OMRON

Data Logger
ZR-RX Series

Easy data recording with all the capacity you need.

4 GB Internal Memory **Best-In-Class**

Ultra Long-Term Data Logger

All channels isolated | Multi-input | Budget prices

realizing

From PRODUCTION

Anyone-Anytime-Anyplace

ZR-RX45

ZR-RX25

Improved performance and operability for multiple recording needs

From the manufacturing floor to the research facility, meeting every need at prices so affordable that every employee can have one.

4 GB Flash Memory Long-Term Data Capture

Best-In-Class 4 GB Flash Memory

Makes long-term capture possible even in workplaces where a USB flash drive cannot be brought in for security reasons.

Ring Memory Capture

This function overwrites captured data so that only recent data is saved at all times.

High Data Reliability

All Channels Isolated

Each channel is supplied with its own isolated circuit eliminating inter-channel noise interference.

Delta-Sigma A/D Converter

A new delta-sigma A/D conversion system boosts anti-noise performance.

Versatile Expandability

Multi Function Input

Simultaneous measurement of temperature, humidity, voltage and other factors can be performed.

Expandability

Expandable up to 200 channels (ZR-RX45)

All Models All Channels Isolated

High-speed, wide-range voltage measurement model

ZR-RX70A-□

High speed | Wide range

4 GB internal flash memory 200-channel expandable temperature measurement model

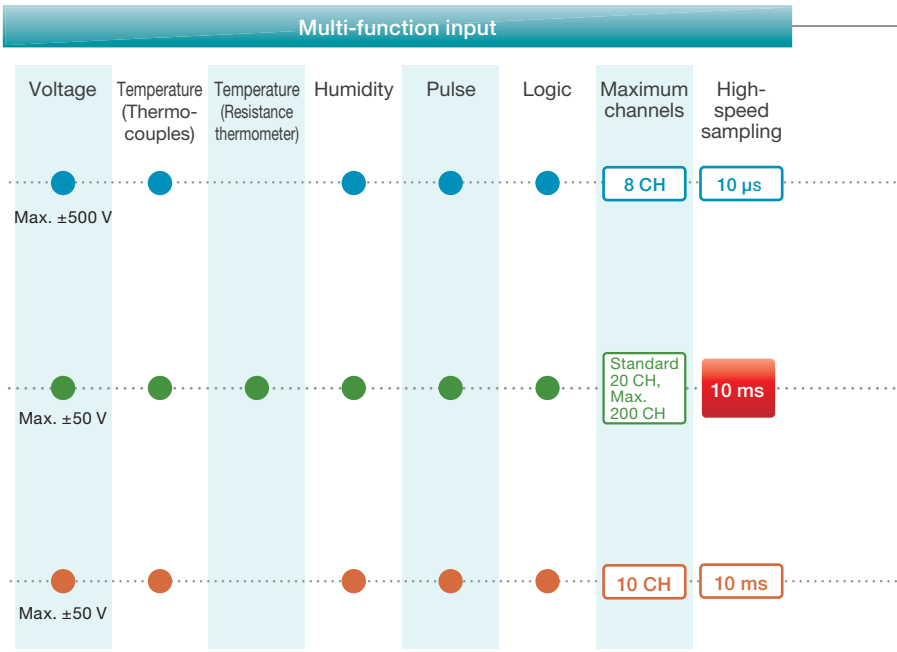
ZR-RX45A-□

4GB Flash memory | Channel expansion | Windows 7 -compatible

4 GB internal flash memory Easy-to-use and compact 10-channel model

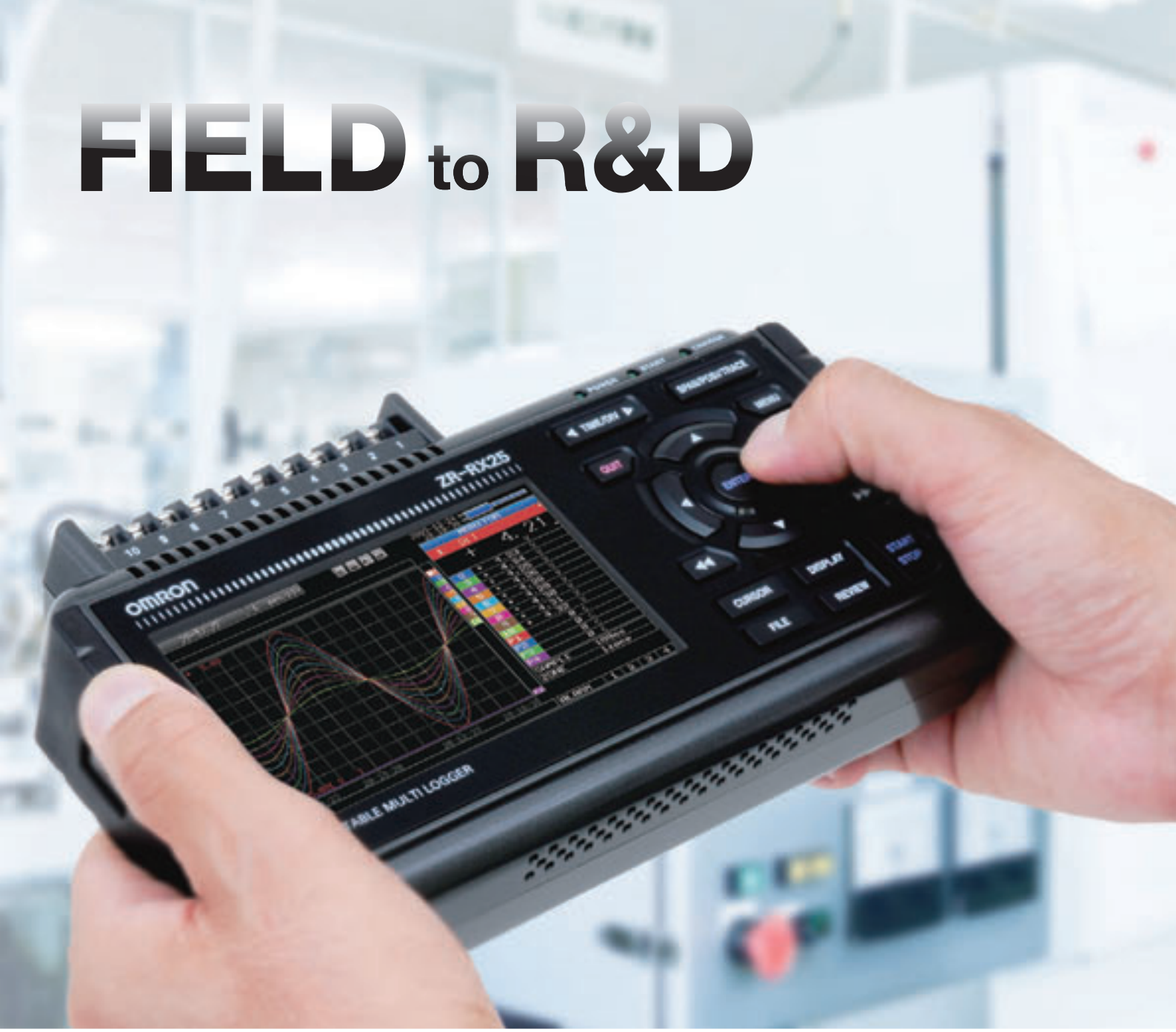
ZR-RX25A-□

4GB Flash memory | Windows 7-compatible



Models compatible with power supply and voltage specifications for each country, as well as conforming to Chinese RoHS are also available. For details, please consult your dealer.

