



# 1-pair DIN rail plug-in Data surge protector

# CITEL

## DLAH-48D3



- ▶ Pluggable surge protection for «DIN» mounting
- ▶ Coordination inductor
- ▶ Up to 2.4 A line current
- ▶ Remote supply version
- ▶ All types of Telephone and Data lines
- ▶ Shield wire protection
- ▶ IEC 61643-21 compliance



|   |   |   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
|---|---|---|------------|--|--------------------|----------------------|----|-----------------|---------------------------|----|---|----------------|--------|-----------------|----------------|--|-----------------------------------|-------------------------|----|------------------------|---|------------------|-----------|-------------------|--|------|---|--------|---------------|---|------------------|---|---|--------------------|------------|--|---------------------|-------------|-----------------|--|-------|
|   | <b>Electrical Characteristics</b>   |   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| <p>G: 3-electrode gas tube<br/>Gb: 2-electrode gas tube<br/>L: Inductor<br/>D: Clamping diode</p> | <table border="1"> <tr><td>Network</td><td></td><td>RNIS-T0, 48 V line</td></tr> <tr><td>Nominal line voltage</td><td>Un</td><td>48 V</td></tr> <tr><td>Max. DC operating voltage</td><td>Uc</td><td>53 Vdc</td></tr> <tr><td>Max. frequency</td><td>f max.</td><td>&gt; 3 MHz</td></tr> <tr><td>Insertion loss</td><td></td><td>&lt; 1 dB</td></tr> <tr><td>Max. load current @25°C</td><td>IL</td><td>2.4 A</td></tr> <tr><td>Max. discharge current max. withstand @ 8/20 μs by pole</td><td>I<sub>max</sub></td><td>20 kA</td></tr> <tr><td>Line inductance</td><td></td><td>10uH</td></tr> <tr><td>Protection level @ I<sub>n</sub> (8/20 μs)</td><td>Up L/L</td><td>70 V</td></tr> <tr><td>Impulse current 2 x 10/350μs Test - D1 Category</td><td>I<sub>imp</sub></td><td>5 kA</td></tr> <tr><td>Line/Line Nominal discharge current C2 Category</td><td>I<sub>n</sub> L/L</td><td>5 kA</td></tr> <tr><td>Nominal Discharge Current, X-C (Line/Earth) 8/20μs Test x 10 - C2 Category</td><td>I<sub>n</sub> L/PE</td><td>5 kA</td></tr> <tr><td>Line resistance</td><td></td><td>0 Ohm</td></tr> </table> |   | Network    |  | RNIS-T0, 48 V line | Nominal line voltage | Un | 48 V            | Max. DC operating voltage | Uc | 53 Vdc  | Max. frequency | f max. | > 3 MHz         | Insertion loss |  | < 1 dB                            | Max. load current @25°C | IL | 2.4 A                  | Max. discharge current max. withstand @ 8/20 μs by pole | I <sub>max</sub> | 20 kA     | Line inductance   |  | 10uH | Protection level @ I <sub>n</sub> (8/20 μs) | Up L/L | 70 V          | Impulse current 2 x 10/350μs Test - D1 Category | I <sub>imp</sub> | 5 kA                                    | Line/Line Nominal discharge current C2 Category | I <sub>n</sub> L/L | 5 kA       | Nominal Discharge Current, X-C (Line/Earth) 8/20μs Test x 10 - C2 Category | I <sub>n</sub> L/PE | 5 kA        | Line resistance |  | 0 Ohm |
| Network   |   | RNIS-T0, 48 V line                                      |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Nominal line voltage  | Un  | 48 V  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Max. DC operating voltage   | Uc  | 53 Vdc  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Max. frequency  | f max.  | > 3 MHz   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Insertion loss  |   | < 1 dB  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Max. load current @25°C   | IL  | 2.4 A   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Max. discharge current max. withstand @ 8/20 μs by pole   | I <sub>max</sub>  | 20 kA   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Line inductance   |   | 10uH  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Protection level @ I <sub>n</sub> (8/20 μs)   | Up L/L  | 70 V  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Impulse current 2 x 10/350μs Test - D1 Category   | I <sub>imp</sub>  | 5 kA  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Line/Line Nominal discharge current C2 Category   | I <sub>n</sub> L/L  | 5 kA  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Nominal Discharge Current, X-C (Line/Earth) 8/20μs Test x 10 - C2 Category                        | I <sub>n</sub> L/PE   | 5 kA  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Line resistance   |   | 0 Ohm   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
|   | <b>Mechanical Characteristics</b>   |   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
|   | <table border="1"> <tr><td>Technology</td><td></td><td>GDT+Clamping diode</td></tr> <tr><td>SPD configuration</td><td></td><td>1-pair+shielded</td></tr> <tr><td>Connection to Network</td><td></td><td>By screw terminal: cross section 0.4-1.5mm<sup>2</sup></td></tr> <tr><td>Format</td><td></td><td>Plug-in DIN 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>Short-circuit</td></tr> <tr><td>Disconnection indicator</td><td></td><td>Transmission interrupt - default mode 2</td></tr> <tr><td>Spare module(s)</td><td></td><td>DLAHM-48D3</td></tr> <tr><td>Dimensions</td><td></td><td>See diagram</td></tr> </table>   |   | Technology |  | GDT+Clamping diode | SPD configuration    |    | 1-pair+shielded | Connection to Network     |    | By screw terminal: cross section 0.4-1.5mm <sup>2</sup> | Format         |        | Plug-in DIN 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                               |        | Short-circuit | Disconnection indicator                         |                  | Transmission interrupt - default mode 2 | Spare module(s)                                 |                    | DLAHM-48D3 | Dimensions   |                     | See diagram |                 |  |       |
| Technology  |   | GDT+Clamping diode                                      |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| SPD configuration   |   | 1-pair+shielded   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Connection to Network   |   | By screw terminal: cross section 0.4-1.5mm <sup>2</sup> |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Format  |   | Plug-in DIN 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   |   | Short-circuit   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Disconnection indicator   |   | Transmission interrupt - default mode 2                 |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Spare module(s)   |   | DLAHM-48D3  |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
| Dimensions  |   | See diagram   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
|   | <b>Standards</b>  |   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
|   | Standards compliance IEC 61643-21 / EN 61643-21 / UL497A  |   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
|   | <b>Part number</b>  |   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |
|   | 641004  |   |            |  |                    |                      |    |                 |                           |    |   |                |        |                 |                |  |                                   |                         |    |                        |   |                  |           |                   |  |      |   |        |               |   |                  |   |   |                    |            |  |                     |             |                 |  |       |

