

# Handy Logger

**MODEL  
MR2041-EU  
SERIES**



## FOUR-CHANNELS HANDY LOGGER

**Easy to Operate, Logging Data At Anytime**

Handy logger MR2041 series is a palm size data logger, it is capable of storing up to 10000 data per each channel. Power supply of logger is selectable from AA battery or AC adaptor, so it is usable as a portable type logger or fixing type logger.

By using the exclusive software, recording / recalling of data and programming of logging parameters can be executed with logger or through a personal computer.



### FEATURES

- Input signals: thermocouple K, E, J, T, 0 to 5V; 0 to 20mA;
- Simultaneous 4 channels, measurement and display.
- High/low alarms for each channel.
- Calculation function: maximum / minimum / average.
- Logging method: log mode and tag-mode.
- Data process-able through a personal computer.
- CE marking, IP 64 dust tight and splash proof enclosure.
- AA battery supply.

### APPLICATION

- Logging and storing data in research and laboratories
- Calorimetric measurement
- Temperature monitoring for HACCP, ISO
- Control industrial process
- Temperature monitoring for production line
- Temperature monitoring in food and transportation.

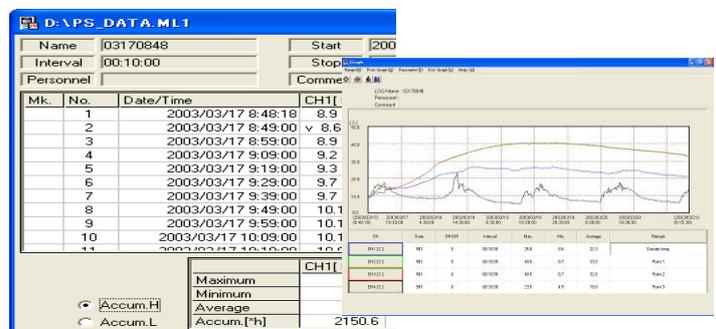
### ACCESSORIES

Name	Model	Note
Software		USB cable 1.5m attached
Current-input adaptor	MR9407	Range 0 to 20mA DC
Voltage-input adaptor	MR9408	Range 0 to 5V DC

### MODEL

Communication Type	Model
USB	MR2041-EU

### LOGGING SOFTWARE (OPTION)



Logging and storing measured value. Recalling of stored data; recalling of the set programs; computing the measured data.



■ **SOFTWARE SPECIFICATION**

**Read logger:** Read the log or tag (20) data and display on the screen.

**Save file:** Save each log data or tag data to the PC by text file or exclusive format.

**Write logger:** Write the recording settings (20) from the PC into the logger.

**Data printing:** Prints the read data as a table format.

**Graph display (Log mode only):** Display selected logged data as in graph format.

■ **SOFTWARE SYSTEM REQUIREMENTS**

**Communication Cable Shape:** USB cable length 1.5m, Series A.

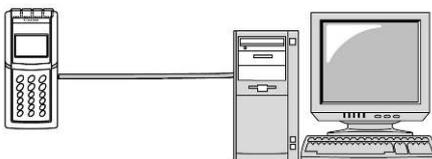
**OS:** DOS-V, Windows XP SP3/ Vista/ 7/ 8/ 8.1 (32/64 bit).

**Communication port:** USB 1.0/2.0 compatible communication port (COM).

**Hard disk drive:** At least 10 MB.

**Free memory capacity:** At least 64MB (128MB or more of memory recommended).

■ **PC CONGIURATION EXAMPLE**



Unit

PC

■ **COMMON SPECIFICATION**

**Input point:** 4 points

**Input signals:** Multi-range

T/C ... K, E, J, T

DC voltage...0 to 5V (by optional adaptor)

DC current...0 to 20mA (by optional adaptor)

**Measuring range:** T/C ... K -200.0 to 1370.0°C

E -200.0 to 700.0°C

J -200.0 to 700.0°C

T -200.0 to 400.0°C

DC voltage... 0 to 5V (scale -9999 to 9999)

DC current... 0 to 20mA (scale -9999 to 9999)

**Accuracy rating:**

T/C...±(0.1% of measuring value+ 0.3°C) (>-100°C)

... ±(0.1% of measuring value +0.6°C) (<-100°C)

DC voltage...±(0.1% of measuring value+ 0.2%of range)

Working environment: 23°C±3°C

**Reference junction compensation accuracy:**

±0.4°C (at ambient temperature: 15°C to 35°C)

±0.7°C (at ambient temp.: -10°C to 15°C, 35°C to 50°C)

**Temperature drift:** ±0.01%/°C of measuring range

**Allowable signal source resistance:** 100Ω (burnout over upper limit)

**Input resistance:** DC voltage inputs ... over 1MΩ

**Resisting voltage between channels:** 400V AC

**Measuring cycle:** 1 second / 4 channels

**Recording interval:** 1 second to 30 seconds (1s step)  
1 minute to 24 hours (1min. step)

**Logging data:** Log-mode... 10000 data / channel.

Tag-mode... 5500 data / channel.

**Display:** Liquid crystal display with backlight.

Dot-matrix 128×64 dot (view area 41×29 mm)

**Operation key:** 18-key including numeric key

**Logging method:** Log-mode ...logging data per a cycle (20 points) in log-area.

Tag-mode...logging data (20 points)

then press the trigger in tag-area.

