



CITEL

B280-12D3



- ↳ Hybrid SAD-GDT Technology
- ↳ UL497B LISTED
- ↳ 20kA I<sub>max</sub>
- ↳ 5kA I<sub>mp</sub>
- ↳ 5kA I<sub>n</sub>



|   |  |   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
|---|--|---|---------------|--|---------------|---------------------------|----------------|---|----------------|--------|-------------------|----------------|--|---|--------------------|--|--|--|----------------|---------|---|----------------|------|-------------------|--|----------------|----------|-----|------------|----------|--|-----------------------|-------------------------|-----|---------------|-------------|-----|-------------|-------------|-----|----------|------------------|-----|-----|------|-----|----------|--------------------------------------|------|---|----------------------------|------|----|------------------------------|------|---|------------|--------|-------------|
|   | <b>Electrical Characteristics</b>  |   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| <p>G: 3-electrode gas tube<br/>R: Resistor<br/>D3: 3-pole clamping diode</p>  | <table border="1"> <tr> <td>Network</td> <td></td> <td>RS232, RS485</td> </tr> <tr> <td>Max. DC operating voltage</td> <td>U<sub>c</sub></td> <td>15 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>Protection mode(s)</td> <td></td> <td>Common/Differential mode</td> </tr> <tr> <td>Protection Level<br/>C3 (10/1000µs), 300 applications@10 A, X-X (Line/Line)</td> <td>U<sub>p</sub></td> <td>30 V</td> </tr> <tr> <td>Protection level<br/>C3 (10/1000µs), 300 applications@10 A, X-C (Line/Earth)</td> <td>U<sub>p</sub></td> <td>20 V</td> </tr> <tr> <td>DATA SPD TYPE</td> <td></td> <td>UL497B LISTED</td> </tr> <tr> <td>VOLTS</td> <td>(V)</td> <td>12</td> </tr> <tr> <td>WIRES</td> <td></td> <td>4W+GROUND</td> </tr> <tr> <td>LINE CURRENT MAX</td> <td>(A)</td> <td>0.3</td> </tr> <tr> <td>AMBIENT MIN</td> <td>(C)</td> <td>-50</td> </tr> <tr> <td>AMBIENT MAX</td> <td>(C)</td> <td>+85</td> </tr> <tr> <td>RESIDUAL VOLTAGE</td> <td>(V)</td> <td>20</td> </tr> <tr> <td>MCOV</td> <td>(V)</td> <td>15/72/72</td> </tr> <tr> <td>I<sub>N</sub><br/>10 impulses 8/20µs</td> <td>(kA)</td> <td>5</td> </tr> <tr> <td>I<sub>MAX</sub><br/>8/20µs</td> <td>(kA)</td> <td>20</td> </tr> <tr> <td>I<sub>imp</sub><br/>10/350µs</td> <td>(kA)</td> <td>5</td> </tr> <tr> <td>DATA SPEED</td> <td>(Mbps)</td> <td>up to 10MHz</td> </tr> </table> |   | Network       |  | RS232, RS485  | Max. DC operating voltage | U <sub>c</sub> | 15 Vdc  | Max. frequency | f max. | > 3 MHz           | Insertion loss |  | < 1 dB  | Protection mode(s) |  | Common/Differential mode                           | Protection Level<br>C3 (10/1000µs), 300 applications@10 A, X-X (Line/Line) | U <sub>p</sub> | 30 V    | Protection level<br>C3 (10/1000µs), 300 applications@10 A, X-C (Line/Earth) | U <sub>p</sub> | 20 V | DATA SPD TYPE     |  | UL497B LISTED  | VOLTS    | (V) | 12         | WIRES    |  | 4W+GROUND             | LINE CURRENT MAX        | (A) | 0.3           | AMBIENT MIN | (C) | -50         | AMBIENT MAX | (C) | +85      | RESIDUAL VOLTAGE | (V) | 20  | MCOV | (V) | 15/72/72 | I <sub>N</sub><br>10 impulses 8/20µs | (kA) | 5 | I <sub>MAX</sub><br>8/20µs | (kA) | 20 | I <sub>imp</sub><br>10/350µs | (kA) | 5 | DATA SPEED | (Mbps) | up to 10MHz |
| Network   |  | RS232, RS485  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Max. DC operating voltage   | U <sub>c</sub>   | 15 Vdc  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Max. frequency  | f max.   | > 3 MHz   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Insertion loss  |  | < 1 dB  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Protection mode(s)  |  | Common/Differential mode                                |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Protection Level<br>C3 (10/1000µs), 300 applications@10 A, X-X (Line/Line)  | U <sub>p</sub>   | 30 V  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Protection level<br>C3 (10/1000µs), 300 applications@10 A, X-C (Line/Earth)   | U <sub>p</sub>   | 20 V  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| DATA SPD TYPE   |  | UL497B LISTED   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| VOLTS   | (V)  | 12  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| WIRES   |  | 4W+GROUND   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| LINE CURRENT MAX  | (A)  | 0.3   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| AMBIENT MIN   | (C)  | -50   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| AMBIENT MAX   | (C)  | +85   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| RESIDUAL VOLTAGE  | (V)  | 20  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| MCOV  | (V)  | 15/72/72  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| I <sub>N</sub><br>10 impulses 8/20µs  | (kA)   | 5   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| I <sub>MAX</sub><br>8/20µs  | (kA)   | 20  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| I <sub>imp</sub><br>10/350µs  | (kA)   | 5   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| DATA SPEED  | (Mbps)   | up to 10MHz   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| <b>Mechanical Characteristics</b>   |  |   