

LIGHTNING CURRENT ARRESTERS SJB

T1

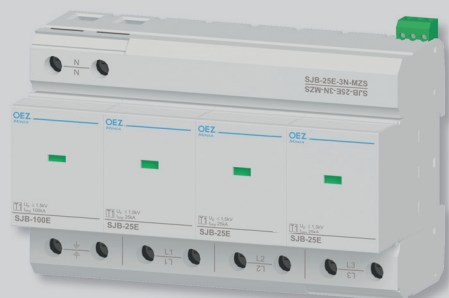
- For protection of electric networks and equipment against overvoltage from direct or indirect lightning strokes in the arresting equipment of buildings, LV lines etc.
- For protection of electric networks and equipment in residential, commercial and industrial buildings etc.
- It reduces voltage and „cut up“ the overvoltage wave power caused by direct or indirect lightning stroke.
- Use: as the first stage (coarse protection) in three degree scale of protection against overvoltage – type 1 according to EN 61643-11.
- For detailed information on OEZ overvoltage protection see the dokument „Overvoltage protection – Application manual“.

Lightning current arresters SJB-25E-...

- Lightning current arresters designed for building, residential, commercial and other similar installations classed in group „big installation threat“.
- For four-wire TN-C network use SJB-25E-3-MZS.
- For five-wire TN-S, TT network use SJB-25E-3N-MZS.
- Main component is a powerful arrester gap with electronic ignition release able to arrest lightning current up to 25 kA (10/350µs).
- Ability of quenching of follow current up to 50 kA.
- Possibility of mounting in casual empty enclosures and switchboard cabinets Distri.
- Design: multipart, consisting of a base and replaceable modules. The modules can be removed in case of measurement or failure without necessity of device disconnection.
- Remote and visual signalling of the shut-down device state (after disconnection the lightning current arrester is non-functional and the replaceable module must be replaced).
- The modules can be turned in their base by 180°, so that it is also possible to turn the whole device while keeping legibility of description (e.g. at connection from the top).



SJB-25E-3-MZS



SJB-25E-3N-MZS



SJB-50E-1-MZS

SJB-50E-1N-MZS



SJB-25E-1-M

SJB-100E-N-M

SJB-50E-1-M

| Network | Type | Order code | Number of modules | Weight [kg] | Package [pcs] |
|--------------------|-----------------------|------------|-------------------|-------------|---------------|
| TN-C (3L + PEN) | SJB-25E-3-MZS | OEZ:38357 | 6 | 0.910 | 1 |
| TN-S (3L + N + PE) | SJB-25E-3N-MZS | OEZ:38358 | 8 | 1.310 | 1 |

Lightning current arresters SJB-50E-...

- Lightning current arrester intended for demanding applications (where SJB-25E-... is not enough), classed in group „Industrial and special applications“.
- For four-wire TN-C network use 3 pcs SJB-50E-1-MZS.
- For five-wire TN-S, TT network use the combination 2 pcs SJB-50E-1-MZS + 1ks SJB-50E-1N-MZS.
- Main component is a powerful arrester gap with electronic ignition release able to arrest lightning current up to 50 kA (10/350 µs) / pole.
- Ability of quenching of follow current up to 50 kA.
- Possibility of mounting in casual empty enclosures and switchboard cabinets Distri.
- Design: multipart, consisting of a base and replaceable modules. The modules can be removed in case of measurement or failure without necessity of device disconnection.
- Remote and visual signalling of the shut-down device state (after disconnection the lightning current arrester is non-functional and the replaceable module must be replaced).
- The modules can be turned in their base by 180°, so that it is also possible to turn the whole device while keeping legibility of description (e.g. at connection from the top).

| Network | Type | Order code | Number of modules | Weight [kg] | Package [pcs] |
|--------------------|-----------------------|------------|-------------------|-------------|---------------|
| TN-C (1L + PEN) | SJB-50E-1-MZS | OEZ:45559 | 2 | 0.410 | 1 |
| TN-S (1L + N + PE) | SJB-50E-1N-MZS | OEZ:45560 | 4 | 0.770 | 1 |








