DATA LOGGER Series
I surely find the Logger I want
Memory HiLogger series

Choose from Hioki’s extensive line of loggers that’s right for your application.

Memory HiLogger series

Memory HiLogger series

For multichannel measurement and recording

Measurement parameters and channels

- Voltage
- Temperature (Thermocouples)
- Temperature (PT 100, JPt100)
- Humidity
- Resistance
- Pulse
- Digital

External Interface

- USB
- LAN

External storage

- USB memory
- CF card

Battery

- N/A

Data Logger series

Compact solutions for measuring 1 or 2 channels

Data Logger series

Measurement parameters and channels

- Temperature 1ch and Humidity 1ch
- Temperature 1ch
- Instrumentation 1ch
- AC Current 2 ch
- DC Voltage 1ch

Measurement range

- Temperature: –40.0 to 85.0 °C
- Humidity: 0% to 100%RH
- Instrumentation: DC – 30.00 to 30.00 mA
- AC: 0.00 to 1000 A

Power supply

- LR6(AA)

Detailed catalogs also available

Power and energy loggers

For use in environmental, energy, and power supply management (demand monitoring) applications

Use a power logger to implement energy-saving measures!
### Memory HiLogger LR8431

#### Key Points
- **Ten Isolated Analog Input Channels**
- **10ms Sampling and Recording Across All Channels**
- **Ultra-compact for convenient portability**
- **Noise-resistant measurement circuitry for improved readings**
- **Improved thermocouple measurement accuracy and reference junction compensation accuracy**
- **Real-time recording to a CF card or USB memory stick**

#### Lightest weight in its class and Easy Operation
- **Featuring USB Flash Drive and Improved Accuracy! Your Personal 10-channel Logger**
- **Memory HiLogger LR8431**
- **Real-time recording of up to 10 ms/ sample data to USB or CF memory devices** (only the Hikoki CF card is guaranteed for correct operation)
- **Small and light enough for the palm of your hand - yet completely isolated**
- **Monitor in real-time on the PC using bundled Logger Utility freeware**

#### General specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of channels</strong></td>
<td>Analog: 10 isolated channels using scanning input method (M3 mm dia. screw terminal block)</td>
</tr>
<tr>
<td><strong>Measurement parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>±10 mV to ±60 V, 1-5V f.s., Max. resolution 5 μV</td>
</tr>
<tr>
<td>Temperature (Thermocouples)</td>
<td>-200°C to 1800°C (depend on the sensor) Thermocouples (K, J, E, T, N, R, S, B), Max. resolution 0.1°C</td>
</tr>
<tr>
<td>Temperature (Pt 100 sensor)</td>
<td>not available</td>
</tr>
<tr>
<td>Humidity</td>
<td>not available</td>
</tr>
<tr>
<td>Totalized pulses</td>
<td>0 to 1000M pulse (No-voltage ‘a’ contact, open collector or voltage input), Max. resolution 1 pulse</td>
</tr>
<tr>
<td>Rotation count</td>
<td>0 to 5000/π (r/s) f.s. (No-voltage ‘a’ contact, open collector or voltage input), Resolution 1/π (r/s)</td>
</tr>
<tr>
<td>Note: n = pulses per rotation (1 to 1,000)</td>
<td></td>
</tr>
<tr>
<td><strong>Max. allowable input</strong></td>
<td>DC 60 V (Analog input), DC 0 V to 10 V (Pulse input)</td>
</tr>
<tr>
<td><strong>Max. rated voltage to earth</strong></td>
<td>AC 30 Vrms, DC 60 V (Upper limit voltage that does not cause damage when applied between input channel and chassis, and between each input channels)</td>
</tr>
<tr>
<td><strong>Recording intervals</strong></td>
<td>10 ms to 1 hour, 19 selections (All input channels are scanned within each recording interval)</td>
</tr>
<tr>
<td><strong>Selectables Filters</strong></td>
<td>50 Hz, 60 Hz, or OFF (digital filtering of high frequencies on analog channels)</td>
</tr>
<tr>
<td><strong>Memory capacity</strong></td>
<td>Internal storage: 3.5 M-words, External storage: CF card or USB memory stick (only the Hikoki CF card is guaranteed for correct operation)</td>
</tr>
<tr>
<td><strong>External Interfaces</strong></td>
<td>USB 2.0 mini-B receptacle x1; Functions: Control from a PC, Transfers files from the installed CF card to a PC (cannot transfer files from the connected USB memory stick to a PC via USB communication), Data copy between CF card and USB memory stick</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>4.3-inch WQVGA-TFT color LCD (480 x 272 dots)</td>
</tr>
<tr>
<td><strong>Functions</strong></td>
<td>Save data to the CF card or USB memory stick in real time, Numerical Calculations, etc.</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>AC Adapter Z1005: 100 to 240 VAC (50/60 Hz), Battery Pack 9780: Continuous use 2.5 hours 12 V DC supply: 10 to 16 V (please contact Hikoki distributor for cable; less than 3 m/9.84 ft cable length)</td>
</tr>
<tr>
<td><strong>Dimensions and mass</strong></td>
<td>176 mm (6.93 in) W × 101 mm (3.98 in) H × 41 mm (1.61 in) D, 550 g (19.4 oz) (Battery Pack 9780 not installed)</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>Measurement guide x1, CD-R (Instruction manual PDF, Logger Utility instruction manual PDF, Data acquisition application program Logger Utility) x1, USB cable x1, AC Adapter Z1005 x1</td>
</tr>
</tbody>
</table>

