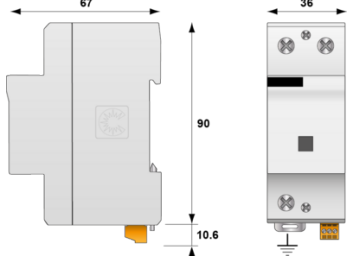
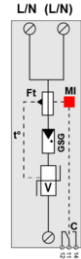


DS250VG-400



- ↳ Type 1+2+3 unipolar surge protector
- ↳ 25 kA on 10/350µs impulse
- ↳ Low voltage Up
- ↳ Internal disconnection, status indicator and remote signaling
- ↳ Optimized to TOV
- ↳ IEC 61643-11 and UL1449 ed.5 compliance



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|----------------------|--|--|-----------------------------------|--|---------------------|-----------------------|----|--|---------------------------|----|--------------------|--|----|-----------------------------------|---|----|------------------------|--|----|-------------------|--|-----|------|----------------|----|-------------------------------|---|----|------------------------|---|------------------|------------------------------|---|------------------|-------------|--|-----|-------|---|--|-------|--|-----|------------|--------------------|--|-------------|--------------------|--|----------------------------------|--|----|--------|---------------------------------|-------|--------|--|--------|------|----------------------------------|-----------------|----------|
|  | Electrical Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  <p>V: High-energy varistor GSG: Specific gas tube Ft: Thermal fuse C: Remote signaling contact t*: Thermal disconnection system MI: Disconnection indicator</p> | <table border="1"> <tr><td>SPD type</td><td></td><td>1+2+3</td></tr> <tr><td>Network</td><td></td><td>230/400 V</td></tr> <tr><td>Nominal line voltage</td><td>Un</td><td>400 Vac</td></tr> <tr><td>Max. AC operating voltage</td><td>Uc</td><td>440 Vac</td></tr> <tr><td>Max. load current if series connection</td><td>IL</td><td>100 A</td></tr> <tr><td>Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection</td><td>UT</td><td>580 Vac withstand</td></tr> <tr><td>Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection</td><td>UT</td><td>770 Vac withstand</td></tr> <tr><td>Residual Current Leakage current to Ground</td><td>Ipe</td><td>None</td></tr> <tr><td>Follow current</td><td>If</td><td>None</td></tr> <tr><td>Nominal discharge current 15 x 8/20 µs impulses</td><td>In</td><td>30 kA</td></tr> <tr><td>Max. discharge current max. withstand @ 8/20 µs by pole</td><td>I_{max}</td><td>70 kA</td></tr> <tr><td>Impulse current by pole max. withstand 10/350µs by pole</td><td>I_{imp}</td><td>25 kA</td></tr> <tr><td>Withstand on Combination waveform IEC 61643-11 Class III test: 1.2/50µs - 8/20µs</td><td>Uoc</td><td>20 kV</td></tr> <tr><td>Withstand on overvoltages IEEE C62.41.1</td><td></td><td>20 kV</td></tr> <tr><td>Specific energy by pole max. withstand 10/350 µs</td><td>W/R</td><td>156 kJ/ohm</td></tr> <tr><td>Connection mode(s)</td><td></td><td>L/N or L/PE</td></tr> <tr><td>Protection mode(s)</td><td></td><td>Common Mode or Differential Mode</td></tr> <tr><td>Protection level@ In (8/20µs) and @ 6 kV (1,2/50 µs)</td><td>Up</td><td>1.5 kV</td></tr> <tr><td>Residual voltage @ In (8/20 µs)</td><td>Up-in</td><td>1.1 kV</td></tr> <tr><td>Residual voltage at 5 kA @ 5 kA (8/20µs)</td><td>Up-5kA</td><td>1 kV</td></tr> <tr><td>Admissible short-circuit current</td><td>I_{sc}</td><td>50 000 A</td></tr> </table> | | SPD type | | 1+2+3 | Network | | 230/400 V | Nominal line voltage | Un | 400 Vac | Max. AC operating voltage | Uc | 440 Vac | Max. load current if series connection | IL | 100 A | Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection | UT | 580 Vac withstand | Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection | UT | 770 Vac withstand | Residual Current Leakage current to Ground | Ipe | None | Follow current | If | None | Nominal discharge current 15 x 8/20 µs impulses | In | 30 kA | Max. discharge current max. withstand @ 8/20 µs by pole | I _{max} | 70 kA | Impulse current by pole max. withstand 10/350µs by pole | I _{imp} | 25 kA | Withstand on Combination waveform IEC 61643-11 Class III test: 1.2/50µs - 8/20µs | Uoc | 20 kV | Withstand on overvoltages IEEE C62.41.1 | | 20 kV | Specific energy by pole max. withstand 10/350 µs | W/R | 156 kJ/ohm | Connection mode(s) | | L/N or L/PE | Protection mode(s) | | Common Mode or Differential Mode | Protection level@ In (8/20µs) and @ 6 kV (1,2/50 µs) | Up | 1.5 kV | Residual voltage @ In (8/20 µs) | Up-in | 1.1 kV | Residual voltage at 5 kA @ 5 kA (8/20µs) | Up-5kA | 1 kV | Admissible short-circuit current | I _{sc} | 50 000 A |
| SPD type | | 1+2+3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Network | | 230/400 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal line voltage | Un | 400 Vac | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. AC operating voltage | Uc | 440 Vac | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. load current if series connection | IL | 100 A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection | UT | 580 Vac withstand | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection | UT | 770 Vac withstand | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Residual Current Leakage current to Ground | Ipe | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Follow current | If | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal discharge current 15 x 8/20 µs impulses | In | 30 kA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. discharge current max. withstand @ 8/20 µs by pole | I _{max} | 70 kA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Impulse current by pole max. withstand 10/350µs by pole | I _{imp} | 25 kA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Withstand on Combination waveform IEC 61643-11 Class III test: 1.2/50µs - 8/20µs | Uoc | 20 kV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Withstand on overvoltages IEEE C62.41.1 | | 20 kV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Specific energy by pole max. withstand 10/350 µs | W/R | 156 kJ/ohm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Connection mode(s) | | L/N or L/PE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Protection mode(s) | | Common Mode or Differential Mode | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Protection level@ In (8/20µs) and @ 6 kV (1,2/50 µs) | Up | 1.5 kV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Residual voltage @ In (8/20 µs) | Up-in | 1.1 kV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Residual voltage at 5 kA @ 5 kA (8/20µs) | Up-5kA | 1 kV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Admissible short-circuit current | I _{sc} | 50 000 A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mechanical Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>Technology</td><td></td><td>VG Technology (MOV+GSG)</td></tr> <tr><td>SPD configuration</td><td></td><td>Single phase</td></tr> <tr><td>Connection to Network</td><td></td><td>By screw terminals: 6-35mm² / by bus</td></tr> <tr><td>Format</td><td></td><td>1-pole modular box</td></tr> <tr><td>Mounting</td><td></td><td>Symmetrical rail 35 mm (EN 60715)</td></tr> <tr><td>Housing material</td><td></td><td>Thermoplastic UL94 V-0</td></tr> <tr><td>Operating temperature</td><td>Tu</td><td>-40/+85°C</td></tr> <tr><td>Protection rating</td><td></td><td>IP20</td></tr> <tr><td>Failsafe mode</td><td></td><td>Disconnection from AC network</td></tr> <tr><td>Disconnection indicator</td><td></td><td>1 mechanical indicator</td></tr> <tr><td>Remote signaling of disconnection</td><td></td><td>Output on changeover contact</td></tr> <tr><td>Dimensions</td><td></td><td>See diagram</td></tr> </table> | | Technology | | VG Technology (MOV+GSG) | SPD configuration | | Single phase | Connection to Network | | By screw terminals: 6-35mm ² / by bus | Format | | 1-pole modular box | Mounting | | Symmetrical rail 35 mm (EN 60715) | Housing material | | Thermoplastic UL94 V-0 | Operating temperature | Tu | -40/+85°C | Protection rating | | IP20 | Failsafe mode | | Disconnection from AC network | Disconnection indicator | | 1 mechanical indicator | Remote signaling of disconnection | | Output on changeover contact | Dimensions | | See diagram | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technology | | VG Technology (MOV+GSG) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPD configuration | | Single phase | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Connection to Network | | By screw terminals: 6-35mm ² / by bus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Format | | 1-pole modular box | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mounting | | Symmetrical rail 35 mm (EN 60715) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Housing material | | Thermoplastic UL94 V-0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating temperature | Tu | -40/+85°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Protection rating | | IP20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Failsafe mode | | Disconnection from AC network | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disconnection indicator | | 1 mechanical indicator | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remote signaling of disconnection | | Output on changeover contact | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dimensions | | See diagram | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Disconnectors | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>Thermal disconnecter</td><td></td><td>Internal</td></tr> <tr><td>Installation ground fault breaker</td><td></td><td>Type 'S' or delayed</td></tr> <tr><td>Fuses</td><td></td><td>Fuses type gG - 315 A</td></tr> </table> | | Thermal disconnecter | | Internal | Installation ground fault breaker | | Type 'S' or delayed | Fuses | | Fuses type gG - 315 A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thermal disconnecter | | Internal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Installation ground fault breaker | | Type 'S' or delayed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuses | | Fuses type gG - 315 A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Standards | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>Standards compliance</td><td></td><td>IEC 61643-11 / EN 61643-11 / UL1449 ed.5</td></tr> <tr><td>Certification</td><td></td><td>EAC</td></tr> </table> | | Standards compliance | | IEC 61643-11 / EN 61643-11 / UL1449 ed.5 | Certification | | EAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Standards compliance | | IEC 61643-11 / EN 61643-11 / UL1449 ed.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Certification | | EAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Part number | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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