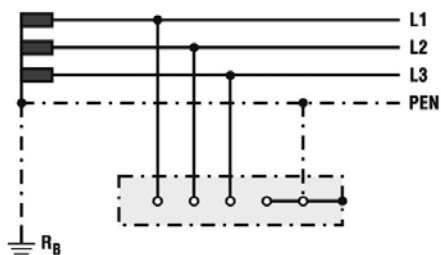
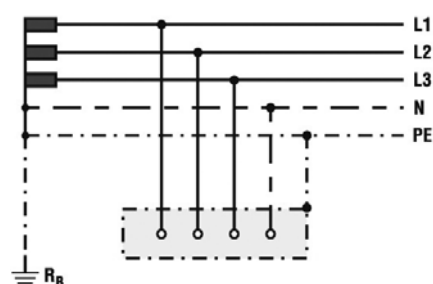


Descărcătoare la supratensiune – ETITEC

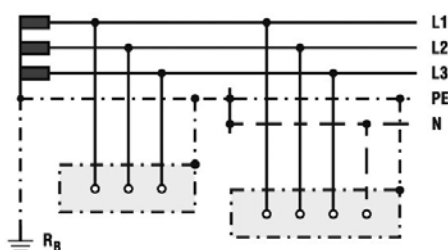
Sisteme comune de distribuție a energiei (Europa)



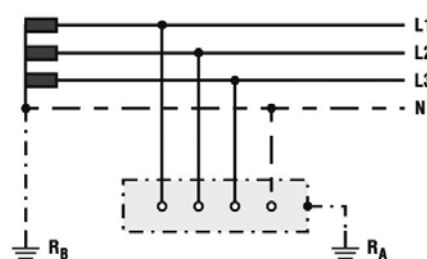
TN-C system



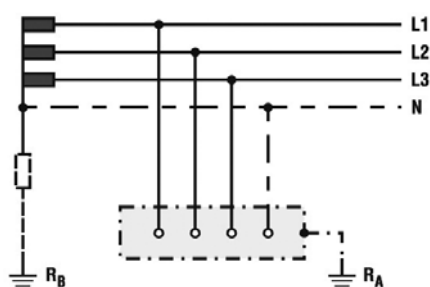
TN-S system



TN-C-S system



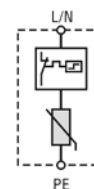
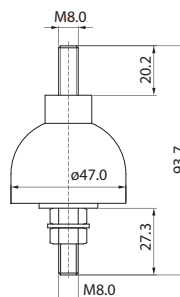
TT system



IT system

Descărcătoare la supratensiune grupa A

Date tehnice ETITEC AQ		
Tip	280/10; 280/15	440/10; 440/15
În conformitate cu	IEC-61643-11	
Categoria IEC/VDE	II/C	
Tensiune maximă de funcționare continuă (AC/DC) U_c	280/350 V	440/580 V
Curent nominal de descărcare (8/20) I_n	10 kA; 15 kA	10 kA; 15 kA
Curent maxim de descărcare (8/20) I_{max}	25 kA; 30 kA	25 kA; 30 kA
Nivel de protecție U_p la I_n (8/20)	1.2, 1.3 kV	1.6, 1.8 kV
Urmă de curent I_f	x	
Timp de răspuns t_A	< 25 ns	
Curent rezidual la U_c IPE	< 2 mA	
Dispozitiv decuplare termică	✓	
Cuplu	max. 3.5 Nm	
Rezistență la scurt-circuit	25kA / 50 Hz	
Interval de temperatură	- 40°C... +80°C	
Secțiune transversală a conductoarelor de conexiune	L/N PE	M8 multifilar 6 mm
Montare	exterior	
Material carcasă	termoplast; grad de stingere UL 94 V-0	



Descărcătoare la supratensiune ETITEC T WENT grupa 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_r (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 U_p - at I_n	<1,5 kV	
Follow current I_f	100 A _{RMS}	
Response time t_a	< 25 ns	
Residual current I_{pe} at U_{ref}	< 0,3 mA	
Current source generator	1 mA	
U_n min (MOV)	459 V	459
U_n max (MOV)	561 V	561 V
Voltage step generator*	100 V/s	100 V/s
U_n min (GDT)*	480 V	480 V
U_n 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. 6mm ² ; max. solid, rigid streded 35mm ² ; flexible 25mm ²	
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 mm ²	
Torque (RC)	0,25 Nm	

Tip of network and nr. of SPD poles

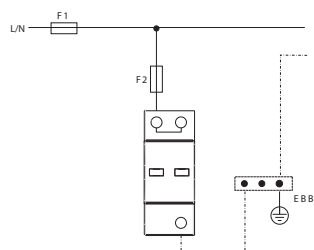
Network	Nr of poles (SPD configuration)
TNC 1 phase	1+0
TNC 3 phase	3+0
TNS 1 phase	2+0 / 1+1
TNS 3 phase	4+0 / 3+1
TT 1 phase	1+1
TT 3 phase	3+1

At TNC, TNS, TT systems with $U_n=230V$, recommended U_c value of SPD is 275V.

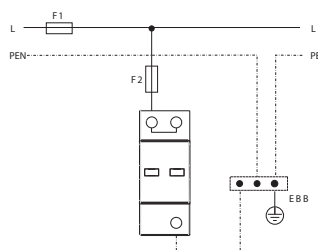
Protection configurations for various power systems

ETITEC T WENT limp=25 kA

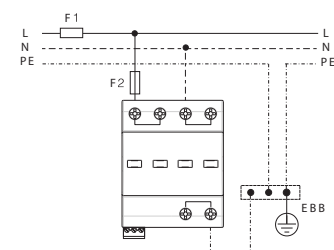
TN-S Network - Single-phase, 1+0 (T-connection)



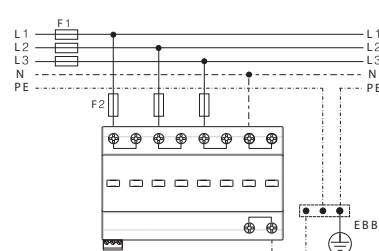
TN-C Network - Single-phase, 1+0 (T-connection)



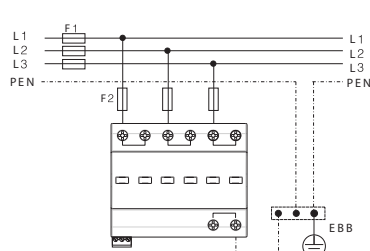
TN-S Network - Single-phase, 2+0 (T-connection)



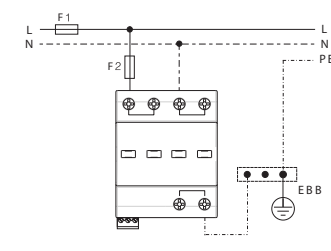
TN-S Network - Three-phase, 4+0 (T-connection)



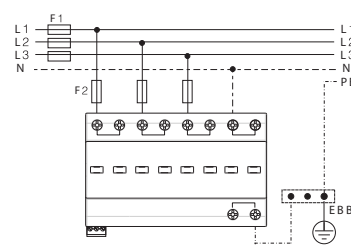
TN-C Network - Three-phase, 3+0 (T-connection)



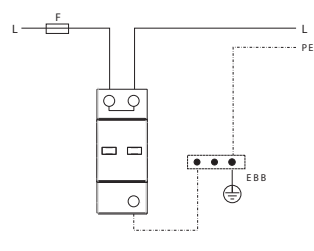
TT Network - Single-phase, 1+1 (T-connection)



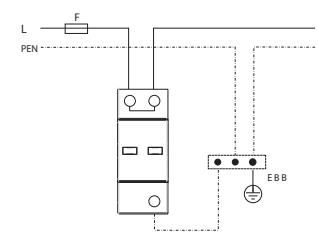
TT Network - Three-phase, 3+1 (T-connection)



