



## HDT1/24D

- Designed for the protection of data and communication lines against longitudinal and transverse surge effects.
- Pluggable version.
- No interruption of communication bus when the module is removed.
- One pair or two pairs lines.
- Contains both 1st and 2nd stage of protection.
- High transmission speed up to 100 Mbit/s.
- Suitable for use in industrial applications, especially in low-voltage ESS, FDAS systems and also in measurement and control systems.

| Type   |             | HDT1/24D                  |
|--|-------------|---------------------------|
| Testing category according to IEC 61643-21:2000 and EN 61643-21:2001 |             | C1, C2, C3, D1            |
| Number of pairs  |             | 1                         |
| Connector type   |             | Screw terminals           |
| Rated operating DC voltage   | $U_N$       | 0 ÷ 24 V                  |
| Maximum continuous operating voltage DC                              | $U_C$       | 28.8 V                    |
| Rated load current   | $I_L$       | 0.5 A                     |
| C1 Voltage protection level at $I_n$ (line/PE)                       | $U_p$       | < 350 V                   |
| C1 Voltage protection level at $I_n$ (line/line)                     | $U_p$       | < 150 V                   |
| C1 Nominal discharge current (8/20)                                  | $I_n$       | 1 kA                      |
| C2 Voltage protection level at $I_n$ (line/PE)                       | $U_p$       | < 180 V                   |
| C2 Voltage protection level at $I_n$ (line/line)                     | $U_p$       | < 165 V                   |
| C2 Nominal discharge current (8/20)                                  | $I_n$       | 15 kA                     |
| C3 Voltage protection level at 1 kV/μs                               | $U_p$       | < 50 V                    |
| D1 Impulse discharge current (10/350) line/PE                        | $I_{imp}$   | 2.5 kA                    |
| D1 Total impulse discharge current (10/350)                          | $I_{Total}$ | 5 kA                      |
| Response time  | $t_A$       | < 30 ns                   |
| Data rate  |             | 100 Mbit/s                |
| Bandwidth  | B           | 0 ÷ 100 MHz               |
| Series impedance per line  |             | 1.8 Ω                     |
| Parasitic capacitance  | C           | < 0.04 nF                 |
| Lightning protection zone  |             | LPZ 1-2, LPZ 2-3          |
| Housing material   |             | Polyamid PA6, UL94 V-0    |
| Degree of protection   |             | IP20                      |
| Operating temperature  | θ           | -40 ÷ 55 °C               |
| Clamp fastening range (solid conductor)                              |             | 0.2 ÷ 1.5 mm <sup>2</sup> |
| Tightening moment  |             | 0,5 Nm                    |
| Installation   |             | On DIN rail 35 mm         |
| Modular width  |             | 1 TE                      |
| Operating position   |             | Any                       |
| Remote signalling  |             | No                        |

| Type   |   | HDT1/24D             |
|--|---|----------------------|
| Modular design   |   | Yes                  |
| Article number of spare module   |   | 56 036/M             |
| Lifetime   |   | > 100 000 h          |
| <b>Designed according to standards</b>   |   |                      |
| Requirements and test methods for SPDs connected to telecommunications and signalling networks |   | IEC 61643-21:2000    |
| Safety of Flammability of Plastic Materials  |   | UL 94                |
| <b>Application standards</b>   |   |                      |
| Protection against lightning   |   | IEC 62305:2010       |
| <b>Ordering, packaging and additional data</b>   |   |                      |
| Mass   | m | 69 g                 |
| Mass (including the packaging)   | m | 80 g                 |
| Packaging dimensions (H x W x D)   |   | 26 x 98 x 73 mm      |
| Packaging value  | V | 0.19 dm <sup>3</sup> |
| ETIM group   |   | EG000021             |
| ETIM class   |   | EC000943             |
| Customs tariff no.   |   | 85363010             |
| EAN code   |   | 8590681167748        |
| <b>Art. number</b>   |   | <b>56 036</b>        |



The link in the QR code leads to the online presentation of the HDT1/24D. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit [www.hakel.com](http://www.hakel.com)



### Internal diagram