### Options

#### AC Adapter
- Z1005 (100 to 240 V AC, Supplied Accessories)

#### Battery Pack
- 9780 (NiMH, Charges while installed)

#### Soft Case
- 9812 (Includes space for small items, Neoprene rubber)

#### Carrying Case
- 9782 (Includes compartment for options, Resin coated)

#### Connection Cable
- 9641 (For pulse inputs, 1.5 m (4.92 ft) length)

#### Protection Sheet
- 9809 (For LCD protection, pairs of sheets)

#### Removable storage (CF Card)

<table>
<thead>
<tr>
<th>CF Card</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC Card</td>
<td>2G 9830</td>
</tr>
<tr>
<td>PC Card</td>
<td>1G 9729</td>
</tr>
<tr>
<td>PC Card</td>
<td>512M 9728</td>
</tr>
</tbody>
</table>

**PC Card Precaution:**
Use only PC Cards sold by Hikoki. Compatibility and performance are not guaranteed for PC cards made by other manufacturers. You may be unable to read from or save data to such cards.
### Memory HiLogger series

#### Portable Data Logger with 30 Standard Channels, Expandible to 60 Channels

**Memory HiLogger LR8400, LR8401, LR8402**

- **Compact size despite 30-channel standard capabilities**
- **Write data to USB memory stick or CF card in real-time**
- **Protected against unexpected power outages**
- **Digital filtering function for enhanced noise immunity**
- **All input channels are isolated and high withstand voltage**

#### Key Point

- **Enhanced Noise Immunity**: High-frequency noise is rejected by means of a digital filter.
- **High withstand voltage**: Maximum voltage that can be input between terminals: ±100 V DC

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### Order Codes

- **LR8400-20**
  - (Built-in the Voltage/Temp unit LR8500 ×2, 30 ch, English)
- **LR8401-20**
  - (Built-in the Universal unit LR8501 ×2, 30 ch, English)
- **LR8402-20**
  - (Built-in the Universal unit LR8501 ×1, Voltage/Temp unit x1, 30 ch, English)

### General Specifications

**Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year**

#### Analog input Voltage/Temp Unit LR8500

- **No. of channels**: 15 analog channels; isolated scanning method input (LR8500) 2 terminals: M3 screw type, [LR8501] 4 terminals: push-button type
- **Voltage**: ±10 mV to ±100 V, 1-5 V f.s., Max. resolution: 500 nV
- **Note**: Isolated between channels and from each channel to chassis
- **Temperature (Thermocouples)**: -200°C to 2000°C (depends on the sensor), Thermocouples (K, J, E, T, N, S, B, W), Max. resolution 0.01°C
- **Note**: Isolated between channels and from each channel to chassis
- **Temperature (Pt 100, JPt 100 sensor)**: -200°C to 800°C, Max. resolution 0.01°C
- **Note**: Not isolated between channels
- **Resistance**: 0 Ω to 200 Ω f.s., Max. resolution 0.5 mΩ
- **Note**: Not isolated between channels
- **Humidity**
  - ±0 to 95 % r.h. (use with the optional sensor), resolution 0.1 % r.h. Not isolated between channels nor from each channel to chassis
- **Max. rated voltage between isolated input channels**
  - LR8500: 250 V DC, LR8501: 300 V DC
- **Max. allowable input**
  - LR8500: ±100 V DC
  - LR8501: [Max. rated voltage from isolated terminals to ground] 300 V AC, DC

