For protection of low voltage consumer’s installations against surges, even at direct lightning strikes. For use according to the lightning protection zones concept at boundaries 0A – 2.

DV TNC 255: Combined lightning current and surge arrester for TN-C systems
DV TNS 255: Combined lightning current and surge arrester for TN(C)-S systems
DV TT 255: Combined lightning current and surge arrester for TT systems

The multipole combined lightning current and surge arresters of the DEHNventil TNC ... / ... TNS / ... TT product family offer an “all-in-one solution”, i.e. lightning equipotential bonding and surge protection in one device.

Energy coordination with downstream Red/Line surge protective devices in low voltage consumer’s installations is ensured without additional cable lengths or decoupling inductances.

In compact electrical installations and a short distance between DEHNventil and the consumers (≤ 5 m), DEHNventil devices alone can protect the terminal equipment.

Especially the small dimension of the combined arresters allows multiple possibilities for the installation of switchgears or distribution boards.

Using encapsulated non-exhausting creepage discharge spark gaps, no additional safety distances need to be observed. For expanded electrical installations, additional surge protective devices have to be provided in downstream distribution boards and directly upstream of the terminal equipment, according to the proceeding in the lightning protection zones concept.

Using the double terminals of DEHNventil devices, which are suitable for all types of conductors, allows a serial connection up to nominal currents of 125 A in a space- and cost-saving way, as preferred by standard IEC 60364-5-53. The multifunctional terminal is suitable for simultaneous connection of conductors and busbars. This allows an easy wiring with other DIN rail mounted devices.

For connection with further DIN rail mounted devices, busbars type MVS 3 8 6 and MVS 4 11 8 can be used.

DEHNventil devices can be chosen easily upon the system configuration of the existing low voltage consumer’s installation in connection with the type description of the devices.

A high availability of the electrical consumer’s installation to be protected is achieved by the patented RADAX Flow technology for follow current limitation and follow current extinction. Even at great short circuit currents up to 50 kA, rising mains follow currents are reduced considerably to ensure the selectivity to small fuse values (e.g. 32 A gL/gG), i.e. upstream fuses do not trip upon rising mains follow currents.

For indicating the presence of the three line-to-line voltages and readiness for operation of DEHNventil on site, the devices have an integrated visual indication of the operating voltage for each outer conductor. Furthermore, the readiness for operation of the device and the existence of operating voltages can be signalled to a superior control system via the remote signalling module DEHNsignal.
DEHNventil® TNC / ... TNS / ... TT

DEHNventil TNC

DV TNC 255: Combined lightning current and surge arrester for TN-C systems

**DV TNC 255**

- SPD according to EN 61643-11: Type 1
- SPD according to IEC 61643-1: Class I
- Classification according to E DIN VDE 0675-6: B
- Nominal ac voltage $U_N$: 230 / 400 V
- Max. continuous ac voltage $U_C$: 255 V
- Lightning impulse current (10/350) $I_{imp}$: 75 kA
- Lightning impulse current (10/350) $I_{imp}$: 25 kA
- Nominal discharge current (8/20) $I_{n}$: 25 / 75 kA
- Voltage protection level $U_P$: ≤ 1.5 kV
- Follow current extinguishing capability ac $I_{f}$: 50 kA
- Nominal discharge current $I_{n}$: 25 / 75 kA
- Voltage protection level $U_P$: ≤ 1.5 kV
- Follow current extinguishing capability ac $I_{f}$: 50 kA
- Follow current extinction/Selectivity: no tripping of a 32 A gl/gG fuse up to 50 kA
- Response time $t_A$: ≤ 100 ns
- Max. backup fuse (L) up to $I_x = 50 \text{ kA}_{\text{rms}}$: 315 A gl/gG
- Max. backup fuse (L) at $I_x > 50 \text{ kA}_{\text{rms}}$: 200 A gl/gG
- Max. backup fuse (L-L): 125 A gl/gG
- TOV voltage $U_T$: 335 V / 5 sec.
- Operating temperature range (parallel wiring) $T_{\text{op}}$: -40°C...+80°C
- Operating temperature range (through-wiring) $T_{\text{us}}$: -40°C...+60°C
- Operation indicator: green light
- Cross-sectional area (L1, L1’, L2, L2’, L3, L3’, PEN, +) min.: 10 mm² solid / flexible
- Cross-sectional area (L1, L2, L3, PEN) max.: 50 mm² stranded / 35 mm² flexible
- Cross-sectional area (L1’, L2’, L3’, +) max.: 35 mm² stranded / 25 mm² flexible
- Mounting on: 35 mm DIN rail acc. to EN 60715
- Enclosure material: red thermoplastic, UL 94 V-0
- Degree of protection: IP 20
- Dimension: 6 mods., DIN 43880
- Approvals, Certifications: KEMA, VDE

