



# Ultra Compact Type 3 hard wired surge protector

# CITEL

## MSB6-400



- ↳ Compact type 3 surge protector
- ↳ Wall mounting and hard wired connection
- ↳ Status indicators
- ↳ IP20
- ↳ EN 61643-11, IEC 61643-11 and UL1449 ed.5 compliance



|   | <table border="1"> <thead> <tr> <th colspan="3">Electrical Characteristics</th> </tr> </thead> <tbody> <tr> <td>SPD type</td> <td></td> <td>3</td> </tr> <tr> <td>Network</td> <td></td> <td>230 V single-phase</td> </tr> <tr> <td>AC system</td> <td></td> <td>TT-TN</td> </tr> <tr> <td>Nominal line voltage</td> <td>Un</td> <td>230 V</td> </tr> <tr> <td>Max. AC operating voltage</td> <td>Uc</td> <td>255 Vac</td> </tr> <tr> <td>Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection</td> <td>UT</td> <td>335 Vac withstand</td> </tr> <tr> <td>Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection</td> <td>UT</td> <td>440 Vac disconnection</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>3 kA</td> </tr> <tr> <td>Max. discharge current max. withstand @ 8/20 μs by pole</td> <td>Imax</td> <td>6 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>6 kV</td> </tr> <tr> <td>Withstand on overvoltages IEEE C62.41.1</td> <td></td> <td>6 kV/6 kA</td> </tr> <tr> <td>Protection mode(s)</td> <td></td> <td>Common/Differential mode</td> </tr> <tr> <td>Protection level L/N @ In (8/20μs)</td> <td>Up L/N</td> <td>1.5 kV</td> </tr> <tr> <td>Protection level L/PE @ In (8/20μs)</td> <td>Up L/PE</td> <td>1.5 kV</td> </tr> <tr> <td>Admissible short-circuit current</td> <td>Iscsr</td> <td>3 000 A</td> </tr> </tbody> </table>        | Electrical Characteristics               |  |  | SPD type   |  | 3       | Network               |  | 230 V single-phase | AC system |  | TT-TN                       | Nominal line voltage | Un | 230 V                  | Max. AC operating voltage | Uc | 255 Vac   | Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection | UT | 335 Vac withstand | Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection | UT | 440 Vac disconnection         | Follow current          | If | None      | Nominal discharge current 15 x 8/20 μs impulses | In | 3 kA    | Max. discharge current max. withstand @ 8/20 μs by pole | Imax | 6 kA        | Withstand on Combination waveform IEC 61643-11 Class III test: 1.2/50μs - 8/20μs | Uoc | 6 kV    | Withstand on overvoltages IEEE C62.41.1 |  | 6 kV/6 kA | Protection mode(s)   |  | Common/Differential mode | Protection level L/N @ In (8/20μs) | Up L/N | 1.5 kV              | Protection level L/PE @ In (8/20μs) | Up L/PE | 1.5 kV | Admissible short-circuit current | Iscsr | 3 000 A                                  |               |  |  |             |  |  |  |  |        |
|---|--|--|--|--|------------|--|---------|-----------------------|--|--------------------|-----------|--|-----------------------------|----------------------|----|------------------------|---------------------------|----|-----------|---|----|-------------------|--|----|-------------------------------|-------------------------|----|-----------|---|----|---------|---|------|-------------|--|-----|---------|---|--|-----------|----------------------|--|--------------------------|------------------------------------|--------|---------------------|-------------------------------------|---------|--------|----------------------------------|-------|--|---------------|--|--|-------------|--|--|--|--|--------|
| Electrical Characteristics  |  |  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| SPD type  |  | 3  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Network   |  | 230 V single-phase                       |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| AC system   |  | TT-TN                                    |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Nominal line voltage  | Un   | 230 V                                    |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Max. AC operating voltage   | Uc   | 255 Vac                                  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection   | UT   | 335 Vac withstand                        |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection  | UT   | 440 Vac disconnection                    |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Follow current  | If   | None                                     |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Nominal discharge current 15 x 8/20 μs impulses   | In   | 3 kA                                     |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Max. discharge current max. withstand @ 8/20 μs by pole   | Imax   | 6 kA                                     |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Withstand on Combination waveform IEC 61643-11 Class III test: 1.2/50μs - 8/20μs  | Uoc  | 6 kV                                     |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Withstand on overvoltages IEEE C62.41.1   |  | 6 kV/6 kA                                |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Protection mode(s)  |  | Common/Differential mode                 |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Protection level L/N @ In (8/20μs)  | Up L/N   | 1.5 kV                                   |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Protection