



# CITEL

## Type 1+2+3 AC surge protector - 3-phase+N

### ZPAC1-13VG-PRO-SU



- Type 1+2+3 combined SPD based on a gas-filled spark gap
- 10-year guarantee
- Discharge capacity per pole:  $I_{imp} = 12.5 \text{ kA}$  (10/350  $\mu\text{s}$ )
- Operating and leakage current-free
- Can be used for lightning protection classes III & IV
- Individually pluggable protection modules: sustainable solution, cost-effective maintenance
- Complies with the IEC 61643-11 and EN 61643-11 standards
- VDE-AR-N 4100 compliant "Use of surge protective devices (SPD) type 1 in main power supply systems"
- Integrated fuse
- Dual voltage tap for RFZ and APZ
- Potential-free remote signaling contact

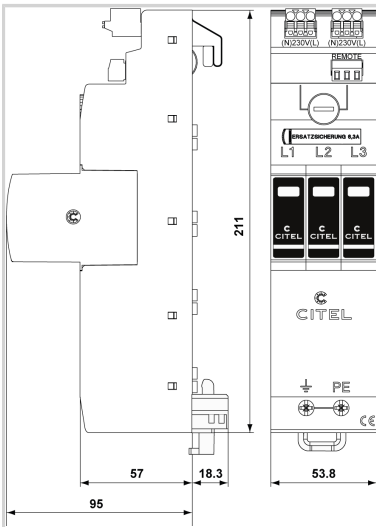
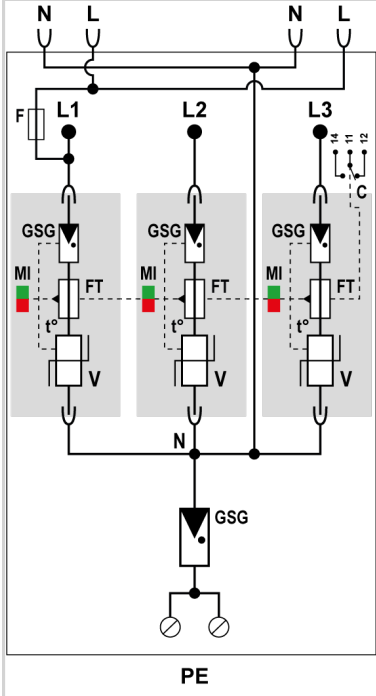


| Electrical Characteristics                                                                                                             |                    |                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------|
| SPD type                                                                                                                               | IEC                | 1+2+3                                                                    |
| Network                                                                                                                                |                    | 230/400V                                                                 |
| AC system                                                                                                                              |                    | TT-TNS                                                                   |
| Nominal line voltage                                                                                                                   | Un                 | 230/400 Vac                                                              |
| Max. AC operating voltage                                                                                                              | Uc                 | 275 Vac                                                                  |
| Temporary Over Voltage (TOV) Characteristics - 5 sec.<br><i>Without disconnection</i>                                                  | UT                 | 335 Vac withstand                                                        |
| Temporary Over Voltage (TOV) Characteristics - 120 mn<br><i>Without disconnection or with safety disconnection</i>                     | UT                 | 440 Vac withstand                                                        |
| Temporary Over Voltage N/PE (TOV HT)<br><i>Without disconnection or with safety disconnection</i>                                      | UT                 | 1200 V/300A/200 ms withstand                                             |
| Residual Current                                                                                                                       |                    |                                                                          |
| Leakage current to Ground                                                                                                              | I <sub>pe</sub>    | None                                                                     |
| Follow current                                                                                                                         | I <sub>f</sub>     | None                                                                     |
| Nominal discharge current<br><i>15 x 8/20 <math>\mu\text{s}</math> impulses</i>                                                        | I <sub>n</sub>     | 20 kA                                                                    |
| Max. discharge current<br><i>max. withstand @ 8/20 <math>\mu\text{s}</math> by pole</i>                                                | I <sub>max</sub>   | 50 kA                                                                    |
| Impulse current by pole<br><i>max. withstand 10/350<math>\mu\text{s}</math> by pole</i>                                                | I <sub>imp</sub>   | 12.5 kA                                                                  |
| Total lightning current<br><i>max. total withstand @ 10/350<math>\mu\text{s}</math></i>                                                | I <sub>total</sub> | 50 kA                                                                    |
| Withstand on Combination waveform IEC 61643-11<br><i>Class III test: 1.2/50<math>\mu\text{s}</math> - 8/20<math>\mu\text{s}</math></i> | U <sub>oc</sub>    | 6 kV                                                                     |
| Withstand on overvoltages IEEE C62.41.1                                                                                                |                    | 20 kV                                                                    |
| Specific energy by pole<br><i>max. withstand 10/350 <math>\mu\text{s}</math></i>                                                       | W/R                | 40 kJ/ohm                                                                |
| Connection mode(s)                                                                                                                     |                    | L/N and N/PE                                                             |
| Protection mode(s)                                                                                                                     |                    | Common/Differential mode                                                 |
| Protection level L/N<br><i>@ I<sub>n</sub> (8/20<math>\mu\text{s}</math>)</i>                                                          | Up L/N             | 1.5 kV                                                                   |
| Protection level L/PE<br><i>@ I<sub>n</sub> (8/20<math>\mu\text{s}</math>)</i>                                                         | Up L/PE            | 1.5 kV                                                                   |
| Residual voltage L/N at 5 kA<br><i>@ 5 kA (8/20<math>\mu\text{s}</math>)</i>                                                           | Up-5kA             | 0.7 kV                                                                   |
| Admissible short-circuit current                                                                                                       | I <sub>sc</sub>    | 50 000 A                                                                 |
| Mechanical Characteristics                                                                                                             |                    |                                                                          |
| Technology                                                                                                                             |                    | VG Technology (MOV+GSG)                                                  |
| SPD configuration                                                                                                                      |                    | 3-phase+Neutral                                                          |
| Connection to Network                                                                                                                  |                    | By 40mm busbar and wire for PE: 6-35mm <sup>2</sup> (50mm <sup>2</sup> ) |
| Format                                                                                                                                 |                    | Plug-in modular box                                                      |
| Mounting                                                                                                                               |                    | 40 mm busbar systems                                                     |
| Housing material                                                                                                                       |                    | Thermoplastic UL94 V-0                                                   |
| Operating temperature                                                                                                                  | T <sub>u</sub>     | -40/+85°C                                                                |
| Protection rating                                                                                                                      |                    | IP20                                                                     |
| Failsafe mode                                                                                                                          |                    | Disconnection from AC network                                            |



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|                                           |                                          |
|-------------------------------------------|------------------------------------------|
| Disconnection indicator                   | 1 mechanical indicator by pole           |
| Spare module(s)                           | ZMDAC1-13VG-PRO-275                      |
| Remote signaling of disconnection         | Output on changeover contact             |
| Wiring for remote signaling               | 1.5 mm² max.                             |
| Max. Voltage/Current for remote signaling | 250 V / 0.5 A (AC) / 30 V / 2 A (DC)     |
| Dimensions                                | See diagram                              |
| <b>Disconnectors</b>                      |                                          |
| Thermal disconnector                      | Internal                                 |
| Installation ground fault breaker         | Type 'S' or delayed                      |
| Back-up protection device                 | max. 315 A (gL/gG)                       |
| <b>Standards</b>                          |                                          |
| Standards compliance                      | IEC 61643-11 / EN 61643-11 / UL1449 5ed. |
| Certification                             | KEMA                                     |
| <b>Part number</b>                        |                                          |
| <b>64092</b>                              |                                          |

