



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

# CITEL

## DAC40CS-40-150



- ↳ Compact, multipole type 2
- ↳ Conductivity per pole:  $I_n = 20 \text{ kA}$ ;  $I_{max} = 40 \text{ kA}$
- ↳ Protection modes - common and/or differential
- ↳ Safe disconnect device
- ↳ Transverse / longitudinal voltage protection
- ↳ Energetically coordinated
- ↳ Pluggable protection module
- ↳ Remote signalling
- ↳ Conforms to IEC 61643-11 / EN 61643-11 and UL1449 ed.5



|   |  |   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|---|--|---|----------------------|--|--|-----------------------------------|--|---------------------|---------------------------|--|---|---------------------------|----|---------------------|---|----|-----------------------------------|--|----|------------------------|--|-----|-----------|-------------------|----|------|--|-------|-------------------------------|--|-----------|-------------------------------------|---|-----------------|----------------|-----------------------------------|--|------------------------------|--|---------|--------------------------|--|---------|--------------------------------------|----------------------------------|-------|-----------------------------|--------|--|----------|
|   | <b>Electrical Characteristics</b>  |   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| <p>V: High-energy varistor<br/>Ft: Thermal fuse<br/>C: Remote signal contact<br/>t*: Thermal disconnection system<br/>MI: Disconnection indicator</p> | <table border="1"> <tbody> <tr><td>SPD type</td><td></td><td>2</td></tr> <tr><td>Network</td><td></td><td>120/208 V</td></tr> <tr><td>AC system</td><td></td><td>TN</td></tr> <tr><td>Max. AC operating voltage</td><td>Uc</td><td>150 Vac</td></tr> <tr><td>Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection</td><td>UT</td><td>180 Vac withstand</td></tr> <tr><td>Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection</td><td>UT</td><td>230 Vac disconnection</td></tr> <tr><td>Residual Current Leakage current to Ground</td><td>Ipe</td><td>&lt; 1 mA</td></tr> <tr><td>Follow current</td><td>If</td><td>None</td></tr> <tr><td>Nominal discharge current 15 x 8/20 <math>\mu\text{s}</math> impulses</td><td><math>I_n</math></td><td>20 kA</td></tr> <tr><td>Max. discharge current max. withstand @ 8/20 <math>\mu\text{s}</math> by pole</td><td><math>I_{max}</math></td><td>40 kA</td></tr> <tr><td>Total Maximum discharge current max. total withstand @ 8/20 <math>\mu\text{s}</math></td><td><math>I_{max}</math> Total</td><td>160 kA</td></tr> <tr><td>Protection mode(s)</td><td></td><td>L/PE and N/PE</td></tr> <tr><td>Protection level N/PE @ In (8/20<math>\mu\text{s}</math>)</td><td>Up N/PE</td><td>0.9 kV</td></tr> <tr><td>Protection level L/PE @ In (8/20<math>\mu\text{s}</math>)</td><td>Up L/PE</td><td>1.2 kV</td></tr> <tr><td>Admissible short-circuit current</td><td>Iscsr</td><td>10 000 A</td></tr> </tbody> </table> |   | SPD type             |  | 2  | Network                           |  | 120/208 V           | AC system                 |  | TN  | Max. AC operating voltage | Uc | 150 Vac             | Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection | UT | 180 Vac withstand                 | Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection | UT | 230 Vac disconnection  | Residual Current Leakage current to Ground | Ipe | < 1 mA    | Follow current    | If | None | Nominal discharge current 15 x 8/20 $\mu\text{s}$ impulses | $I_n$ | 20 kA                         | Max. discharge current max. withstand @ 8/20 $\mu\text{s}$ by pole | $I_{max}$ | 40 kA                               | Total Maximum discharge current max. total withstand @ 8/20 $\mu\text{s}$ | $I_{max}$ Total | 160 kA         | Protection mode(s)                |  | L/PE and N/PE                | Protection level N/PE @ In (8/20 $\mu\text{s}$ ) | Up N/PE | 0.9 kV                   | Protection level L/PE @ In (8/20 $\mu\text{s}$ ) | Up L/PE | 1.2 kV                               | Admissible short-circuit current | Iscsr | 10 000 A                    |        |  |          |
| SPD type  |  | 2   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Network   |  | 120/208 V   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| AC system   |  | TN  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Max. AC operating voltage   | Uc   | 150 Vac   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection   | UT   | 180 Vac withstand   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection  | UT   | 230 Vac disconnection   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Residual Current Leakage current to Ground  | Ipe  | < 1 mA  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Follow current  | If   | None  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Nominal discharge current 15 x 8/20 $\mu\text{s}$ impulses  | $I_n$  | 20 kA   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Max. discharge current max. withstand @ 8/20 $\mu\text{s}$ by pole  | $I_{max}$  | 40 kA   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Total Maximum discharge current max. total withstand @ 8/20 $\mu\text{s}$   | $I_{max}$ Total  | 160 kA  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Protection mode(s)  |  | L/PE and N/PE   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Protection level N/PE @ In (8/20 $\mu\text{s}$ )  | Up N/PE  | 0.9 kV  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Protection level L/PE @ In (8/20 $\mu\text{s}$ )  | Up L/PE  | 1.2 kV  