

Surge arresters

ETITEC surge arresters are intended for protection of electrical installations and devices against overvoltage effects, which may occur in atmospheric discharges and switching overvoltages. The main part of surge arrester is ZnO non-linear varistor. Its main characteristic is ohmic non-linearity, which depends strongly on the applied voltage at the clamps. All arresters have modular construction, a special feature is interchanging varistor part and visual signalization for varistor thermal failure. The signalization performed with a red flag, which appears when failure occurs. The models with RC mark are equipped with auxiliary contacts for signalization.

Surge arrester ETITEC group A

ETITEC A are surge arresters for outdoor mounting. Group A overvoltage protection is in accordance with VDE class C. This protection corresponds to IEC category II. Protection is provided on power lines and is capable of discharging enormous pulse currents. In case of permanent arrester damage thermal protection will be activated. The protective component interrupts the circuit and a red plug indicates a faulty device (type A). After activation of disconnecting device earth conductor is visibly separated (type AQ).



ETITEC A

| type | code No. | weight [g] | packaging [pcs] |
|-----------------------------------|-----------|------------|-----------------|
| ETITEC A 10/275 | 002441310 | 130 | 3/60 |
| ETITEC A 15/275 | 002441330 | 130 | 3/60 |
| ETITEC A 10/440 | 002441315 | 130 | 3/60 |
| ETITEC A 10/440 Al/Fe connection* | 002441353 | 130 | 3/60 |
| ETITEC A 15/440 | 002441335 | 130 | 3/60 |
| ETITEC A 15/440 Al/Fe connection* | 002441358 | 130 | 3/60 |

* Al/Fe connection for non isolated conductors

ETITEC A

contains a decoupling device, which protects a module against short circuit condition and also signalizes a failure – a red plug springs out of the casing.

ETITEC AQ

| type | code No. | weight [g] | packaging [pcs] |
|------------------|-----------|------------|-----------------|
| ETITEC AQ 280/10 | 002442121 | 105 | 1/60 |
| ETITEC AQ 440/10 | 002442221 | 105 | 1/60 |
| ETITEC AQ 280/15 | 002442131 | 105 | 1/60 |
| ETITEC AQ 440/15 | 002442231 | 105 | 1/60 |

ETITEC AQ

contains a decoupling device, which protects a module against short circuit condition. The earth conductor is visibly separated.

Accessories

| type | code No. | weight [g] | packaging [pcs] |
|---|-----------|------------|-----------------|
| Connection clamp for non insulated conductors Al/Fe | 002441941 | 170 | 3 |
| Connection clamp for insulated conductor | 002441942 | 430 | 3 |

Connection isolated conductors (only for A type)

| type | code No. |
|--------------------------|-----------|
| Al 16 mm ² 1m | 002441394 |
| Al 25 mm ² 1m | 002441391 |
| Cu 10 mm ² 1m | 002441392 |
| Cu 6 mm ² 1m | 002441393 |

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

ETITEC B is surge arrester for indoor application. Group B overvoltage protection is in accordance with VDE class B, C. This protection corresponds to IEC category I, II. The protection is made on the main distribution box, as the first level of protection against lightning strikes, partial direct, indirect atmospheric discharges and induced surges. In case of permanent arrester damage, thermal protection is activated which signalizes faulty arrester. Consequently only the varistor overvoltage insert has to be replaced. The basic casing remains in the top hat fixing DIN rail. ETITEC B 230/100G is an overvoltage arrester for protection against partial direct and indirect atmospheric discharges. It is used as a galvanic separation between N-PE conductor in TT systems.

| ETITEC B | | | |
|------------------------------|-----------|------------|-----------------|
| type | code No. | weight [g] | packaging [pcs] |
| ETITEC B 275/25* | 002441420 | 300 | 1/6 |
| ETITEC B 275/25 RC* | 002441421 | 310 | 1/6 |
| ETITEC B 440/25* | 002441422 | 295 | 1/6 |
| ETITEC B 440/25 RC* | 002441423 | 305 | 1/6 |
| ETITEC B 275/35 (8/20) | 002441460 | 140 | 1/12 |
| ETITEC B 275/35-RC (8/20) | 002441680 | 150 | 1/12 |
| ETITEC B 440/35 (8/20) | 002441470 | 150 | 1/12 |
| ETITEC B 440/35-RC (8/20) | 002441690 | 160 | 1/12 |
| MODUL ETITEC B 275/35 (8/20) | 002441461 | 70 | 1/12 |
| MODUL ETITEC B 440/35 (8/20) | 002441471 | 80 | 1/12 |
| ETITEC B 230/100G | 002441900 | 260 | 1/6 |

