OMRON

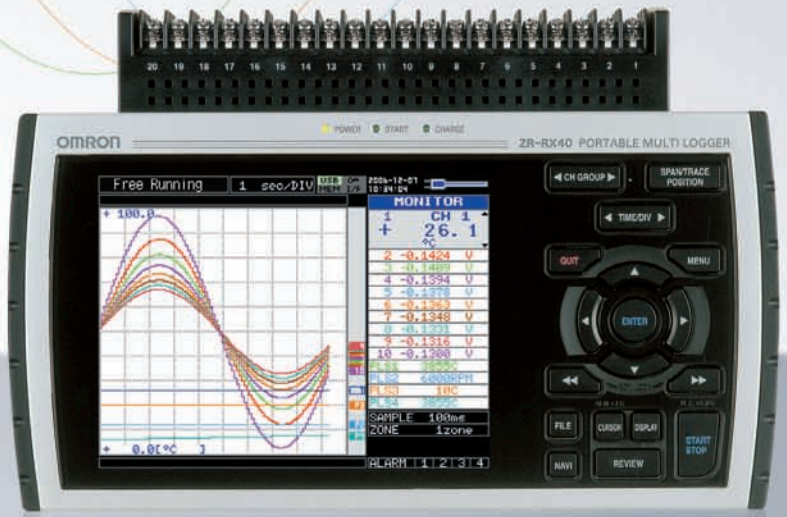
N E W

Portable Multi-logger

ZR-RX40 / ZR-RX20

OPEN

Dear My Buddy,



realizing

No Surprise!

Fund

Portable Multi-logger

ZR-RX40A-E

Standard
20 Channels
Insulated

- Up to 200 isolated channels
- Multifunction input (thermocouples, resistance thermometer, voltage etc.)
- LAN connection
- Compatible with USB flash drive
- Internal 12 MB flash-memory
- 5.7 inch TFT color LCD
- Easy-to-navigate menus
- 9 hour battery (option)
- M3 screw terminal blocks
- Standard PC software

amentals, Versatility and Usability!

Secure Isolated Multi-Input

Multi-input is possible for temperature, humidity, voltage, logic and pulse. Each channel is supplied with its own isolated circuit giving zero inter-channel noise interference.

Maximum 200 Channel Expandability

The terminal block, just connect and go, comes with 20 channels in standard configuration. A maximum of 10 units can be connected to each logger, easily creating a multi-channeled measurement system to be used according to the number of channels needed.

Simple LAN Connection

The embeded Web server function enables remote control from a web browser. A USB connection means a greater array of measurements is possible. Standard PC software is also included .

Supper Light Mobile Model Also Available!

10 insulated channels

Portable Multi-Logger

ZR-RX20A-E

- 10 isolated channels
- Multi-channel input (thermal resistance, voltage etc.)
- Compatible with USB flash drive
- Internal 3.5MB flash memory
- 3.5 inch TFT color LCD
- Easy-to-navigate menus
- 6 hour battery (option)
- M3 screw terminal blocks
- Standard PC software

