

# DIN-Rail MOUNT

## SURGE SUPPRESSOR SERIES

### SPU-420S SERIES ONE LINE PAIR (2 WIRE)

### SPU-420 SERIES TWO LINE PAIR (4 WIRE)



### FEATURES:

- ▶ Designed for equipment used in 4-20 mA control/monitor loops and communication networks.
- ▶ Protection of a concentrated data line installation is practical due to the vertical universal mounting on any standard DIN-Rail.
- ▶ Fast, direct wire termination to secure wire clamp terminals.
- ▶ Exceeds severity level 4 of IEC/EN 61000-4-4 (Provides 2.5 kA/line of surge protection).
- ▶ Space efficient protector is hermetically sealed and suitable for the most harsh environments.
- ▶ Unique multi-stage design provides the most effective suppression available and requires no additional secondary protection.
- ▶ Automatically resets after each transient. No maintenance is required.
- ▶ Can be used on analog and digital signal/data lines.
- ▶ Sub nanosecond response time stops failures due to lightning, spikes and over-voltage surges while minimizing other electrical noise.
- ▶ Superior protection at an affordable price.

### Applications:

The SPU-420 Series is designed to protect measurement and process control equipment, 4-20 mA loop instrumentation, data processing instrumentation equipment and telecommunication equipment, etc. This Series may be used on analog or digital signal/data lines, RS-422, RS-485 and RS-232 lines.

Select the model according to the operating voltage found on the reverse side of this data sheet.

Select the model SPU-420S Series or SPR-42US Series for single pair (2 wire) applications. The SPU-420 Series is used in 2 pair (4 wire) applications while the SPU-120 is used for DIN-Rail 120VAC line protection.

### Typical Installation:

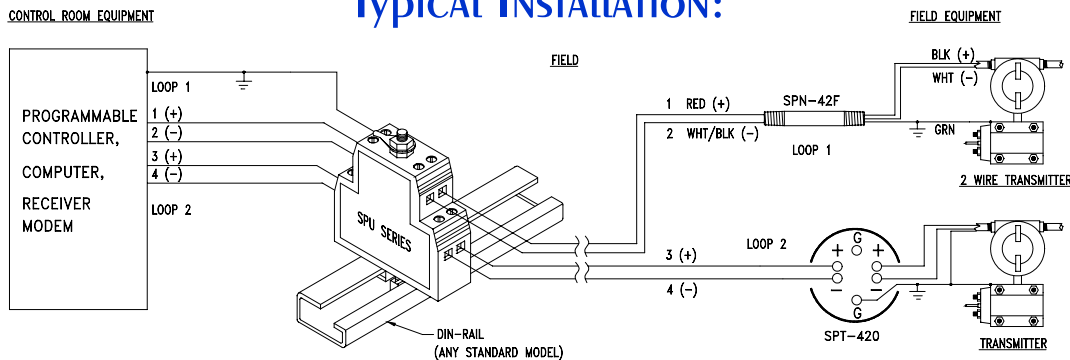
Mount the SPU-420 Series suppressor on any standard DIN-Rail. Connect each incoming line pair to the suppressor as indicated. Connect the facility "clean" line pair(s) to the equipment and dress away from incoming lines. The suppressor must be connected to a good earth ground. Keep the ground wire (#12 AWG or larger) short and place the suppressor as near the equipment it is to protect as possible. Equipment ground and suppressor ground should be common.

# SPU-420 SERIES OPERATING SPECIFICATIONS:

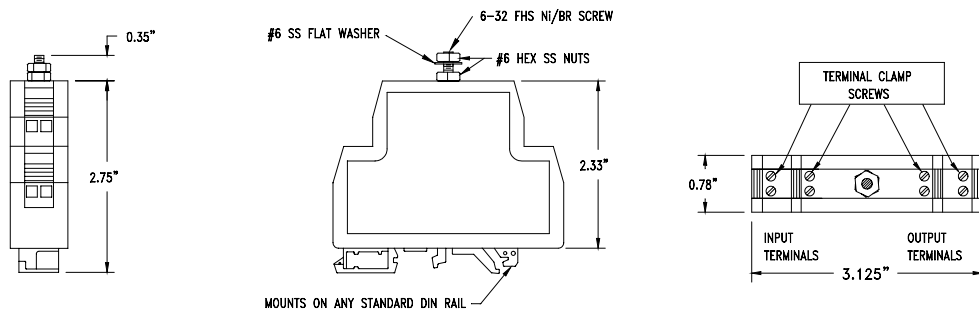
Specifications	SPU-42005	SPU-42014	SPU-42025	SPU-42028	SPU-42036	SPU-42050	SPU-42060
"RS" Applications	N/A	RS-422 RS-485	RS-232	N/A	N/A	N/A	N/A
Operating Voltage	5 Volts	12 Volts	24 Volts	28 Volts	36 Volts	50 Volts	60 Volts
Maximum Operation Voltage	6 Volts	14 Volts	27 Volts	30 Volts	38 Volts	55 Volts	67 Volts
Maximum Operating Current	200 mA	200 mA	200 mA	200 mA	200 mA	200 mA	200 mA
Clamping Action Turn-On	7.1 Volts	14.3 Volts	28.5 Volts	31.4 Volts	40.9 Volts	58.9 Volts	71.3 Volts
Maximum Clamping at 2 kA (8 x 20 $\mu$ Sec)	11 Volts	22 Volts	44 Volts	46 Volts	58 Volts	81 Volts	94 Volts
Maximum Surge Voltage	20 kV	20 kV	20 kV	20 kV	20 kV	20 kV	20 kV
Maximum Surge Current (8 x 20 $\mu$ Sec)	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA
Current Leakage/Line At Operating Voltage	500 $\mu$ A	5 $\mu$ A	5 $\mu$ A	5 $\mu$ A	5 $\mu$ A	5 $\mu$ A	5 $\mu$ A
Capacitance/Line At Rated Voltage	4000 pF	2000 pF	500 pF	500 pF	400 pF	300 pF	200 pF
Response Time	Less than 1 nanosecond						
Operating and Storage Temperature	-40 Degrees Celsius to +85 Degrees Celsius						

- For all models above, insert an "S" after the "420" in each model number for single pair applications.
- Consult the factory for other applications and operating conditions and specifications. All specifications at 25 degrees Celsius. For Low capacitance version consult with factory.

## Typical Installation:



## OUTLINE DIMENSIONS:



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