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Admissible short-circuit current  | Iscsr  | 10 000 A  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | <b>Mechanical Characteristics</b>  |   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | <table border="1"> <tbody> <tr><td>Technology</td><td></td><td>MOV</td></tr> <tr><td>SPD configuration</td><td></td><td>3-phase+Neutral</td></tr> <tr><td>Connection to Network</td><td></td><td>By screw terminals: L/N = 1.5-10mm<sup>2</sup> (16mm<sup>2</sup> rigid) or PE = 2.5-25mm<sup>2</sup> (35mm<sup>2</sup> rigid)</td></tr> <tr><td>Format</td><td></td><td>Plug-in 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>2 mechanical indicators - Red/Green</td></tr> <tr><td>Spare module(s)</td><td></td><td>MDAC40C-40-150</td></tr> <tr><td>Remote signaling of disconnection</td><td></td><td>Output on changeover contact</td></tr> <tr><td>Wiring for remote signaling</td><td></td><td>1.5 mm<sup>2</sup> max.</td></tr> <tr><td>Max. Voltage/Current for remote signaling</td><td></td><td>250 V / 0.5 A (AC) / 30 V / 3 A (DC)</td></tr> <tr><td>Dimensions</td><td></td><td>See diagram - 2TE (EN43880)</td></tr> <tr><td>Weight</td><td></td><td>0.255 kg</td></tr> </tbody> </table>   |   | Technology           |  | MOV                                      | SPD configuration                 |  | 3-phase+Neutral     | Connection to Network     |  | By screw terminals: L/N = 1.5-10mm <sup>2</sup> (16mm <sup>2</sup> rigid) or PE = 2.5-25mm <sup>2</sup> (35mm <sup>2</sup> rigid) | Format                    |    | Plug-in 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  |           | 2 mechanical indicators - Red/Green | Spare module(s)   |                 | MDAC40C-40-150 | Remote signaling of disconnection |  | Output on changeover contact | Wiring for remote signaling                      |         | 1.5 mm <sup>2</sup> max. | Max. Voltage/Current for remote signaling        |         | 250 V / 0.5 A (AC) / 30 V / 3 A (DC) | Dimensions                       |       | See diagram - 2TE (EN43880) | Weight |  | 0.255 kg |
| Technology  |  | MOV   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| SPD configuration   |  | 3-phase+Neutral   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Connection to Network   |  | By screw terminals: L/N = 1.5-10mm <sup>2</sup> (16mm <sup>2</sup> rigid) or PE = 2.5-25mm <sup>2</sup> (35mm <sup>2</sup> rigid) |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Format  |  | Plug-in 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   |  | 2 mechanical indicators - Red/Green   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Spare module(s)   |  | MDAC40C-40-150  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Remote signaling of disconnection   |  | Output on changeover contact  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Wiring for remote signaling   |  | 1.5 mm <sup>2</sup> max.  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Max. Voltage/Current for remote signaling   |  | 250 V / 0.5 A (AC) / 30 V / 3 A (DC)  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Dimensions  |  | See diagram - 2TE (EN43880)   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Weight  |  | 0.255 kg  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | <b>Disconnectors</b>   |   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | <table border="1"> <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> <tr><td>Back-up protection device</td><td></td><td>50 A min. - 125 A max. - Fuses Type gG</td></tr> </tbody> </table>   |   | Thermal disconnector |  | Internal                                 | Installation ground fault breaker |  | Type 'S' or delayed | Back-up protection device |  | 50 A min. - 125 A max. - Fuses Type gG  |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Thermal disconnector  |  | Internal  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Installation ground fault breaker   |  | Type 'S' or delayed   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Back-up protection device   |  | 50 A min. - 125 A max. - Fuses Type gG  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | <b>Standards</b>   |   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | <table border="1"> <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>KEMA</td></tr> </tbody> </table>  |   | Standards compliance |  | IEC 61643-11 / EN 61643-11 / UL1449 ed.5 | Certification                     |  | KEMA                |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Standards compliance  |  | IEC 61643-11 / EN 61643-11 / UL1449 ed.5  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
| Certification   |  | KEMA  |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | <b>Part number</b>   |   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |
|   | 821510122  |   |                      |  |  |                                   |  |                     |                           |  |   |                           |    |                     |   |    |                                   |  |    |                        |  |     |           |                   |    |      |  |       |                               |  |           |                                     |   |                 |                |                                   |  |                              |  |         |                          |  |         |                                      |                                  |       |                             |        |  |          |