level L/PE @ In (8/20μs)   | Up L/PE  | 1.5 kV                                   |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Admissible short-circuit current  | Iscsr  | 3 000 A                                  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| <p>V: Varistor<br/> GSG: Specific gas tube<br/> Ft: Thermal fuse<br/> Buzzer: Audible disconnection indicator<br/> t*: Thermal system disconnection</p> | <table border="1"> <thead> <tr> <th colspan="3">Mechanical Characteristics</th> </tr> </thead> <tbody> <tr> <td>Technology</td> <td></td> <td>MOV+GDT</td> </tr> <tr> <td>Connection to Network</td> <td></td> <td>Wires</td> </tr> <tr> <td>Mounting</td> <td></td> <td>AC outlet or screw terminal</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>Buzzer ON</td> </tr> <tr> <td>Voltage/operating indicator</td> <td></td> <td>without</td> </tr> <tr> <td>Dimensions</td> <td></td> <td>See diagram</td> </tr> <tr> <td>Weight</td> <td></td> <td>0.02 kg</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">Disconnectors</th> </tr> </thead> <tbody> <tr> <td>Thermal disconnector</td> <td></td> <td>Internal</td> </tr> <tr> <td>Installation ground fault breaker</td> <td></td> <td>Type 'S' or delayed</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">Standards</th> </tr> </thead> <tbody> <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></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">Part number</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>561302</td> </tr> </tbody> </table> | Mechanical Characteristics               |  |  | Technology |  | MOV+GDT | Connection to Network |  | Wires              | Mounting  |  | AC outlet or screw terminal | Housing material     |    | Thermoplastic UL94 V-0 | Operating temperature     | Tu | -40/+85°C | Protection rating   |    | IP20              | Failsafe mode  |    | Disconnection from AC network | Disconnection indicator |    | Buzzer ON | Voltage/operating indicator                     |    | without | Dimensions  |      | See diagram | Weight   |     | 0.02 kg | Disconnectors                           |  |           | Thermal disconnector |  | Internal                 | Installation ground fault breaker  |        | Type 'S' or delayed | Standards                           |         |        | Standards compliance             |       | IEC 61643-11 / EN 61643-11 / UL1449 ed.5 | Certification |  |  | Part number |  |  |  |  | 561302 |
| Mechanical Characteristics  |  |  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Technology  |  | MOV+GDT                                  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Connection to Network   |  | Wires                                    |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Mounting  |  | AC outlet or screw terminal              |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Housing material  |  | Thermoplastic UL94 V-0                   |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Operating temperature   | Tu   | -40/+85°C                                |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Protection rating   |  | IP20                                     |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Failsafe mode   |  | Disconnection from AC network            |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Disconnection indicator   |  | Buzzer ON                                |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Voltage/operating indicator   |  | without                                  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Dimensions  |  | See diagram                              |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Weight  |  | 0.02 kg                                  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Disconnectors   |  |  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Thermal disconnector  |  | Internal                                 |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Installation ground fault breaker   |  | Type 'S' or delayed                      |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Standards   |  |  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Standards compliance  |  | IEC 61643-11 / EN 61643-11 / UL1449 ed.5 |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Certification   |  |  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
| Part number   |  |  |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |
|   |  | 561302                                   |  |  |            |  |         |                       |  |                    |           |  |                             |                      |    |                        |                           |    |           |   |    |                   |  |    |                               |                         |    |           |   |    |         |   |      |             |  |     |         |   |  |           |                      |  |                          |                                    |        |                     |                                     |         |        |                                  |       |  |               |  |  |             |  |  |  |  |        |

