Slim surge arresters for the power supply in the TT and TN-S system

VALVETRAB compact

VALVETRAB compact are multi-position type 2 (formerly arrester class C) surge arresters. The modules meet the highest standards with regard to power and convenience. There are fully equipped installation blocks for almost every power supply system. The high nominal arrester voltage of VALVETRAB compact allows worldwide use in all 230V/400V ... 240V/415V power supply networks. The slim design of just 12 mm per channel sets a new standard worldwide. Only varistors with a low leakage current are used with VALVETRAB compact. This reduces the energy turnover in the component, thus extending the life of the arresters.

Further properties of VALVETRAB compact:
- Slim, application-oriented installation blocks
- Universal pluggability
- Mechanical coding of all slots
- Variable installation direction
- Thermal disconnect device
- Mechanical coding of all slots
- Variable installation direction
- Thermal disconnect device
- Mechanical status display of the individual arresters without consumption of electrical power
- Integrated floating changeover contact for remote signaling
- Biconnect terminal blocks
- Extensive labeling possibilities
- Clamping part pockets with protective guide
- In order to ensure the full performance capability of the surge protection devices, missing plugs or plugs without components are reported as errors at the remote indicator contact.

Note
Products bearing this stamp (plug elements) can all be tested with the CHECKMASTER.
Technical Data

**VALVETRAB compact**, for 3-phase power supply systems with varistor
L1, L2, L3, N, PE

**Order No.** 28 59 52 1

**VALVETRAB compact**, for 3-phase power supply systems with varistor + gas-filled surge arrester
L1, L2, L3, N, PE

**Order No.** 28 59 51 8

**Replacement plug**, L-N, L-N, N-PE

**Order No.** 28 59 60 2

**Order No.** 28 59 61 5

**Order No.** 28 59 69 9

**Type** | **Order No.** | **Pcs.** | **Pkt.**
--- | --- | --- | ---
VAL-CP-3S-350 | 28 59 52 1 | 1 | 1
VAL-CP-3S-350VF | 28 59 51 8 | 1 | 1
VAL-CP-3S-350-ST | 28 59 60 2 | 10 | 10
VAL-CP-3S-350VF-ST | 28 59 61 5 | 10 | 10
VAL-CP-N/PE-350-ST | 28 59 69 9 | 10 | 10

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**Technical data**

**IEC category/VDE requirement class/EN type**
Nominal voltage $U_{N}$:
Arrester rated voltage $U_{C}$:
Nominal discharge surge current $I_{D}(8/20)$ μs L-N/N-PE:
Max. discharge surge current $I_{RS}(8/20)$ μs L-N/N-PE/
Residual voltage at 5 kA L-N/N-PE/
Protection level $U_{p}$ with $I_{N}$ L-N/N-PE/
Response time $t_{R}$ L-N/N-PE:
Backup fuse $I_{F}$ max. in acc. with IEC:
Short circuit resistance with max. backup fuse:
Temperature range:
Degree of protection in acc. with IEC 60 529/EN 60 529:
Insulation housing:
Inflammability class:
Thread/torque Biconnect terminal block:
Remote indicator contact:
Certification:
Test standards:
Remote indicator contact:

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1) 125 A gL/gG with branch wiring;
63 A gL/gG with (V) through wiring

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**Circuit diagram:** VAL-CP-3S-350

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**Circuit diagram:** VAL-CP-3S-350/VF
VAL-CP-2S-350 / VAL-CP-2S-350VF
Arrester combination for 4-conductor networks with a TT and TN-S system

Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Order No.</th>
<th>Pcs</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALVETRAB compact, for 2-phase power supply systems with varistor</td>
<td>L1, L2, N, PE</td>
<td>VAL-CP-2S-350</td>
</tr>
<tr>
<td>VALVETRAB compact, for 2-phase power supply systems with varistor + gas-filled surge arrester</td>
<td>L1, L2, N, PE</td>
<td>VAL-CP-2S-350VF</td>
</tr>
<tr>
<td>Replacement plug,</td>
<td>L-N</td>
<td>VAL-CP-350-ST</td>
</tr>
<tr>
<td></td>
<td>L-N</td>
<td>VAL-CP-350VF-ST</td>
</tr>
<tr>
<td></td>
<td>N-PE</td>
<td>VAL-N/PE-350-ST</td>
</tr>
</tbody>
</table>

