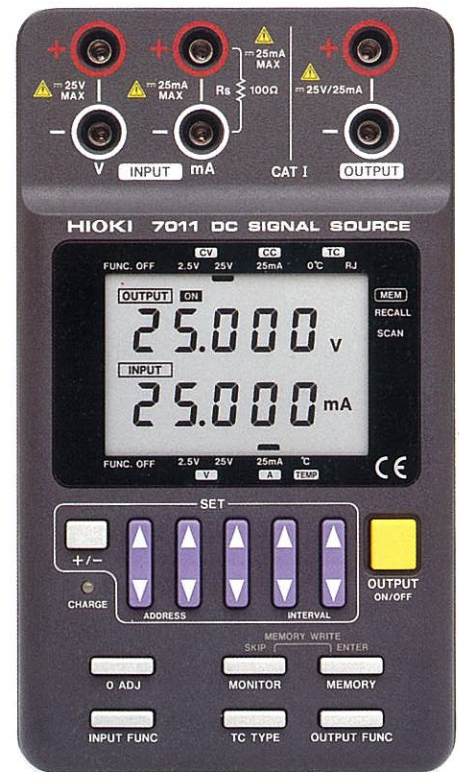


7011 DC SIGNAL SOURCE

Signal source & Power source



Maximum output: ± 25 V, ± 25 mA

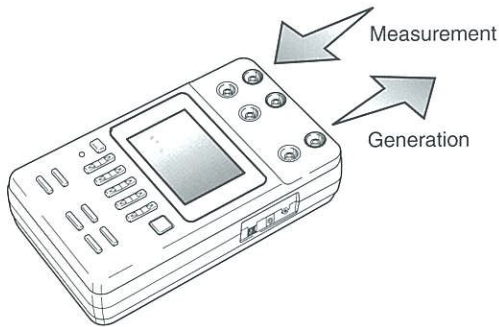
A DC Signal Source That Can Generate and Measure Signals Simultaneously

The **7011 DC SIGNAL SOURCE** can be used not only for instrument system maintenance, but also for maintaining and servicing industrial meters and for testing electronic circuits and electronic equipment. In addition to generating DC voltage and current, the **7011 DC SIGNAL SOURCE** can also generate thermoelectromotive force equivalent to the temperatures corresponding to seven types of thermocouples. Furthermore, this compact DC signal source can generate and measure signals simultaneously.

A Signal Source for Applications Ranging from Instrument System Maintenance to Electronic Equipment Testing and Evaluation

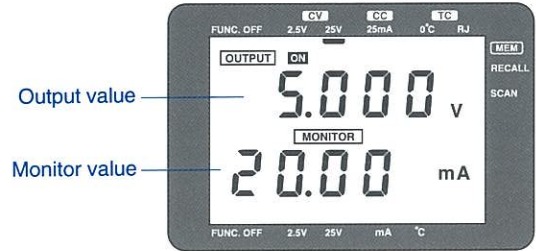
Simultaneous display of voltage/current generation and measurement

The 7011 DC SIGNAL SOURCE can generate and measure voltage up to a maximum of ± 25.000 V and current up to ± 25.000 mA, with a minimum resolution of $100 \mu\text{V}$ (over a 2.5 V range) and $1 \mu\text{A}$. In addition, because the unit is capable of measurement and generation simultaneously, it improves work efficiency. For example, only one unit is needed in order to simultaneously test the input and output sides of a transducer.



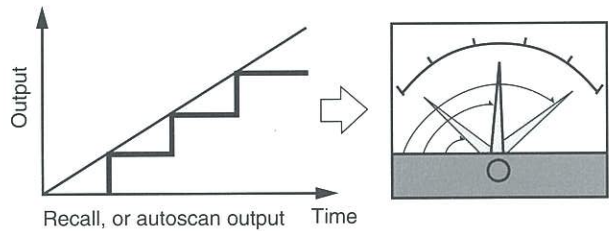
Constant voltage (CV) and constant current (CC) generation

This feature is effective for a variety of evaluations and tests. The output value and the monitor value can both be displayed simultaneously.



Memory settings for up to 20 steps

Up to 20 steps of generation data can be saved per function, and can be output either through the recall function (manual readout) or the autoscan function (automatic sequential readout). This capability is useful for repeat adjustments and for linearity tests, etc.



