitance C	150 pF	30 pF
Limit frequency f_G	10 Mhz	35 Mhz
Terminal cross section	Multi-strand to 6 mm^2	
Operating temperature J	- 40°C ...+80°C	
Degree of protection	IP 20	
Casing material	thermoplastic; extinguishing degreeV-0	
Housing colour	yellow	
Dimensions DIN 43880	1 TE	
Mounting	on 35 mm DIN rail	

ETITEC EMH-TC 110V 2 GND



ETITEC EMH-TC 24V 2 GND

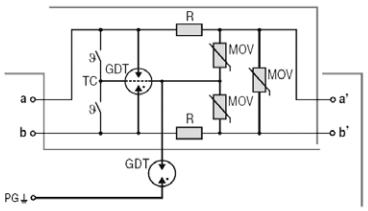


LEGEND
TD - termal decoupler
GDT - gas discharge tube
MOV - varistor
PTC - resistor with a positive temperature coeficient
R - resistor
BD - bi-directional diode
SG - signal grounding
PG - protective grounding

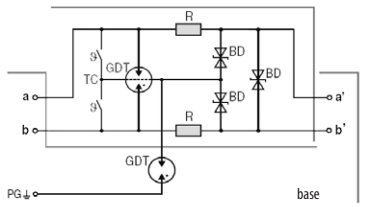
Surge protection of SIGNAL/CONTROL lines type EMS-TC

Technical data		
Type	ETITEC EMS-TC 110 V	ETITEC EMS-TC 24 V
Protection construction	two parts: base extractable insert	
Number of protected pairs	1 (2 conductors)	
Nominal operating voltage Un	110V DC	24V DC
Max. continous operating voltage	170V DC	28V DC
Rated spark overvoltage	a/b-PG; 420-680 V a/b; 184-264 V	a/b-PG; 350-500 V a/b; 30-36 V
Rated operating current IL at 25°C	1A	1 A
Nominal discharge current In (8/20)	10kA	10 kA
Max. discharge current Imax (8/20)	20 kA	20 kA
Residual voltage at 5kA (8/20)	< 450 V	< 65 V
Response time t_A	a/b;< 25ns a/b-PG; 100ns	< 1ns a/b-PG; 100ns
Insulation resistance	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Serial resistance R	cca. 1ohm	cca. 1ohm
Transverse capacitance C	a/b; 90 pF a/b-PG; 8pF	a/b; 1,9 pF a/b-PG; 8pF
Limit frequency f_G	10 Mhz	1,4 Mhz
Terminal cross section	Multi-strand to 6 mm²	
Operating temperature J	- 40°C ...+80°C	
Degree of protection	IP 20	
Casing material	thermoplastic; extinguishing degreeV-0	
Housing colour	yellow	
Dimensions DIN 43880	1 TE	
Mounting	on 35 mm DIN rail	

ETITEC EMS-TC 110V



ETITEC EMS-TC 24V

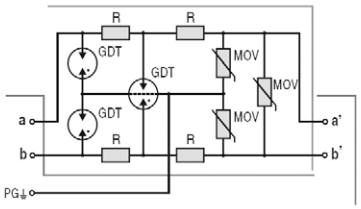


LEGEND
TD - termal decoupler
GDT - gas discharge tube
MOV - varistor
R - resistor
BD - bi-directional diode
PG - protective grounding

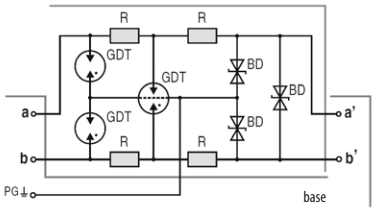
Surge protection of SIGNAL/CONTROL lines type EMO

Technical data		
Type	ETITEC EMO 110 V	ETITEC EMO 24 V
Protection construction	two parts: base + extractable insert	
Number of protected pairs	1 (2 conductors)	
Nominal operating voltage Un	110V DC	24V DC
Max. continous operating voltage	170V DC	28V DC
Rated spark overvoltage	a/b-PG; 184-264 V a/b; 184-264 V	a/b-PG; 30-36 V a/b; 30-36 V
Rated operating current IL at 25°C	1 A	1 A
Nominal discharge current In (8/20)	20 kA	20 kA
Max. discharge current Imax (8/20)	30 kA	30 kA
Lightning impulse current (10-350)	5 kA	5 kA
Residual voltage at 5kA (8/20)	< 450 V	< 65 V
Response time t_A	< 25ns	< 1ns
Insulation resistance	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Serial resistance R	cca. 2 ohm	cca. 2 ohm
Transverse capacitance C	150 pF	2,9 pF
Limit frequency f_G	10 Mhz	1,8 Mhz
Terminal cross section	Multi-strand to 6 mm²	
Operating temperature J	- 40°C ...+80°C	
Degree of protection	IP 20	
Casing material	thermoplastic; extinguishing degreeV-0	
Housing colour	yellow	
Dimensions DIN 43880	1 TE	
Mounting	on 35 mm DIN rail	

