E-Mobility
Surge protection for charging infrastructure

Protection against
• damage to charging regulators, charging stations and the charging electronics of the vehicle
• Short circuits of Li-ion batteries due to surge voltages
• Resulting costs due to failure of the charging station
• Voltage spikes that destroy the electronics of the vehicle when connected to the charging equipment
• Surge voltages in data cables for ensuring the monitoring and communication of the system

Surge protection for publicly accessible charging equipment is compulsory in accordance with IEC 60364-7-722

Surge arrester V20 and Net Defender
E-Mobility
Surge protection for charging infrastructure

Net Defender

- Low protection level at a high current load
- Support for Power over Ethernet ++ (PoE++/4PPoE) up to 1A according to IEEE 802.3
- Tested transmission qualities in networks up to 10 GBit (Class EA) or CAT6A
- Rapid installation due to pluggable design
- High-quality RJ45 sockets
- Incl. DIN rail fastening set and earthing cable
- Earthing via DIN rail or connection cable

Surge arrester V20

- For surge protection equipotential bonding in accordance with VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 40 kA (8/20) per pin through high-performance varistors
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking function with vibration protection and voltage coding
- The FS variants have a potential-free changeover contact for remote signalling

ND-CAT6A/EA

<table>
<thead>
<tr>
<th>Testing standard</th>
<th>IEC 61643-21</th>
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<tbody>
<tr>
<td>Category</td>
<td>Typ 2/3 / C2+C1</td>
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<tr>
<td>LPZ</td>
<td>1 &gt; 3</td>
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</table>

- Maximum continuous voltage AC: 41 V
- Maximum continuous voltage DC: 56 V
- Impulse durability wire-earth: C2: 2 kV / 1 kA (8/20 μs)
- Arrester surge current (8/20): 7 kA
- Protection level wire: <120 V
- Protection level wire-earth: <700 V
- Frequency range: >500 MHz

V20-3+NPE-280

<table>
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<tr>
<th>SPD to EN 61643-11</th>
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<td>SPD to UL 1449</td>
<td>Type 4</td>
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</table>

- Nominal voltage AC (50/60 Hz): U, 230 V
- Maximum continuous voltage AC: Uₜₚₑₚₑ 280 V
- Nominal discharge current (8/20 μs): Iₜₚₑₚₑ 20 kA
- Maximum discharge current (8/20 μs): Iₜₚₑₚₑ 40 kA
- Arrester surge current (8/20 μs) [total]: Iₜₚₑₚₑₚₑ 60 kA
- Protection level [L-N]: Uₚₑₚₑₚₑₚₑ 1,3 kV
- Protection level [L-N] @ 1 kA: Uₚₑₚₑₚₑₚₑ 0,7 kV
- Protection level [L-N] @ 5 kA: Uₚₑₚₑₚₑₚₑ 0,9 kV
- Short-circuit resistance for max. mains-side overcurrent protection: 50 kA
- Protection type: B20
- Approvals: UL, ÖVE, VDE

Retrofit type 2 surge protection and data cable protection quickly and easily:

Installation directly in the charging station or Installation in the connection and media distribution system

Our expert tip:

For buildings with an existing external lightning protection system, IEC 62305-3 requires T1+T2 combination surge arresters in both the charging station and the connected low-voltage distribution system.

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