

Specifications

DC VOLTS MEASUREMENT RELATED

Accuracy ¹	6 rdg/sec	25 rdg/sec
200 mV range	0.05% + 0.03 mV	0.05% + 0.1 mV
2 V range	0.05% + 0.1 mV	0.05% + 1 mV
20 V range	0.05% + 1 mV	0.05% + 10 mV
200 V range	0.05% + 10 mV	0.05% + 100 mV
500 V range	0.05% + 100 mV	0.05% + 1 V
Resolution		
200 mV--200 V ranges	0.005% of range	0.025% of range
500 V range	100 mV	500 mV
Input Resistance	10 MW , $\pm 1\%$ (all ranges)	
Common Mode Rejection	>120 dB, at dc and 50 Hz to 20 kHz	
Common Mode Range	500 V _{peak}	
Normal Mode Rejection	>60 dB, 50 Hz to 60 HZ	

- 1 Valid from + 15°C to +30°C, <80% RH, for 1 year. Derate linearly to 2 times indicated values at + 5°C and +40°C.

OHMS MEASUREMENT RELATED

Accuracy ^{1, 2}	6 rdg/sec	25 rdg/sec
200 Ω range	0.05% + 0.04 Ω	0.05% + 0.1 Ω
2 k Ω range	0.05% + 0.2 Ω	0.05% + 1 Ω
20 k Ω range	0.05% + 1 Ω	0.05% + 10 Ω
200 k Ω range	0.05% + 10 Ω	0.05% + 100 Ω
2 M Ω range ³	0.15% + 100 Ω	0.15% + 1 k Ω
Resolution	0.005% of range	0.025% of range
Open Circuit Voltage	<6 Vdc	

DC OUTPUT RELATED

Range	± 10.500 V (bipolar output)
Resolution	20 μ V (20 bits equivalent)
Accuracy ^{1, 4}	$\pm(0.05\% + 0.2$ mV), absolute ± 40 μ V, relative to best fit line
Maximum Output Current	20 mA source; 10 mA sink
Residual Noise	< 10 μ V rms, 10 Hz to 80 kHz bw
Output Floating Characteristics	Electronically balanced to allow low output (-) terminal to float up to 2 Vpk. Common mode rejection is typically >54 dB (500:1).

- 2 With both 2-wire or 4-wire configurations. When using 4-wire configuration, lead resistance must be ≤ 1.5 Ω .
- 3 Full scale on the 2 M Ω range is 2.50 M Ω .
- 4 Load current must be ≤ 1 mA for specified accuracy. Output resistance is typically <0.1 Ω .

Specifications

PROGRAM CONTROL INPUT/OUTPUT

Input Configuration	8-bit parallel input. Input bits are software definable to execute any valid keystroke sequence. An 8-byte FIFO buffer allows asynchronous inputs.
Output Configuration	
Pin 1	Delayed Gate. High-low transition occurs 50 ms to 12.75 s (in 50-ms steps) after sweep start.
Pin 2	Reset pulse, high during UTILITY RESTORE command or following power cycling to the DCX-127.
Pin 3	2 ms pulse when data is settled
Pin 4	2 ms pulse at end of settling delay
Pin 6	Sweep Gate, low during sweeps
Pin 7	A/B Gate; high when LVF is measuring channel A
Connectors	9-pin D-subminiature

DIGITAL INPUT/OUTPUT RELATED

Configuration	22-bit (21 bits data + sign) words, plus data valid/new data strobes. 25-pin D-subminiature connectors.
Maximum data rate	Approximately 8 msec/transfer, limited by computer speed

AUXILIARY OUTPUT PORTS

Configuration	Three independent 8-bit parallel output ports. 9-pin female D subminiature connectors
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MISCELLANEOUS

All digital input/output is LSTTL/CMOS compatible. Outputs in series with 390 Ω resistors. Input resistance typically 100 k Ω . Maximum rated input 0 – 5V. Output drive +5mA/bit maximum.

Dimensions	17 in. Wide, 1.75 in. High, 10.5 in. deep
Operating temperature	+ 5°C to +40°C, <80% relative humidity
Power requirements	100/120/220/240 Vac + 5/-10%); 48-63 Hz; 20 VA maximum