#### Pulse, Digital input

- **No. of channels**: 8 channels, pulse / digital selectable for each channel, M3 screw terminal, not isolated, common ground
- **Pulse totalization**: 0 to 1000 M pulse (No-voltage 'a' contact; normally open, open collector or voltage input), Max. resolution 1 pulse
- **Rotation count**: 0 to 5000 n (r/s) f.s. (same as Pulse totalization input signal condition), resolution 1 n (r/s)
- **Note**: ‘n’ is the number of sensor output pulses per revolution, 1 to 1000
- **Digital input**: Record logical “1” or “0” at each sampling
- **Max. rated voltage between input channels**: Not isolated
- **[Max. allowable input]**: 0 to 50 V

#### Recording intervals

- 40 ms to 50 ms, 100 ms to 1 h, 19 selections (All input channels are scanned within each recording interval)
- **Note**: Limited by using channels at 10 ms to 50 ms interval

#### Digital filter

- **Select from OFF/ 50 Hz/ 60 Hz** (the cut-off frequency is automatically set)

#### Data storage

- **Internal memory**: 8 M-words, Data storage media: CF card or USB memory (Only data recorded to a genuine Hioki CF card is guaranteed)
- **No. of channels**: 15 analog channels, 15 digital channels (USB memory stick)

#### Interfaces

- **LAN**: 100BASE-TX, Functions: Data acquisition using bundled software or PC commands, FIP server, FTP client, HTTP server function, or E-mail system (USB USB 2.0 High-speed capable, series mini-B receptacle)
- **USB**: 2.0 High-speed capable, series mini-B receptacle
- **Data transfer not possible from USB memory sticks**

#### Display device

- **5.7 inch TFT color liquid crystal display (640 x 480 pixel)**

#### Other functions

- **Save waveform data in real time to the CF card or USB memory stick. Numerical value calculations, Waveform calculations, and others**

#### Power supply

- **AC Adapter 9418-15**: 100 to 240 V AC (50/60 Hz), Battery Pack Z1000: Continuous use 5 h, External power: 10 to 28 V DC

#### Dimensions and mass

- **272 mm (10.71 in) W x 182.4 mm (7.18 in) H x 65.5 mm (2.62 in) D, 1.8 kg (36.5 oz), (LR8400-20 main unit, excluding the Battery Pack 370 g/ 13.1 oz)**

#### Accessories

- **Instruction manual x1, Measurement guide x1, AC Adapter 9418-15 x1, USB cable x1, CD-R (data collection software "Logger Utility") x1**

### Options

#### Voltage/Temp Unit LR8500

- (2 terminals M-3 mm screw type, 15 channels Voltage, Temperature with thermocouple, or Humidity measurement)

#### Universal Unit LR8501

- (4 terminals push-button type, 15 channels Voltage, Temperature with thermocouple, Platinum Resistance temperature sensor, Humidity, or Resistance measurement)

#### Humidity Sensor Z2000

- (3 m (9.84 ft) length)

#### Battery Pack Z1000

- (NIMH, Charges while installed)

#### AC Adapter 9418-15

- (100 to 240 V AC, Bundled with the LR8400, LR8401 and LR8402)

#### LAN Cable 9642

- (Straight Ethernet cable, supplied with straight to cross conversion adapter, 5 m (16.41 ft) length)

#### Carrying Case C1000

- (Includes compartment for options)

#### Fixed Stand Z5000

- (For wall hanging and slanted bench mounting)

#### Removable storage (CF card)

- **PC Card 2G**: 9830
- **PC Card 1G**: 9729
- **PC Card 512M**: 9728

**PC Card Precaution**

Use only PC Cards sold by Hioki. Compatibility and performance are not guaranteed for PC cards made by other manufacturers. You may be unable to read from or save data to such cards.
Fast 10-ms Sampling. Up to 600 Channels of Data Logging
Memory HiLogger 8423

Mix and match input units to build a measurement system with up to 600 channels.

