

# TP232

High Energy RS-232 Serial Protection



Approvals



### Part Number/Price

Part #	Description	Price
69201	TP232	\$187.00

### Options/Accessories

Part #	Description	Price
17778	12 in ground strap	\$22.00
17781	24 in ground strap	\$22.00
69516	Additional installation manual	\$6.00

### 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
- Safe for use with computers and PLCs
- Also works with RS-485, RS-422 and 20 mA

### Applications

- Indicators
- Remote displays
- Printers
- Computers
- PLC

### Specifications

- Clamping Voltage (Stage One):**  
72 V DC minimum, 108 V DC maximum
- Series Resistance (Stage Two):**  
2.7 ohm
- Clamping Voltage (Stage Three):**  
14.3 V minimum, 15.7 V maximum
- Temperature:**  
Operating Range  
0 °F to 122 °F (-18 °C to 50 °C)
- Clamping Time:**  
Less than 5 < 10-9 seconds
- Connectors:**  
Five-position terminal blocks
- Dimensions:**  
(L × W × H)  
Approximately 4.5 × 3.3 × 1.8 in
- Approvals:**  
CE marked
- Warranty:**  
One-year limited

# Ranger 1

Variable Range Simulator



### Part Number/Price

Part #	Description	Price
68029	Ranger 1 variable range simulator	\$160.00

### Options/Accessories

Part #	Description	Price
21116	Cable (4 ft) with banana plugs	\$68.00

### 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

### Specifications

- Variable Range:**  
0 to 3 mV/V
- Impedance:**  
700 ohm nominal
- Temperature:**  
Operating Range  
0 °F to 122 °F (-18 °C to 50 °C)
- Connectors:**  
Binding posts suitable for banana plug or 14 gauge wire
- Temperature Coefficient:**  
±100 ppm/°C
- Dimensions:**  
(L × W × H)  
4.5 × 3.5 × 1.25 in  
(114 × 89 × 32 mm)
- Warranty:**  
One-year limited

JUNCTION BOXES /  
SIMULATORS