Rail Mounted Surge Suppressors for Factory Data Networks

Series 600

Peradata's data line surge suppressors with VSET™ circuitry are designed for demanding industrial applications. They suppress damaging transient overvoltage pulses which are caused by nearby lightning strikes, power line disturbances, electrostatic discharge (ESD), and industrial load switching.

Models

Model 610 is designed for RS422 and RS485 data lines. It provides common mode (line to ground) surge protection and differential mode (line to line) protection for 2 wire balanced networks.

Model 611 is designed for RS232 data lines. It provides common-mode (line to ground) surge protection for two ground-referenced data lines.

Note - Surge suppressors should be installed in pairs, to protect the equipment at each end of the data cable.

General Features

Series 600 surge suppressors are designed to protect factory data networks and other data communication systems operating at transmissions speeds up to 20 Mbit/sec.

These models are provided in a narrow profile case and can be mounted on standard DIN rails. Connections are made with integral screw terminals. Both models feature high-speed transient response (in nanoseconds) and quick, automatic recovery after each surge. Surface mount component technology provides wide surge conducting paths and low ground impedance for robust suppression performance.

Each model features a three-stage surge suppression network, employing a high capacity gas discharge tube stage and 2100 watt rated, fast-responding, silicon avalanche suppression diodes for each data line. In addition, Model 610 provides an additional stage of differential mode surge protection between the data lines. These models feature low capacitance for minimal data line loading.

Specifications

Clamp Voltage:	+/-7V (RS422/485) +/-25V (RS232)
Response Time:	less than 1 nanosecond
Data Rate:	up to 20 Mbit/sec
Connections:	Screw connections for data and ground
Dimensions:	75mm deep, 109mm high, 22.5 mm wide
Mounting:	Combination foot for 32mm, 35x7.5mm and 35x15mm DIN rails

Peradata's VSET ™ suppression circuitry

When a surge enters your data line, the transient pulses are affected by the inductance and capacitance of your data cable. By the time the surge reaches your equipment it contains many positive and negative high voltage pulses; each as high as several thousand volts. Peradata's ***V**ectored **S**urge **E**nergy **T**echnology*™ circuitry directs the positive and negative surge pulses to separate suppression circuits. This feature greatly improves peak energy absorption and shortens the recovery time of the suppressor.

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Data Communication Products
Surge Suppressors for Factory Data Networks

DIN Rail Mounted Surge Suppressors

Model	Description and Application
610	RS485, 2 wire, balanced signal, narrow profile case, up to 20 Mbit/sec
610-2	RS485, 4 wire, balanced signal, dual narrow profile case, up to 20 Mbit/sec
611	RS232, 2 wire, ground referenced, narrow profile case
621-12	0-20 or 4-20 mA current loop, 12V, 2 wire, HART™, narrow profile case
621-24	0-20 or 4-20 mA current loop, 24V, 2 wire, HART™, narrow profile case
621-48	0-20 or 4-20 mA current loop, 48V, 2 wire, HART™, narrow profile case
630-12	Seriplex™, 12V systems, dual narrow profile case
630-24	Seriplex™, 24V systems, dual narrow profile case
635	Profibus™, Bus Connector with Surge Suppression, DB9 connectors
232SP-8Rxy	RS232, 7 lines, DB25 connectors
232SP-3Rxy	RS232, 3 lines, DB25 connectors
521R	T-1 lines, RJ-45 plug and jack
SP4LR-A	4 wire terminal, RS422/485, up to 38 Kbit/sec
SP4HR-A	4 wire terminal, RS422/485, T1 lines, up to 20 Mbit/sec
SP4LR-C	4 wire terminal, RS232, up to 38 Kbit/sec
SP8LR-A	8 wire terminal, RS422/485, up to 38 Kbit/sec
SP8HR-A	8 wire terminal, RS422/485, T1 lines, up to 20 Mbit/sec
SP8LR-C	8 wire terminal, RS232, up to 38 Kbit/sec
SP12LR-A	12 wire terminal, RS422/485, up to 38 Kbit/sec
SP12HR-A	12 wire terminal, RS422/485, T1 lines, up to 20 Mbit/sec
SP12LR-C	12 wire terminal, RS232, up to 38 Kbit/sec
SP16LR-A	16 wire terminal, RS422/485, up to 38 Kbit/sec
SP16HR-A	16 wire terminal, RS422/485, T1 lines, up to 20 Mbit/sec
SP16LR-C	16 wire terminal, RS232, up to 38 Kbit/sec

RS485

RS232

4-20mA

Seriplex™

Profibus™

DeviceNet™

Hart™

Threaded Tube Surge Suppressors

These surge suppressors protect sensors, transmitters, signal conditioners, etc. and thread directly into the housing of the device being protected. They are enclosed in stainless steel threaded pipe nipples, 1/2 and 3/4 inch trade size, and are available in single-ended or double-ended wiring configurations. The circuitry is completely encapsulated for use in severe environments.

Each model protects two wires of a data line from overvoltage surges that can damage sensitive control equipment. An additional gas tube stage is provided for differential mode surge protection between the data lines. These models feature low capacitance for minimal data line loading. Models are also available with additional surge protection for the shield for those applications where the shield cannot be connected to ground. Connections are made with 12 inch integral leads.

Model	Description
650-1xx	2 wire, 1/2 in. threaded nipple (xx= 12, 24, 48 or 60 volts)
650-2xx	2 wire, 3/4 in. threaded nipple
651-1xx	2 wire, 1/2 in. threaded nipple with end cap
651-2xx	2 wire, 3/4 in. threaded nipple with end cap
652-1xx	2 wire with shield, 1/2 in. threaded nipple
652-2xx	2 wire with shield, 3/4 in. threaded nipple
653-1xx	2 wire with shield, 1/2 in. threaded nipple with end cap
653-2xx	2 wire with shield, 3/4 in. threaded nipple with end cap

Note - Special configurations and custom wiring of these products are available. Contact our office for application assistance.

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