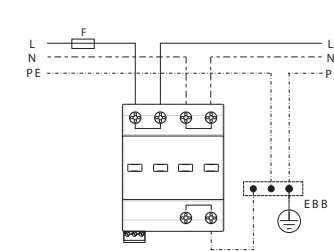
TN-S Network - Single-phase, 1+0 (V-connection)



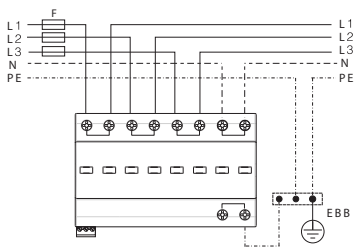
TN-C Network - Single-phase, 1+0 (V-connection)



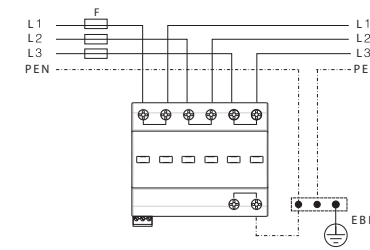
TN-S Network - Single-phase, 2+0 (V-connection)



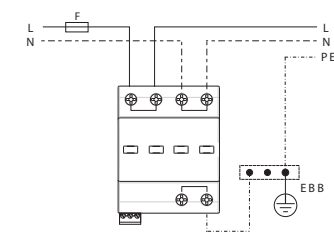
TN-S Network - Three-phase, 4+0 (V-connection)



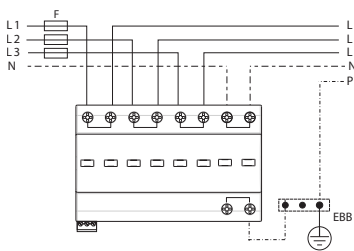
TN-C Network - Three-phase, 3+0 (V-connection)



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



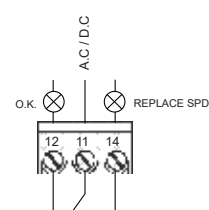
TT Network - Three-phase, 3+1 (V-connection)



Remote signalization connection / Back-up fuse

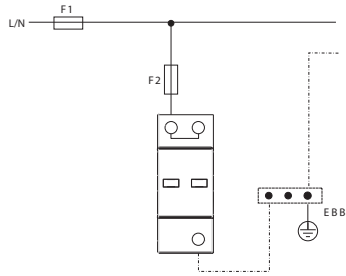
Back-up fuse	
$F1 > 250 \text{ A gG}$	$\rightarrow F2 = 250 \text{ A gG}$
$F1 \leq 250 \text{ A gG}$	$\rightarrow F2 = \text{not needed}$
$F \leq 100 \text{ A gG}$	

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

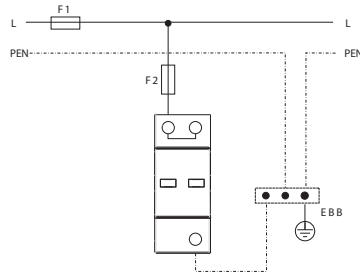


ETITEC T WENT limp=12,5 kA

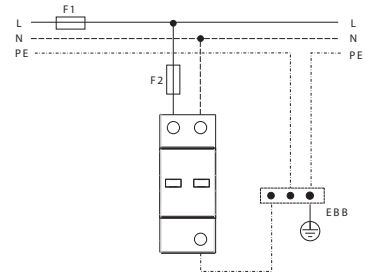
TN-S Network - Single-phase, 1+0 (T-connection)



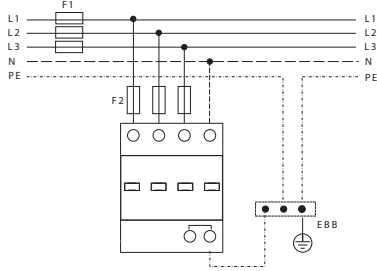
TN-C Network - Single-phase, 1+0 (T-connection)



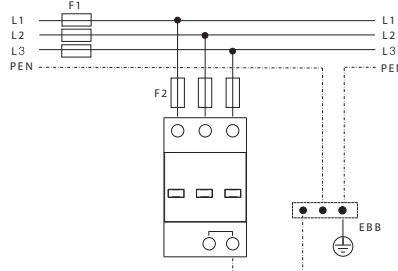
TN-S Network - Single-phase, 2+0 (T-connection)



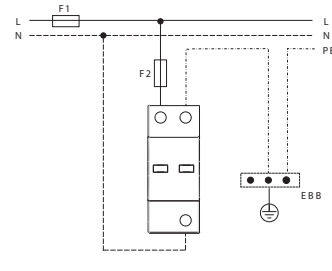
TN-S Network - Three-phase, 4+0 (T-connection)



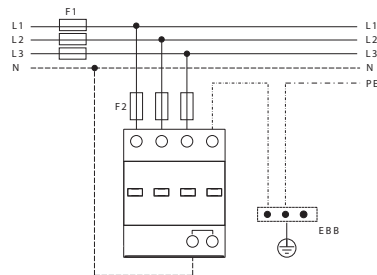
TN-C Network - Three-phase 3+0 (T-connection)



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



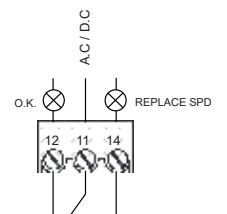
TT Network - Three-phase 3+1 (T-connection)



Remote signalization connection / Back-up fuse

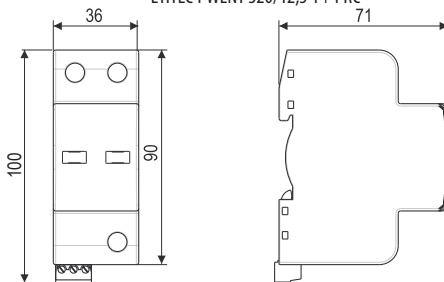
Back-up fuse	
$F1 > 250 \text{ A gG}$	$\rightarrow F2 = 250 \text{ A gG}$
$F1 \leq 250 \text{ A gG}$	$\rightarrow F2 = \text{not needed}$

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

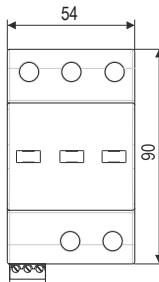


Dimensiuni

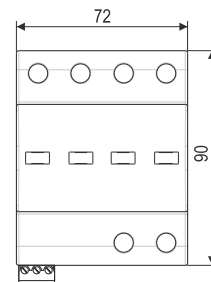
ETITEC T WENT 320/25 1+0 RC
ETITEC T WENT 320/12,5 1+0 RC
ETITEC T WENT 320/12,5 2+0 RC
ETITEC T WENT 320/12,5 1+1 RC



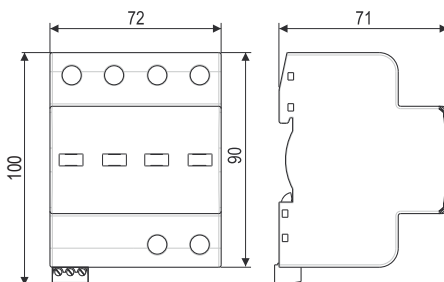
ETITEC T WENT 320/12,5 3+0 RC



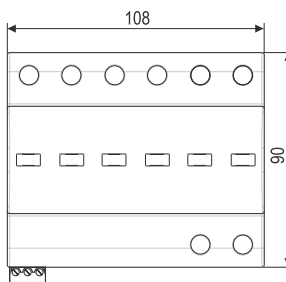
ETITEC T WENT 320/12,5 4+0 RC
ETITEC T WENT 320/12,5 3+1 RC