FIELD to R&D



Improvements

Wider range of features								PC compatibility		Compliant Model		
Memory capacity	Isolation	A/D conversion system	Resolution	Ring memory capture	LCD monitor	LAN connection	USB cable	USB flash drive		CEE	CCC	PSE
256 MB	All channels isolated	Sequential comparison	16-bit		5.7-inch (QVGA)	●	●	●		-E	-CHRO	
4 GB	All channels isolated	Delta-sigma	16-bit	■	5.7-inch (VGA)	●	●	●		-E	-CHRO	
4 GB	All channels isolated	Delta-sigma	16-bit	■	4.3-inch (WQVGA)		●	●		-E	-CHRO	

Blank after the last hyphen

High-speed, wide-range voltage measurement model

ZR-RX70

Multi-function input

Voltage	±20 mV to ±500 V	Temperature	Thermocouples (K, J, E, T, R, S, B, N, W)
Humidity	Humidity Sensor (optional ZR-XRH1 required)		
Pulse	Logic	4 channels in addition to the analog 8 channels (optional ZR-XRL1)	

(Rpm/Count /Inst.)

Wider range of features

8 CH	Max. recording time 10 µs	All channels isolated
256 MB internal memory	5.7 inch (QVGA)	2-hour battery
16 bit resolution	Easy-to-navigate menus	External sampling

PC compatibility

USB flash drive	USB (High speed)	100BASE-TX
Web server	FTP server	NTP client

Highest speed and widest input range in its class

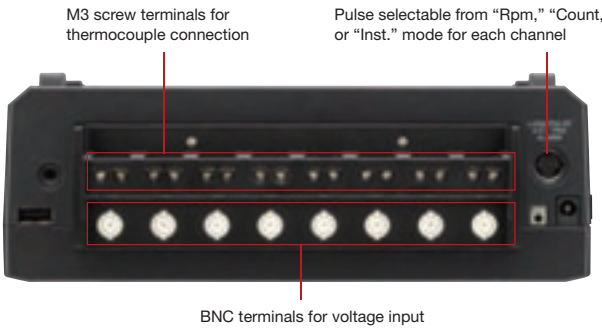
Meeting Versatile Requirements

Isolated multi-function input on all channels

Each channel is supplied with its own isolated circuit preventing inter-channel noise interference. Multi-function input enables simultaneous logging of voltage, temperature, humidity (optional), pulse, and logic. A wide variety of inputs can be logged.

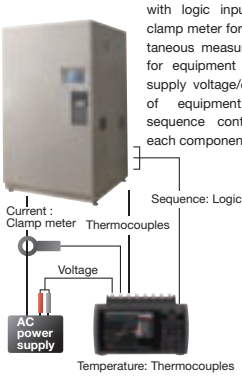
BNC / screw hybrid input terminal

Each analog input terminal features hybrid BNC terminal / screw terminal specifications.
Use either one for voltage input connection.



Full Array of Features

Super-wide Voltage Input Range



Use in combination with logic input and clamp meter for simultaneous measurement for equipment power supply voltage/current of equipment and sequence control of each component.

Wide input range from ±20 mV to ±500 V. It allows the measurement of 100 to 240 VAC power supply waveforms.

Ultra high-speed sampling

High-speed sampling at speeds up to 10 µs is possible. Thus it is suitable for applications such as drop tests and oscillation tests that require high-speed sampling. Data for lengthy applications, such as endurance tests and environmental tests, can be continuously logged to the flash memory (at a sampling interval of 1 ms or over).

■ Potential recording time (with 8 analog channels)

	10 µs	100 µs	500 µs	1 ms	10 ms	100 ms	1 s
Internal RAM	10 s	approx. 1 min 40 s	approx. 8 min 20 s	approx. 16 min 40 s	approx. 2 h 40 s	approx. 1 day 3 h	approx. 11 days 13 h
Internal flash memory	–	–	–	approx. 1 h	approx. 11 h	approx. 4 days	approx. 46 days
USB flash drive* (Example: 512 MB)	–	–	–	approx. 2 h	approx. 22 h	approx. 9 days	approx. 93 days

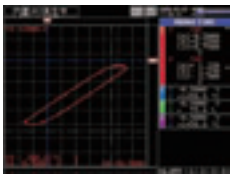
* Please use a USB flash drive without security function.

Simultaneous sampling with external devices

Data capture can be timed in response to external device.
Capture necessary data only.