Anyone- Anytime- Anyplace

Portable Multi-logger

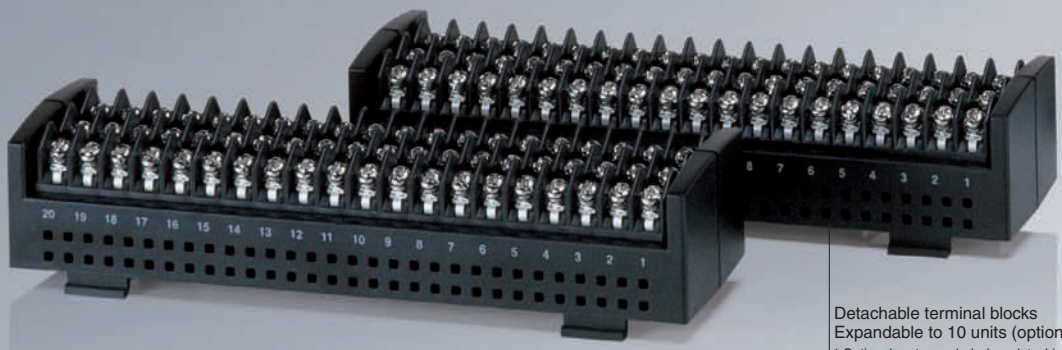
ZR-RX40

Input signal

Temperature | Voltage | Humidity | Logic | Pulse

List of features

Maximum 200 channels	All channels isolated	Thermocouples K,J,E,T,R,S,B,N,W	Resistance thermometer Pt100,JPt100,Pt1000	LAN function	USB flash drive
12MB internal memory	5.7 inch TFT LCD	Easy-to-navigate menus	9 hour battery	Display switch	16bit resolution



Detachable terminal blocks
Expandable to 10 units (option)
* Optional parts needed when detaching or expanding.

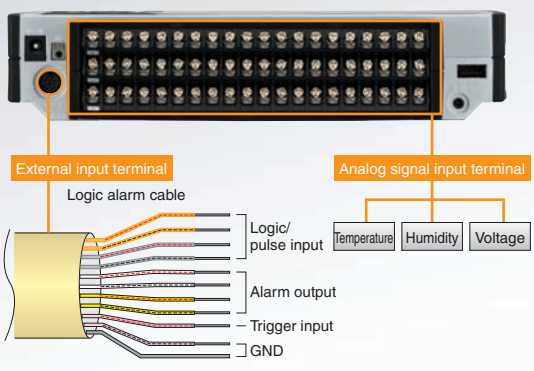
Advanced Fundamentals

All channels isolated

Each circuit is electrically isolated so that the different channels do not affect each other. Consequently, there is no noise interference between the channels giving highly accurate and stable measurements.

Multi-function input

The temperature input supports thermocouples and resistance thermometer. Furthermore, in addition to temperature, an array of measurements including humidity and voltage can be taken at once. It also supports logic or pulse input, input from external triggers, as well as alarm signals output.



*Switches between logic and pulse

Expandable up to 200 channels

Maximum in its class

Each detachable terminal block has a standard 20 channels per unit. Up to 10 units can be connected making it possible to extend up to as much as 200 channels. It can also be used in car data logging where multi-measurements of temperature, voltage etc. on many channels is needed. Its seismic resistance corresponds to Class 1-A car parts(JIS standards)which means that it can be used stably even when there are vibrations and jolts during data-gathering.

Base unit cable
(Length 60 cm)

Maximum 10 unit connection | MAX 200CH

990g*

Palm-top Miniature, light-weight

480g*

Portable Multi-logger

ZR-RX20

*Not including battery, AC adapter

Input signal

Temperature | Voltage | Humidity | Logic | Pulse

List of features

- Maximum 10 channels
- All channels isolated
- Thermocouples K,J,E,T,R,S,B,N,W
- USB flash drive
- 3.5MB internal memory
- 3.5 inch TFT LCD
- Easy-to-navigate menus
- 6 hour battery
- Display switch
- 16bit resolution

Outstanding Versatility

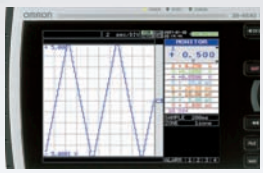
Portable size - only 990 grams

Lightest in its class

Its light weight of 990 gram* makes handheld measurement possible. It is quite portable and can easily be slipped into your brief-case when setting out on a business trip. *Including 1 terminal unit block. Not including battery or AC adapter.

Easy-to-see 5.7 inch color TFT LCD.

Comes with bright, easy-to-see, high-intensity 5.7 inch TFT large-scale color LCD panel. Its wide field of vision means it can even be seen at an angle.



USB flash drive and internal 12MB flash memory

Inside has a 12MB flash memory. It is also possible to connect it to commercially sold USB flash drive which means that the recording capacity can be selected as required according to application.

*Do not use USB flash drive with security functions.

■Potential data recording time(when 10 channels are used)

Recording interval (sampling speed)	100ms	200ms	500ms	1s	10s
12MB embedded flash memory	13hours	1day 3hours	2days 21hours	5days	58days
256MB USB flash drive	12days	25days	62days	125days	1256days

LAN port enabling remote control from web browser.