More robust isolation: 600 V terminal-to-ground, 200 V/120 V channel-to-channel
Capture data with 15 to a maximum of 600 channels
USB 2.0, LAN 100BASE-TX, Store to 1GB PC Card
Dual sampling to make efficient use of available memory

Enhanced noise immunity reduces the impact of switching noise from inverter-equipped devices and 50/60 Hz hum noise.

Enhanced Noise Immunity

High withstand voltage

Order Code: 8423

General specifications
(Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

No. of connectable units
Maximum 8 units (total 120 channels), Bundle 8 Modules together to achieve a 120-channel System, Bundle 5 Systems together to enable a maximum of 600 channels of simultaneous recording.

Measurement parameters
Model 8948
- [Voltage] ±150 mV to ±100 V, ±1.5 V f.s., Max. resolution 5 µV, Max. allowable input : 100 V DC, Max. rated voltage between channels : 200 V DC, AC.
- [Temperature (Thermocouples)] : -200°C to 200°C (depend on the sensor), Thermocouples(K, E, J, T, N, W (Wre5-26), R, S, B), Max. resolution 0.01°C

Model 8949
- [Voltage] ±150 mV to ±60 V, ±1.5 V f.s., Max. resolution 5 µV, Max. allowable input : 60 V DC, Max. rated voltage between channels : 120 V DC, Max. rated voltage to earth : 600 V DC, AC.
- [Temperature (Thermocouples)] : -200°C to 200°C (depend on the sensor), Thermocouples(K, E, J, T, N, W (Wre5-26), R, S, B), Max. resolution 0.01°C
- [Temperature (Pt 100, JPt 100 sensor)] : -200°C to 800°C, Max. resolution 0.01°C
- [Humidity] 5.0 to 95.0% rh (use with the optional sensor 9701), 0.1% rh resolution

Model 8996
- [Totalized pulses] 0 to 100M pulse, Max. resolution 1 pulse
- [Rotation count] 0 to 50000r (r/s) f.s., Resolution 1r (r/s), Note: n = pulses per rotation (1 to 1,000) 50/60 Hz hum noise.

Measurement parameters
Model 8996
- [Max. allowable input] 50 V DC, Max. rated voltage between channels : 33 AC V, 70 DC V, Max. rated voltage to earth : 600 V DC, AC. (Upper limit voltage that does not cause damage when applied between CH-1 to CH-5 each channel and chassis, CH-6 to CH-10 each channel and chassis, CH-11 to CH-15 each channel and chassis, and between each UNITS, common ground for CH-1 to CH-5, common ground for CH-6 to CH-10, common ground for CH-11 to CH-15).

Recording intervals
10 ms to 1 hr, 19 range (5 s to 1hr when combined with humidity measurement), Dual sampling : Recording intervals can be specified for every input module (high-speed and low-speed).

Interfaces
- [LAN] supports 100 Base-TX, [USB] Ver 2.0, mini-B receptacle, CF card slot
- AC Adapter 9418-15, 20 VA (when connected with 8 units), External power: 9.6 to 15.6 V DC, Please contact Hioki for connection cord
- Dimensions and mass
67 mm (2.64 in) W × 133 mm (5.24 in) H × 125 mm (4.92 in) D, 600 g (21.2 oz) (main unit)

Enhanced Noise Immunity

- Enhanced noise immunity reduces the impact of switching noise from inverter-equipped devices and 50/60 Hz hum noise.

High withstand voltage

- Maximum rated voltage between each module: 600 V AC, DC
- Maximum rated voltage between each channel: 200 V DC
- 200 V in model 8948
- 120 V in model 8949

PC Card Precaution

Use only PC Cards sold by Hioki. Compatibility and performance are not guaranteed for PC cards made by other manufacturers. You may be unable to read from or save data to such cards.