Replaceable modules

| For device | Spare module | Order code | Number of modules in the device | Weight [kg] | Package [pcs] |
|----------------|---------------------|------------|---------------------------------|-------------|---------------|
| SJB-25E-3-MZS | SJB-25E-1-M | OEZ:38360 | 3 | 0.240 | 10 |
| SJB-25E-3N-MZS | SJB-100E-N-M | OEZ:38360 | 3 | 0.240 | 10 |
| SJB-50E-1-MZS | SJB-50E-1-M | OEZ:45561 | 1 | 0.270 | 10 |
| SJB-50E-1N-MZS | SJB-50E-1-M | OEZ:45561 | 1 | 0.270 | 10 |
| | SJB-100E-N-M | OEZ:38359 | 1 | 0.240 | 10 |

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T1

Specifications

| Type | | SJB-25E-3-MZS | SJB-25E-3N-MZS | SJB-50E-1-MZS | SJB-50E-1N-MZS | | |
|---|-------------------|---|--|---|--|------------------|------------------|
| Standards | | EN 61643-11 IEC 61643-11 | EN 61643-11 IEC 61643-11 | EN 61643-11 IEC 61643-11 | EN 61643-11 IEC 61643-11 | | |
| Approval marks | |  |  |  |  | | |
| Rated voltage | U_N | AC 230/400 V | AC 230/400 V | AC 230 V | AC 230 V | | |
| Maximum constant operating voltage | U_C | L-N | - | - | AC 264 V | | |
| | | L-PEN | AC 350 V | - | AC 264 V | - | |
| | | N-PE | - | AC 350 V | - | AC 264 V | |
| Impulse current (10/350 μ s) | I_{imp} | peak value I_{vchot} | L-N | - | 75 kA (25 kA / pole) | - | |
| | | | L-PEN | 75 kA (25 kA / pole) | - | 50 kA | - |
| | | | N-PE | - | 100 kA | - | 100 kA |
| | | | charge Q | 37.5 As | 50 As | 25 As | 25 As |
| | | | specific energy W/R | 1.4 MJ/ Ω | 2.50 MJ/ Ω | 625 kJ/ Ω | 625 kJ/ Ω |
| Rated discharge current (8/20 μ s) | I_n | L-N | - | 25 kA / pole | - | | |
| | | L-PEN | 25 kA / pole | - | 50 kA | - | |
| | | N-PE | - | 100 kA | - | 100 kA | |
| Rated frequency | f_n | 50/60 Hz | 50/60 Hz | 50/60 Hz | 50/60 Hz | | |
| Voltage protection level | U_p | L-N | - | ≤ 1.5 kV | - | | |
| | | L-PEN/L-PE | ≤ 1.5 kV / - | - / 2.5 kV | ≤ 2.5 kV / - | - / 3 kV | |
| | | N-PE | - | ≤ 1.5 kV | - | ≤ 1.5 kV | |
| Arrester classification | | according to EN 61643-11 | type 1  | type 1  | type 1  | | |
| | | according to IEC 61643-1 | class I | class I | class I | | |
| Response time | | L-N | - | ≤ 100 ns | - | | |
| | | L-PEN | ≤ 100 ns | - | ≤ 100 ns | - | |
| | | N-PE | - | ≤ 100 ns | - | ≤ 100 ns | |
| Quenching follow-current | I_{fi} | L-N | - | 50 kA / AC 264 V | - | | |
| | | L-PEN | 50 kA / AC 264 V | - | 50 kA / AC 264 V | - | |
| | | N-PE | - | 0.1 kA | - | 0.1 kA | |
| Maximum backup fuse gG/gL | | parallel connection (T) | 315 A | 315 A | 500 A | | |
| | | serial connection (V) | 125 A | 125 A | 125 A | 125 A | |
| Degree of protection - with connected conductors | | IP20 | IP20 | IP20 | IP20 | | |
| Mounting on "U" rail according to EN 60715 – type | | TH 35 | TH 35 | TH 35 | TH 35 | | |
| Connection | | | | | | | |
| Conductor - rigid (solid, stranded) | | 2.5 \div 35 mm ² | 2.5 \div 35 mm ² | 2.5 \div 35 mm ² | 2.5 \div 35 mm ² | | |
| Conductor – flexible | | 2.5 \div 25 mm ² | 2.5 \div 25 mm ² | 2.5 \div 25 mm ² | 2.5 \div 25 mm ² | | |
| Torque | | 4.5 Nm | 4.5 Nm | 4.5 Nm | 4.5 Nm | | |
| Top or bottom connection | | yes | yes | yes | yes | | |
| Optical signalling | | | | | | | |
| Functional state | | green | green | green | green | | |
| Non-functional state | | red | red | red | red | | |
| Remote signalling | | | | | | | |
| Arrangement of contacts ¹⁾ | | 001 | 001 | 001 | 001 | | |
| Max. voltage/current | U_{max}/I_{max} | AC 250 V / 1 A | AC 250 V / 1 A | AC 250 V / 1 A | AC 250 V / 1 A | | |
| | | DC 30 V / 1 A | DC 30 V / 1 A | DC 30 V / 1 A | DC 30 V / 1 A | | |
| Min. voltage/current | U_{min}/I_{min} | AC 12 V / 10 mA | AC 12 V / 10 mA | AC 12 V / 10 mA | AC 12 V / 10 mA | | |
| Connection – conductor (rigid, flexible) | | 0.14 \div 1.5 mm ² | 0.14 \div 1.5 mm ² | 0.14 \div 1.5 mm ² | 0.14 \div 1.5 mm ² | | |
| Torque | | 0.25 Nm | 0.25 Nm | 0.25 Nm | 0.25 Nm | | |
| Operating conditions | | | | | | | |
| Ambient temperature | | -40 \div 80 °C | -40 \div 80 °C | -40 \div 80 °C | -40 \div 80 °C | | |
| Working position | | arbitrary | arbitrary | arbitrary | arbitrary | | |

