PROTECTION DEVICES: RS232-9 & RS232-25

RS232 SERIAL PORT TRANSIENT PROTECTION DATAPRO

Introduction

RS232 communications cabling is highly susceptible to induced transient overvoltages caused by lightning strikes and other voltage disturbances. These transients may be directly induced in the cabling or may be caused by differential earth voltages due to mains voltage disturbances.

The Novaris RS232 protector is specially designed for the protection of RS232 systems and incorporates fail-safe circuitry to protect sensitive line driver and receiver cards.

Operation

The RS232 protector is an in-line device that may be inserted in the cable at the equipment or terminal ends to protect either piece of equipment.

For the DB25 connector version, protection is provided by metal oxide varistor elements connected from lines 2, 3, 4, 5, 6, 8, 20 to a common point (line 7, signal ground) and from the common point to line 1 via a gas filled arrestor. Lines 9 to 20 and 22 to 25 are left open circuit.

For the DB9 connector version, protection is provided by metal oxide varistor elements connected from lines 1, 2, 3, 4, 6, 7, 8 to a common point (line 5, signal ground) and from the common point to frame ground via a flying lead with gas filled arrester.

The protectors feature fusable links on each of the protected lines, so should a surge current that exceeds the rating of the metal oxide varistors occur, the link will fuse and open the circuit. The unit is thus fail-safe.

The circuit configuration minimises cross talk between lines and virtually eliminates circuit loading due to component capacitance.

The protectors may be used on all common RS232 systems.

Specifications

Description: Overvoltage protector for RS232 cabling incorporating DB25 and DB9 connectors.

Lines protected: 7 lines.

	SIGNAL	PIN DB9	PIN DB25
TD	Transmitted data	3	2
RD	Received data	2	3
RTS	Request to send	7	4
CTS	Clear to send	8	5
DSR	Data set ready	6	6
CD	Carrier detect	1	8
DTR	Data term. Ready	4	20
SG	Signal ground	5	7
PG	Protective ground	flying lead	1

Protection modes: Transverse and common mode.

Protection stages: Metal Oxide Varistor with fusible link per line. Gas arrestor overvoltage protection signal ground to protective ground / frame.

Clamping voltage: 17V line to signal ground
90V signal ground to frame

Surge withstand: 250A 8/20us impulse rating for MOVs. 5kA 8/20us impulse rating for gas arrester.

Dimensions (mm):
RS232- 9 65L x 15D x 30W
RS232- 25 65L x 15D x 60W

Options

Cat No.	Application
RS232-25	RS232 DB25 plug / socket
RS232-9	RS232 DB9 plug / socket

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Pacific Communications
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DIRECT ALARM SUPPLIES

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