* fixed, varistor's part cannot be changed
** RC → remote signalisation

Advantages:

- indication window of faulty device
- two module system (in case of a failure of one of the modules protection is still possible)
- remote signalisation
- mounting on DIN rail
- connection up to 35mm²
- high discharge currents
- high degree of protection
- varistor is the protective element



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

| ETITEC B-F | | | | | |
|----------------------------|-----------|-----------------------|--------------------------------|-----------|-----------------|
| type | code No. | U _c [V AC] | I _{imp} (10/350) [kA] | weight[g] | packaging [pcs] |
| ETITEC B 150/12,5 F 1+0 | 002440120 | 150 | 12,5 | 124 | 12 |
| ETITEC B 275/12,5 F 1+0 | 002440121 | 275 | 12,5 | 150 | |
| ETITEC B 320/12,5 F 1+0 | 002440122 | 320 | 12,5 | 150 | |
| ETITEC B 150/12,5 F 1+0 RC | 002440123 | 150 | 12,5 | 129 | |
| ETITEC B 275/12,5 F 1+0 RC | 002440124 | 275 | 12,5 | 155 | |
| ETITEC B 320/12,5 F 1+0 RC | 002440125 | 320 | 12,5 | 155 | |
| ETITEC B 150/12,5 F 2+0 | 002440130 | 150 | 12,5 | 248 | 7 |
| ETITEC B 275/12,5 F 2+0 | 002440131 | 275 | 12,5 | 300 | |
| ETITEC B 320/12,5 F 2+0 | 002440132 | 320 | 12,5 | 300 | |
| ETITEC B 150/12,5 F 2+0 RC | 002440133 | 150 | 12,5 | 258 | |
| ETITEC B 275/12,5 F 2+0 RC | 002440134 | 275 | 12,5 | 600 | |
| ETITEC B 320/12,5 F 2+0 RC | 002440135 | 320 | 12,5 | 600 | |
| ETITEC B 150/12,5 F 3+0 | 002440140 | 150 | 12,5 | 372 | 5 |
| ETITEC B 275/12,5 F 3+0 | 002440141 | 275 | 12,5 | 450 | |
| ETITEC B 320/12,5 F 3+0 | 002440142 | 320 | 12,5 | 450 | |
| ETITEC B 150/12,5 F 3+0 RC | 002440143 | 150 | 12,5 | 387 | |
| ETITEC B 275/12,5 F 3+0 RC | 002440144 | 275 | 12,5 | 465 | |
| ETITEC B 320/12,5 F 3+0 RC | 002440145 | 320 | 12,5 | 465 | |
| ETITEC B 150/12,5 F 4+0 | 002440150 | 150 | 12,5 | 496 | 3 |
| ETITEC B 275/12,5 F 4+0 | 002440151 | 275 | 12,5 | 600 | |
| ETITEC B 320/12,5 F 4+0 | 002440152 | 320 | 12,5 | 600 | |
| ETITEC B 150/12,5 F 4+0 RC | 002440153 | 150 | 12,5 | 516 | |
| ETITEC B 275/12,5 F 4+0 RC | 002440154 | 275 | 12,5 | 620 | |
| ETITEC B 320/12,5 F 4+0 RC | 002440155 | 320 | 12,5 | 620 | |
| MODUL ETITEC B 150/12,5 F | 002440160 | 150 | 12,5 | 70 | 1/12 |
| MODUL ETITEC B 275/12,5 F | 002440161 | 275 | 12,5 | 70 | |
| MODUL ETITEC B 320/12,5 F | 002440162 | 320 | 12,5 | 70 | |