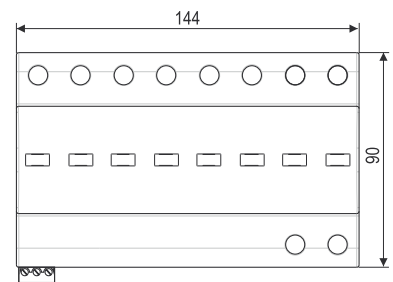
ETITEC T WENT 320/25 2+0 RC
ETITEC T WENT 320/25 1+1 RC



ETITEC T WENT 320/25 3+0 RC



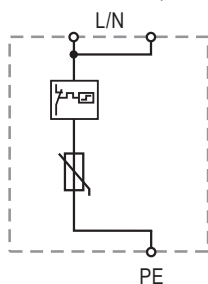
ETITEC T WENT 320/25 4+0 RC
ETITEC T WENT 320/25 3+1 RC



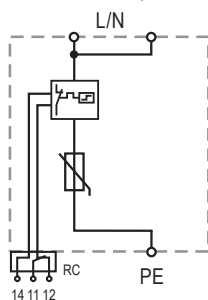
Conexiuni

ETITECT WENT $I_{imp}=12,5 \text{ kA}$

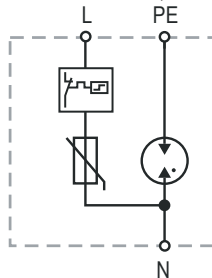
ETITECT WENT 320/12,5 1+0



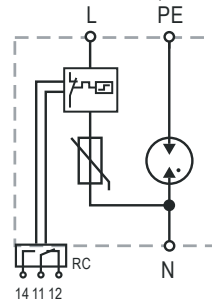
ETITECT WENT 320/12,5 1+0 RC



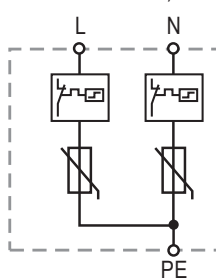
ETITECT WENT 320/12,5 1+1



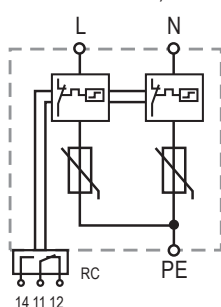
ETITECT WENT 320/12,5 1+1 RC



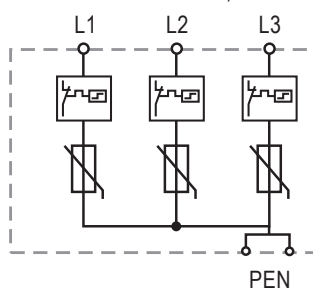
ETITECT WENT 320/12,5 2+0



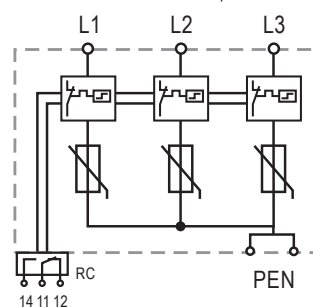
ETITECT WENT 320/12,5 2+0 RC



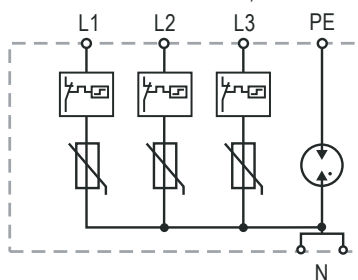
ETITECT WENT 320/12,5 3+0



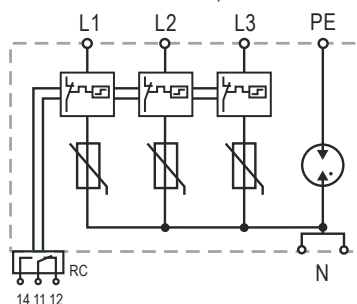
ETITECT WENT 320/12,5 3+0 RC



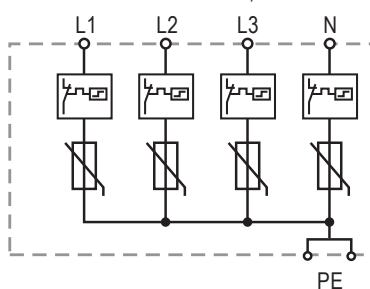
ETITECT WENT 320/12,5 3+1



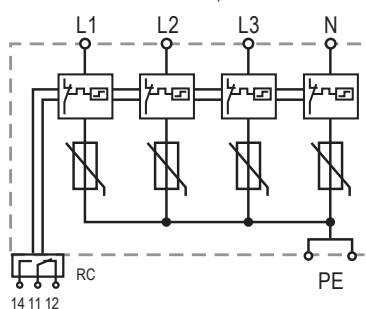
ETITECT WENT 320/12,5 3+1 RC



ETITECT WENT 320/12,5 4+0

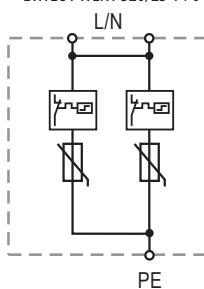


ETITECT WENT 320/12,5 4+0 RC

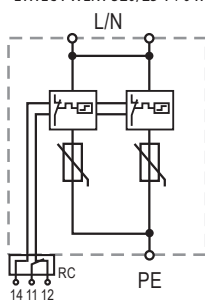


ETITEC T WENT $I_{imp}=25$ kA

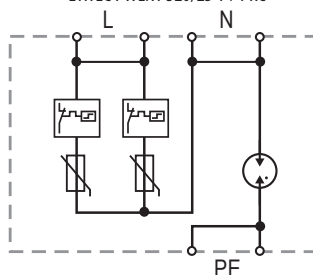
ETITEC T WENT 320/25 1+0



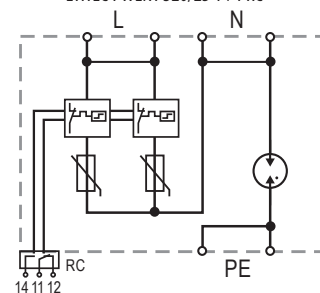
ETITEC T WENT 320/25 1+0 RC



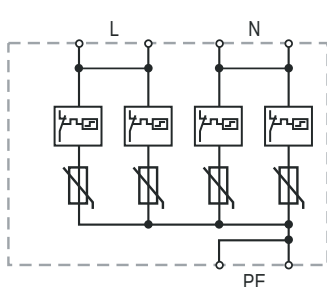
ETITEC T WENT 320/25 1+1 RC



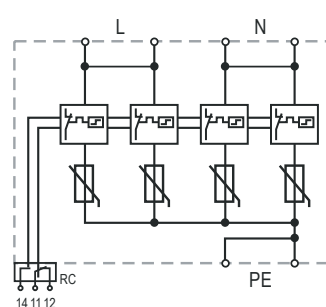
ETITEC T WENT 320/25 1+1 RC



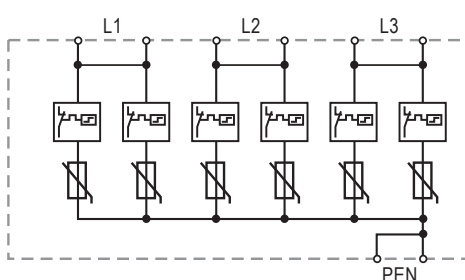
ETITEC T WENT 320/25 2+0 RC



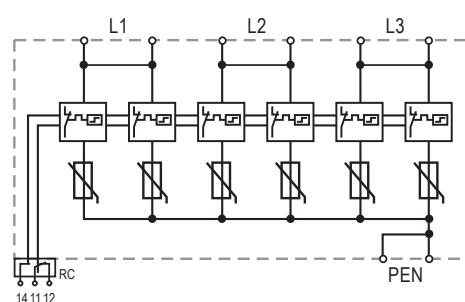
ETITEC T WENT 320/25 2+0 RC



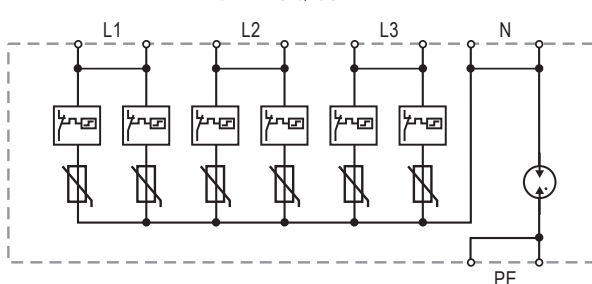
ETITEC T WENT 320/25 3+0



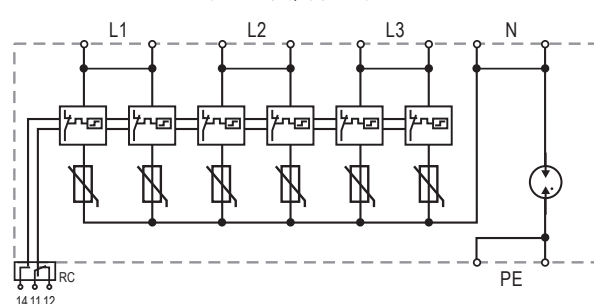
ETITEC T WENT 320/25 3+0 RC



