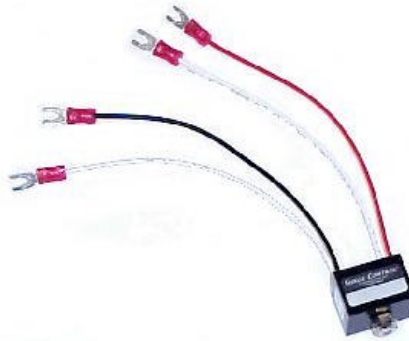


# SPR-42US Series

## Two Wire Instrumentation

## Surge Suppressor



---

### Features:

- ▶ Exceeds severity level 4 of IEC/EN 61000-4-4 (Provides 2.5 kA / line of surge protection).
- ▶ Compatible with all 2 wire signal or current loop equipment installations.
- ▶ Can be installed on analog or digital signal data lines.
- ▶ Space efficient protector is hermetically sealed and suitable for the most harsh industrial environments.
- ▶ Unique multi-stage design provides the most effective suppression available.
- ▶ Sub nanosecond response time stops failures due to lightning, spikes and overvoltage surges while minimizing other electrical noise.
- ▶ Automatic reset and fail safe design requires no maintenance. Eliminates “Out of Service” downtime and repair/replacement costs caused by damaging electrical surges.
- ▶ Simple installation to a wall or case. Hardware is included.
- ▶ Superior protection at an affordable price.

---

### Applications:

The SPR-42US Series is designed to protect traffic controllers, measurement and process control equipment, 4-20 mA loop instrumentation, data processing and telecommunication equipment, etc.

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

Select the SPR-42US14 for RS-422 and RS-485 applications. The SPR-42US24 for RS-232 data lines and SPR-42UST for Telco installations.

---

### Typical Installation:

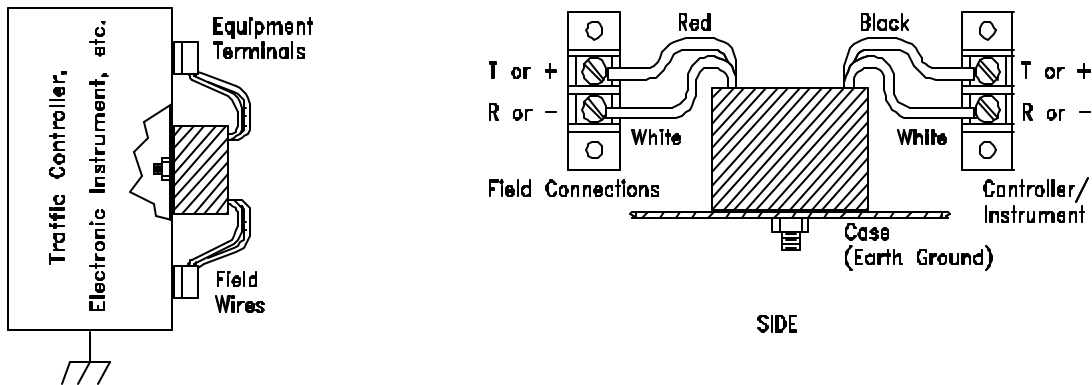
The SPR-42US Series is normally mounted to a panel or case wall using the #6 screw stud provided. This stud must be connected to a good earth ground. Connect the field and instrument wires as indicated, taking care to dress output wires away from field wires. Mount the suppressor as near the equipment it protects as possible. Keep the suppressor ground and equipment ground common.

# SPR-42US Series Operating Specifications:

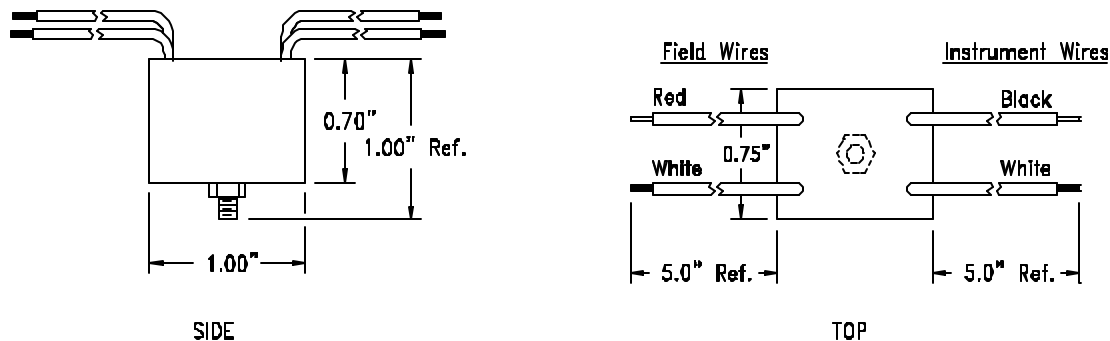
| Specifications                                 | SPR-42US05             | SPR-42US14 | SPR-42US25 | SPR-42US28 | SPR-42US36 | SPR-42US50 | SPR-42US60 | SPR-42US1 |
|--|------------------------|------------|------------|------------|------------|------------|------------|-----------|
| Operating Voltage                              | 5 Volts                | 12 Volts   | 24 Volts   | 28 Volts   | 36 Volts   | 50 Volts   | 60 Volts   | 185 Volts |
| Maximum Operating Voltage                      | 6 Volts                | 14 Volts   | 27 Volts   | 30 Volts   | 38 Volts   | 55 Volts   | 67 Volts   | 205 Volts |
| Maximum Operating Current                      | 200 mA                 | 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 | 209 Volts |
| Maximum Clamping at 2kA<br>(8 x 20 µSec)       | 11 Volts               | 22 Volts   | 44 Volts   | 46 Volts   | 58 Volts   | 81 Volts   | 94 Volts   | 340 Volts |
| Maximum Surge Voltage                          | 20 kV                  | 20 kV      | 20 kV      | 20 kV      | 20 kV      | 20 kV      | 20 kV      | 20 kV     |
| Maximum Surge Current<br>(8 x 20 µSec)         | 2.5 kA                 | 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<br>Operating Voltage | 500 µA                 | 5 µA       | 5 µA       | 5 µA       | 5 µA       | 5 µA       | 5 µA       | 5 µA      |
| Capacitance/Line<br>At Rated Voltage           | 4000 pF                | 2000 pF    | 500 pF     | 500 pF     | 400 pF     | 300 pF     | 200 pF     | 50 pF     |
| Response Time                                  | Less than 1 nanosecond |            |            |            |            |            |            |           |
| Operating & Storage<br>Temperature             | -40 °C to +85 °C       |            |            |            |            |            |            |           |

Consult factory to select other operating conditions and specifications. All specifications at 25 degrees Celsius.

## Typical Installation:



## Outline Dimensions:



**Circuit Components, Inc.**  
 2400 S. Roosevelt Street Tempe, AZ - 85282  
 Tel: 480-967-0624 - Fax: 480-967-9385  
 Email: [info@surgecontrol.com](mailto:info@surgecontrol.com) - Website: [www.surgecontrol.com](http://www.surgecontrol.com)

**SURGE CONTROL®**  
 A PRODUCT OF **CCI**

This information is not intended to and does not create any warranties, expressed or implied, including any warranty of merchantability or fitness for a particular purpose. Circuit Components Inc. reserves the right to change specifications at any time without notice.