Handy Calibrator

Multi-functional Hand-held Calibrator

- Highly accurate within 0.02% of the DC voltage range for source and measure
- Source and measurement can be performed simultaneously.
- Vertical body with large-screen display
- Loop power supply function (24 VDC at a load of max 22 mA)
  It is possible to measure current in the mA range while supplying power.
- Sink function
- Sweep functions that allow 3 types of continuous outputs:
  Step sweep function
  Linear sweep function
  Program sweep function

Yokogawa Meters & Instruments Corporation
Multi-functional and high-precision calibrator that can be used to calibrate and test industrial process devices and various electronics equipment

**Functions/Features**

- **Vertical hand-held calibrator**
  Easy-to-hold vertical body is designed to make it intuitively easy to operate, as individual functions are accessed directly by pressing assigned keys.

  Using the main body case (model No. 93027) (sold separately), you can hang CA150 to your body or a handrail to keep it handy.

- **Simultaneous source and measurement for process devices**
  In conventional calibration applications, multiple devices such as a standard generator, dial resistor and multi-meter were required. Now with a single CA150 unit, it is possible to perform operation check at regular inspection and maintenance of thermocouples, RTDs and instruments, as well as maintenance and equipment diagnosis of process devices such as transmitters, thermostats and signal converters.

- **Loop power supply function**
  It is possible to measure generated current signals while supplying loop power 24 VDC from a two-wire type transmitter (up to 22 mA).

**Two-wire Type Transmitter Applications**

- **Two-wire type transmitter (measurement function) application**
  - Loop check function
    Measures mA signals output while supplying transmitter power at 24 VDC.

- **Two-wire type transmitter (source function) application**
  - Sink function
    Receives current (Sink) from the power supply at voltages of up to 28 VDC and transmits mA signals to the loop.

**Memory Functions**

- **Setting memory**
  This function saves/load setting conditions. Up to 21 data items can be stored. Settings for source/measurement functions, ranges, generated values/lengths as well as setting mode conditions can be stored.

- **Data memory**
  This function saves source and measure values displayed. Up to 100 data items can be stored. Storage date/time, source/measurement functions, ranges and generated values/lengths can be stored. Stored data can be checked on the display of the main unit as well as via communication.

**Convenient Functions Useful in Field Tests**

**Sweep Functions (Automatic Output Functions)**

- **Step sweep function**
  This function changes the output in a staircase (step) pattern at fixed intervals.

- **Linear sweep function**
  This function increases (or decreases) the output linearly with respect to the generated value.

- **Program sweep function**
  This function outputs source setting values stored by the data memory function sequentially in the order they are stored in the memory.
### Specifications - Source Unit

#### General Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC voltage</td>
<td>100mV to 500.0V</td>
</tr>
<tr>
<td>DC current</td>
<td>2mA to 10mA</td>
</tr>
<tr>
<td>DC voltage</td>
<td>2.5V to 100mV</td>
</tr>
<tr>
<td>IR</td>
<td>0.1mA to 1mA</td>
</tr>
<tr>
<td>Number of memory locations</td>
<td>100 locations</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.02% of reading + 0.005V</td>
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<tr>
<td>Response time</td>
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#### DC Characteristics

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#### Specifications common to source unit

- **Source unit response time:** Approx. 300 ms (only ranges 1V, 2V, 5V, 500mV (excitation current 1mA) and RTD (excitation current 1mA) response time approx. 5ms).
- **Source unit voltage limiter:** Approx. 32 V (source current limiter: Approx. 25 mA)
- **Output polarity switching:** Enable
- **Division output (m/V):**
  - Output = setting value x (m/V)
  - Steps can be set in the ranges of m = 0 to 19 and V = 1 to 19
  - Condition: m
  - Step sweep function

#### Frequency/ripple

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**Model Name**

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<td>CA150</td>
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With the main body case (model name: 93027) (sold separately) installed
Includes strap and accessory storage case

The main body case is designed to make it easy to hold with one hand.

**External Dimensions**

Unit: mm

**Supplied Accessories**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Lead cable for source</th>
<th>Lead cable for measurement</th>
<th>Carrying case</th>
<th>Terminal adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<th>Model name</th>
<th>98020</th>
<th>RD031</th>
<th>93026</th>
<th>99022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remark</td>
<td>One set of 1 red and 2 black cables Length: Approx. 1.7 m</td>
<td>One set of 1 red and 1 black cables Length: Approx. 1.0 m</td>
<td>Lead cables for source/measurement, terminal adapter, 6 spare batteries, fuse, AC adapter and Instruction Manual can be stored.</td>
<td>Used for temperature measurement.</td>
</tr>
</tbody>
</table>

**Optional Accessories (sold separately)**

<table>
<thead>
<tr>
<th>Product name</th>
<th>AC adapter</th>
<th>RJ sensor</th>
<th>Accessory storage case</th>
<th>NIMH battery</th>
<th>Main body case</th>
<th>Lead cable for measurement</th>
</tr>
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<tr>
<th>Model name</th>
<th>94010</th>
<th>B9108WA</th>
<th>B9108XA</th>
<th>94015</th>
<th>93027</th>
<th>98064</th>
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<tr>
<td>Remark</td>
<td>-D</td>
<td></td>
<td></td>
<td>-F</td>
<td>-H</td>
<td>-P</td>
</tr>
<tr>
<td>For UL/CSA Standard</td>
<td>-R</td>
<td>For VDE Standard</td>
<td>-N</td>
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<td>-S</td>
<td>For BS Standard</td>
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- For reference junction compensation
- Lead cables, RJ sensor, etc. can be stored.
- NIMH battery Dedicated
- With strap and accessory storage case
- Alligator clip, CAT I, for control signal only (under 70 V)
- One set of 1 red and 1 black cables Length: Approx. 1.7 m

**NOTICE**

- Before using the product, read the instruction manual carefully to ensure proper and safe operation.