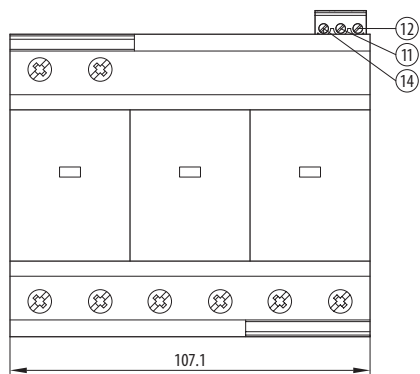
¹⁾ Each digit indicates successively the number of make, break and break-make contacts.

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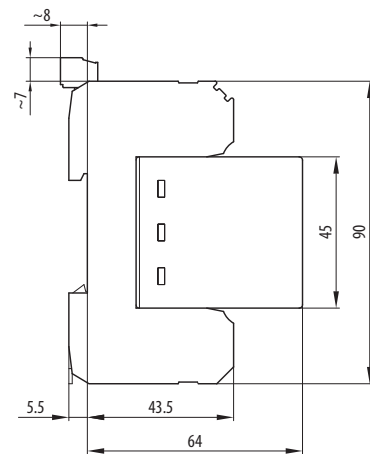
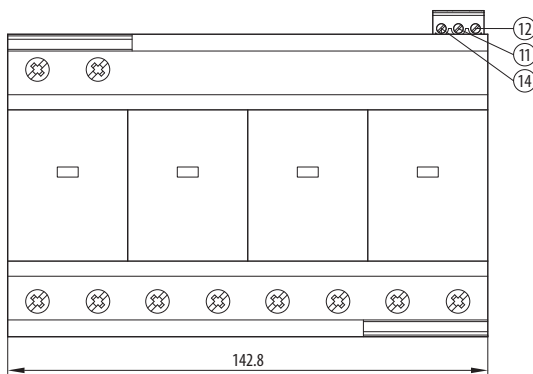
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Dimensions