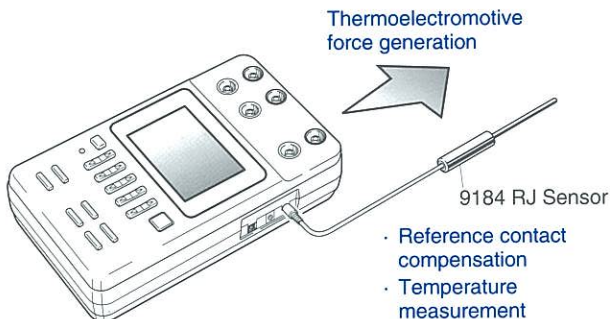
Thermoelectromotive force generation (TC)

Because the 7011 DC SIGNAL SOURCE can generate thermoelectromotive force equivalent to the temperatures required by seven types of thermocouples (K, E, J, T, R, S, and B [JIS* C1602-1981]), the output settings for calibration can be made almost intuitively.

* JIS=Japan Industrial Standard

Temperature Measurement (TEMP)

When used with the 9184RJ sensor option, the 7011 DC SIGNAL SOURCE can measure temperatures ranging from -25°C to 80°C . This capability is effective not only for measuring environmental temperatures, but also for calibrations including reference contact compensation (TC:RJ).



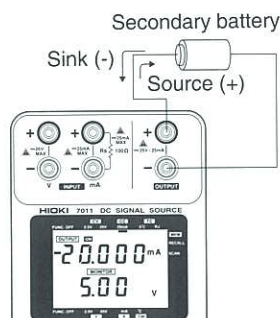
Lightweight and compact size suited for use in the field

The 7011 DC SIGNAL SOURCE is small enough to be held in one hand, since it was designed with practicality for field work in mind. Its small size also makes it portable for on-site calibration and servicing work.



Bipolar output

Because the 7011 DC SIGNAL SOURCE can act as a source and as a sink, it is useful for signal loop tests in instrument systems and secondary battery charging/discharging tests.



Three-way power supply permits use anywhere

With its three-way power supply (LR6 alkaline batteries, the 9420 battery pack option, or the 9418 AC adapter option), the 7011 DC SIGNAL SOURCE can be used anywhere. Furthermore, the battery pack is capable of rapid recharging when used with the AC adapter.

Voltage, current, and thermoelectromotive force generation and measurement

A Field Calibrator That Can Be Held in One Hand

Input/output terminals

- Because the inputs and outputs are isolated, simultaneous signal generation and measurement is possible
- Output terminals
 - Current input terminals/standard resistance terminals
 - Voltage input terminals

Generation display

- Bar display of set function
- Display of thermocouple setting for TC function
- Set value and output status (ON/OFF)

Measurement display

- Bar display of set function
- Measured value, and monitor value for output
- Display of address and interval for memory setting and output

Operation keys

- [OUTPUT FUNC] Generation function setting key
- [TC TYPE] Thermocouple setting key
- [MEMORY] Memory generation switching key
- [SET] Output value setting keys corresponding to each digit
- [+/-] Generated output polarity switching key
- [OUTPUT] Output ON/OFF key
- [INPUT FUNC] Measurement function setting key
- [0 ADJ] Zero adjustment key for measurement
- [MONITOR] Measurement value/monitor value switching key

Memory generation setting keys

- [SKIP-ENTER] Memory write mode generation selection switching key
- [ADDRESS] Memory generation address setting key
- [INTERVAL] Autoscan output interval setting key



*Photograph shows display with all segments on.

■ Specifications (Accuracy is given at 23 ± 5°C)

