

DT-TELE-SHDSL Surge Protector

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DSL Modem Surge Protector

- Protection for SHDSL telecommunication interfaces
- Protective adapter for two signal pairs via RJ45 (RJ12) connector or screwed connector
- Sturdy metal housing
- Two SHDSL ports

The DT-TELE-SHDSL Surge Protector was designed to meet the special requirements of SHDSL data transmission. It is specifically designed to provide **Lightning, RFI, ESD and transient surge protection** for maximum data security with minimum signal attenuation.



Surge protection for SHDSL systems

Reliable telecommunications are indispensable in today's industry. The sensitive systems used in these cases work with high frequencies at low signal levels and are networked over a wide area. Surge voltages here quickly lead to largescale failures and, in the worst-case scenario, data loss. The SHDSL Surge Protector takes the form of an adapter that can be **easily installed between incoming telecommunications cables and a modem**. The pluggable connection ensures fast and flexible installation and only needs to be grounded by way of the black cable or DIN rail base.

Attachment plug with surge protection for two SHDSL telecommunications interfaces (ports). Connection: RJ45 (RJ12/RJ11) and plug-in screw terminal block (COMBICON). Alternatively, can be snapped onto a DIN rail.



DT-TELE-SHDS Technical Specifications

Ambient Conditions	
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Protective circuit	
IEC test classification	B2

	C1
	C2
	C3
	D1
Maximum continuous voltage UC	185 V DC
Rated current	≤ 380 mA (25 °C)
Operating effective current IC at UC	≤ 6 μ A
Residual current IPE	≤ 4 μ A
Nominal discharge current In (8/20) μ s (Core-Core)	≤ 5 kA
Nominal discharge current In (8/20) μ s (core-earth)	≤ 5 kA
Total discharge current Itotal (8/20) μ s	10 kA
Nominal pulse current Ian (10/700) μ s (Core-Core)	150 A
Nominal pulse current Ian (10/700) μ s (Core-Earth)	150 A
Voltage protection level Up (core-core)	250 V (B2 - 100 A)
	≤ 250 V (C1 - 500 A)
	≤ 410 V (C2 - 5 kA)
Voltage protection level Up (core-ground)	≤ 580 V (B2 - 100 A)
	≤ 580 V (C1 - 500 A)
Response time tA (core-core)	≤ 100 ns
Response time tA (core-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB ($\leq 2,8$ MHz / 100 Ω)
	typ. 3 dB (≤ 25 MHz / 100 Ω)
Cut-off frequency fg (3 dB), sym. in 100 Ohm system	25 MHz
Capacity (core-core)	55 pF
Capacity (core-earth)	7 pF

Surge protection fault message	None
Impulse durability (conductor-conductor)	C1 - 1 kV/500 A
Impulse durability (conductor-ground)	B2 - 4 kV/100 A
	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
VDE requirement class	B2
	C1
	C2
	C3
	D1
Maximum continuous voltage UC	130 V AC
Pulse discharge current Iimp (10/350) µs	2.5 kA (Number of pulses category D1)
Nominal pulse current Ian (10/1000) µs (Core-Core)	100 A
Nominal pulse current Ian (10/1000) µs (Core-Earth)	100 A
Voltage protection level Up (core-core)	≤ 250 V (C3 - 100 A)
Voltage protection level Up (core-ground)	≤ 790 V (C2 - 5 kA)
	≤ 300 V (C3 - 100 A)
Resistance in series	3.3 Ω 20 %
Impulse durability (conductor-conductor)	C2 - 10 kV/5 kA
	B2 - 4 kV/100 A
Impulse durability (conductor-ground)	D1 - 1 kA

