



# CITEL

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

### DLA-24-IS



- High current data transmission
- Common mode and differential mode protection
- Data lines, including those isolated from Earth
- Compact DIN rail enclosure, high density protection
- Protection of shield wire
- Plug-out with line cut-off
- Location and test categories: D1, C2, C3
- IEC 61643-21 compliance



|   |  |   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
|---|--|---|---------|--|---|----------------------|----|------|---------------------------|----|--------|--------------------------------|--------|-------------|----------------|--|--------|---|------------------|-------|--|----|------|---|----|-------|--|------------------|------|--|----------------|-------|--|----------------|------|-------------------|----------------|-------|-------------------------|--|---------|--|---|---------|
|   | <b>Electrical Characteristics</b>  |   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| <p>G: 3-electrode gas tube<br/>Gb: 2-electrode gas tube<br/>D: Clamping diode</p>           | <table border="1"> <tr> <td>Network</td> <td></td> <td>Floating applications, E.g: 4-20mA or 24 V line</td> </tr> <tr> <td>Nominal line voltage</td> <td>Un</td> <td>24 V</td> </tr> <tr> <td>Max. DC operating voltage</td> <td>Uc</td> <td>28 Vdc</td> </tr> <tr> <td>Max. frequency, in the channel</td> <td>f max.</td> <td>DC to 3 MHz</td> </tr> <tr> <td>Insertion loss</td> <td></td> <td>&lt; 1 dB</td> </tr> <tr> <td>Max. discharge current<br/><i>max. withstand @ 8/20 μs, X-C (Line/Earth)</i></td> <td>I<sub>max</sub></td> <td>20 kA</td> </tr> <tr> <td>Protection Level<br/><i>C3 category (10/1000μs), 300 applications@10 A, X-X (Line/Line)</i></td> <td>Up</td> <td>40 V</td> </tr> <tr> <td>Protection level<br/><i>C3 category (10/1000μs), 300 applications@10 A, X-C (Line/Earth)</i></td> <td>Up</td> <td>650 V</td> </tr> <tr> <td>Impulse current<br/><i>D1 category (10/350μs), 2 applications, X-C (Line/Earth)</i></td> <td>I<sub>imp</sub></td> <td>5 kA</td> </tr> <tr> <td>Nominal Discharge Current<br/><i>C2 category (8/20μs), 10 applications, X-X (Line/Line)</i></td> <td>I<sub>n</sub></td> <td>200 A</td> </tr> <tr> <td>Nominal discharge current<br/><i>C2 category (8/20μs), 10 applications X-C (Line/Earth)</i></td> <td>I<sub>n</sub></td> <td>5 kA</td> </tr> <tr> <td>Max. Load current</td> <td>I<sub>L</sub></td> <td>2,4 A</td> </tr> <tr> <td>Line resistance (± 10%)</td> <td></td> <td>4.7 Ohm</td> </tr> <tr> <td>Capacitance<br/><i>@ 1MHz, X-C (Line/Earth)</i></td> <td>C</td> <td>&lt; 50 pF</td> </tr> </table> |   | Network |  | Floating applications, E.g: 4-20mA or 24 V line | Nominal line voltage | Un | 24 V | Max. DC operating voltage | Uc | 28 Vdc | Max. frequency, in the channel | f max. | DC to 3 MHz | Insertion loss |  | < 1 dB | Max. discharge current<br><i>max. withstand @ 8/20 μs, X-C (Line/Earth)</i> | I <sub>max</sub> | 20 kA | Protection Level<br><i>C3 category (10/1000μs), 300 applications@10 A, X-X (Line/Line)</i> | Up | 40 V | Protection level<br><i>C3 category (10/1000μs), 300 applications@10 A, X-C (Line/Earth)</i> | Up | 650 V | Impulse current<br><i>D1 category (10/350μs), 2 applications, X-C (Line/Earth)</i> | I <sub>imp</sub> | 5 kA | Nominal Discharge Current<br><i>C2 category (8/20μs), 10 applications, X-X (Line/Line)</i> | I <sub>n</sub> | 200 A | Nominal discharge current<br><i>C2 category (8/20μs), 10 applications X-C (Line/Earth)</i> | I <sub>n</sub> | 5 kA | Max. Load current | I <sub>L</sub> | 2,4 A | Line resistance (± 10%) |  | 4.7 Ohm | Capacitance<br><i>@ 1MHz, X-C (Line/Earth)</i> | C | < 50 pF |
| Network   |  | Floating applications, E.g: 4-20mA or 24 V line         |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Nominal line voltage  | Un   | 24 V  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Max. DC operating voltage   | Uc   | 28 Vdc  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Max. frequency, in the channel  | f max.   | DC to 3 MHz   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Insertion loss  |  | < 1 dB  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Max. discharge current<br><i>max. withstand @ 8/20 μs, X-C (Line/Earth)</i>                 | I <sub>max</sub>   | 20 kA   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Protection Level<br><i>C3 category (10/1000μs), 300 applications@10 A, X-X (Line/Line)</i>  | Up   | 40 V  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Protection level<br><i>C3 category (10/1000μs), 300 applications@10 A, X-C (Line/Earth)</i> | Up   | 650 V   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Impulse current<br><i>D1 category (10/350μs), 2 applications, X-C (Line/Earth)</i>          | I <sub>imp</sub>   | 5 kA  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Nominal Discharge Current<br><i>C2 category (8/20μs), 10 applications, X-X (Line/Line)</i>  | I <sub>n</sub>   | 200 A   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Nominal discharge current<br><i>C2 category (8/20μs), 10 applications X-C (Line/Earth)</i>  | I <sub>n</sub>   | 5 kA  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Max. Load current   | I <sub>L</sub>   | 2,4 A   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Line resistance (± 10%)   |  | 4.7 Ohm   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Capacitance<br><i>@ 1MHz, X-C (Line/Earth)</i>  | C  | < 50 pF   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| <b>Mechanical Characteristics</b>   |  |   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Technology  |  | GDT+Clamping diode                                      |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| SPD configuration   |  | 1-pair+shielded   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Connection to Network   |  | By screw terminal: cross section 0.5-2.5mm <sup>2</sup> |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Mounting  |  | Symmetrical rail 35 mm (EN 60715)                       |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Housing material  |  | Thermoplastic UL94 V-0                                  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Operating and storage temperature   |  | -40/+85°C   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Ingress Protection rating   |  | IP20 (NEMA 2)   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Failsafe mode   |  | Short-circuit   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Disconnection indicator   |  | Transmission interrupt - default mode 2                 |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Spare module(s)   |  | DLAM-24-IS  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Dimensions  |  | See diagram   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Weight  |  | 0.087 kg  |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| <b>Standards</b>  |  |   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| Standards compliance  |  | IEC 61643-21 / EN 61643-21                              |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| <b>Part number</b>  |  |   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |
| <b>640153</b>   |  |   |         |  |   |                      |    |      |                           |    |        |                                |        |             |                |  |        |   |                  |       |  |    |      |   |    |       |  |                  |      |  |                |       |  |                |      |                   |                |       |                         |  |         |  |   |         |

