## 201C ELECTRICAL SPECIFICATIONS

### ■ Source Input Module

The Source Input Module is normally the source for power applied to the input terminal of the DUT. According to the mode commanded digitally by the I/O Unit, that power may be controlled as voltage at the DUT input (voltage source mode), or as current into the DUT input (current source mode). In voltage source mode the current is limited according to the current range selected.

| | Range | Accuracy [1] | |
|---|---|---|---|
| | | Full Scale | Value |
| **Voltage** | | | |
| **Standard** | +/-4.000V | +/-0.25% | +/-0.25% |
| | +/-40.00V | +/-0.25% | +/-0.25% |
| **Current** | | | |
| **Standard** | +/-200.0nA | +/-1.00% | +/-2.00% |
| | +/-2.000uA | +/-.25% | +/-0.50% |
| | +/-20.00uA | +/-.25% | +/-0.25% |
| | +/-200.0uA | +/-.25% | +/-0.25% |
| | +/-2.000mA | +/-.25% | +/-0.25% |
| | +/-20.00mA | +/-.25% | +/-0.25% |
| | +/-200.0mA | +/-.25% | +/-0.25% |
| | +/-2.000A | +/-.25% | +/-0.25% |
| | +/-20.00A | +/-.25% | +/-0.25% |

### ■ Source Output Module

The Source Output Module is the source for current applied to the output terminal of the DUT. According to the mode commanded by the I/O Unit, the current may be controlled as to voltage at the DUT output (voltage source mode), current into the DUT output (current source mode), or voltage via a selected series resistor to the DUT output (load mode).

| | Range | Accuracy [1] | |
|---|---|---|---|
| | | Full Scale | Value |
| **Voltage** | | | |
| **Standard** | +/-2.000V | +/-0.25% | +/-0.25% |
| | +/-20.00V | +/-0.25% | +/-0.25% |
| | +/-200.0V | +/-0.25% | +/-0.25% |
| **Option 1 [2]** | +/-2000V | +/-0.50% | +/-0.50% |
| **Current** | | | |
| **Standard** | +/-200.0uA | +/-0.25% | +/-0.25% |
| | +/-2.000mA | +/-0.25% | +/-0.25% |
| | +/-20.00mA | +/-0.25% | +/-0.25% |
| | +/-200.0mA | +/-0.25% | +/-0.25% |
| | +/-2.000A | +/-0.25% | +/-0.25% |
| | +/-20.00A | +/-0.25% | +/-0.25% |
| **Option 1 [3]** | +/-200.A | +/-0.50% | +/-0.50% |
| **Option 38** | +/1000A | +/-1.00% | +/-1.00% |

**Specifications subject to change without notice. 07/01/05**

## 201C ELECTRICAL SPECIFICATIONS

### ■ Measurement Module

The Measurement Unit of the 201C Tester is configured to make different types of measurement by the I/O Unit via the 8-bit data bus. It can measure the current from the DUT common terminal or the DUT input or output voltage from one of the source unit voltmeters. The measurement is made by a fast 16-bit ADC. The measurement is then reported to the I/O Unit and PC on the TAN interface stream.

The DUT input voltage and output voltage are measured in the Input Source and Output Source respectively and scaled samples sent to the Measurement Unit. The common current of the DUT is measured in the Measurement Unit by providing a path to ground through a selectable shunt resistor and measuring the resultant voltage drop.

| | Range | Accuracy (1) | |
|---|---|---|---|
| | | Full Scale | Value |
| **Voltage** | | | |
| **Standard** | +/-2.0000V | +/-0.25% | +/-0.25% |
| | +/-20.000V | +/-0.25% | +/-0.25% |
| | +/-200.00V | +/-0.25% | +/-0.25% |
| | +/-4.0000V | +/-0.25% | +/-0.25% |
| | +/-40.000V | +/-0.25% | +/-0.25% |
| **Option 1** | +/-2000.0V | +/-0.50% | +/-0.50% |
| **Option 49** | +/-200.00mV | +/-0.25% | +/-0.25% |
| | +/-20.000mV | +/-0.50% | +/-0.50% |
| | 2mV | +/-1.00% | +/-1.00% |
| **Current** | | | |
| **Standard** | +/-200.00nA | +/-4nA | +/-0.50% |
| | +/-2.0000uA | +/-0.25% | +/-0.25% |
| | +/-20.000uA | +/-0.25% | +/-0.25% |
| | +/-200.00uA | +/-0.25% | +/-0.25% |
| | +/-2.0000mA | +/-0.25% | +/-0.25% |
| | +/-20.000mA | +/-0.25% | +/-0.25% |
| | +/-200.00mA | +/-0.25% | +/-0.25% |
| | +/-2.0000A | +/-0.25% | +/-0.25% |
| | +/-20.000A | +/-0.25% | +/-0.25% |
| **Option 1 (4)** | +/-200.00A | +/-0.50% | +/-0.50% |
| **Option 17C** | +/-2.0000nA | +/-2.50% | +/-2.50% |
| | +/-20.000nA | +/-0.50% | +/-0.50% |
| **Option 17D** | +/-20.000pA | +/-2.50% | +/-2.50% |
| | +/-200.00pA | +/-2.50% | +/-2.50% |
| | +/-2.0000nA | +/-1.00% | +/-0.50% |
| | +/-20.00nA | +/-0.50% | +/-0.50% |
| **AC** | | | |
| **Standard** | Gain=1 | +/-1% | +/-1% |
| | Gain=10 | +/-1% | +/-1% |
| | Gain=100 | +/-1% | +/-1% |
| | Gain=1000 | +/-5% | +/-5% |

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## 201C ELECTRICAL SPECIFICATIONS

### ■ Option 24 Matrix Test Terminal

5 by 16 Matrix Test Terminal with programmable auxiliary power supplies.

| | Range | Accuracy (1) | |
|---|---|---|---|
| | | Full Scale | Value |
| **Voltage Source** | | | |
| **Standard** | +/-8.000V | +/-0.25% | +/-0.25% |
| | +/-0.800V | +/-0.25% | +/-0.25% |
| **Current Measurement** | | | |
| **Standard** | +/-200.00mA | +/-0.25% | +/-0.25% |
| | +/-20.000mA | +/-0.25% | +/-0.25% |
| | +/-2.0000mA | +/-0.25% | +/-0.25% |
| | +/-200.00uA | +/-0.25% | +/-0.25% |
| | +/-20.000uA | +/-0.25% | +/-0.25% |

### ■ Option 40 External DMM with automated calibration self check

Interface to external DMM through an IEEE-488 I/O card. Includes automated data log calibration self check to verify the test system specification compliance.

| Range | Accuracy (1) |
|---|---|
| 200.00mV | 0.016% + 3 counts |
| 2.0000V | 0.011% + 2 counts |
| 20.000V | 0.015% + 2 counts |
| 200.00V | 0.015% + 2 counts |

### ■ Electrical Specification Notes

1. Accuracy is valid +/-4 Degree Centigrade from Calibration Temperature. Requires one (1) hour warm up time. Pulses as short as 300uSec are available in Voltage Mode or Current Mode above 200uA.
2. 8mSec Pulse above 1000V,17msec pulse 500V to 1000V, 25msec pulse 200V to 500V
3. 300µSec Pulse
4. For Test Terminals 2, 3, 4, and 5, the current on the 200.0A range is derated to 180.0A max.



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