Standards and Regulations

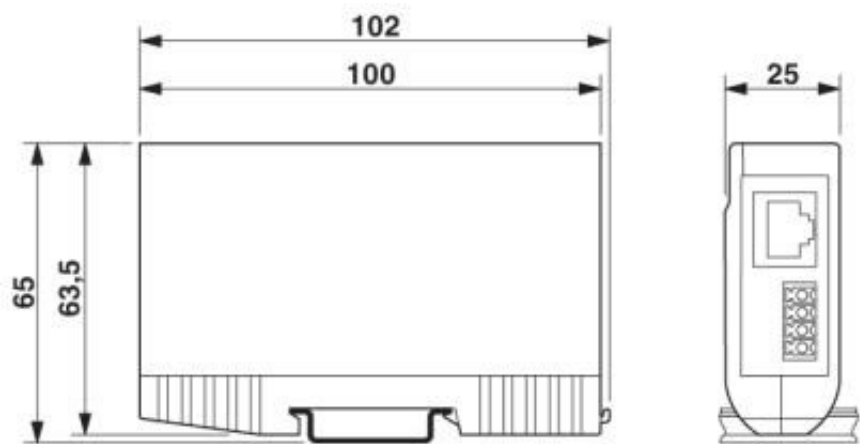
Standards/specifications	IEC 61643-21 2002
	IEC 61643-21

General

Housing material	Zinc die-cast
Color	silver/black
Mounting type	Connection-specific attachment plug and DIN rail, 35 mm
Design	Attachment plug for DIN rail mounting
Number of positions	4
Direction of action	Line-Line & Line-Ground/Shield
Standards for clearances and creepage distances	IEC 60664-1
	VDE 0110-1
Connection, equipotential bonding	
Connection method	Cable connection/DIN rail
Connection data	
Connection method	RJ45/COMBICON
Connection method IN	RJ45 socket
Connection method OUT	RJ45 socket
Connection method IN	MC 1,5/4
Connection method OUT	MC 1,5/4
Connection technology	Screw connection
Screw thread	M2
Tightening torque	0.22 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section solid	0.14 mm² ... 1.5 mm²
Conductor cross section AWG	28 ... 16
Dimensions	
Height	103 mm
Width	25 mm

Depth

63 mm



Environmental Product Compliance

Reach and RoHS Compliant

Reach and RoHS Compliant

Approvals

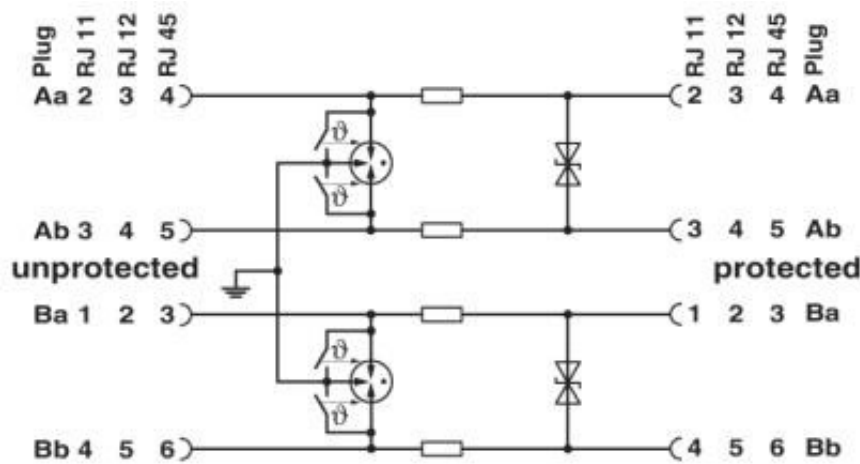
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EAC

Commercial data

Packing unit	1
Weight per piece	320.0 g
Country of origin	Germany

Circuit Diagram



Protection Against Surge Voltage

Digital telecommunications systems (DSL) are safely protected against surge voltage by SHDSL Surge Protectors. Due to the high bandwidth of the surge protectors, the transmission signal is not influenced. Use is possible up to DSL 16000. All signal wires and the ground conductor must be connected to the surge protector according to the connection scheme. Any DIN rail should be grounded.

