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Surge protectors SURGYS® E10

Function

The Socomec's surge protectors SURGYS® E10 are conceived to assure the protection of circuits in LV distribution and materials against the transient overvoltages. They act against overvoltages due to industrial switching and those due to the lightning. These surge protectors are set after a primary surge protector and do the protection in common mode (type E10 MC) or both common and differential mode (type E10 MC/MD).

Choice of surge protection and coordination

Insure consistently - before all implantation - that the choice of this surge protector is adapted to the following requirements :

- to actual regulations and standards.
- to the Socomec recommendations (see our catalogue about surge protector).
- to the table of co-ordination between Socomec surge protector and the definition of the minimal distances between surge protectors (see also our pages of the catalogue on surge protectors).

Connection to the network

This surge protector permits to protect a single phase AC network (E10 2P) or 3-phase AC network (E10 3P or 4P). It is set within the main distribution panel. It is compatible with all types of link diagrams to the earth or systems : TT, TN, IT (MC) and TNS, TT (MC/MD).

Setting the surge protector

The installation of surge protectors shall only be done by qualified and respectful people to the Socomec recommendations and in particular of the present document.

For certain insulation measurements or dielectric tests, the disconnection of surge protectors can be necessary in order to avoid to influence measures or to accelerate the ageing of surge protectors.

- Surge protectors must be connected between the active conductors (L1, L2, L3, N) and the PE.
- A device of protection conductor against short circuit must imperatively be associated to the surge protector (see table of characteristics).
- The wiring between phases (or the neutral conductor) and equipotential crossbar must be as shortest as possible (max. 0,5m - please report to the technical pages of our catalogue).
- The section of the cable connected to the PE must be minimum 4 mm².
- The no-protected cables must not be install in parallel with the protected cables in order to avoid couplings.

Liability

The surge protector SURGYS® don't require a particular maintenance, nevertheless the periodic verification of their state is recommended.

In case of exceptional life end of the surge protector, the disconnection of the surge protector of the network is signalled by a mechanical indicator. As soon as the mechanical indicator turns to red, the surge protector cartridge must be replaced (m-E10).

Conformity to standards

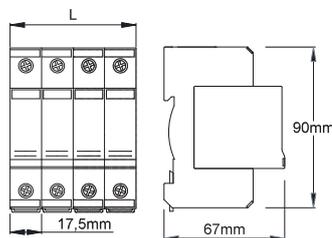
- IEC 61643-1 - Test class II
- NF EN 61643-11 - Test class II
- VDE 0675-6

Ordering details

Type	Number of poles	Reference
E10 MC 2P	2	49830120
E10 MC 3P	3	49830130
E10 MC 4P	4	49830140
E10 MC/MD 2P	2	49830122
E10 MC/MD 4P	4	49830142
m-E10 MC	1	49830199
m-E10 MC/MD	1	49830198

MC : common protection mode
MC/MD : common + differential protection mode

Dimensions (mm)

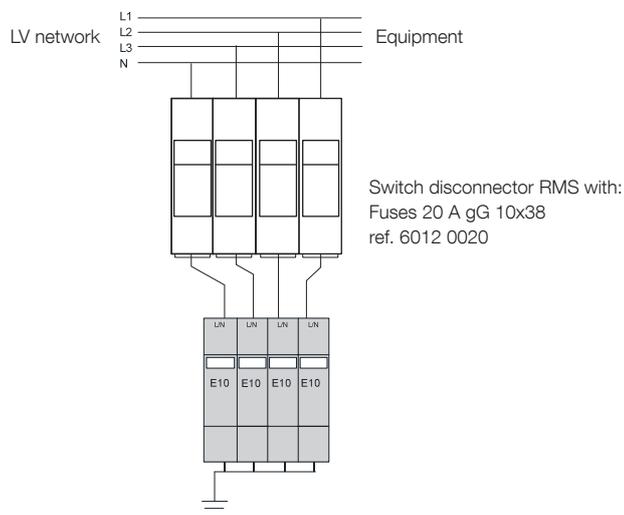


E10 4P : L = 71,2

E10 3P : L = 53,4

E10 2P : L = 35,6

Electrical diagram



Characteristics E10

Type		3
Type of network		230 / 400 V
Neutral systems		TT-TN-IT (MC) TT-TNS (MC/MD)
Nominal voltage	Un	400 V rms
Max. operating voltage	Uc	440 V rms
Temporary overvoltage	Ut	440 V rms
Protection level	Up	1,5 kV (MC) 1 kV (MC/MD)
Open circuit voltage (Class III test)	Uoc	10 kV
Maximal discharge current (1 impulse 8/20 µs)	/max	10 kA
Nominal discharge current (20 impulses 8/20 µs)	/n	5 kA
Admissible short-circuit current	/cc	25 kA
Operating current (leakage current at Uc)	/c	< 1 mA
Follow current quench capacity	/f	None
Associated protection devices	Fuses type gG 20 A* or equivalent circuit breaker	
Power connection	4 to 25 mm ² or connexion bus	
Disconnection indicator	mechanical indicator	
Mounting	Symmetrical rail 35mm	
Housing material	Polycarbonate UL94-VA	
Operating temperature	-40/+85°C	
Storage temperature	-40/+85°C	
Protection class	IP20	

(*) Calibre conforms to NF C 15100 Art.534.1.5.3. In order to increase protection continuity, higher calibres might be used (40 A max).