	Generation/measurement range	Resolution	Accuracy	Remarks
Generation functions	Constant voltage (CV) 2.5V/0 to ±2.5000V 25V/0 to ±25.000V	100μV 1mV	±0.03% of setting ±3dgt. ±0.03% of setting ±3dgt.	(Sink/source) Approx. ±25mA Approx. ±25mA
	Constant current (CC) 25mA/0 to ±25.000mA	1μA	±0.03% of setting ±3dgt.	(Sink/source) Approx. ±25V
	Thermoelectromotive force TC (0°C) K: -176.0 to 1372.0°C E: -220.0 to 839.0°C J: -208.0 to 1108.0°C T: -169.0 to 400.0°C R: -50 to 100°C 101 to 1769°C S: -50 to 100°C 101 to 1769°C B: 300 to 600°C 601 to 1820°C	0.1°C 0.1°C 0.1°C 0.1°C 1°C 1°C 1°C 1°C	±0.05% of setting ±0.5°C ±0.05% of setting ±0.5°C ±0.05% of setting ±0.5°C ±0.05% of setting ±0.5°C ±0.05% of setting ±1.5°C ±0.05% of setting ±1.0°C ±0.05% of setting ±1.5°C ±0.05% of setting ±1.0°C ±0.05% of setting ±2.5°C ±0.05% of setting ±1.5°C	Internal resistance Approx. 2.2 Ω JIS C1602-1981
	Thermoelectromotive force TC (RJ) Thermocouple types, generation ranges, and resolution are the same as for TC (0°C)		Add the following to TC (0°C) ±0.5°C(23±5°C) ±1.0°C(0 to 50°C) ±2.0°C(-25 to 80°C)	Use the 9184 RJ sensor
	Memory generation (recall, scan) for each function: CV, CC, TC (0°C), and TC (RJ)		Maximum number of steps: 20 Interval time: 1 to 99 sec.	Accuracy of the time is not stipulated
Measurement functions	Voltage 2.5V/0 to ±2.5000V 25V/0 to ±25.000V	100μV 1mV	(after executing a zero adjustment) ±0.03%rdg.±2dgt. ±0.03%rdg.±2dgt.	Input resistance Approx. 1 MΩ
	Current 25mA/0 to ±25.000mA	1μA	(after executing a zero adjustment) ±0.03%rdg.±2dgt.	Input resistance Approx. 25Ω*
	Temperature -25.0 to 80.0°C	0.1°C	±0.5°C(23±5°C) ±1.0°C(0 to 50°C) ±2.0°C(-25 to 80°C)	Use the 9184 RJ sensor
	Standard resistance 100Ω		±0.2%rdg.	±5mΩ/°C
Monitor	Load current monitor	10μA	±0.1%rdg.±2dgt.	0 to ±25.00mA
	Terminal voltage monitor	10mV	±0.1%rdg.±2dgt.	0 to ±25.00V
	Reference contact temperature monitor	0.1°C	±0.5°C(23±5°C) ±1.0°C(0 to 50°C) ±2.0°C(-25 to 80°C)	-25 to 80.0°C

*Including approximately 15Ω for the fuse

9418 -10 AC Adapter



9420 Battery Pack



9380 Carrying Case



9184 RJ Sensor



9168 Input Cord (provided)



9170 Test Lead (provided)



■ General Specifications

Output generation system: Bipolar sink-source system

A/D operation method: Delta-sigma method

Temperature coefficients:

± (50ppm of setting + 0.3dgt.) / °C (CV: 2.5V)
 ± (50ppm of setting + 0.2dgt.) / °C (CV: 25V, CC)
 ± (50ppm of setting + 0.05°C) / °C (TC: 0°C/K, E, J, T)
 ± (50ppm of setting + 0.1°C) / °C (TC: 0°C/R, S, B)
 ± (100ppm of setting + 0.1°C) / °C (TC: RJ/K, E, J, T, R, S, B)
 ± (50ppm of rdg. + 0.1dgt.) / °C (V, A)
 ± (0.05°C) / °C (TEMP)

Zero adjustment function: All measurement ranges (for V and A measurement)

Display: LCD five-digit display "25000"

Operating temperature and humidity ranges:

0°C to 40°C, 80% RH or less (with no condensation)

I/O protection: 50mA fuse (generation and measurement)

Withstand voltage: 500 V AC for one minute (between I/O terminals and the case, and between the power supply and the case)

Power supply: LR6 alkaline batteries (LR6) × 6, or 9420 Battery Pack, or 9418 AC Adapter [9420 Battery Pack capacity (continuous operation):

With 25 mA output: approximately 80 minutes or more
 With V meter: approximately 180 minutes or more
 Charging time: with 120 minutes]

Dimensions and mass: 104(W) × 180(H) × 58(D) mm, approximately 590 g

Accessories: One set of 9168 input cords, one set of 9170 test leads, three spare fuses (F50 mA/250 V mizet fuse)

7011 DC Signal Source

The 7011 will not operate entirely on its own. To use the 7011, either the 9418 AC Adapter or the 9420 Battery Pack (both sold separately); the 9418 is also required in order to charge the 9420, or a LR6 alkaline battery is required. Select the power source that is suited to the application at hand. Alkaline batteries can be purchased at many stores.

Example of recommended combination:

7011 (main unit) + 9418 AC Adapter + 9420 Battery Pack + 9184 RJ Sensor + 9380 Carrying Case

Options

9418 -10 AC ADAPTER (100 to 240 V AC ±10%, 50/60Hz)

9420 BATTERY PACK (7.2 V/700 mAh)

9184 RJ SENSOR (for reference contact compensation)

9380 CARRYING CASE

HIOKI

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