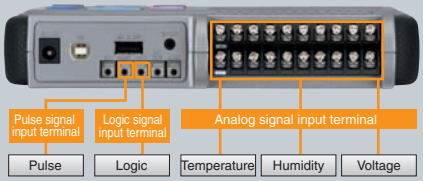
Equipped with LAN port for Ethernet connection. By connecting the ZR-RX 40 to a PC with a LAN cable, it is possible to set the logger up with your web browser. You can take measurements from your own desktop.

'Easy to operate' and 'easy to handle' means that data can be gathered at ease even from equipment jammed into narrow spaces!

Small but fully-fledged! multi-function input of 10 insulated channels

First in its class

Even with its small size, the 10 isolated channel input can provide accurate and stable measurements. The ability to input voltage, humidity, pulse and logic, as well as temperature, makes it practical in every field.



Comfortable Usability

Step1 Connection

No need For Wiring

Detachable terminal blocks - no need for wiring to the main body ZR-RX40 only

The ZR-RX40 has removable terminal blocks which means that it can be wired up securely in narrow places just by detaching the blocks. Also, if the terminal blocks are left in the location they have been wired into, there is no need to rewire them back to the main body when you want take repeat measurements.

* Optional parts needed

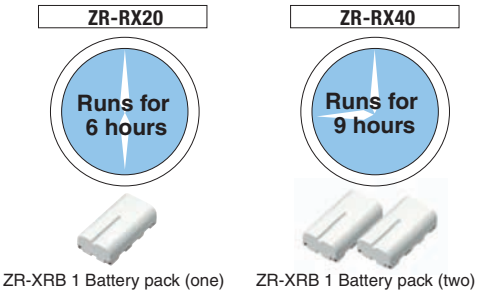
Connection with just one screwdriver

It uses M3 terminal blocks for analog signal input. The ring terminals and tongue terminals can be easily connected with just one screw driver. There is no need for special tools so it can be used immediately.

Step2 Installation

No need for AC Adapter

With optional batteries, there is no need for the AC adapter. When fully charged, the ZR-RX20 and ZR-RX40 can run for 6 hours and 9 hours respectively. In the unlikely even that the batteries should cut-out, there is no need to worry as the preceding data is saved with the data back-up function.



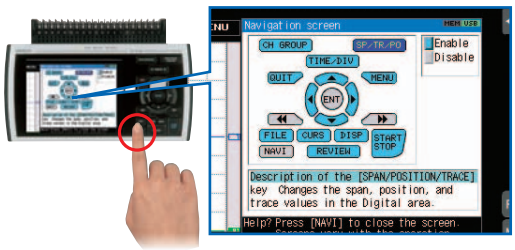
ZR-XRB 1 Battery pack (one)

ZR-XRB 1 Battery pack (two)

Step3 Configuration- Measurement

No need for operation manuals

Operates just like a mobile phone so you use it just by following your instincts rather than by following the manual. Touching the NAVI button just once brings up a help screen so that you can operate it without the ponderous burden of browsing a manual.

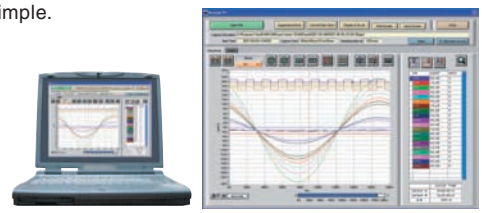


Step4 Operation- Maintenance

No need for time-consuming work

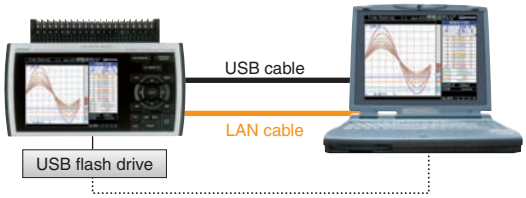
Easy display and easy editing with PC software

Using the standard PC software provided, graphs can be displayed on a PC, or saved as Excel data. Furthermore, using the optional special PC software, in addition to displaying graphs or saving Excel data, it is possible to monitor multiple measurement data divided into groups, so preparing data for reports is simple.