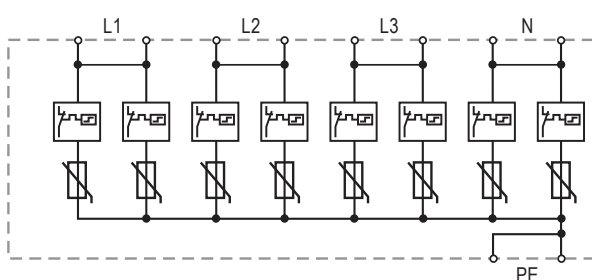
ETITEC T WENT 320/25 3+1



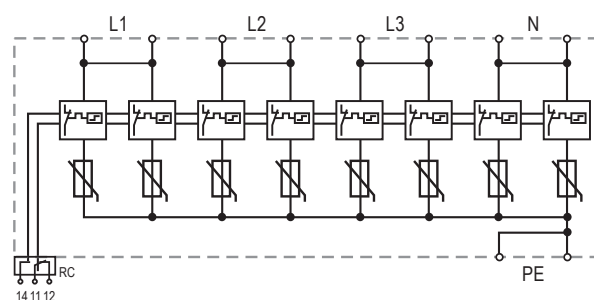
ETITEC T WENT 320/25 3+1 RC



ETITEC T WENT 320/25 4+0



ETITEC T WENT 320/25 4+0 RC



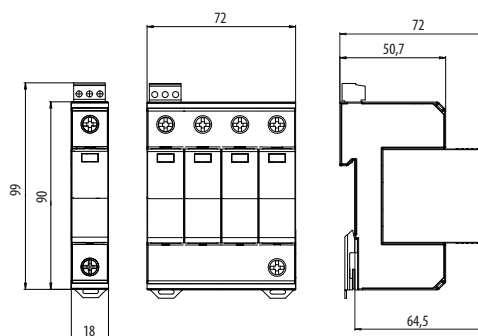
Descărcătoare la supratensiune ETITEC grupa B EN/IEC/VDE: T1,T2, T3 /I,II, III /B+C+D

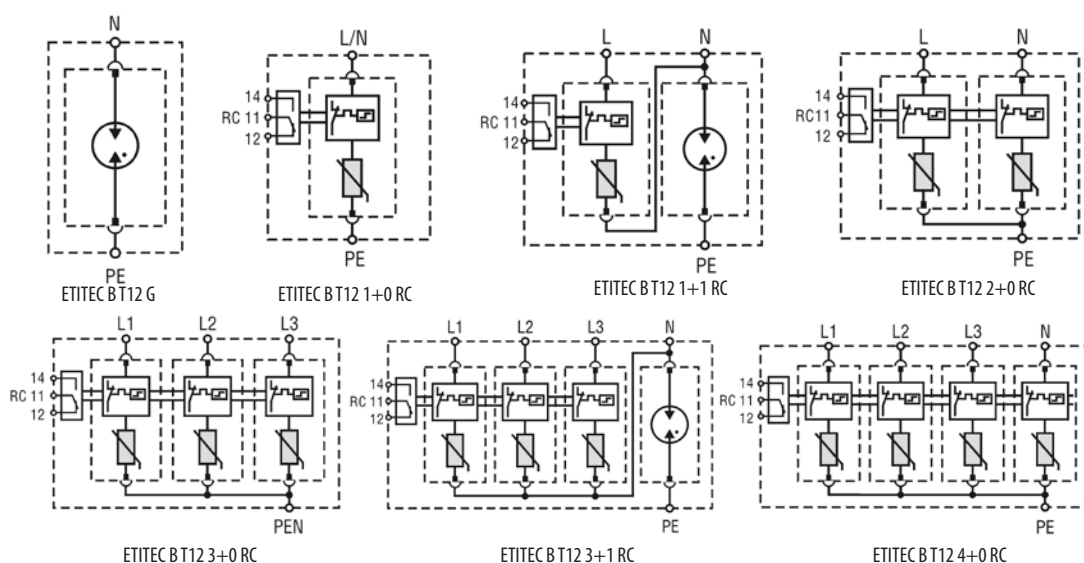
ETITEC B T12 Iimp=12,5kA			
Type	150/12,5	275/12,5	440/12,5
În conformitate cu	IEC/EN 61643-11		
Categoria IEC/EN/VDE	I, II, III / T1, T2, T3 / B, C, D		
Tensiunea maximă continuă (AC) Uc	150 V	275 V	440 V
Curentul de descărcare (8/20) In	25 kA		
Curentul maxim de descărcare (8/20) Imax	60 kA		
Curent de impuls (10/350) Iimp	12,5 kA		
Tensiunea nominală AC Uo	230V 50-60 Hz		
Imunitate TOV Ur (AC)	334 V/5s withstand		
	438 V/120 min safe disconnection		
Armare			
Nivelul de protecție Up - at In (8/20)	<1,0 kV	<1,4 kV	<2,0 kV
Curent de întoarcere In	x		
Timpul de răspuns ta	< 25 ns		
Curent rezidual Ipe at Uref	< 0,3 mA		
Decuplare termică	✓		
Cuplu	3,0 Nm		
Fuzibile de rezervă (> 160A)	160 A gG		
Curentul de scurtcircuit ISCCR	25 kA / 50 Hz		
Aria temperaturilor	- 40°C ...+70°C		
Secțiunea conductorilor	min. 4mm², max. single strand 35mm², strat dublu 25mm²		
Montaj	în interior pe șină 35 mm (EN 60715)		
Gradul de protecție	IP 20		
Material carcasă	termoplastic; grad ignifug UL 94 V-0		
Dimensiuni	1 TE ... 4 TE		
Indicator defect	indicator roșu		
Umiditatea permisă	5% - 95%		
Date adiționale pentru ETITEC B-RC			
Semnalizare la distanță (RC)	✓		
Compatibilitate de comutare (RC)	AC: 250V/0.5A; 125V/3A		
Secțiunea conductorilor (RC)	max. 1.5 mm²		
Cuplu (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 U_n=230V, recommended Uc value of SPD is 275V. At IT system, recommended Uc value (varistor) is 440V.