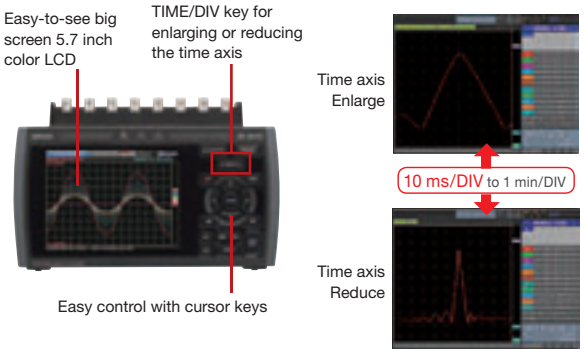
X-Y Recorder Function

The analog X-Y recorder function of the product enables users to view correlations between different pieces of data. The product can also be used as a 4-pen recorder. Digital data captured with this function can be used for reports and other post-measurement work.



Smart operability with cursor key

Intuitive operation using a set of cursor keys allows users to view enlarged and reduced images of high-speed waveforms. A 5.7-inch large-screen color LCD (QVGA) enables easy observation of waveforms and measurements even in a dark place.



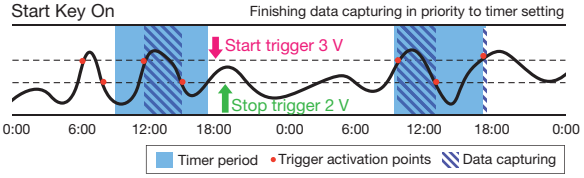
Useful Trigger and Timer Functions

Different combinations of the trigger and timer functions
They enable users to eliminate superfluous data and capture the data truly necessary for each situation.

Timer Setting	Timer mode	Off, Date/Time, Daily Cycle, Hourly Cycle
Trigger settings	Start source setting	Off, Level Value, External Input, Scheduled Time
	Stop source setting	Off, Level Value, External Input, Scheduled Time
	Pre-trigger Only when data is stored in internal RAM	0% to 100%
	Repeat capture	On, Off

Setting example Measurement of abnormal signals while a certain device is at work

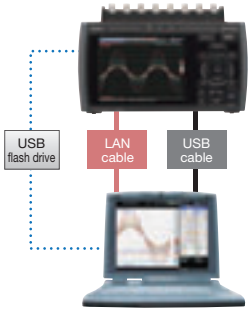
Timer Setting	Timer mode	Daily Cycle Start setting: 09 hrs 00 sec Stop setting: 18 hrs 00 sec
Trigger settings	Start source setting Stop source setting Repeat capture	Level CH1 (3V rising) Level CH1 (2V falling) On



PC Compatibility

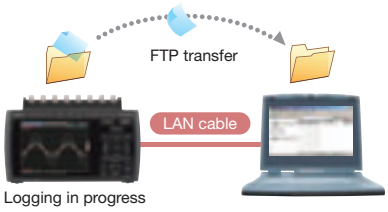
Versatile PC linkup via LAN, USB, etc.

3 ways to link to a PC are available through a USB flash drive, a USB connection, or a LAN connection.
No initial setup is required. Supports all kinds of data applications.



Extract data even while logging is in progress

With the pre-installed FTP server function, data stored on the logger can be transferred to your PC even while logging is in progress.



Remote control / Monitoring function

You can remote control the logger from the web browser installed in your PC by connecting the logger with an IP address to the PC through a LAN network.
Files stored on the unit (or on the USB flash drive) can be copied to your PC via the web browser as well.

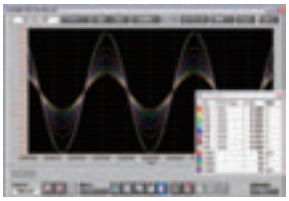
Automatic clock-time correction

Clock-time of the unit is automatically corrected by the NTP client function.

PC viewer function

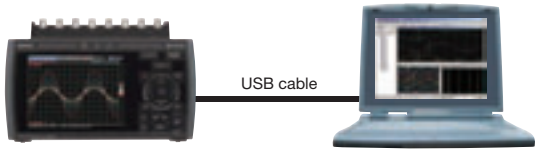
Special software allows you to display captured data easily in waveform format.
Search, printout, and CSV conversion can also be performed.