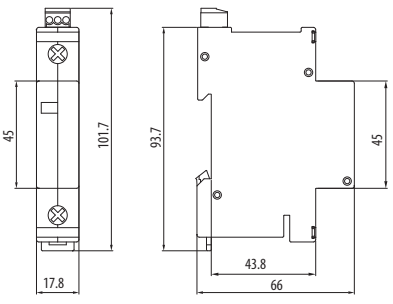
ETITEC EMO110V



ETITEC EMO 24V

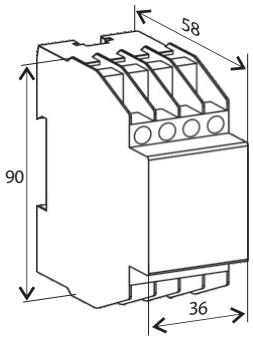


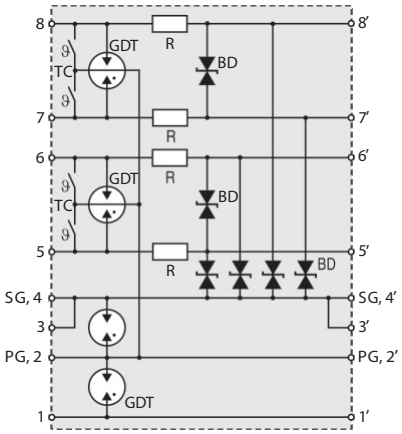
LEGEND
GDT - gas discharge tube
MOV - varistor
R - resistor
BD - bi-directional diode



ETITEC C EM-TD, EMH-TC, EMS-TC, EMO

ETITEC



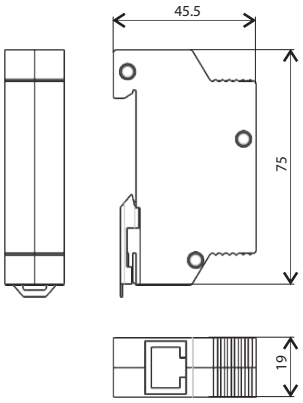


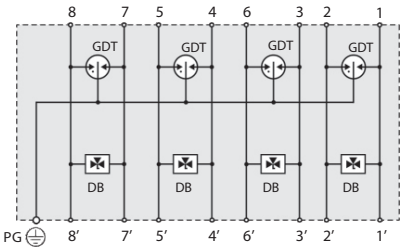
Legend:

TC	thermo-clip
GDT	gas discharge tube
R	resistor
BD	bi-directional TVS diode
PG	protective grounding
SG	signal grounding

Technical data ETITEC EM-RS485

Protection construction		Protective module
Number of protected pairs		2 (4 conductors)
Nominal operating voltage	U_n	5VDC
Max. continuous operating voltage	U_c	6VDC
Rated spark overvoltage (5, 6, 7 & 8 - 4, SG)		6.5V - 8.5V
Rated spark overvoltage (5-6 & 7-8)		6.5V - 8.5V
Rated spark overvoltage (5, 6, 7 & 8 - 2, PG)		78V - 116V
Rated operating current at 25°C	I_L	500mA
Nominal discharge current (8/20µs)	I_n	20kA
Residual voltage at 5 kA (8/20µs)		20V
Response time of overvoltage protection	t_A	< 1ns (5, 6, 7, 8 - SG))
Thermal protection		Thermo-clip in lines 5, 6, 7and 8
Insulation resistance of the protection		6kΩ
Serial resistance	R	1.7 - 1.9Ω
Transverse capacitance	C	< 2nF
Limit frequency	f_G	> 1MHz
Terminal cross section		Multi-strand to 2 x 2.5mm^2
Operating temperature		-40°C … +80°C
Degree of protection		IP 20
Housing material		Thermoplastic; gray, extinguishing degree V-0
Dimensions DIN 43880		2TE
Mounting EN 60715		on a 35mm DIN rail





Legend:

GDT	gas discharge tube
DB	diode block
PG	protective grounding

Technical data ETITEC LAN

Protection construction		Protective module
Nominal operating voltage	U_n	48VDC
Max. continuous operating voltage	U_c	48VDC
Nominal operating current	I_L	1A
Nominal discharge current (8/20µs)	I_n	150A line - line
Total nominal discharge current (8/20µs)	I_n	10kA lines - PG
Voltage protection level at In	U_p	150V line - line
		550V line - PG
Limit frequency	f_G	< 250MHz (Class E)
Response time of overvoltage protection	t_A	< 1ns
Connection		Input/Output: RJ45 sockets, all 4 line pairs protected
Operating temperature		-40°C … +80°C
Degree of protection		IP 20
Housing material		Metal