



9818 DC Current and Voltage Calibrator

- * **5 Current ranges from 100uA to 1A**
- * **4 Voltage ranges from 10mV to 10V**
- * **0.01% Accuracy**
- * **30% Overrange on all ranges**
- * **IEEE/GPIB compatible**



Introduction

The 9818 is a high performance IEEE programmable D.C. Current/Voltage Calibration source. By combining microprocessor and linear circuit technology, exceptional long term stability has been achieved. Computer selection of the basic reference device combined with high performance precision resistors ensure a guaranteed 50 ppm per year stability.

Up to 10V D.C. or 1 Amp D.C. may be supplied by the unit with a 5 ppm resolution. The deviation control allows easy percentage deviation from the nominal value.

Range and output value selection is by keyboard entry and the value is clearly displayed on the 7 digit L.E.D. display.

The modular construction is based on the standard Euro Card frame. Each main section i.e. Microprocessor Control, IEEE interface, D-A Converter, Reference Amplifier etc. is located on a separate plug in the Euro board. All boards are easily accessible from the instrument rear.

With the ability to be operated manually and via the IEEE bus, the 9818 is ideal for ATE systems or for D.C. signal generation.



Time Electronics Limited, Botany Industrial Estate, Tonbridge, Kent, TN9 1RH
Telephone: 01732 355993 Fax: 01732 770312
E-mail: mail@TimeElectronics.co.uk Web Site: www.TimeElectronics.co.uk

Specifications

INTERFACE

Type:	IEEE 488
Connections:	24 pin connector as prescribed in the 488– 1975 standard
Addressing:	rear panel switch. Device No. 0-31
Isolation:	All outputs electrically isolated from IEEE bus (Up to 350V A.C.)
Overload:	If the instrument fails to give the correct output due to internal fault conditions, or output overloads, the microprocessor resets the output to zero within 10ms and an 'OUTPUT ERROR' message is displayed.
Output Polarity:	The true Bipolar output can provide positive or negative polarity.
Local Controls & Displays:	LED indicators: indicate operation mode. 7 digit LED displays output and polarity. Push buttons select and indicate range and output polarity.
Setting Time:	Less than 1ms between 0 and full scale. Less than 50ms with range change.
Output Connections:	Front panels – 4mm 'Banana' low thermal E.M.F.

RANGE	MAX O/P	ACCURACY			STABILITY-ppm			RESOLUTION	O/P RES OHMS	MAX CURENT/ VOLTAGE	NOISE ppm of F.S.
		Setting	Range	Zero	TC/°C	/Hr	/Day				
10V	13V	±0.01%	±0.001%	5uV	20	<4	<10	50uV	<0.01	100mA	4
1V	1.3V	±0.01%	±0.001%	3uV	20	<4	<10	5uV	<0.01	100mA	4
100mV	130mV	±0.02%	±0.005%	2uV	20	<4	<20	500nV	10	S/C	4
10mV	13mV	±0.02%	±0.005%	2uV	20	<4	<20	50nV	10	S/C	4
1A	1.3A	±0.05%	±0.01%	10nA	50	<20	<50	5uA	-	12V	15
100mA	130mA	±0.02%	±0.005%	2nA	50	<8	<10	500nA	-	12V	8
10mA	13mA	±0.02%	±0.005%	2nA	50	<8	<10	50nA	-	12V	8
1mA	1.3mA	±0.02%	±0.008%	2nA	50	<8	<20	5nA	-	12V	8
100uA	130uA	±0.02%	±0.008%	2nA	50	<8	<20	0.5nA	-	12V	8

General Information

Power:	110V/120V/220V/240V AC. 50/60 Hz – Switch selected. Consumption 30 watts.
Dimensions:	480 x 240 x 130 mm Rack Mount Version 494 x 374 x 154 mm Bench Version
Weight:	5.5 kg Rack Mount Version 10 kg Bench Version
Optional Extras:	Free standing case

Ordering Information

Description	Order Code
DC Current and Voltage Calibrator	9818
N.P.L. Traceable Calibration Certificate	9163
UKAS Calibration Certificate	9123
Free Standing Case	9047