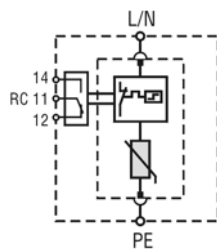
Descărcătoare la supratensiune ETITEC grupa B T12 EN/IEC/VDE: T1,T2 /I,II/B,C

ETITEC B T12	
Type	275/7
În conformitate cu	IEC/EN 61643-11
Categoria IEC/EN/VDE	I, II / T1,T2 / B,C
Tensiunea maximă continuă (AC) U_c	275
Tensiunea nominală AC U_o	230V 50-60 Hz
Imunitate TOV U_r (AC)	335 V/5s withstand 440 V/120 min safe disconnection
Curent de impuls (10/350) I_{imp}	7 kA
Curentul de descărcare (8/20) I_n	25 kA
Curentul maxim de descărcare (8/20) I_{max}	50 kA
Armare	
Nivelul de protecție U_p - at I_n (8/20)	< 1,5 kV
Curent de întoarcere I_{in}	x
Timpul de răspuns t_a	< 25 ns
Curent rezidual I_{pe} at U_{ref}	< 0,2 mA
Decuplare termică	✓
Cuplu	3,0 Nm
Fuzibile de rezervă (> 125A)	125 A gG
Curentul de scurtcircuit I_{scCR}	25 kA / 50 Hz
Aria temperaturilor	- 40°C ... +70°C
Secțiunea conductorilor	min. 6mm ² , max. single strand 35mm ² , strat dublu 25mm ²
Montaj	în interior pe șină 35 mm (EN 60715)
Gradul de protecție	IP 20
Material carcasă	termoplastic; grad ignifug UL 94 V-0
Dimensiuni	1 TE ... 4 TE
Indicator defect	indicator roșu
Umiditatea permisă	5% - 95%
Date adiționale pentru ETITEC B-RC	
Semnalizare la distanță (RC)	✓
Compatibilitate de comutare (RC)	AC: 250V/0.5A; 125V/3A
Secțiunea conductorilor (RC)	max. 1.5 mm ²
Cuplu (RC)	0,25 Nm

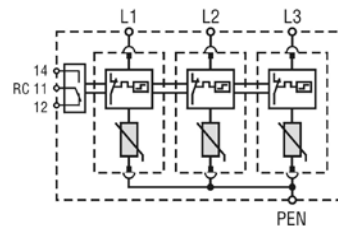
Type of network and nr. of SPD poles

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

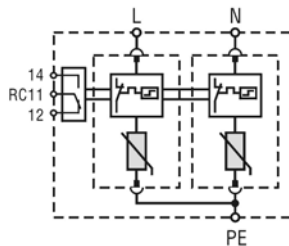
TNC, TNS, TT rendszerekben $U_n=230V$ feszültségen, ajánlott U_c (varisztor) érték 275V.
At IT system, recommended U_c value (varistor) is 440V.



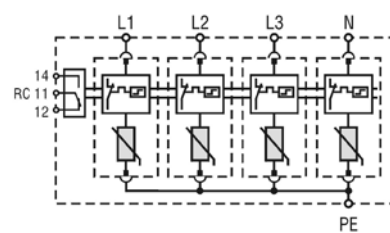
ETITEC B T12 275/7 1+0 RC



ETITEC B T12 275/7 3+0 RC

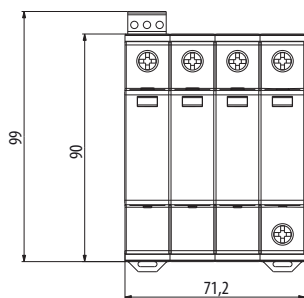


ETITEC B T12 275/7 2+0 RC

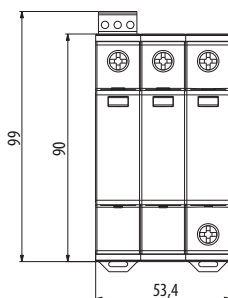


ETITEC B T12 275/7 4+0 RC

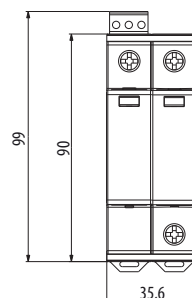
ETITEC B T12 275/7 4+0 RC



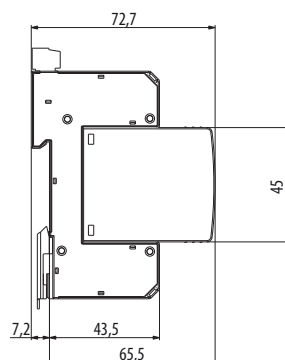
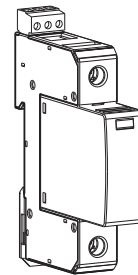
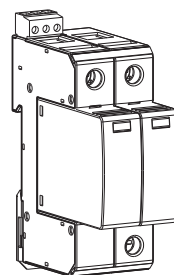
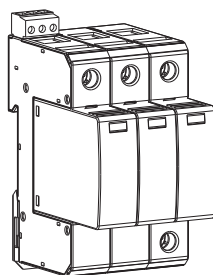
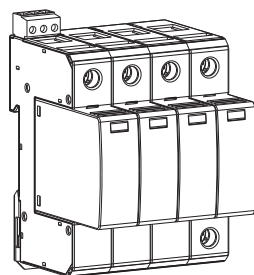
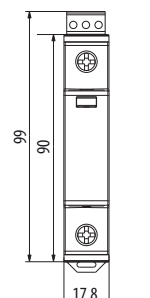
ETITEC B T12 275/7 3+0 RC



ETITEC B T12 275/7 2+0 RC



ETITEC B T12 275/7 1+0 RC



Descărcătoare la supratensiune ETITEC grupa C T2

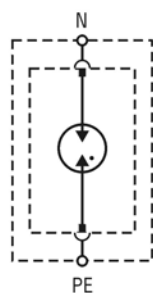
EN/IEC/VDE: T2/II/C

ETITEC C T2			
Type	275/20	440/20	255/20 G
În conformitate cu	IEC/EN 61643-11		
Categoria IEC/EN/VDE	II/T2/C		
Tensiunea maximă continuă (AC) U _c	275	440	255
Tensiunea nominală AC U _o	230 V 50-60 Hz		
Imunitate TOV U _T (AC)	335 V/5s withstand	335 V/5s withstand	1200 V
	440 V/120 min safe disconnection	440 V/120 min withstand	-
Curentul de descărcare (8/20) I _n	20 kA		
Curentul maxim de descărcare (8/20) I _{max}	40 kA		
Armare			
Nivelul de protecție U _p - at I _n (8/20)	<1,5 kV	<2,0 kV	<1,5 kV
Curent de întoarcere I _i	x		>100 A
Timpul de răspuns t _A	< 25 ns		< 100 ns
Curent rezidual I _{pe} at U _{ref}	< 0,2 mA		-
Decuplare termică	✓		-
Cuplu	3,0 Nm		
Fuzibile de rezervă (> 125A)	125 A gG		-
Curentul de scurtcircuit I _{scCR}	25 kA / 50 Hz		-
Aria temperaturilor	- 40°C ...+70°C		
Secțiunea conductorilor	min. 6mm ² , max. single strand 35mm ² , strat dublu 25mm ²		
Montaj	în interior pe șină 35 mm (EN 60715)		
Gradul de protecție	IP 20		
Material carcasă	termoplastic; grad ignifug UL 94 V-0		
Dimensiuni	1 TE ... 4 TE		
Indicator defect	indicator roșu		
Umiditatea permisă	5% - 95%		
Date adiționale pentru ETITEC C-RC			
Semnalizare la distanță (RC)	✓		-
Compatibilitate de comutare (RC)	AC: 250V/0.5A; 125V/3A		-
Secțiunea conductorilor (RC)	max. 1.5 mm ²		-
Cuplu (RC)	0,25 Nm		-

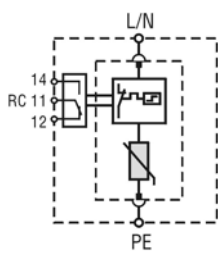
Type of network and nr. of SPD poles

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

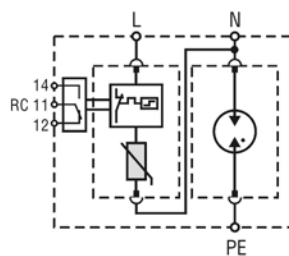
TNC, TNS, TT rendszerekben $U_n=230V$ feszültségen, ajánlott U_c (varisztor) érték 275V.
 At IT system, recommended U_c value (varistor) is 440V.