* Simply start up the software and select a file. For multi-channel measurement and advanced waveform display, we recommend special PC software (Wave Inspire RX). (See p. 8)



Real-time data gathering in a PC

The special software enables real-time data saving in a PC.
The logger can be connected to a PC via USB or LAN connection.
Captured data can be simultaneously saved on the logger and on a PC, or on the PC only.



You can also save and convert logging data directly to Excel format.

200-Channel Expandable Temperature Measurement Logger with Internal 4 GB Flash Memory

ZR-RX45

Multi-function input

Voltage	±20 mV to ±50 V	Humidity	Humidity Sensor (optional ZR-XRH1)
Temperature Thermocouples	Temperature Resistance thermometer	Thermocouples (K, J, E, T, R, S, B, N, W) Resistance thermometer (Pt100, JPt100, Pt1000)	
Pulse	Logic	Select 4 channels of logic input or 4 channels of pulse input (optional ZR-XRL1)	

(Rpm/Count /Inst.)

Wider range of features

Standard 20CH Max. 200 CH	Max. recording time 10 ms	All channels isolated
4 GB internal memory	5.7 inch (VGA)	7-hour battery
16 bit resolution	Easy-to-navigate menus	USB flash drive insertion or removal during data gathering

PC compatibility

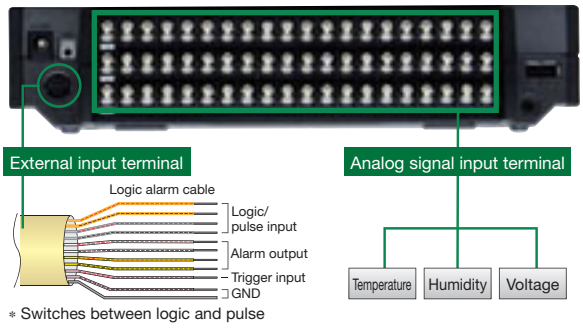
USB flash drive	USB (High speed)	100BASE-TX
Web server	FTP server	NTP client

Max. 200 Channels, Additional Expandability via PC Connection

Meeting Versatile Requirements

Isolated Multi-Function Inputs

Each circuit is electrically isolated so that the different channels do not affect each other. Built-in delta-sigma A/D converter boosts anti-noise performance as well.
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

Full Array of Features

Max. in its class

Resistance Thermometer Input

The logger is also compatible with resistance thermometer input, allowing measurement with higher accuracy and greater stability than thermocouples.
What's more, the logger measures up to Pt1000, enabling temperature measurement with precision previously only found in high-cost measurement devices.

∗ Photo shows an Omron platinum temperature resistance thermometer, 52 series.

Expandable up to 200 channels

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.

The 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.

Internal Large-Capacity 4 GB Flash Memory

Best-In-Class

The unit features a 4 GB internal flash memory. Long-term data capture is possible without a USB flash drive. With flash memory, data will not be lost even if power is turned off. Of course direct data capture to a USB flash drive is also possible, and data will be stored even if the USB flash drive is replaced while measurement is in progress.

∗ Please use a USB flash drive without security function.

■ Potential recording time (with 20 analog channels)

Length of data capture (sampling speed)	10 ms∗1	50 ms∗1	100 ms∗1	200 ms	500 ms	1 s	10 s
Internal 4 GB flash memory	approx. 29 days	approx. 72 days	approx. 89 days	approx. 101 days	approx. 253 days	approx. 506 days	approx. 5,068 days
1 GB USB flash drive ∗2	approx. 15 days	approx. 38 days	approx. 47 days	approx. 54 days	approx. 135 days	approx. 270 days	approx. 2,701 days

∗1: Number of channels that can be added is limited: at 10 ms, 1 channel; at 50 ms, 5 channels; at 100 ms, 10 channels.
∗2: Please use a USB flash drive without security function.