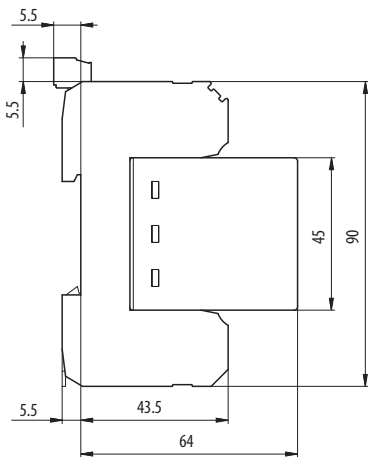
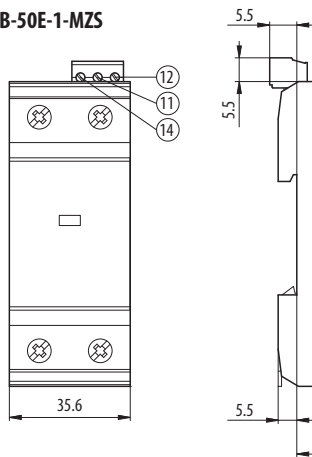
SJB-25E-3-MZS



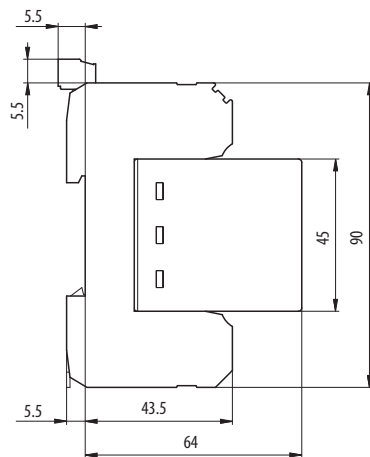
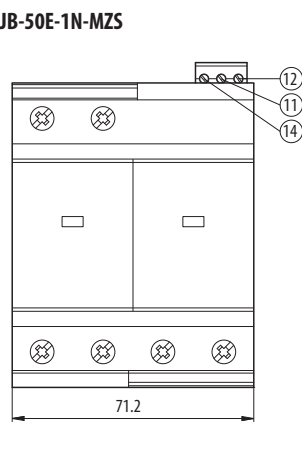
SJB-25E-3N-MZS



SJB-50E-1-MZS

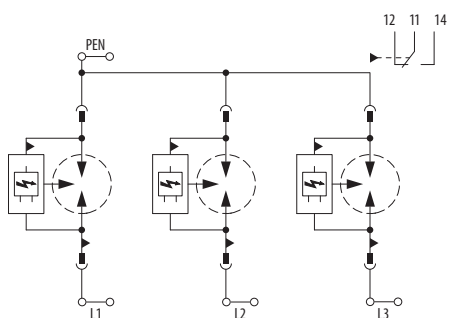


SJB-50E-1N-MZS

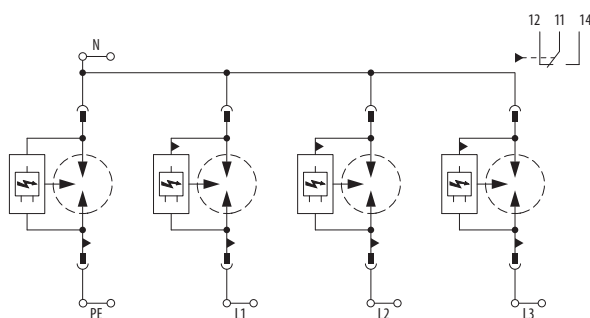


Diagram

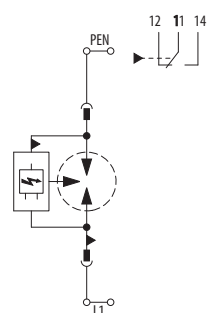
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SJB-25E-3N-MZS



SJB-50E-1-MZS



SJB-50E-1N-MZS