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| <table border="1"> <tr> <td>Technology</td> <td></td> <td>GDT+TVS diode</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>Wall mounting box</td> </tr> <tr> <td>Failsafe mode</td> <td></td> <td>Short-circuit - transmission cut-off - fault mode 2</td> </tr> <tr> <td>Weight</td> <td></td> <td>0.12 kg</td> </tr> <tr> <td>TECHNOLOGY</td> <td></td> <td>SAD-GDT</td> </tr> <tr> <td>NETWORK CONFIGURATION</td> <td></td> <td>4W+G</td> </tr> <tr> <td>CONNECTION METHOD</td> <td></td> <td>RJ11 Connector</td> </tr> <tr> <td>MOUNTING</td> <td></td> <td>Wall mount</td> </tr> <tr> <td>MATERIAL</td> <td></td> <td>Thermoplastic UL94-V0</td> </tr> <tr> <td>NEMA RATING (IP RATING)</td> <td></td> <td>NEMA 2 (IP20)</td> </tr> <tr> <td>DIMENSIONS</td> <td></td> <td>See diagram</td> </tr> <tr> <td>WEIGHT</td> <td></td> <td>0.30 lbs</td> </tr> <tr> <td>SPARE PART</td> <td></td> <td>n/a</td> </tr> </table> |  |   | Technology    |  | GDT+TVS diode | Connection to Network     |                | By screw terminal: cross section 0.4-1.5mm <sup>2</sup> | Format         |        | Wall mounting box | Failsafe mode  |  | Short-circuit - transmission cut-off - fault mode 2 | Weight             |  | 0.12 kg  | TECHNOLOGY   |                | SAD-GDT | NETWORK CONFIGURATION   |                | 4W+G | CONNECTION METHOD |  | RJ11 Connector | MOUNTING |     | Wall mount | MATERIAL |  | Thermoplastic UL94-V0 | NEMA RATING (IP RATING) |     | NEMA 2 (IP20) | DIMENSIONS  |     | See diagram | WEIGHT      |     | 0.30 lbs | SPARE PART       |     | n/a |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Technology  |  | GDT+TVS diode   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Connection to Network   |  | By screw terminal: cross section 0.4-1.5mm <sup>2</sup> |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Format  |  | Wall mounting box                                       |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Failsafe mode   |  | Short-circuit - transmission cut-off - fault mode 2     |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Weight  |  | 0.12 kg   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| TECHNOLOGY  |  | SAD-GDT   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| NETWORK CONFIGURATION   |  | 4W+G  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| CONNECTION METHOD   |  | RJ11 Connector  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| MOUNTING  |  | Wall mount  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| MATERIAL  |  | Thermoplastic UL94-V0                                   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| NEMA RATING (IP RATING)   |  | NEMA 2 (IP20)   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| DIMENSIONS  |  | See diagram   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| WEIGHT  |  | 0.30 lbs  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| SPARE PART  |  | n/a   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| <b>Standards</b>  |  |   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| <table border="1"> <tr> <td>Certification</td> <td></td> <td>UL 497B</td> </tr> <tr> <td>UL STANDARD</td> <td></td> <td>UL497B</td> </tr> <tr> <td>UL CATEGORY</td> <td></td> <td>QVGQ</td> </tr> <tr> <td>UL FILE NUMBER</td> <td></td> <td>E184939</td> </tr> <tr> <td>STANDARDS</td> <td></td> <td>IEC 61643-11, NOM-003-SCFI-2014, NOM-001-SCFI-1993</td> </tr> <tr> <td>ENVIRONMENTAL STANDARDS</td> <td></td> <td>ROHS</td> </tr> </table>  |  |   | Certification |  | UL 497B       | UL STANDARD               |                | UL497B  | UL CATEGORY    |        | QVGQ              | UL FILE NUMBER |  | E184939   | STANDARDS          |  | IEC 61643-11, NOM-003-SCFI-2014, NOM-001-SCFI-1993 | ENVIRONMENTAL STANDARDS  |                | ROHS    |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| Certification   |  | UL 497B   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| UL STANDARD   |  | UL497B  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| UL CATEGORY   |  | QVGQ  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| UL FILE NUMBER  |  | E184939   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| STANDARDS   |  | IEC 61643-11, NOM-003-SCFI-2014, NOM-001-SCFI-1993      |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| ENVIRONMENTAL STANDARDS   |  | ROHS  |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| <b>Part number</b>  |  |   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |
| 72772   |  |   |               |  |               |                           |                |   |                |        |                   |                |  |   |                    |  |  |  |                |         |   |                |      |                   |  |                |          |     |            |          |  |                       |                         |     |               |             |     |             |             |     |          |                  |     |     |      |     |          |                                      |      |   |                            |      |    |                              |      |   |            |        |             |