No need for initial set-up with 3 way PC link ZR-RX40 only

3 ways to link to a PC are available through a USB flash drive, a USB connection or a LAN connection. It is also possible to operate with wireless LAN with a commercially available wire LAN to wireless LAN adapter to support your application needs.



Calibration service (charged option) Calibrations and certification on request.

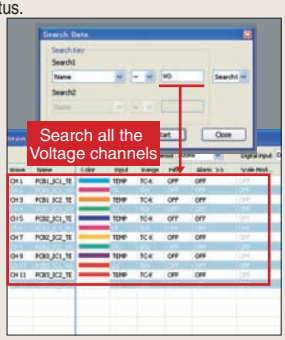
Freely compare and quickly decide!

Smart grouping & multiple display

● 3 step simple waveform observation

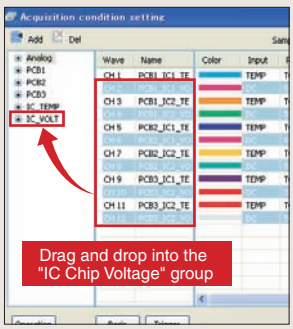
Step1 Smart search

Search selected channels in one operation! After the search the channels have selected status.



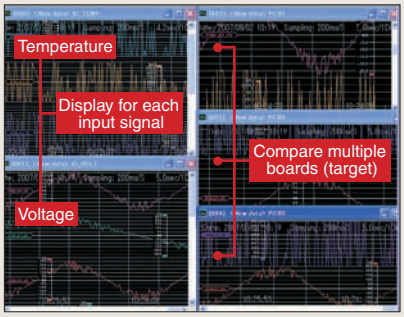
Step2 Grouping

Grouping is simple by drag and drop into the created groups.



Step3 Multiple display

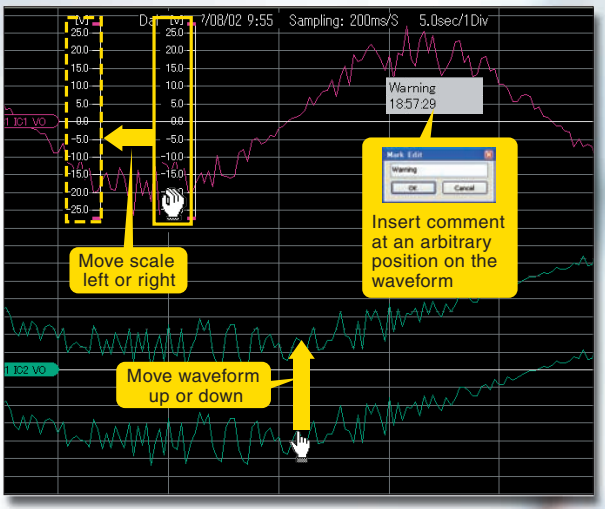
For each group a waveform screen can be displayed, so observation of comparisons between groups is possible.



Free movement, and extremely intuitive operation!

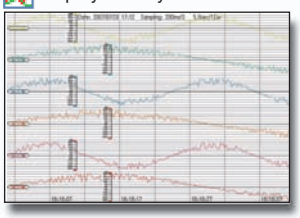
Free adjustment function new concept

● Click on wave form, scale, or cursor, and move

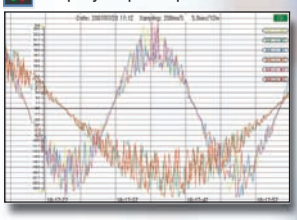


● Change the position of the wave form with a single click of an icon

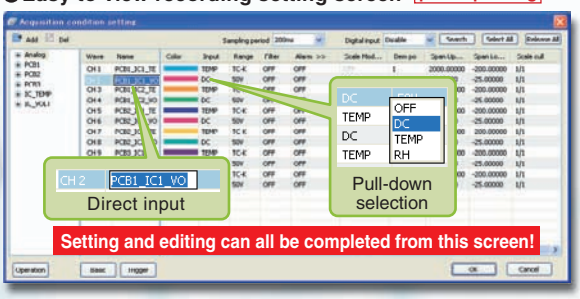
Display side by side



Display superimposed



● Easy to view recording setting screen patent pending



Extremely easy to use compared with conventional logger software

Wave Inspire RX

Common Options

ZR-SX10

* 30 days´ trial software is provided on the utility disk in a standard set.