**Ordering information**

- Type: DV TNC 255
- Part No.: 900 373
- Packing unit: 1 pc(s)

**Accessory Part for DEHNventil® TNC / ... TNS / ... TT**

DEHNsignal DV

DSI DV: Remote signalling module for

- multiple SPDs with 4-wire interface "DSI DV" (e.g. DEHNventil TNC / ... TNS / ... TT)
- single-pole SPDs with single-wire interface "DSI DV" in TN-S and TT systems (e.g. DEHNbloc Maxi)

<table>
<thead>
<tr>
<th>Type</th>
<th>PU</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSI DV</td>
<td>1</td>
<td>910 620</td>
</tr>
</tbody>
</table>
DV TNS 255: Combined lightning current and surge arrester for TN(C)-S systems

**DV TNS 255**

- SPD according to EN 61643-11: Type 1
- SPD according to IEC 61643-1: Class I
- Classification according to E DIN VDE 0675-6: B
- Nominal ac voltage $U_n$: 230 / 400 V
- Max. continuous ac voltage $U_c$: 255 V
- Lightning impulse current (10/350) $[L1+L2+L3+N-PE]$ $I_{imp}$: 100 kA
- Lightning impulse current (10/350) $[L1,N-PE]$ $I_{imp}$: 25 kA
- Nominal discharge current (8/20) $I_n$: 25 / 100 kA
- Voltage protection level $[L-PE]$ $U_p$: $\leq 1.5$ kV
- Voltage protection level $[N-PE]$ $U_p$: $\leq 1.5$ kV
- Follow current extinguishing capability ac $I_{fi}$: 50 kA rms
- Follow current extinction/Selectivity: no tripping of a 32 A gl/gG fuse up to 50 kA rms (prosp.)
- Response time $t_{A}$: $\leq 100$ ns
- Max. backup fuse (L) up to $I_k = 50$ kA rms: 315 A gl/gG
- Max. backup fuse (L) at $I_k > 50$ kA rms: 200 A gl/gG
- Max. backup fuse (L-L'): 125 A gl/gG
- TOV voltage $[L-N]$ $U_{T}$: 335 V / 5 sec.
- Operating temperature range (parallel wiring) $T_{up}$: -40°C...+80°C
- Operating temperature range (through-wiring) $T_{us}$: -40°C...+60°C
- Operation indicator: green light
- Cross-sectional area (L1, L1', L2, L2', L3, L3', N, N', PE, ±): 10 mm² solid / flexible
- Cross-sectional area (L1, L2, L3, N, PE): 50 mm² stranded / 35 mm² flexible
- Cross-sectional area (L1', L2', L3', N', ±): 35 mm² stranded / 25 mm² flexible
- Mounting on: 35 mm DIN rail acc. to EN 60715
- Enclosure material: red thermoplastic, UL 94 V-0
- Degree of protection: IP 20
- Dimension: 8 mods., DIN 43880
- Approvals, Certifications: KEMA, VDE

**Ordering information**

- Type: DV TNS 255
- Part No.: 900 374
- Packing unit: 1 pc(s)

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**Accessory Part for DEHNventil® TNC / ... TNS / ... TT**

**DEHNsignal DV**

DSI DV: Remote signalling module for

- multipole SPDs with 4-wire interface “DSI DV” (e.g. DEHNventil TNC / ... TNS / ... TT)
- single-pole SPDs with single-wire interface “DSI DV” in TN-S and TT systems (e.g. DEHNbloc Maxi)

<table>
<thead>
<tr>
<th>Type</th>
<th>PU</th>
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</tr>
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<tbody>
<tr>
<td>DSI DV</td>
<td>1</td>
<td>910 620</td>
</tr>
</tbody>
</table>
DEHNventil® TNC / ... TNS / ... TT