Technical data

- IEC category/VDE requirement class/EN type
- Nominal voltage $U_N$:
- Arrester rated voltage $U_C$:
- Nominal discharge surge current $I_{(8/20)\mu s}$: L-N/N-PE (per pole)
- Max. discharge surge current $I_{\max}$ (8/20)$\mu s$: L-N/N-PE (per pole)
- Residual voltage at 5 kA: L-N/N-PE/L-PE
- Protection level $U_p$ with $I_N$: L-N/N-PE
- Response time $t_a$: L-N/N-PE
- Backup fuse (max. in acc. with IEC)
- Short circuit resistance with max. backup fuse:
- Temperature range:
- Degree of protection in acc. with IEC 60 529/EN 60 529:
- Insulation housing:
- Inflammability class:
- Thread/torque Biconnect terminal block
- Remote indicator contact
- Certification:
- Test standards:

Remote indicator contact: PDT

max. operating voltage
max. operating current AC (Ω/Ind.)
max. operating current DC (Ω/Ind.)

1) 125 A gL/gG with branch wiring;
63 A gL/gG with (V) through wiring
VAL-CP-1S-350 / VAL-CP-1S-350VF
Arrester combination for 3-conductor networks with a TT and TN-S system

Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Order No.</th>
<th>Pcs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALETRAB compact, for 1-phase power supply systems with varistor</td>
<td>VAL-CP-1S-350</td>
<td>28 59 56 3</td>
</tr>
<tr>
<td>VALETRAB compact, for 1-phase power supply systems with varistor + gas-filled surge arrester</td>
<td>VAL-CP-1S-350VF</td>
<td>28 59 55 0</td>
</tr>
<tr>
<td>Replacement plug, L-N</td>
<td>VAL-CP-350-ST</td>
<td>28 59 60 2</td>
</tr>
<tr>
<td>N-PE</td>
<td>VAL-CP-350VF-ST</td>
<td>28 59 61 5</td>
</tr>
<tr>
<td></td>
<td>VAL-CP-N/PE-350-ST</td>
<td>28 59 69 9</td>
</tr>
</tbody>
</table>

Technical data

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<th>Pcs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAL-CP-1S-350</td>
<td>230 / 400 V AC ... 240 / 415 V AC</td>
<td>25 kA rms</td>
</tr>
<tr>
<td>VAL-CP-1S-350VF</td>
<td>350 V AC</td>
<td>25 kA rms</td>
</tr>
</tbody>
</table>

- Nominal voltage $U_N$:
- Arrester rated voltage $U_C$:
- Nominal discharge surge current $I_{(8/20)\mu s}$: L-N (N-PE)
- Max. discharge surge current $I_{(8/20)\mu s}$: L-N-Pe (per pole)
- Residual voltage at 5 kA: L-N/N-Pe/L-Pe
- Protection level $U_p$ with $I_N$:
- Response time $t_a$:
- Backup fuse $I_{max}$ in acc. with IEC:
- Short circuit resistance with max. backup fuse:
- Temperature range:
- Degree of protection in acc. with IEC 60 529/EN 60 529:
- Insulation housing:
- Inflammability class:
- Thread/torque Biconnect terminal block:
- Remote indicator contact:

Certification:
- Test standards:
- Remote indicator contact: PDT
- max. operating voltage
- max. operating current AC (Ω/Ind.)
- max. operating current DC (Ω/Ind.)

1) 125 A gL/gG with branch wiring;
63 A gL/gG with (V) through wiring

Circuit diagram: VAL-CP-1S-350

Circuit diagram: VAL-CP-1S-350VF