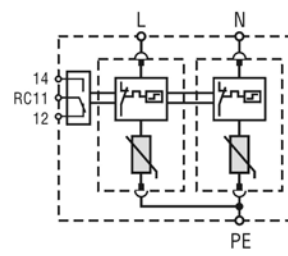
ETITEC CT2 G



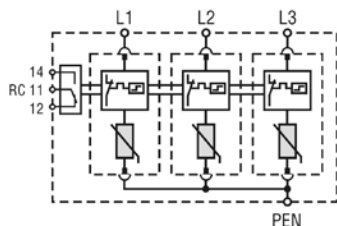
ETITEC CT2 1+0 RC



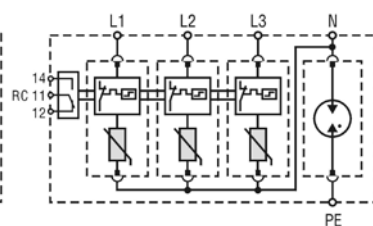
ETITEC CT2 1+1 RC



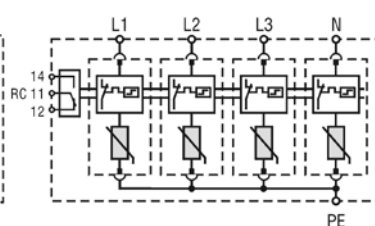
ETITEC CT2 2+0 RC



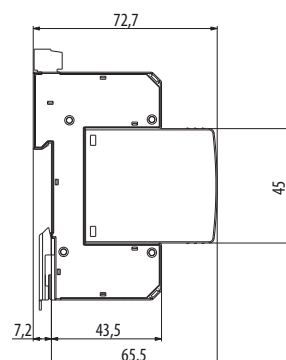
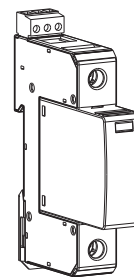
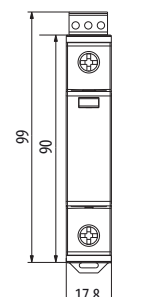
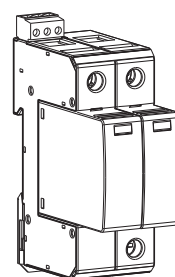
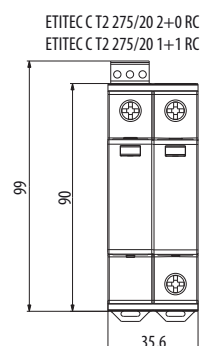
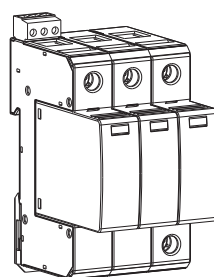
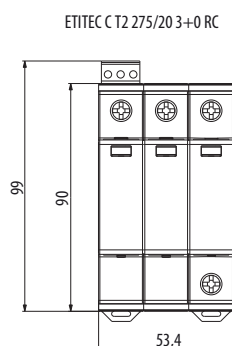
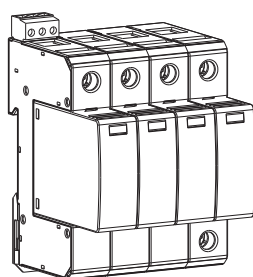
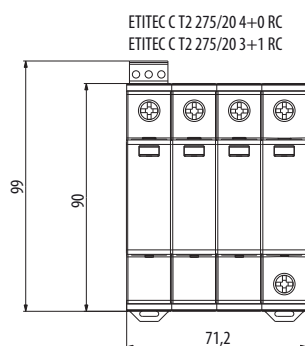
ETITEC CT2 3+0 RC



ETITEC CT2 3+1 RC



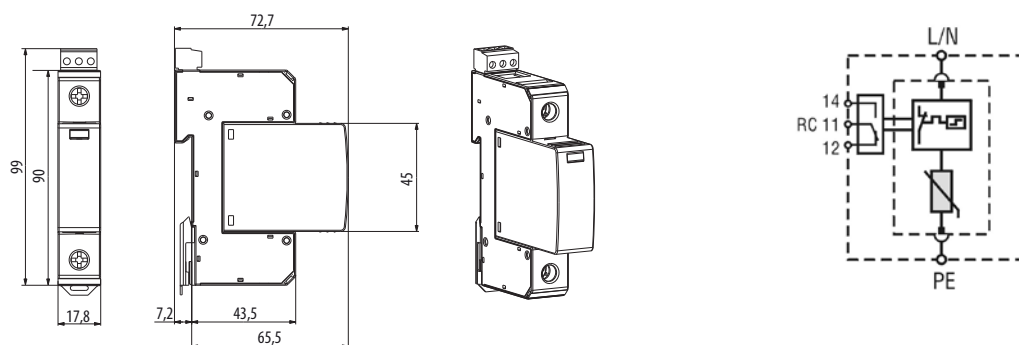
ETITEC CT2 4+0 RC



Descărcătoare la supratensiune ETITEC grupa D T3 EN/IEC/VDE: T3/III/D

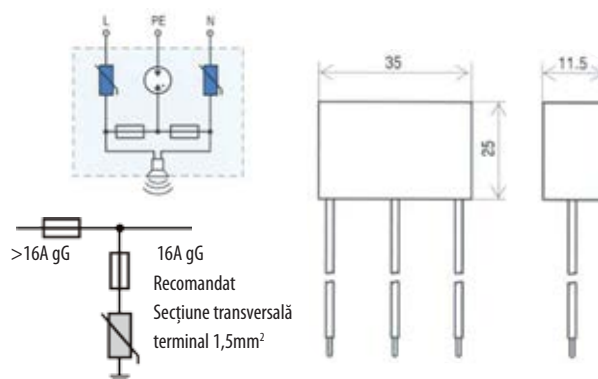
ETITEC D T3		
Type	275/3	440/3
În conformitate cu	IEC/EN 61643-11	
Categoria IEC/EN/VDE	III/T3/D	
Tensiunea maximă continuă (AC) U _c	275	440
Tensiunea nominală AC U _o	230 V 50-60 Hz	
Imunitate TOV U _T (AC)	335 V/5s withstand	335 V/5s withstand
	440 V/120 min safe disconnection	440 V/120 min withstand
U _{oc}	10 kV	
Curentul maxim de descărcare (8/20) I _{max}	10 kA	
Armare		
Nivelul de protecție Up - at In (8/20)	<1,4 kV	<1,6 kV
Curent de întoarcere I _n	x	
Timpul de răspuns t _A	< 25 ns	
Curent rezidual I _{pe} at U _{ref}	< 0,3 mA	
Decuplare termică	✓	
Cuplu	3,0 Nm	
Fuzibile de rezervă (> 63A)	125 A gG	
Curentul de scurtcircuit I _{scCR}	25 kA / 50 Hz	
Aria temperaturilor	- 40°C ...+70°C	
Secțiunea conductorilor	min. 6mm ² , max. single strand 35mm ² , strat dublu 25mm ²	
Montaj	în interior pe șină 35 mm (EN 60715)	
Gradul de protecție	IP 20	
Material carcasă	termoplastic; grad ignifug UL 94 V-0	
Dimensiuni	1 TE	
Indicator defect	indicator roșu	
Umiditatea permisă	5% - 95%	
Date adiționale pentru ETITEC D-RC		
Semnalizare la distanță (RC)	✓	
Compatibilitate de comutare (RC)	AC: 250V/0.5A; 125V/3A	
Secțiunea conductorilor (RC)	max. 1.5 mm ²	
Cuplu (RC)	0,25 Nm	