**Display contents:** measure value (4,2,1ch), alarm, maximum / minimum / average value, computation value. etc.

**Other functions:** Clock (year, month, day/ hour, minute, second); Auto power-off; reading correction; backlight; buzzer; residual battery; residual memory; alarm; calculation; key lock; etc.

**Communicate:** USB

**Battery:** AA×4pieces or AC (100 to 240V AC)

Battery life: About 500 hours (at 25°C, 1min interval)

**Backup battery:** Lithium battery for data logging, clock

**Backup battery life:** Over 5 years (at 25°C)

**Outside dimensions/weight:** 70×159×33mm/300g

**Material/color:** Nylon ABS

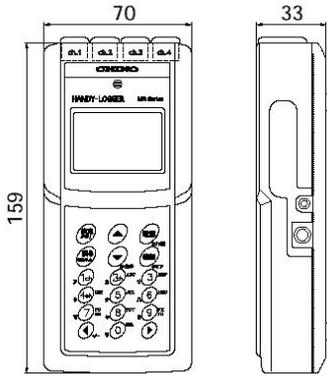
**Working environment:** -10 to 50°C, 10 to 80%rh

**CE-marking:** EN-61326, Class B (battery operation)

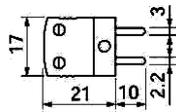
**Housing structure:** IP64 (S)

**Accessory:** Wall-holder, AA×4, AC adaptor (option)

■ **DIMENSIONS**



- **Connectable**  
Dimensions of SM connector (option)



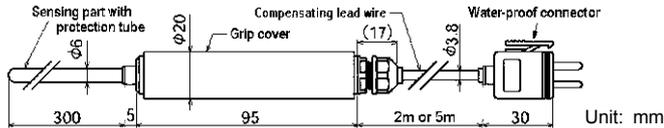
Unit: mm

■ **Special sensor with water-proof connector**

- **General sensor**

Measuring range:  
-60 to 260°C  
Response(90%):  
About 5.5seconds  
In 0°C to 90°C water.

Model	T/C	Lead wire
MR9401A021	K	2m
MR9401A051	K	5m

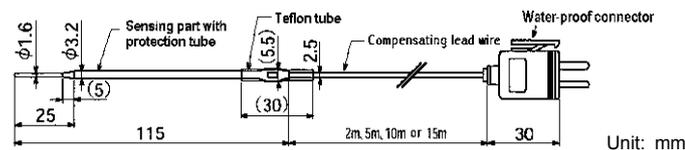


Unit: mm

- **Tapering sensor**

Measuring range:  
-60 to 260°C  
Response (90%):  
About 1.2seconds  
In 0°C to 90°C water

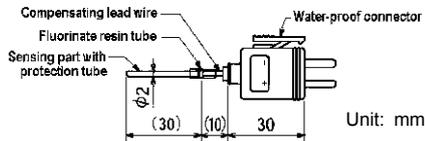
Model	T/C	Lead wire
MR9401D021	K	2m
MR9401D051	K	5m
MR9402D021	T	2m
MR9402D051	T	5m



Unit: mm

- **Room temperature sensor, MR9402R (T/C T)**

Measuring range:  
-20 to 60°C  
Response (90%):  
About 52seconds  
In 20°C to 0°C air.

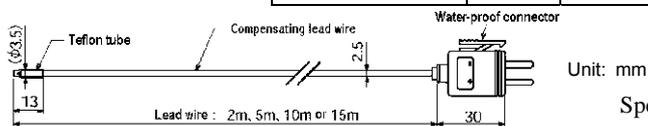


Unit: mm

- **Teflon covered sensor**

Measuring range:  
-60 to 200°C  
Response (90%):  
About 20seconds  
In 0°C to 90°C water.

Model	T/C	Lead wire
MR9401T021	K	2m
MR9401T051	K	5m
MR9402T021	T	2m
MR9402T051	T	5m



Unit: mm

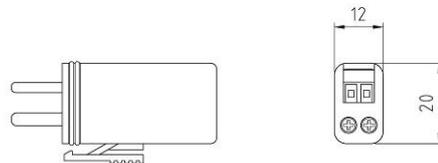
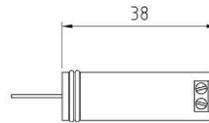
■ **VOLTAGE / CURRENT INPUT ADAPTOR**

- **Voltage input adapter: MR9408**

**Input range:** 0 to 5V DC  
**Input resistant:** 500kΩ  
**Input diameter wire:**  
Single wire 0.14 to 1.5 mm<sup>2</sup>  
Twisted wire 0.14 to 1mm<sup>2</sup>  
**Conversion accuracy:** ±0.1%  
**Operation temperature accuracy:** -10 to 50°C

- **Current input adaptor: MR9407**

**Input range:** 0 to 20mA DC  
**Input resistant:** 250Ω  
**Input diameter wire:**  
Single wire 0.14 to 1.5 mm<sup>2</sup>  
Twisted wire 0.14 to 1mm<sup>2</sup>  
**Conversion accuracy:** ±0.1%  
**Operation temperature accuracy:** -10 to 50°C



Specifications subject to change without notice. Printed in Japan (I) 2017.03

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