Using the new special PC software "Wave Inspire RX", in a simple 3 step operation it is possible to compare each measurement, or observe the waveforms for each input signal. Observation of wave forms is very convenient when there is much measurement data, such as multi-channel measurements, multi-measurements, etc. Also, functions not available in standard software are provided, such as directly dragging waveforms, scales, and cursors with a mouse, so that extremely intuitive operability that far exceeds that of conventional logger software is achieved.

Major functions

- Quick call up of the cursor
- Special search function
- Screen save function/CSV save function
- Report printing function

■System Configuration

Standard set

ZR-RX20A-E

●AC adaptor/AC cable
●Start-up guide

●Utility disk*

*Content of utility disk
–Special PC software(Trial version)
–Standard PC software
–manual PDF file

ZR-RX40A-E

●AC adaptor/AC cable
●Start-up guide

●Utility disk*

*Content of utility disk
–Special PC software(Trial version)
–Standard PC software
–manual PDF file

Options

Common options

Special PC Software ZR-SX10

*USB flash drive can be used usually.

DC cable(2m) ZR-XRD1

Battery Pack ZR-XRB1

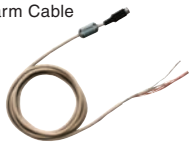
Humidity Sensor(3m) ZR-XRH1

ZR-RX40 Special options

Base Set ZR-XRE1

Extension Terminal Set ZR-XRT1

Logic Alarm Cable ZR-XRL1



ZR-RX40 Necessary option when channel is enhanced

Item	20CH	40CH	100CH	200CH
ZR-RX40 Main unit	1	1	1	1
Base Set(ZR-XRE1)	0	1	1	1
Extension Terminal Set(ZR-XRT1)	0	1	4	9

■Standard Specifications

Main unit

Model		ZR-RX20A	ZR-RX40A
Input method		all channels isolated	all channels isolated Resistance temperature detector is non-isolated
Input terminal shape		M3 screw type terminal	
Number of input channels		10CH	Standard: 20ch Max: 200ch(When the terminal unit is connected)
Sampling interval		Max 100ms	100ms/10CH max
A/D resolution		16bit	
Measurement ranges	Voltage	20/50/100/200/500mV,1/2/5/10/20/50V,1-5V F.S.	
	Thermocouples	K/J/E/T/R/S/B/N/W(WRe5-26)	
	Resistance temperature detector	Uncorrespondence	Pt100/JPt100/Pt1000(IEC751)
	Humidity	0 to100%(Voltage 0V to 1V Scaling conversion)*ZR-XRH1(Refer to the option.)	
	Logic	1CH	Switch between logic4CH and pulse4CH
	Pulse	1CH(Revolutions mode, Counts mode, Inst. Mode switch method)	pulse type(Revolutions mode, Counts mode, Inst. Mode switch method)
Reference contact compensation		Internal/External switching	
Reference contact compensation accuracy		±0.5 ˚C(23˚C±2 ˚C, when the input terminal temperature is balanced)	
Maximum input voltage	Channel Terminals	60Vp-p	
	Logic input/Pulse input/Trigger input	24V	
Input impedance		1MΩ±5%	
Allowable signal source resistance		Less than 300Ω	
Alarm output	Number of channels	1CH	4CH
	Output format	Open collector output	
	Output conditions	Level judgment, window judgment, logic pattern judgment, pulse judgment	
Trigger input		1CH	
PC I/F Type		USB(1.1)	USB(2.0),LAN(10BASE-T/100BASE-TX)
PC I/F Functions		Data transfer to the PC(realtime memory)	Data transfer to the PC(realtime memory) Web server function(Operation of ZR-RX40) FTP function(Transfers and deletes measured data from internal memory via network)
Data save functions	Measured data	Internal memory(3.5MB Flash memory) or direct capture in the USB memory device	Internal memory(12MB Flash memry) or direct capture in the USB memory device
	Other	Setup conditions, copy of data screen can be saved in the internal memory or USB memory device	
Display		3.5-inch TFT color LCD(QVGA: 320 x 240 dots)	5.7-inch TFT color LCD(QVGA: 320 x 240 dots)
Display Language		Japanese/English(US)/English(UK)/French/German/Chinese/Korean	
Operating environment		0 to 40˚C, 30 to 80 % RH(15 to 40˚C when the battery)	0 to 45˚C, 5 to 85 % RH(15 to 40˚C when the battery)
Withstand voltage		350 Vp-p(between input channel/GND; between each chs)1 minute	
Power supply/Voltage		AC adapter: 100 to 240 VAC/50 to 60 Hz(*9)DC input: 8.5 to 24VDC Battery pack(opitin)	
Power consumption		28 VA or less(when the AC adapter is used)	
Weight		480g(Excluding the AC adapter and battery)	990g(Including 1 terminal units,Excluding the AC adapter and battery)

