



HDT1/12C

- 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.
  - The HDT\*/\*C range, in addition, contains a gas discharge tube between the PE and SH (shield) terminals for their galvanic isolation.
  - Suitable for use in industrial applications, especially in low-voltage ESS, FDAS systems and also in measurement and control systems.

Type		HDT1/12C
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 ÷ 12 V
Maximum continuous operating voltage DC	$U_C$	14.4 V
Rated load current	$I_L$	0.5 A
C1 Voltage protection level at $I_n$ (line/PE)	$U_p$	< 250 V
C1 Voltage protection level at $I_n$ (line/line)	$U_p$	< 50 V
C1 Nominal discharge current (8/20)	$I_n$	1 kA
C2 Voltage protection level at $I_n$ (line/PE)	$U_p$	< 450 V
C2 Voltage protection level at $I_n$ (line/line)	$U_p$	< 55 V
C2 Nominal discharge current (8/20)	$I_n$	15 kA
C3 Voltage protection level at 1 kV/μs (line/PE)	$U_p$	< 28 V
C3 Voltage protection level at 1 kV/μs (line/line)	$U_p$	< 18 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		1 Mbit/s
Bandwidth	B	0 ÷ 1 MHz
Series impedance per line		0.8 Ω
Parasitic capacitance	C	< 1.5 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

Type		HDT1/12C
Remote signalling		No
Pluggable version		Yes
Article number of spare module		56 019/M
Lifetime		> 100 000 h
Designed according to standards		
Requirements and test methods for SPDs connected to telecommunications and signalling networks		IEC 61643-21:2000
Safety of Flammability of Plastic Materials		UL 94
Application standards		
Protection against lightning		IEC 62305:2010
Ordering, packaging and additional data		
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		8590681167557
Art. number		56 019



**The link in the QR code** leads to the online presentation of the **HD1/12C**.  
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

