2552
DC Voltage Standard

2552
439 × 149 × 415 mm 19 kg
(17-1/4 × 5-7/8 × 16-3/8" 41.9 lbs)

The 2552 is a programmable DC voltage standard which delivers an output voltage of 0 to ±1,200 V DC at an accuracy of ±0.005%. The output is controlled by a reflected binary code (Gray code) signal so that an undesired output is virtually impossible.

- **±0.005% accuracy**
- **0 to ±1,200 V DC in 4 ranges**
- **Patented PWM DC Potentiometer featuring outstanding stability and long-life operation**
- **Voltage trip and current limiter**
- **Remote programming or BCD output option**
- **Output polarity switch-selectable**

SPECIFICATIONS

Voltage Ranges:

Range	Output Voltage	Steps
1,000 mV	0 to ±1,199.999 mV	1 µV
10 V	0 to ±11.99999 V	10 µV
100 V	0 to ±119.9999 V	100 µV
1,000 V	0 to ±1,199.999 V	1 mV

Max. Output Current: Approx. 25 mA on 1,000 mV/10 V/100 V ranges, 10 mA on 1,000 V range

Accuracy of Output: (at 3-month calibration cycle, 23±2°C, relative humidity of 45 to 75%, rated power supply voltage and rated load)
1,000 mV range (whichever is greater)
±0.005% of setting or ±10 µV
10 V range (whichever is greater)
±0.005% of setting or ±50µV
100 V range (whichever is greater)
±0.005% of setting or ±500 µV
1,000 V range (whichever is greater)
±0.005% of setting or ±5 mV

Temperature Coefficient of Output: (at 5 to 21°C or 25 to 40°C)
±(0.0005% of setting + 1 µV)/°C on 1,000 mV range

Stability of Output: (after 4 hours of OUTPUT ON, at the same conditions in Accuracy of Output)
1,000 mV range (whichever is greater)
(±0.0005% of setting or ±2 µV)/hour
(±0.001% of setting or ±3 µV)/24 hours
(±0.002% of setting or ±5 µV)/30 days
10 V range (whichever is greater)
(±0.0005% of setting or ±20 µV)/hour
(±0.001% of setting or ±20 µV)/24 hours
(±0.002% of setting or ±30 µV)/30 days

Ripple and Noise: (at rated output voltage and rated load)

Range	DC to 10Hz	10Hz to 2MHz
1,000 mV	5 µVrms	100 µVrms
10 V	10 µVrms	200 µVrms
100 V	70 µVrms	500 µVrms
1,000 V	500 µVrms	2 mVrms

Settling Time: (time for attaining a value within ±0.005% of final output after change of range or set value, not including polarity change)
500 ms on 1,000 mV/10 V/100 V ranges, 3 s on 1,000 V range

Line Regulation: (against a power line voltage variation of ±10% of rated value)
±(0.0005% of setting + 0.0002% of range)

Load Regulation: (against a change from no load to full load)
±(0.0005% of setting + 0.0002% of range)

Overcurrent Protection (Current Limit): Automatically limits output current at the preset level from 1 mA to 25 mA in 4 steps according to set limit dial on front panel

Overvoltage Protection (Voltage Trip): Automatically sets output voltage to zero at the preset level from 12 V to 1,200 V in 4 steps, output termainals are shorted, and output voltage is turned on again only when output dial is set to STAND BY and OUTPUT ON

Polarity Selection: +, – or 0 (output termainals short-circuited)

Operating Temperature Range: 5 to 40°C (41 to 104°F)

Humidity Range: 20 to 80% (relative humidity)

Warm-Up Time: (Time for attaining a value within specified accuracy), Approx. one hour

Insulation Resistance: More than 500 MΩ at 500 V DC between the case and power line, guard and case, and guard and chassis

Dielectric Strength: 1,500 V rms (50 Hz) for one minute between the case and power line, 3,500 V rms (50 Hz) for one minute between guard and case and between guard and chassis

Power Requirements: 100, 115, 200, 215, or 230 V AC (must be specified), 50 and 60 Hz

Power Consumption: Approx. 80 VA at full load

Available Models: **255211** Standard, **255212** with remote control, **255213** with BCD ouput

Remote Control: Provided with **255212**. Output voltage, range, polarity, voltage trip, current limit, and standby-operate settings are programmable by external contact or TTL level signals.