ETITEC D T3 275/3 1+0 RC



Date tehnice ETITEC D 255/3 MINI

Tensiune maximă de funcționare continuă (AC/DC) U_c	255V AC
Tensiune nominală U_n	230V AC
Combinatie val (1.2/50-8/20) U_{oc}/I_{sc}	6kV/3kA
Timp de răspuns t_A	100 ns
Nivel de protecție U_p - la I_n	$\leq 0,8$ kV
Interval de temperatură	-20°C ... +50°C
Categoria IEC/VDE	III / D
Secțiune transversală terminal	1,5 mm ²
Siguranță fuzibilă (gG)	16A

**Date tehnice ETITEC FILT D**

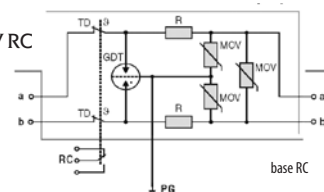
În conformitate cu	IEC-61643-1
Categoria IEC/VDE	III / D
Conexiune:	TN-S, TT
Protecție:	L/N-PE
Elemente de protecție	GDT, MOV & EMI filter
Tensiune maximă de funcționare continuă (AC/DC) U_c	275/50 Hz
Combinatie val (1.2/50-8/20) U_{oc}/I_{sc}	6kV/3kA
Curent max. încărcare I_c	8A
Nivel de protecție U_p	$\geq 800V$
Atenuare asimetrică	<70 dB at 5MHz
Secțiune transversală terminal	1,5 mm ² (blocat)
Indicator	Lumină
Carcasă	Termoplast
Dimensiuni (w*h*d)	33*90*57mm

Protecție la supratensiuni a circuitelor de SEMNAL / CONTROL tip EM-TD

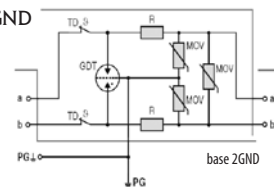
Date tehnice

Tip	ETITEC EM-TD 110V	ETITEC EM-TD 24V
Protecția construcției	două părți: inserate socluri extractabile	
Număr de perechi protejate	1 (2 conductori)	
Tensiune nominală de funcționare Un	110V DC	24V DC
Tensiune maximă de funcționare continuă	170V DC	28V DC
Supratensiune nominală la scânteie	184-264 V	30-36 V
Curent nominal de funcționare IL la 25°C	1A	145 mA
Curent nominal de descărcare In (8/20)	10kA	10 kA
Curent maxim de descărcare Imax (8/20)	20 kA	20 kA
Tensiune reziduală la 5kA (8/20)	< 450 V	< 65 V
Timp de răspuns t_A	< 25ns	< 1ns
Protecție termică	deconectare termică în liniile a și b	
Protecție la supracurent	PTC rezistor la $I > 0,3A$	
Rezistență la izolare	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Rezistență serial R	cca. 1ohm	cca. 9-11 ohm
Capacitate transversală C	90 pF	2,9 pF
Frecvență limită f_c	10 Mhz	1,4 Mhz
Secțiune transversală terminal	Multifilar 6 mm ²	
Temperatură de funcționare J	- 40°C ... +80°C	- 25°C ... +50°C
Grad de protecție	IP 20	
Material carcasă	termoplast; grad de stingereV-0	
Culoare carcasă	galbenă	
Dimensiuni DIN 43880	1 TE	
Montare	pe șină DIN 35mm	

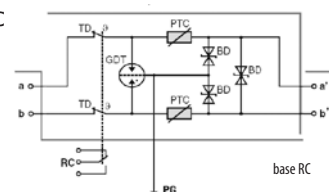
ETITEC EM-TD 110V RC



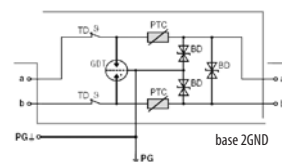
ETITEC EM-TD 110V 2 GND



ETITEC EM-TD 24V RC



ETITEC EM-TD 24V 2 GND



LEGENDĂ

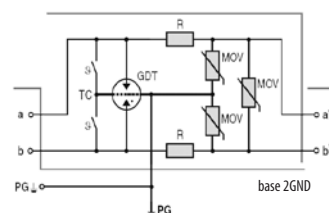
TD - decuplare termică
 GDT - tub de descărcare gaz
 MOV - varistor
 PTC - rezistor cu un coeficient de temperatură pozitiv
 R - rezistor
 BD - diodă bidirecțională
 SG - semnal împământare
 PG - protecție - împământare

Protecție la supratensiuni a circuitelor de SEMNAL / CONTROL tip EMH-TC

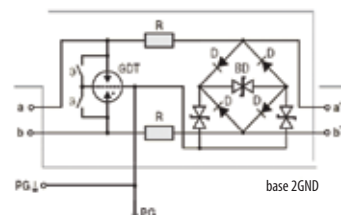
Date tehnice

Tip	ETITEC EMH-TC 110V	ETITEC EMH-TC 24V
Protecția construcției	două părți: inserate socluri extractabile	
Număr de perechi protejate	1 (2 conductori)	
Tensiune nominală de funcționare Un	110V DC	24V DC
Tensiune maximă de funcționare continuă	170V DC	28V DC
Supratensiune nominală la scânteie	184-264 V	30-36 V
Curent nominal de funcționare IL la 25°C	1A	1 A
Curent nominal de descărcare In (8/20)	10kA	10 kA
Curent maxim de descărcare Imax (8/20)	20 kA	20 kA
Tensiune reziduală la 5kA (8/20)	< 450 V	< 65 V
Timp de răspuns t_A	< 25ns	< 1ns
Protecție termică	thermo clip	
Rezistență la izolare	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Rezistență serial R	cca. 1ohm	cca. 1ohm
Capacitate transversală C	150 pF	30 pF
Frecvență limită f_c	10 Mhz	35 Mhz
Secțiune transversală terminal	Multifilar 6 mm ²	
Temperatură de funcționare J	- 40°C ... +80°C	
Grad de protecție	IP 20	
Material carcasă	termoplast; grad de stingereV-0	
Culoare carcasă	galbenă	
Dimensiuni DIN 43880	1 TE	
Montare	pe șină DIN 35mm	

ETITEC EMH-TC 110V 2 GND



ETITEC EMH-TC 24V 2 GND



LEGENDĂ

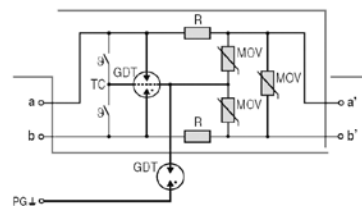
TD - decuplare termică
 GDT - tub de descărcare gaz
 MOV - varistor
 PTC - rezistor cu un coeficient de temperatură pozitiv
 R - rezistor
 BD - diodă bidirecțională
 SG - semnal împământare
 PG - protecție - împământare

Protecție la supratensiuni a circuitelor de SEMNAL / CONTROL tip EMS-TC

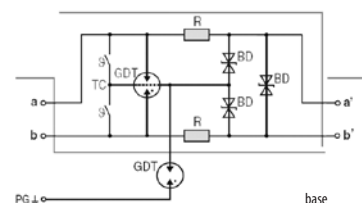
Date tehnice

Tip	ETITEC EMS-TC 110 V	ETITEC EMS-TC 24 V
Protecția construcției	două părți: inserate socluri extractabile	
Număr de perechi protejate	1 (2 conductori)	
Tensiune nominală de funcționare U_n	110V DC	24V DC
Tensiune maximă de funcționare continuă	170V DC	28V DC
Supratensiune nominală la scânteie	a/b-PG; 420-680 V a/b; 184-264 V	a/b-PG; 350-500 V a/b; 30-36 V
Curent nominal de funcționare I_L la 25°C	1 A	1 A
Curent nominal de descărcare I_n (8/20)	10kA	10 kA
Curent maxim de descărcare I_{max} (8/20)	20 kA	20 kA
Tensiune reziduală la 5kA (8/20)	< 450 V	< 65 V
Timp de răspuns t_A	a/b; < 25ns a/b-PG; 100ns	< 1ns a/b-PG; 100ns
Rezistență la izolare	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Rezistență serial R	cca. 1ohm	cca. 1ohm
Capacitate transversală C	a/b; 90 pF a/b-PG; 8pF	a/b; 1,9 pF a/b-PG; 8pF
Frecvență limită f_c	10 Mhz	1,4 Mhz
Secțiune transversală terminal	Multifilar 6 mm ²	
Temperatură de funcționare J	- 40°C ... +80°C	
Grad de protecție	IP 20	
Material carcasă	termoplast; grad de stingereV-0	
Culoare carcasă	galbenă	
Dimensiuni DIN 43880	1 TE	
Montare	pe șină DIN 35mm	