Measurement accuracy(ZR-RX20,ZR-RX40 Commonness)

Voltage	±0.1% of F.S.

Thermocouple	Measurement Temperature Range (˚C)	Measureme
R/S	0≤TS ≤100	±5.2˚C
	100<TS ≤300	±3.0˚C
	R : 300<TS ≤1600˚C	±(0.05%of rdg+2.0˚C)
	S : 300<TS ≤1760˚C	±(0.05%of rdg+2.0˚C)
B	400≤TS ≤600	±3.5˚C
	600<TS ≤1820˚C	±(0.05%of rdg+2.0˚C)
K	–200≤TS ≤–100	±(0.05%of rdg+2.0˚C)
	–100<TS ≤1370˚C	±(0.05%of rdg+1.0˚C)
E	–200≤TS ≤–100	±(0.05%of rdg+2.0˚C)
	–100<TS ≤800˚C	±(0.05%of rdg+1.0˚C)
T	–200≤TS ≤–100	±(0.1%of rdg+1.5˚C)
	–100<TS ≤400˚C	±(0.1%of rdg+0.5˚C)
J	–200≤TS ≤–100	±2.7˚C
	–100<TS ≤100	±1.7˚C
	100<TS ≤1100˚C	±(0.05%of rdg+1.0˚C)
N	0≤TS ≤1300˚C	±(0.1%of rdg+1.0˚C)
W	0≤TS≤2315˚C	±(0.1%of rdg+1.5˚C)

Resistance Temperature Detector	Measurement Temperature Range(˚C)	Applied Current	Measurement Accuracy
Pt100	–200 to 850˚C(FS=1050˚C)	1mA	±1.0˚C
JPt100	–200 to 500˚C(FS=700˚C)	1mA	±0.8˚C
Pt1000	–200 to 500˚C(FS=700˚C)	0.2mA	±0.8˚C

Features under the following measurement parameters
Operating environment 23 ˚C ±3 ˚C
Left for at least 30 minutes after the power supply is turned on
Sampling interval 1 s(20 ch)
Filter ON(Average: 10 times)
GND connection
Thermocouple used is T: 0.32f, other: 0.65f
Only ZR-RX40 corresponds to the resistance temperature detector.

Humidity Sensor ZR-XRH1(Option)

Item	Description
Ambient temperature	–25 to +80˚C
Ambient humidity	0 to 100%RH
Relative humidity measurement accuracy	±3%RH(5 to 98%RH at 25˚C)
Response time	15 sec(90 % response when membrane filter is installed)
Sensor output	DCO to 1V
External dimensions	14 x 80 mm(excluding cable)
Cable length	3m