10 ms High-Speed Sampling

Higher voltage measurement sampling speeds achieved.
Data can be captured at intervals as short as 10 ms.

■ Potential recording time (with 20 analog channels only)

Sampling speed		10 ms	20 ms	50 ms	100 ms	200 ms	500 ms	1 s	2 s
Number of operating channels		1	2	5	10	20	50	100	200
Type of measurement:	Voltage	●	●	●	●	●	●	●	●
	Temperature ∗				●	●	●	●	●

∗ Sampling speed for temperature is equivalent to that of voltage, as it is scaled to 0-1 V.

Easily readable 5.7 inch VGA LCD

Comes with bright, easily readable 5.7-inch large-screen color LCD panel with VGA (640 x 480 dot) high resolution.
Measured values and waveform can be vividly displayed in addition to set values.

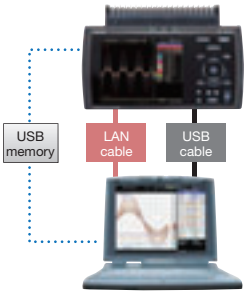
Secure Ring Memory Capture

This function deletes unneeded past data so that only recent data is saved to the internal memory or USB flash drive at all times. It conveniently allows the data logger to be set up and continually capturing data, and also prevents data capture failure when trouble occurs. (The length of time data is saved can be preset.)

PC Compatibility

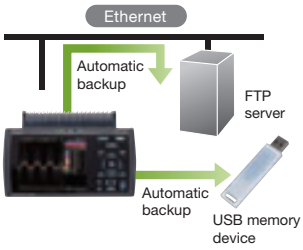
Versatile PC linkup via LAN, USB, etc.

3 ways to link to a PC are available through a USB flash drive, a USB connection or a LAN connection.
No initial setup is required. Supports all kinds of data applications.



Automatic Backup of Captured Data

Select either a USB flash drive or FTP server to save captured data. If FTP server is selected, data will automatically be backed up on the server, allowing you to establish an automatic data-gathering system without the need for troublesome programs.



Remote control / Monitoring function

You can remote control the logger from the web browser installed in your PC by connecting the logger with an IP address to the PC through a LAN network.
Files stored on the unit (or on the USB flash drive) can be copied to your PC via the web browser as well.

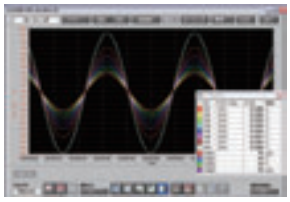
Automatic clock-time correction

CLock-time of the unit is automatically corrected by the NTP client function.

PC viewer function

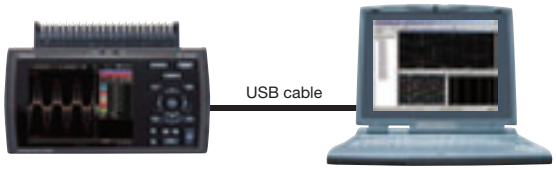
Special software allows you to display captured data easily in waveform format.
Search, printout, and CSV conversion can also be performed.

∗ Simply start up the software and select a file. For multi-channel measurement and advanced waveform display, we recommend special PC software (Wave Inspire RX). (See p. 8)



Real-time data gathering in a PC

The special software enables real-time data saving in a PC.
The logger can be connected to a PC via USB or LAN connection.
Captured data can be simultaneously saved on the logger and on a PC, or on the PC only.



You can also save and convert logging data directly to Excel format.

Easy-to-use and Compact 10-Channel Logger with Internal 4 GB Flash Memory

ZR-RX25

Multi-function input

- Voltage: ±20 mV to ±50 V
- Temperature: Thermocouples (K, J, E, T, R, S, B, N, W)
- Humidity: Humidity Sensor (optional ZR-XRH1 required)
- Pulse / Logic: Select 4 channels of logic input or 4 channels of pulse input (optional ZR-XRL1) (Rpm/Count /Inst.)

