Isolation and protection devices

Area of application
Isolation devices are used in all applications where hazardous area regulations must be observed. In addition to powering the sensors in the field, they ensure electrical isolation from the connected PLC or process control system.

Principle of operation
Isolation devices separate intrinsically safe circuits from non-intrinsically safe circuits. Distinguishing features are the type of power supply and the size of the Ex-specific characteristic values.

Advantages
Reliable separation of intrinsically safe and non-intrinsically safe circuits. Simple installation, as no additional power supply is required. Simple installation via carrier rail mounting.
<table>
<thead>
<tr>
<th></th>
<th>VEGATRENN 141/142</th>
<th>VEGATRENN 151/152</th>
<th>Safety barrier 9001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application</strong></td>
<td>Separator for 4 … 20 mA/HART sensors</td>
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<td>Single channel safety barrier for measuring current transmission</td>
</tr>
<tr>
<td><strong>Sensors</strong></td>
<td>4 … 20 mA</td>
<td>4 … 20 mA</td>
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<tr>
<td><strong>Input and power supply</strong></td>
<td>VEGATRENN 141: 1x 4 … 20 mA signal circuit VEGATRENN 142: 2x 4 … 20 mA signal circuit</td>
<td>VEGATRENN 151: 1x 4 … 20 mA sensor input VEGATRENN 152: 2x 4 … 20 mA sensor input</td>
<td>1x 4 … 20 mA signal circuit</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>VEGATRENN 141: 1x 4 … 20 mA VEGATRENN 142: 2x 4 … 20 mA</td>
<td>VEGATRENN 151: 1x 4 … 20 mA VEGATRENN 152: 2x 4 … 20 mA</td>
<td>1x 4 … 20 mA</td>
</tr>
<tr>
<td><strong>Operating voltage</strong></td>
<td>20 … 253 V AC/DC, 50/60 Hz</td>
<td>Via 4 … 20 mA current loop</td>
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</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Carrier rail 35 x 7.5 acc. to EN 50022</td>
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<tr>
<td><strong>Approvals</strong></td>
<td>ATEX, IEC, Ship, SIL2</td>
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<td>ATEX</td>
</tr>
<tr>
<td><strong>Benefit</strong></td>
<td>• Secure supply and reliable separation of intrinsically safe and non-intrinsically safe measuring circuits. • Complete HART permeability allows unrestricted access to sensor settings. • Easy installation via rail mounting and removable, coded terminals.</td>
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</tr>
</tbody>
</table>
# Isolation and protection devices

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<tr>
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<th>B53-19/B61-300/B61-300 FI</th>
<th>B62-36G/B62-30W</th>
</tr>
</thead>
</table>
| **Application** | B53-19: Overvoltage arresters for conductive probes  
                 B61-300: Overvoltage arresters of supply and control cables  
                 B61-300 FI: Overvoltage arresters of supply and control cables with FI protective circuits | B62-36G: Overvoltage arresters for two-wire circuits  
                 B62-30W: Overvoltage arresters for ProField PA and Foundation Fieldbus circuits |
| **Mounting** | Carrier rail 35 x 7.5 acc. to EN 50022 or on carrier rail 32 mm acc. to EN 50035 | Carrier rail 35 x 7.5 acc. to EN 50022 or on carrier rail 32 mm acc. to EN 50035 |
| **Operating voltage** | B53-19: max. 19 V AC, 27 V DC  
                        B61-300/B61-300 FI:  
                        110 … 300 V AC/DC, max. 16 A | B62-36G: 9.6 … 36 V DC, max. 450 mA  
                        B62-30W: 12 … 36 V DC, max. 450 mA |
| **Nominal leak current** | < 10 kA | < 10 kA |
| **Protection** | IP 20 | IP 20 |
| **Temperature range** | -40 … +60 °C | -40 … +60 °C |
| **Approvals** | ATEX | ATEX |
| **Benefit** | • High operational reliability even with impermissible voltage surges  
              • Simple installation via carrier rail mounting |
### B63-48/B63-32

**B63-48**: Overvoltage arresters for two-wire circuits  
**B63-32**: Overvoltage arresters for Profinet PA and Foundation Fieldbus circuits

- Direct mounting in the cable entry of the field device
- B63-48: 12 ... 48 V DC  
  B63-32: max. 32 V DC
- < 10 kA
- IP 66
- -40 ... +85 °C
- ATEX

- High operational reliability even with impermissible voltage surges
- Simple installation in the cable gland of the field instrument
- No additional, separate on-site assembly

### B81-35

**B81-35**: Pluggable overvoltage arresters for supply and signal circuits

- Pluggable to the plics® mains electronics of VEGAPULS series 60, VEGAFLEX series 80, VEGABAR series 80 and VEGADIS 82
- max. 35 V DC
- < 10 kA
- -
- -40 ... +85 °C
- -

- High operational reliability of the measuring point through surge protection
- Simple installation in the terminal compartment of the field instrument through compact design
- Easy retrofitting in already installed sensors