PC Software

	Special PC Software ZR-SX10 Wave Inspire RX (OPTION; Sold separately,Trial version enclosed in the ZR-RX standard set.)	Standard PC Software Smart Viewer RX20/RX40 (Enclosed in the ZR-RX standard set.)
Standard	Logging-data display,Real-time PC data logging, ZR-RX setting,CSV file conversion	
Wave Operation	Direct drug & move Scale batch change of all channels Other Intuitive functions including mouse wheel operation	Scale change by numeric input. (RX20) Scale change of each channel by icon. (RX40)
Wave Display	Multiwindow display All channel multi-scale display Scroll(UP/Down/left/right)	Single window division display. Y-T, X-Y, and meter display selectable.
Setting Display	"Smart List view" "Smart grouping"	Tab form
CSV Conversion	Between cursors,All data,File batch conversions	
Other functions	"Smart Search" Cursor View, Comment input,	Cursor View, Comment input, Excel transfer,Alarm mail.
I/F for Real-time logging	USB	USB,LAN
OS	Windows Vista / XP / 2000	Windows XP/2000

Model

Standard set

Item	Model
Portable Multi Logger	ZR-RX20A-E
Portable Multi Logger	ZR-RX40A-E

Option

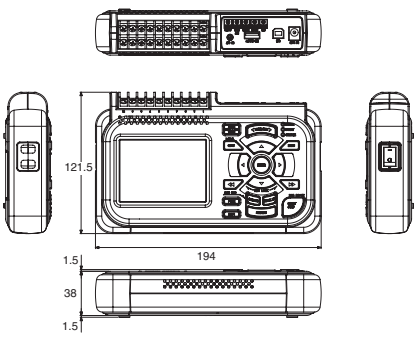
Item	Model
Battery Pack	ZR-XRB1
Humidity Sensor	ZR-XRH1
DC Cable	ZR-XRD1
Base Set(ZR-RX40 Special option goods)	ZR-XRE1
Extension Terminal Set(ZR-RX40 Special option goods)	ZR-XRT1
Logic Alarm Cable(ZR-RX40 Special option goods)	ZR-XRL1
Special PC Software Wave Inspire RX(ZR-RX20/40 commonness)	ZR-SX10

The temperature detector also abundantly does the lineup.

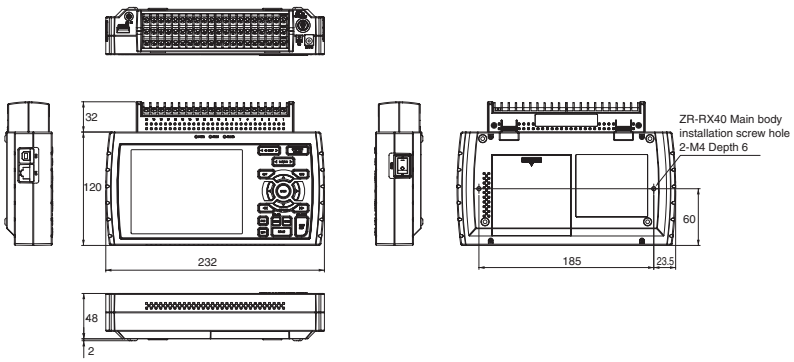
External Dimensions

(Unit: mm)

ZR-RX20



ZR-RX40



Portable Multi-logger

ZR-RX20/RX40

This document provides information mainly for selecting suitable models. Please read the document User's Manual (Z257/Z260) carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

OMRON Corporation
Industrial Automation Company
Sensing Devices Division H.Q.
Application Sensors Division
Shiokoji Horikawa, Shimogyo-ku,
Kyoto, 600-8530 Japan
Tel: (81) 75-344-7068/Fax: (81) 75-344-7107

Regional Headquarters
OMRON EUROPE B.V.
Sensor Business Unit
Carl-Benz-Str. 4, D-71154 Nufringen,
Germany
Tel: (49) 7032-811-0/Fax: (49) 7032-811-199

OMRON ELECTRONICS LLC
One Commerce Drive Schaumburg,
IL 60173-5302 U.S.A.
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON ASIA PACIFIC PTE. LTD.
No. 438A Alexandra Road # 05-05/08 (Lobby 2),
Alexandra Technopark, Singapore 119967
Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON (CHINA) CO., LTD.
Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
Pu Dong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

Note: specifications subject to change without notice.

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Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranty and Limitations of Liability

WARRANTY
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