

COMBINED OVERVOLTAGE PROTECTION

SOCKET ADAPTERS $U_{oc}=10$ kV

[ZPA D](#), [ZPA DF](#), [ZPA DFAX](#), [ZPA DTV](#), [ZPA DEth](#)

Socket adapters ZPA D 10 kV present the overvoltage protection devices of class D (class III), that due to special construction are in compliance with requirements of the latest open-circuit voltage $U_{oc}=10$ kV. The adapters ZPA D 10 kV therefore present a more reliable and effective overvoltage protection than in common used overvoltage protections of class II, because they protect much better within a wider scope of overvoltage events.

USE

ZPA D overvoltage protection socket adapters with class D protection (3rd level of protection) are intended for protecting electronic devices, connected through movable inputs (via cables) to 230V/50Hz (TN-C, TN-S) networks. The adapters do not require specialised installation. They are prepared for use simply by plugging the adapter to a standard 230V socket or DFAX, DEth or DTV adapter also connecting of applicable data cables. The unprotected cable supply is wired to one of a pair of data connectors, the protected device is installed by an additional cable to the second data connector. The correct functioning of the adapter requires that the socket which the device is connected to, meets the STN standards (namely STN 33 2000-4-41 and STN 33 2000-5-54).

TECHNICAL PARAMETERS - Power Supply Unit

Type	ZPA D	ZPA DF	ZPA DFAX	ZPA DTV	ZPA DEth
Nominal voltage	U_N		230 V / 50 Hz		
Nominal current	I_N		16 A		
Combined wave	U_{oc}		10 kV L+N-PE		
Nominal discharge current (8/20)	I_{SN}		2,5 kA L(N) - PE, L - N		
Maximum discharge current (8/20)	I_{Smax}		5 kA L(N) -PE, L - N		
Voltage protection level at 5kA (8/20)	U_{SP}		$\leq 1,5$ kV L(N) - PE, $\leq 1,5$ kV L-N		
Response time	t_A		≤ 25 ns L - N, ≤ 100 ns L(N) - PE		
Backup fuse - circuit breaker			16 A with disconnection chars B, C		
Short-circuit withstand capability			6 kA / 50 Hz		
Degree of protection			IP 20		

Operating State Indication

The adapters are equipped with visual indicators of the state of operation. A green light indicates that power supply is present. A red signal turns on when the thermal disconnect is activated, and therefore signals a loss of protection from the adapter.

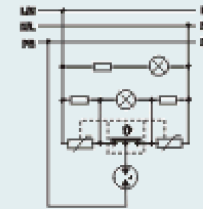
The operating state of the data protectors (DFAX, DEth and DTV adapters) is not signalled, a loss of function from the adapter will be shown by a loss of transmission signal.

Following an overvoltage event exceeding values listed in technical parameters above, or often repeating overvoltage at the upper limits of these parameters, will result in damage to the safety circuits of the adapters. In this case, the damaged adapter should be changed.

ZPA D

DESCRIPTION

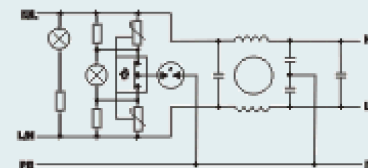
The ZPA D adapter provides for connecting device protection against overvoltage occurring from distributing network.



ZPA DF

DESCRIPTION

The ZPA DF adapter provides the basic protection against overvoltage surges as well as protection against high frequency interference occurring from distributing network.



TECHNICAL PARAMETERS FOR FILTER UNIT

symmetrical attenuation

160 kHz < f < 800 kHz	> 30 dB
800 kHz < f < 30 MHz	> 40 dB
1,2 MHz < f < 25 MHz	> 50 dB

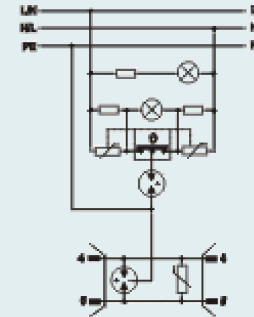
asymmetrical attenuation

0,9 MHz < f < 30 MHz	> 35 dB
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ZPA DFAX

DESCRIPTION

The ZPA DFAX adapter provides basic protection in combination with data input protection for telecommunication equipment (fax, modem, telephones) using analogue interfaces. The input is protected with a gas discharge tube and a varistor. The protected equipment is connected to the adapter via standard RJ-12 2/6 socket.



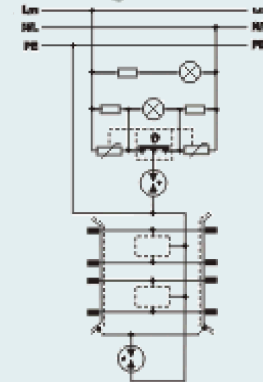
TECHNICAL PARAMETERS FOR ANTENNA UNIT

Nominal voltage	U_N	110 V DC
Max. operating voltage	U_C	130 V DC
Nominal current	I_N	300 mA
Nominal discharge current (8/20)	I_{SN}	1 kA
Maximum discharge current (8/20)	I_{Smax}	2,5 kA
Voltage protection level (at I_{Smax})		
line - line	U_P	< 400 V
line - protected earth	U_P	< 650 V
Series resistance		-
Response time		< 25 ns
Max. frequency	f_{MAX}	3 MHz

ZPA DEth

DESCRIPTION

ZPA DEth provides basic protection in combination with data input protection of devices in Ethernet 100BaseTX computer network. Data input is protected by gas discharge tubes and suppressor diodes in special connection. The protected equipment is attached through RJ45 connectors.



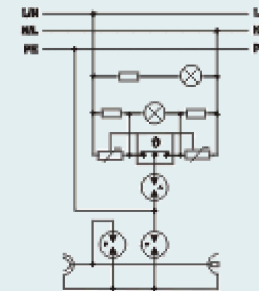
TECHNICAL PARAMETERS FOR DATA UNIT

Nominal discharge current (8/20)	line - line	I_{SN}	300 A
	line - earth	I_{SN}	300 A
	shielding - earth	I_{SN}	2 kA
Maximum discharge current (8/20)	line - line	I_{Smax}	350 A
	line - earth	I_{Smax}	350 A
	shielding - earth	I_{Smax}	2,5 kA
Nominal voltage		U_n	5 V DC
Max. operating voltage		U_C	6 V DC
Voltage protection level (at I_{Smax})	žila - žila, žila - zem	U_P	< 45 V
	tienie - zem	U_P	< 600 V
Serial impedance			
Transfer rate			100 Mbit/s
Response time			< 1 ns

ZPA DTV

DESCRIPTION

ZPA DTV adapter provides basic protection in combination with protection of coaxial antenna leads. It is particularly intended for television sets, tuners, cable television distributions, and FM radio receivers. It contains a powerful gas discharge tube as a protective element of antenna leads. The protected equipment is attached via EC connectors.



TECHNICAL PARAMETERS FOR LINE INIT

Attenuation	a_E	1 db pre $f < 2$ GHz
Nominal discharge current (8/20)	I_{SN}	10 kA
Maximum discharge current (8/20)	I_{Smax}	20 kA
Voltage protection level at 1 kV/ μ s		< 650 V

ORDERING INFORMATION

typ	obj.č.
ZPA D 10kV	92.044
ZPA DF 10kV	92.045
ZPA DFAX 10kV	92.046
ZPA DEth 10kV	92.047
ZPA DTV 10kV	92.048