ETITEC EMS-TC 110V



ETITEC EMS-TC 24V



LEGENDĂ

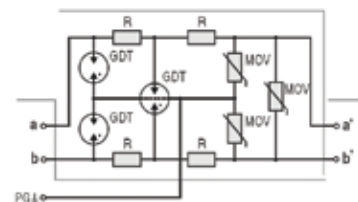
TD - decuplare termică
 GDT - tub de descărcare gaz
 MOV - varistor
 R - rezistor
 BD - diodă bidirecțională
 PG - protecție - împământare

Protecție la supratensiuni a circuitelor de SEMNAL / CONTROL tip EMO

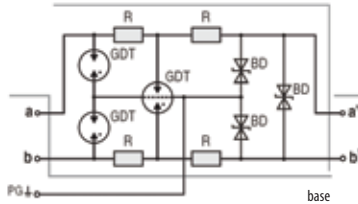
Date tehnice

Tip	ETITEC EMO 110 V	ETITEC EMO 24 V
Protecția construcției	two parts: base + extractable insert	
Număr de perechi protejate	1 (2 conductori)	
Tensiune nominală de funcționare U_n	110V DC	24V DC
Tensiune maximă de funcționare continuă	170V DC	28V DC
Supratensiune nominală la scânteie	a/b-PG; 184-264 V a/b; 184-264 V	a/b-PG; 30-36 V a/b; 30-36 V
Curent nominal de funcționare I_L la 25°C	1 A	1 A
Curent nominal de descărcare I_n (8/20)	20 kA	20 kA
Curent maxim de descărcare I_{max} (8/20)	30 kA	30 kA
Curent la impuls de trăsnet (10-350)	5 kA	5 kA
Tensiune reziduală la 5kA (8/20)	< 450 V	< 65 V
Timp de răspuns t_A	< 25ns	< 1ns
Rezistență la izolare	> 1 Gohm/100 V DC	> 24 Mohm/24 V DC
Rezistență serial R	cca. 2 ohm	cca. 2 ohm
Capacitate transversală C	150 pF	2,9 pF
Frecvență limită f_c	10 Mhz	1,8 Mhz
Secțiune transversală terminal	Multifilar 6 mm ²	
Temperatură de funcționare J	- 40°C ... +80°C	
Grad de protecție	IP 20	
Material carcasă	termoplast; grad de stingereV-0	
Culoare carcasă	galbenă	
Dimensiuni DIN 43880	1 TE	
Montare	pe șină DIN 35mm	

ETITEC EMO110V

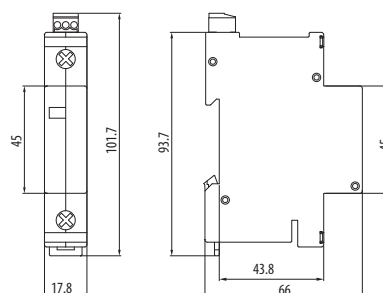


ETITEC EMO 24V

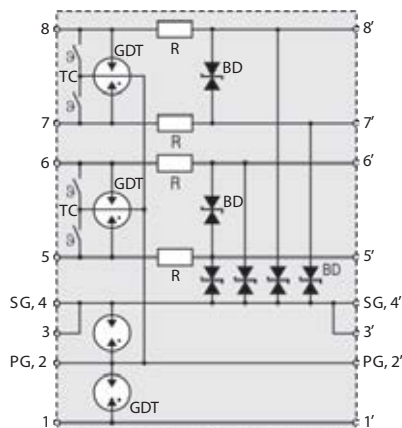
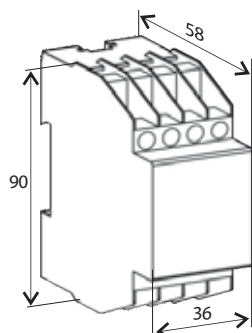


LEGENDĂ

GDT - tub de descărcare gaz
 MOV - varistor
 R - rezistor
 BD - diodă bidirecțională



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



Legendă:

TC – clip termorezistent

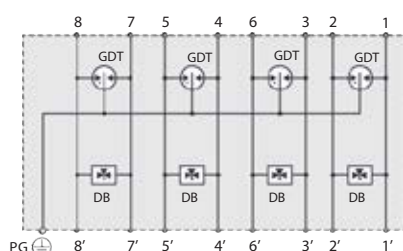
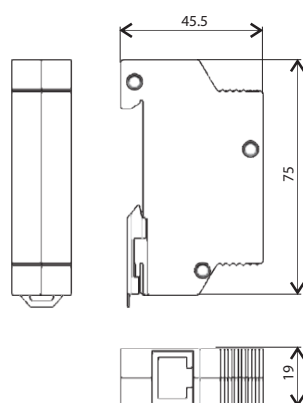
GDT – tub descărcare gaz

R – rezistor

BD – dioda TVS bi-direcțională

PG – împământare de protecție

SG – semnal împământare



Legendă

GDT – tub descărcare gaz

BD – bloc diode

PG – împământare de protecție

Date tehnice ETITEC EM-RS485

Protecția construcției	Modul de protecție
Număr de perechi protejate	2 (4 conductori)
Tensiune nominală de funcționare U_n	5VDC
Tensiune maximă de funcționare continuă U_c	6VDC
Supratensiune nominală la scânteie (5, 6, 7 & 8 - 4, SG)	6.5V - 8.5V
(5-6 & 7-8)	6.5V - 8.5V
(5, 6, 7 & 8 - 2, PG)	78V - 116V
Curent nominal de operare la 25°C I_L	500mA
Curent nominal de descărcare (8/20μs) I_n	20kA
Tensiune reziduală la 5 kA (8/20μs)	20V
Timp de răspuns la protecție supraîncărcare t_A	< 1ns (5, 6, 7, 8 - SG))
Protecție termică	Clipuri termo-rezistente în linie 5, 6, 7 & 8
Rezistență la izolare a protecției	6kΩ
Rezistență serială R	1.7 - 1.9Ω
Capacitate transversală C	< 2nF
Frecvență limită f_g	> 1MHz
Secțiune transversală terminal	Multifilar 2 x 2.5mm ²
Temperatură de funcționare	-40°C ... +80°C
Grad de protecție	IP 20
Material carcasă	Termoplast; gri, grad de stingere V-0
Dimensiuni DIN 43880	2TE
Montare EN 60715	pe șină DIN 35mm

Date tehnice ETITEC LAN

Protecția construcției	Modul de protecție
Tensiune nominală de funcționare U_n	48VDC
Tensiune maximă de funcționare continuă U_c	48VDC
curent nominal de operare I_L	1A
Curent nominal de descărcare (8/20μs) I_n	150A linie - linie
curent nominal de descărcare total (8/20μs) I_n	10kA linie - PG
nivel de protecție tensiune la U_p	150V linie - linie
	550V linie - PG
Frecvență limită f_g	< 250MHz (Class E)
Timp de răspuns la protecție supraîncărcare t_A	< 1ns
Conexiune	intrare/ieșire/prize/ toate cele 4 perechi de linii protejate
Temperatură de funcționare	-40°C ... +80°C
Grad de protecție	IP 20
Material carcasă	Metal