DEHNventil TT

Basic circuit diagram DV TT 255

Dimension drawing DV TT 255

DV TT 255: Combined lightning current and surge arrester for TT- and TN(C)-S systems

### DV TT 255

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>SPD according to EN 61643-11</td>
<td>Type 1</td>
</tr>
<tr>
<td>SPD according to IEC 61643-1</td>
<td>Class I</td>
</tr>
<tr>
<td>Classification according to E DIN VDE 0675-6</td>
<td>B</td>
</tr>
<tr>
<td>Nominal ac voltage $U_n$</td>
<td>230 / 400 V</td>
</tr>
<tr>
<td>Max. continuous ac voltage $U_c$</td>
<td>255 V</td>
</tr>
<tr>
<td>Lightning impulse current (10/350) $[L1+L2+L3+N-PE]$ $I_{imp}$</td>
<td>100 kA</td>
</tr>
<tr>
<td>Lightning impulse current (10/350) $[L-N]$ $I_{imp}$</td>
<td>25 kA</td>
</tr>
<tr>
<td>Lightning impulse current (10/350) $[N-PE]$ $I_{imp}$</td>
<td>100 kA</td>
</tr>
<tr>
<td>Nominal discharge current (8/20) $I_n$</td>
<td>25 / 100 kA</td>
</tr>
<tr>
<td>Voltage protection level $[L-N]$ $U_T$</td>
<td>≤ 1.5 kV</td>
</tr>
<tr>
<td>Voltage protection level $[N-PE]$ $U_T$</td>
<td>≤ 1.5 kV</td>
</tr>
<tr>
<td>Follow current extinguishing capability $[L-N]$ $ac I_{ac}$</td>
<td>50 kA$_{res}$</td>
</tr>
<tr>
<td>Follow current extinguishing capability $[N-PE]$ $ac I_{ac}$</td>
<td>100 kA$_{res}$</td>
</tr>
<tr>
<td>Follow current extinction/Selectivity</td>
<td>no tripping of a 32 A gl/gG fuse up to 50 kA$_{res}$ (prosp.)</td>
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<tr>
<td>Response time $t_{R}$</td>
<td>≤ 100 ns</td>
</tr>
<tr>
<td>Max. backup fuse (L) up to $I_k = 50$ kA$_{res}$</td>
<td>315 A gl/gG</td>
</tr>
<tr>
<td>Max. backup fuse (L) at $I_k &gt; 50$ kA$_{res}$</td>
<td>200 A gl/gG</td>
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<td>Max. backup fuse (L-L)</td>
<td>125 A gl/gG</td>
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<tr>
<td>TOV voltage $[L-N]$ $U_T$</td>
<td>335 V / 5 sec.</td>
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<tr>
<td>TOV voltage $[N-PE]$ $U_T$</td>
<td>1200 V / 200 ms</td>
</tr>
<tr>
<td>Operating temperature range (parallel wiring) $T_{opt}$</td>
<td>-40°C...+80°C</td>
</tr>
<tr>
<td>Operating temperature range (through-wiring) $T_{opt}$</td>
<td>-40°C...+60°C</td>
</tr>
<tr>
<td>Operation indicator</td>
<td>green light</td>
</tr>
<tr>
<td>Cross-sectional area $[L1, L1', L2, L2', L3, L3', N, N', PE, +]$ min.</td>
<td>10 mm² solid / flexible</td>
</tr>
<tr>
<td>Cross-sectional area $[L1, L2, L3, N, PE]$ max.</td>
<td>50 mm² stranded / 35 mm² flexible</td>
</tr>
<tr>
<td>Cross-sectional area $[L1', L2', L3', N', +]$ max.</td>
<td>35 mm² stranded / 25 mm² flexible</td>
</tr>
<tr>
<td>Mounting on</td>
<td>35 mm DIN rail acc. to EN 60715</td>
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<td>KEMA, VDE</td>
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### Ordering information

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<td>Part No.</td>
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<td>Packing unit</td>
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</table>

### Accessory Part for DEHNventil® TNC / ... TNS / ... TT

DEHNsignal DV

- DSI DV: Remote signalling module for
  - multipole SPDs with 4-wire interface “DSI DV” (e.g. DEHNventil TNC / ... TNS / ... TT)
  - single-pole SPDs with single-wire interface “DSI DV” in TN-S and TT systems (e.g. DEHNbloc Maxi)

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