

## TP232 RS-232

High Energy Serial Protection



### Standard Features:

- Two metal mounting brackets
- Three stages of protection: Gas discharge tube, series resistor and Transient Voltage Suppressor (TVS)
- Two terminal posts for ground
- RS-232 high energy surge protector
- Terminal blocks for transmit, receive, request to send, clear to send and signal ground

### Part Number/Price

Part #	Description	Price
69201	TP232	\$175.00

### Options/Accessories

Part #	Description	Price
17778	12 in ground strap	\$12.00
17781	24 in ground strap	\$16.00
69516	Additional installation manual	\$6.00

### Specifications:

**Clamping Voltage (Stage One):**  
72 VDC minimum, 108 VDC maximum

**Series Resistance (Stage Two):**  
2.7 ohms

**Clamping Voltage (Stage Three):**  
14.3 V minimum, 15.7 V maximum

**Clamping Time:**  
Less than 5 x 10<sup>-9</sup> seconds

**Connectors:**  
5 position terminal blocks

**Dimensions:**  
Approximately (L x W x H) 4.5 in x 3.3 in x 1.8 in  
(114.3 mm x 83.8 mm x 45.7 mm)

**Weight:**  
Approximately 0.42 lb (0.19 kg)

**Approvals:**  
CE marked

### Applications:

- Indicators
- Remote displays
- Printers
- Computers
- PLC

## Ranger 1



### Standard Features:

- ABS plastic case, weighs less than 1 lb
- Large vernier knob, smooth 10 turn potentiometer
- Ideal tool for troubleshooting a scale system, bench testing stability of indicators and setpoint simulation
- Binding posts are color coded to ISA S37.8 standard

### Part Number/Price

Part #	Description	Price
68029	Ranger 1 variable range simulator	\$145.00

### Options/Accessories

Part #	Description	Price
21116	Cable with banana plugs	\$60.00

### Specifications:

**Range:**  
0-3 mV/V, variable

**Impedance:**  
700 ohms nominal

**Connectors:**  
Binding posts suitable for banana plug or 14 gauge wire

**Temperature Coefficient:**  
±100 ppm/°C

**Dimensions:**  
(L x W x H) 4.5 in x 3.5 in x 1.25 in (114.3 mm x 88.9 mm x 31.8 mm)

**Warranty:**  
One-year limited warranty