Options
- AC Adapter 9418-15 (Supplied as standard, 100 to 240 V AC, Supplied Accessories)
- LAN Cable 9642 (Straight Ethernet cable, supplied with straight to cross conversion adapter, 5 m (16.41 ft) length)
- Connection Cable 9683 (For synchronization, cable length 1.5 m (4.92 ft))
- Humidity Sensor 9701 (1-channel, for UNIVERSAL UNIT 8949)

Removable storage (CF card)
- PC Card 9728
- PC Card Precaution

- Use only PC Cards sold by Hioki. Compatibility and performance are not guaranteed for PC cards made by other manufacturers. You may be unable to read from or save data to such cards.
**Data Logger series**

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### Record Temperature and Humidity Simultaneously

**Humidity Logger LR5001**

**Measurement items**: Temperature 1ch and Humidity 1ch

**Measurement range**
- **Temperature**: -40°C to 85°C
- **Humidity**: 0% to 100%rh

**Accuracy**

Temperature:
- -40.0°C up to (not including) 0.0°C: ±1.0 °C
- 0.0°C up to (not including) 35.0°C: ±0.5 °C
- 35.0°C up to (not including) 70.0°C: ±1.0 °C
- 70.0°C to 85.0°C: ±2.0 °C

Humidity:
- 0.0%rh up to (not including) 90.0%rh: ±8%rh
- 90.0%rh up to (not including) 100.0%rh: ±6%rh

**Waterproof and dustproof**: IP54 (splash-proof construction) (with sensor connected, excluding sensor tip)

**Operating temperature and humidity**: -20°C (-4°F) to 70°C (158°F), 80%rh or less (non-condensating)

**Power supply**: LR6 (AA) Alkaline battery 1.5V×1

**Battery life**

- Case 1: Approx. 3 months (1min. recording interval, power-saving mode, Instantaneous recording, environmental temp.20°C)
- Case 2: Approx. 20 days (1sec. recording interval, power-saving mode, Instantaneous recording, environmental temp.20°C)

**Dimensions and mass**: Approx. 79 mm (3.11 in)W×57 mm (2.24 in) H×28 mm (1.10 in)D, 105 g (3.7 oz)

**Accessories**: Humidity Sensor LR9504x1, Stand, LR6 (AA) Alkaline battery x1, Instruction manual x1, Operation manual x1

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### Options

**Temperature range**: -40.0°C up to 85.0°C (-4°F to 185°F)

**Humidity range**: 0.0%rh up to 100.0%rh

**Response time**: Approx. 300 seconds

**Waterproofness**: None

**Sensor head size**: Ø13 mm x 30 mm (0.51 in x 1.18 in)

**Options**

- **Temperature Sensor LR9501** (1 m)
- **Temperature Sensor LR9502** (5 m)
- **Temperature Sensor LR9503** (10 m)
- **Temperature Sensor LR9601** (1 m)
- **Temperature Sensor LR9602** (5 m)
- **Temperature Sensor LR9603** (10 m)
- **Temperature Sensor LR9604** (45 mm)

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### Measure Temperature with External Sensor

**Temperature Logger LR5011**

**Measurement items**: Temperature 1ch

**Measurement range**: -40°C to 180°C (-40°F to 356°F)

**Accuracy**

Temperature:
- -40.0°C up to (not including) 0.0°C: ±1.0 °C
- 0.0°C up to (not including) 35.0°C: ±0.5 °C
- 35.0°C up to (not including) 70.0°C: ±1.0 °C
- 70.0°C to 180.0°C: ±2.0 °C

Humidity:
- 0.0%rh up to (not including) 90.0%rh: ±8%rh
- 90.0%rh up to (not including) 100.0%rh: ±6%rh

**Waterproofness**: Watertight JIS C 0920 (when attached to logger)

**Response time**: Approx. 100 seconds (90% response time)

**Diameter**: Outer: 7 mm (0.26 in), Inner: 3.2 mm (0.13 in)

**Sensor head size**: Ø6 mm x 28 mm (0.24 in x 1.10 in)

**Options**

- **Temperature Sensor LR9611** (1 m)
- **Temperature Sensor LR9612** (5 m)
- **Temperature Sensor LR9613** (10 m)
- **Temperature Sensor LR9631** (1 m)

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**Humidity**

- **Humidity LR5001+Sensor**

**Temperature**: ±1.0 °C

**Humidity**: ±8%rh

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**Note**: LR9504 is bundled accessory.