* RC → remote signalisation

Note: I_{imp} - defined for a single 1-pole varistor (MOV)

Advantages:

- indication window of faulty device
- remote signalisation
- mounting on DIN rail
- connection up to 35mm²
- high discharge currents
- high degree of protection
- varistor is the protective element



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

ETITEC Went is surge arrester for indoor application. Group WENT surge protection is in accordance with VDE class B, C. This protection corresponds to IEC category I, II. The protection is made on the main distribution box, as the first level of protection against lightning strikes and partial direct. It's distinguished by its small requirement for space, since for a complete 3-phase systems protection; it only requires a width of 4 modules. It represents a solution for systems and overvoltage protection for all 4 known network systems (TT, TNC, TNC-S and IT) can easily be built in.

Advantages:

- indication window of faulty device
- two module system (in case of failure of one of the modules protection is still possible)
- remote signalisation
- mounting on DIN rail
- connection up to 35mm²
- high discharge currents
- high degree of protection
- varistor is the protective element

ETITEC WENT

| type | code No. | weight [g] | packaging [pcs] |
|---------------------------------|-----------|------------|-----------------|
| ETITEC WENT TNC-S 25/50 2+0 | 002444001 | 374 | 1/7 |
| ETITEC WENT IT 25/50 2+0 | 002444021 | 458 | 1/3 |
| ETITEC WENT TT 25/50 1+1 | 002444002 | 364 | 1/3 |
| ETITEC WENT TNC 25/75 3+0 | 002444003 | 570 | 1/5 |
| ETITEC WENT TT 25/100 3+1 | 002444004 | 768 | 1/2 |
| ETITEC WENT TNC-S 25/100 4+0 | 002444005 | 756 | 1/3 |
| ETITEC WENT IT 25/100 4+0 | 002444025 | 1000 | 1/2 |
| ETITEC WENT TNC-S 25/50 RC 2+0 | 002444011 | 379 | 1/7 |
| ETITEC WENT IT 25/50 RC 2+0 | 002444031 | 463 | 1/3 |
| ETITEC WENT TT 25/50 RC 1+1 | 002444012 | 369 | 1/3 |
| ETITEC WENT TNC 25/75 RC 3+0 | 002444013 | 570 | 1/5 |
| ETITEC WENT TT 25/100 RC 3+1 | 002444014 | 772 | 1/2 |
| ETITEC WENT TNC-S 25/100 RC 4+0 | 002444015 | 760 | 1/3 |
| ETITEC WENT IT 25/100 RC 4+0 | 002444035 | 1004 | 1/2 |

RC → remote signalisation

Note: I_{imp} - defined for a single 1-pole varistor (MOV)

ETITEC WENT 25/_

I_{imp} = 25 kA/pole
 I_n = 25 kA/pole
 I_{max} = 100 kA/pole
 U_p at I_{imp} = 1,3 kV (TNC)

ETITEC WENT

| type | code No. | weight [g] | packaging [pcs] |
|----------------------------------|-----------|------------|-----------------|
| ETITEC WENT TNC-S 12,5/25 2+0 | 002444042 | 251 | 1/7 |
| ETITEC WENT IT 12,5/25 2+0 | 002444062 | 283 | 1/7 |
| ETITEC WENT TT 12,5/25 1+1 | 002444043 | 245 | 1/7 |
| ETITEC WENT TNC 12,5/37,5 3+0 | 002444044 | 382 | 1/5 |
| ETITEC WENT TT 12,5/50 3+1 | 002444046 | 538 | 1/3 |
| ETITEC WENT TNC-S 12,5/50 4+0 | 002444045 | 462 | 1/3 |
| ETITEC WENT IT 12,5/50 RC 4+0 | 002444065 | 526 | 1/3 |
| ETITEC WENT TNC-S 12,5/25 RC 2+0 | 002444052 | 256 | 1/7 |
| ETITEC WENT IT 12,5/25 RC 2+0 | 002444072 | 288 | 1/7 |
| ETITEC WENT TT 12,5/25 RC 1+1 | 002444053 | 245 | 1/7 |
| ETITEC WENT TNC 12,5/37,5 RC 3+0 | 002444054 | 384 | 1/5 |
| ETITEC WENT TT 12,5/50 RC 3+1 | 002444056 | 542 | 1/3 |
| ETITEC WENT TNC-S 12,5/50 RC 4+0 | 002444055 | 464 | 1/3 |
| ETITEC WENT IT 12,5/50 RC 4+0 | 002444075 | 528 | 1/3 |