Wider range of features

- 10 CH
- Max. recording time 10 ms
- All channels isolated
- 4 GB internal memory
- 4.3 inch (WQVGA)
- 6-hour battery
- 16 bit resolution
- USB flash drive insertion or removal during data gathering

PC compatibility

- USB flash drive
- USB (Full speed)

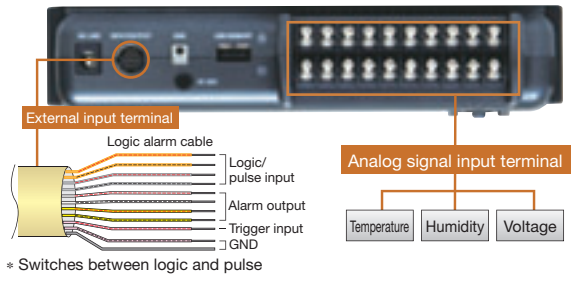
Easy-to-use and Affordable, Yet Capable of 10 ms Sampling Speeds!

Meeting Versatile Requirements

First in its class

10 Isolated Channels + Multi-Input

Though the unit is light and compact, each channel is supplied with its own isolated circuit giving zero inter-channel noise interference. A delta-sigma A/D converter boosts anti-noise performance as well. With inputs not only for temperature but also voltage, humidity, pulse, and logic, this model is suitable for any field.



∗ Switches between logic and pulse

Full Array of Features

Fastest in its class

10 ms High-Speed Sampling

Higher voltage measurement sampling speeds achieved.
Data can be captured at intervals as short as 10 ms.

Sampling speed		10 ms	20 ms	50 ms	100 ms	1 s
Number of operating channels		1	2	5	10	10
Type of measurement:	Voltage	●	●	●	●	●
	Temperature ∗				●	●

∗ Sampling speed for temperature is equivalent to that of voltage, as it is scaled to 0-1 V.

Secure Ring Memory Capture

This function overwrites unneeded past data so that only recent data is saved to the internal memory or USB flash drive device at all times. It conveniently allows the data logger to be set up and continually capturing data, and also prevents data capture failure when trouble occurs.

Internal Large-Capacity 4 GB Flash Memory

Max. in its class

The unit features a 4 GB internal flash memory. Long-term data capture is possible without a USB flash drive. With flash memory, data will not be lost even if power is turned off. Of course, direct data capture to a USB flash drive is also possible, and data will be stored even if the USB flash drive is replaced while measurement is in progress.

∗ Please use a USB flash drive without security function

■ Potential recording time (with 10 analog channels)

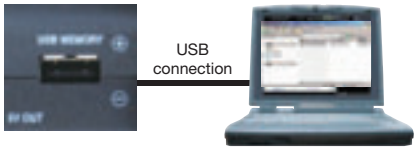
	10 ms ∗1	50 ms ∗1	100 ms	200 ms	500 ms	1 s	10 s
Internal 4 GB flash memory	approx. 38 days	approx. 83 days	approx. 97 days	approx. 194 days	approx. 485 days	approx. 971 days	approx. 9,714 days
1 GB USB flash drive ∗2	approx. 20 days	approx. 44 days	approx. 51 days	approx. 103 days	approx. 258 days	approx. 517 days	approx. 5,178 days

∗1: Number of channels that can be added is limited: at 10 ms, 1 channel; at 50 ms, 5 channels.
∗2: Please use a USB flash drive without security function.

PC Compatibility

Handy PC linkup via USB connection

The logger is equipped with a USB flash drive for direct data capture. With PC connection, data in the USB flash drive can be displayed in Excel format. Connection to a PC is easy with a USB cable, and logger settings can be determined and data transferred in real time using special PC software. PC connection also allows the logger to be used as a USB flash drive.



Option Special PC software

WaveInspireRX

ZR-SX10

Major functions

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

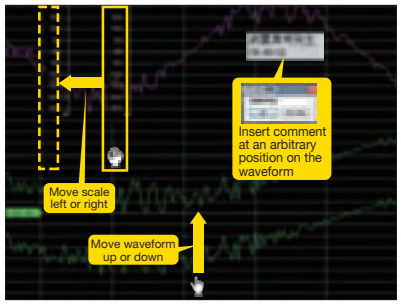
Easy-to-use operation plus processing capabilities beyond previous logger software!