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**Order Code**: LR5001
Record 4-20 mA Instrumentation Signals, etc.
Instrumentation Logger LR5031

<table>
<thead>
<tr>
<th>Measurement items</th>
<th>DC Voltage 1 ch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>±50.00 mV to 50.00 mV</td>
</tr>
<tr>
<td>Basic Accuracy</td>
<td>±0.5% rdg. ±5 dgt. (@23°C ±5°C)</td>
</tr>
<tr>
<td>Waterproof and dustproof</td>
<td>IP54 (splash-proof construction)</td>
</tr>
<tr>
<td>Operating temperature and humidity</td>
<td>-5°C to 50°C (23°F to 122°F), 80%rh or less (non-condensating)</td>
</tr>
<tr>
<td>Power supply</td>
<td>LR6 (AA) Alkaline battery 1.5V x1</td>
</tr>
<tr>
<td>Battery life</td>
<td>Case 1: Approx. 2 years (min. recording interval, power-saving mode, Instantaneous recording, environmental temp. 20°C)</td>
</tr>
<tr>
<td>Dimensions and mass</td>
<td>Approx. 79 mm(3.11 in) x 70 mm(2.76 in) x 37 mm(1.46 in), 165 g (5.8 oz)</td>
</tr>
<tr>
<td>Accessories</td>
<td>Connection Cable LR9802 x1, Stand, LR6 (AA) Alkaline battery x1, Instruction manual x1, Operation manual x1</td>
</tr>
</tbody>
</table>

Order Code: LR5031

Bundled accessory (LR9801)

Record Instrumentation Signals and Measure Analog Output from Sensors and other Devices
Voltage Logger LR5041, LR5042, LR5043

<table>
<thead>
<tr>
<th>Measurement items</th>
<th>DC Voltage 1 ch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>-5.00 V to 5.000 V</td>
</tr>
<tr>
<td>Basic Accuracy</td>
<td>±0.5% rdg. ±5 dgt. (@23°C ±5°C)</td>
</tr>
<tr>
<td>Waterproof and dustproof</td>
<td>IP54 (splash-proof construction)</td>
</tr>
<tr>
<td>Operating temperature and humidity</td>
<td>-5°C to 50°C (23°F to 122°F), 80%rh or less (non-condensating)</td>
</tr>
<tr>
<td>Power supply</td>
<td>LR6 (AA) Alkaline battery 1.5V x1</td>
</tr>
<tr>
<td>Battery life</td>
<td>Case 1: Approx. 2 years (min. recording interval, power-saving mode, Instantaneous recording, environmental temp. 20°C)</td>
</tr>
<tr>
<td>Dimensions and mass</td>
<td>Approx. 79 mm(3.11 in) x 70 mm(2.76 in) x 37 mm(1.46 in), 165 g (5.8 oz)</td>
</tr>
<tr>
<td>Accessories</td>
<td>Connection Cable LR9802 x1, Stand, LR6 (AA) Alkaline battery x1, Instruction manual x1, Operation manual x1</td>
</tr>
</tbody>
</table>

Order Code: LR5041
Order Code: LR5042
Order Code: LR5043

Easily Record Load Current of 50Hz/60Hz lines and Leak Current
Clamp Logger LR5051

<table>
<thead>
<tr>
<th>Measurement items</th>
<th>AC Current (2 channels) *Current and leak current that occur intermittently cannot be measured.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>When Using 9669: ±1000 A range</td>
</tr>
<tr>
<td>Basic Accuracy</td>
<td>±0.5% rdg. ±5 dgt. +Clamp sensor accuracy</td>
</tr>
<tr>
<td>Operating temperature and humidity</td>
<td>-4°C(32°F) to 50°C(122°F), 80%rh or less (non-condensating)</td>
</tr>
<tr>
<td>Power supply</td>
<td>LR6 (AA) Alkaline battery 1.5V x 2</td>
</tr>
<tr>
<td>Battery life</td>
<td>Case 1: Approx. 1 years (min. recording interval, power-saving mode, Instantaneous recording, environmental temp. 20°C)</td>
</tr>
<tr>
<td>Dimensions and mass</td>
<td>Approx. 79 mm(3.11 in) x 70 mm(2.76 in) x 37 mm(1.46 in), 165 g (5.8 oz)</td>
</tr>
<tr>
<td>Accessories</td>
<td>LR6 (AA) Alkaline battery x 2 Instruction manual x1, Operation manual x1</td>
</tr>
</tbody>
</table>