RC → remote signalisation

Note: I_{imp} - defined for a single 1-pole varistor (MOV)

ETITEC WENT 12,5/_

I_{imp} = 12,5 kA/pole
 I_n = 20 kA/pole
 I_{max} = 50 kA/pole
 U_p at I_{imp} = 1,2 kV (TNC)



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

ETITEC C is surge arrester for indoor application. Group C surge protection is in accordance with VDE class C. This protection corresponds to IEC category II. The protection is made on the subdistribution box, as the second level of protection against overvoltage indirect lightning strikes. In case of permanent arrester damage, thermal protection is activated which signalize faulty arrester. ETITEC C 255/20 G is an overvoltage arrester with gas discharge tube for protection against indirect lightning strikes. It is used as a galvanic separation between N-PE conductor in TT network systems.

*Note: First number of designation 1+0, 2+0, 3+1 etc. indicates the number of varistors. Second one means the following: number 0 indicates there is no gas discharge tube, number 1 indicates there is.

| ETITEC C | | | |
|------------------------|-----------|------------|-----------------|
| type | code No. | weight [g] | packaging [pcs] |
| ETITEC C 275/20 1+0 | 002441510 | 125 | 1/12 |
| ETITEC C 275/20 1+0 RC | 002441710 | 135 | 1/12 |
| ETITEC C 275/20 4+0 | 002441512 | 465 | 1/3 |
| ETITEC C 275/20 4+0 RC | 002441513 | 475 | 1/3 |
| ETITEC C 275/20 2+0 | 002441520 | 240 | 1/6 |
| ETITEC C 275/20 2+0 RC | 002441521 | 250 | 1/6 |
| ETITEC C 275/20 3+0 | 002441522 | 350 | 1/3 |
| ETITEC C 275/20 3+0 RC | 002441523 | 360 | 1/3 |
| ETITEC C 275/20 1+1 | 002441524 | 230 | 1/6 |
| ETITEC C 275/20 1+1 RC | 002441525 | 240 | 1/6 |
| ETITEC C 275/20 3+1 | 002441526 | 440 | 1/3 |
| ETITEC C 275/20 3+1 RC | 002441527 | 450 | 1/3 |
| ETITEC C 440/20 1+0 | 002441515 | 135 | 1/12 |
| ETITEC C 440/20 1+0 RC | 002441720 | 145 | 1/12 |
| ETITEC C 440/20 4+0 | 002441530 | 480 | 1/3 |
| ETITEC C 440/20 4+0 RC | 002441531 | 490 | 1/3 |
| ETITEC C 440/20 2+0 | 002441532 | 250 | 1/6 |
| ETITEC C 440/20 2+0 RC | 002441533 | 260 | 1/6 |
| ETITEC C 440/20 3+0 | 002441534 | 365 | 1/3 |
| ETITEC C 440/20 3+0 RC | 002441535 | 375 | 1/3 |
| ETITEC C 440/20 U | 002441528 | 130 | 1/12 |
| ETITEC C 440/20 U RC | 002441529 | 140 | 1/12 |
| ETITEC C 275/20 U | 002441536 | 120 | 1/12 |
| ETITEC C 275/20 U RC | 002441537 | 130 | 1/12 |
| ETITEC C 255/20 G | 002441910 | 105 | 1/12 |
| MODUL ETITEC C 275/20 | 002441511 | 55 | 1/12 |
| MODUL ETITEC C 440/20 | 002441516 | 65 | 1/12 |
| MODUL ETITEC C 255/20G | 002441517 | 35 | 1/12 |

*U → fixed, varistor's part cannot be changed

**RC → remote signalisation

Note: I_{imp} - defined for a single 1-pole varistor (MOV)

Advantages:

- indication window of faulty device
- remote signalisation
- mounting on top hat fixing DIN rail
- connection up to 35mm²
- high discharge currents
- high degree of protection
- varistor is the protective element
- metal snapper, new way of mounting on DIN rail (easier, quicker)
- new round-off shape



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

ETITEC D is a surge arrester for indoor application. Group D surge protection is in accordance with VDE class D. This protection corresponds to IEC category III. The protection should be installed immediately before the protected load. This is protection against indirect lightning strikes. In case of permanent arrester damage, thermal protection is activated, which signalizes faulty arrester. Consequentially only the varistor overvoltage insert has to be replaced. The basic casing remains on the top hat fixing DIN rail.

| ETITEC D | | | |
|----------------------|-----------|------------|-----------------|
| type | code No. | weight [g] | packaging [pcs] |
| ETITEC D 275/3 | 002441610 | 125 | 1/12 |
| ETITEC D 275/3 RC | 002441740 | 135 | 1/12 |
| ETITEC D 440/3 | 002441620 | 135 | 1/12 |
| ETITEC D 440/3 RC | 002441750 | 145 | 1/12 |
| MODUL ETITEC D 275/3 | 002441611 | 55 | 1/12 |
| MODUL ETITEC D 440/3 | 002441621 | 65 | 1/12 |

*RC → remote signalisation



Surge protection of SIGNAL/CONTROL lines

ETITEC SIGNAL/CONTROL low voltage protective devices have been developed to protect against the effects of induced voltages onto data, signal and communication circuits. Coarse protection is provided by a three terminal gas discharge tube while fine protection is provided using a high speed silicon or metal oxide varistor stage. Care is taken to ensure coordination between these two stages without voltages or surge current blind spots occurring. The circuit topology consists of a multi-stage protector providing both common (longitudinal) mode and differential (transverse) mode protection.

ETITEC SIG EM-TD series provides overcurrent protection by PTC element, which provides a level of protection against short circuit or mains incursion. Internal thermal disconnectors are also employed to reduce the hazards of thermal runaway during fault conditions.

ETITEC SIG EMH-TC series is designed to minimize intercapacitance and shunt capacitance, thereby maximizing the operating frequency to 35MHz in most cases. Thermal protection is provided to reduce the hazards of thermal runaway should there be an inadvertent mains incursion fault.

ETITEC SIG EMS-TC series is intended for those applications where high ground potential rises may frequently occur, such as in locations close to electric railways. Thermal protection is provided to reduce the hazards of thermal runaway should there be an inadvertent mains incursion fault.

ETITEC SIG EMO series is intended for those application where higher than normal surge discharge levels may be experienced.

Advantages:

- indication window of faulty device
- remote signalisation (option)
- mounting on top hat fixing DIN rail
- high degree of protection
- PTC is the protective element
- metal snapper, new way of mounting on DIN rail (easier, quicker)

ETITEC SIGNAL/CONTROL lines

| type | code No. | dodatne funkcije | weight [g] | packaging [pcs] |
|-----------------------------|-----------|------------------|------------|-----------------|
| ETITEC SIG EM-TD 24V RC | 002441701 | 1, 2, 3, 4 | 110 | 1/12 |
| ETITEC SIG EM-TD 24V 2 GND | 002441702 | 1, 3, 4 | 110 | 1/12 |
| ETITEC SIG EM-TD 110V RC | 002441703 | 1, 2, 4 | 110 | 1/12 |
| ETITEC SIG EM-TD 110V 2 GND | 002441704 | 1, 4 | 110 | 1/12 |
| ETITEC SIG EMH-TC 24V 2GND | 002441705 | 4 | 110 | 1/12 |
| ETITEC SIG EMH-TC 110V 2GND | 002441706 | 4 | 110 | 1/12 |
| ETITEC SIG EMS-TC 24V | 002441707 | 4 | 110 | 1/12 |
| ETITEC SIG EMS-TC 110V | 002441708 | 4 | 110 | 1/12 |
| ETITEC SIG EMO 24V | 002441709 | | 110 | 1/12 |
| ETITEC SIG EMO 110V | 002441711 | | 110 | 1/12 |