Order Code: LR5051

Clamp on Sensor

<table>
<thead>
<tr>
<th>Clamp on Sensor</th>
<th>Clamp on Leak Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>9669</td>
<td>CT6500</td>
</tr>
<tr>
<td>9695-02</td>
<td>9675</td>
</tr>
<tr>
<td>9657-10</td>
<td>9675</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Options</th>
<th>Measurable conductor diameter</th>
<th>Primary current rating</th>
<th>LR5051 range(s)</th>
<th>Accuracy @60Hz to 60Hz</th>
<th>Maximum rated voltage to earth</th>
</tr>
</thead>
<tbody>
<tr>
<td>9609</td>
<td>Ø55 mm (2.17&quot;) or less, 80(3.15&quot;) x 20(0.79&quot;) mm busbar</td>
<td>1000 A AC</td>
<td>1000 A</td>
<td>±1.0% rdg. ±0.01% rdg.</td>
<td>600 Vrms</td>
</tr>
<tr>
<td>CT6500</td>
<td>Ø44 mm (1.71&quot;) or less</td>
<td>500 A AC</td>
<td>500 A</td>
<td>±1.5% rdg. ±0.05% rdg.</td>
<td>600 Vrms</td>
</tr>
<tr>
<td>9695-02</td>
<td>Ø15 mm (0.59&quot;) or less</td>
<td>50 A AC</td>
<td>500 A</td>
<td>±0.3% rdg. ±0.02% rdg.</td>
<td>300 Vrms</td>
</tr>
<tr>
<td>9675</td>
<td>Ø30 mm (1.18&quot;)</td>
<td>5 A AC *</td>
<td>500 mA</td>
<td>±1.0% rdg. ±0.05% rdg.</td>
<td>300 Vrms</td>
</tr>
<tr>
<td>9657-10</td>
<td>Ø40 mm (1.57&quot;)</td>
<td>5 A AC *</td>
<td>500 mA</td>
<td>±1.0% rdg. ±0.05% rdg.</td>
<td>300 Vrms</td>
</tr>
</tbody>
</table>

Order Code: LR5051

Clamp sensor is sold separately (Sensor warranty is one year)

*Note: Using with LR5051
LR5000 Series common specifications  (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording interval</td>
<td>1/2/5/10/15/20/30 seconds, 1/2/5/10/15/20/30/60 minutes</td>
</tr>
<tr>
<td>Recording methods</td>
<td>One time recording</td>
</tr>
<tr>
<td></td>
<td>Endless recording Continue recording even when the memory capacity is full (Old data is overwritten)</td>
</tr>
<tr>
<td>Recording modes</td>
<td>Instantaneous recording Instantaneous values are recorded at every recording interval</td>
</tr>
<tr>
<td></td>
<td>Statistical value recording Measure at one second intervals, and record the instantaneous, maximum, minimum, and average values within every recording interval</td>
</tr>
<tr>
<td>Storage capacity</td>
<td>Instantaneous value mode 60,000 data sets per channel</td>
</tr>
<tr>
<td></td>
<td>Statistical value mode 15,000 data sets per channel</td>
</tr>
<tr>
<td>Display items</td>
<td>Measured value, Interval configuration, Date, Time, Alarm, Remaining battery power, Number of data, Maximum data, Minimum data</td>
</tr>
<tr>
<td>Recording start stop</td>
<td>Recording start Manual start, Timer start</td>
</tr>
<tr>
<td></td>
<td>Recording stop Manual stop, Timer stop When the memory capacity is full (One time recording)</td>
</tr>
<tr>
<td>Data backup</td>
<td>Data from the last recording session is always backed up</td>
</tr>
<tr>
<td>Interfaces</td>
<td>Infrared optical communications with LR5091, LR5092-20</td>
</tr>
<tr>
<td>Power supply</td>
<td>DC3 V (USB bus power) Maximum rated power 0.5 VA</td>
</tr>
<tr>
<td></td>
<td>DC5 V (USB bus power) Maximum rated power 1 VA</td>
</tr>
<tr>
<td></td>
<td>Maximum rated power 1 VA</td>
</tr>
<tr>
<td></td>
<td>Maximum rated power 0.5 VA</td>
</tr>
<tr>
<td></td>
<td>9°C(48°F) to 40°C(104°F) , 80%rh or less (non-condensing)</td>
</tr>
<tr>
<td>Dimensions, Mass</td>
<td>Approx. 83 mm(3.27 in)×61 mm(2.40 in)×19 mm(0.75 in) D, 43 g(1.5 oz)</td>
</tr>
<tr>
<td></td>
<td>USB cable (1 m)×1, CD (Application software &quot;LR5000 Utility&quot;) × 1</td>
</tr>
</tbody>
</table>

**LR5000 Series common options**

- Magnetic Strap Z5004
- Wall-mounted Holder LR9901

*Not compatible with Model LR5051*

**Data Collector LR5092**

- **Order Code**: LR5092-20
- **Features**
  - Collect recorded data from the Data Logger to internal memory or SD memory card
  - View collected data in a graph
  - Transfer Data Logger configurations or clock settings from internal memory or SD memory card to the Data Logger
  - Transfer data from a Data Logger to a PC
  - Transfer Data Logger configurations or clock settings from a PC to the Data Logger
  - Infrared optical communications

- **Operating environment**
  - Indoors
  - Operating temperature 0°C(32°F) to 40°C(104°F) , 80%rh or less (non-condensing)
  - Operating temperature 9°C(48°F) to 40°C(104°F) , 80%rh or less (non-condensing)

- **Dimensions, Mass**
  - Approx. 83 mm(3.27 in)×61 mm(2.40 in)×19 mm(0.75 in) D, 43 g(1.5 oz)
  - USB cable (1 m)×1, CD (Application software "LR5000 Utility") × 1

- **Accessories**
  - Instruction manual x1, Operation manual x1, LR6 (AA) Alkaline battery x2, USB cable (1 m)×1, CD (Application software "LR5000 Utility") × 1

**Data Logger LR5092**

- **Order Code**: LR5092-20
- **Features**
  - Transfer data from a Data Logger to a PC
  - Transfer Data Logger configurations or clock settings from a PC to the Data Logger
  - Infrared optical communications

- **Interface with Data Logger**
  - USB2.0, Full Speed, Series Mini B Receptacle

- **Clock functions**
  - Auto calendar, auto leap year

- **Display**
  - Dot-matrix LCD (128 × 64 dots)

- **Operating environment**
  - Indoors
  - 0°C(32°F) to 40°C(104°F) , 80%rh or less (non-condensing)

- **Dimensions, Mass**
  - Approx. 83 mm(3.27 in)×61 mm(2.40 in)×19 mm(0.75 in) D, 43 g(1.5 oz)
  - USB cable (1 m)×1, CD (Application software "LR5000 Utility") × 1

**Communication Adapter LR5091**

- **Order Code**: LR5091
- **Features**
  - Auto calender, auto leap year
  - USB2.0, Full Speed, Series Mini B Receptacle

- **Clock functions**
  - USB2.0, Full Speed, Series Mini B Receptacle

- **Display**
  - Dot-matrix LCD (128 × 64 dots)

- **Operating environment**
  - Indoors
  - 0°C(32°F) to 40°C(104°F) , 80%rh or less (non-condensing)

- **Dimensions, Mass**
  - Approx. 83 mm(3.27 in)×61 mm(2.40 in)×19 mm(0.75 in) D, 43 g(1.5 oz)
  - USB cable (1 m)×1, CD (Application software "LR5000 Utility") × 1

- **Accessories**
  - Instruction manual x1, Operation manual x1, LR6 (AA) Alkaline battery x2, USB cable (1 m)×1, CD (Application software "LR5000 Utility") × 1

**Note**: Company names and Product names appearing in this catalog are trademarks or registered trademarks of various companies.

**All information correct as of Jan. 24, 2019. All specifications are subject to change without notice.**

**series_Loggers_E4-91E**

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