Wave Inspire RX, a special PC software program, offers intuitive operability and data processing capabilities beyond all previous logger software.
Featuring a number of functions not available in standard logging software programs, it allows you to directly grab and drag waveforms and scales with the mouse cursor, as well as to group channels freely and operate multiple windows. Different categories of data can be compared, and the waveform of each input signal can be observed with ease, making it particularly useful when handling a large number of multi-channel measurements.

Free Adjustment Function

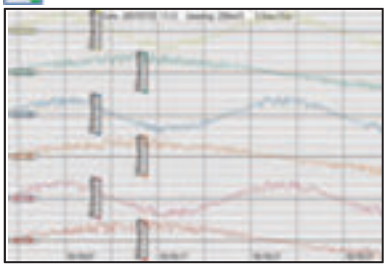
Intuitive Control

Free adjustment function

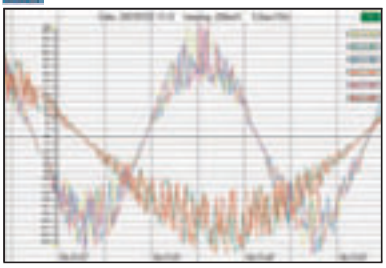


Click on waveform, scale, or cursor, and move

Display side by side



Display superimposed

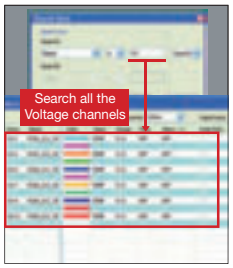


Change the position of the waveform with a single click of an icon

Easy Comparison and Quick Decision

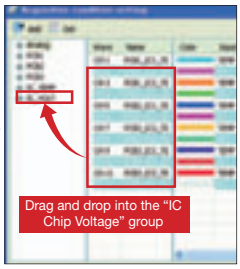
Sophisticated Data Processing

Smart search



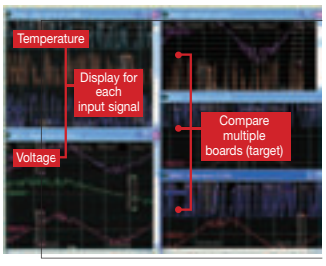
Search selected channels in one operation! After the search the channels have selected status.

Grouping



Grouping is simple by dragging and dropping into the created groups.

Multiple display



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

Viewing Data from Two Data Loggers Simultaneously

Multi-Connection of Different Types of Loggers

If you connect ZR-RX70 and ZR-RX45 via LAN connection, you can view temperature data measured by ZR-RX45 and voltage data measured by ZR-RX70 simultaneously, and save the data from the different loggers as one file. You can handle data from the two loggers without any data-combining processes.

* When sampling speed is 1 ms or faster.

■ Standard Specifications

Main Unit

Item			ZR-RX70A-□	ZR-RX45A-□	ZR-RX25A-□
Input method			All channels isolated input, Simultaneous sampling of all channels	All channels isolated input *1	All channels isolated input
Input terminal shape			BNC terminal: For voltage measurement M3 screw type terminal: For voltage/temperature measurement *2	M3 screw type terminal	
Number of analog input channels			8 ch	Standard: 20 ch Max.: 200 ch (When the terminal unit is connected)	10 ch
Sampling speeds			10 µs to 1 min	10 ms (when 1 ch is used) to 1 h	
A/D resolution			16 bit		
A/D conversion system			Sequential comparison	Delta-sigma	
Measurement ranges	Voltage		20, 50, 100, 200, 500 mV, 1, 2, 5, 10, 20, 50, 100, 200, 500 V, 1-5 V F.S.	20, 50, 100, 200, 500 mV, 1, 2, 5, 10, 20, 50 V, 1-5 V F.S.	
	Temperature	Thermocouple	K, J, E, T, R, S, B, N, W (WRe5-26)		
		Resistance temperature detector	—	Pt100, JPt100, Pt1000 (IEC751)	—
	Humidity		0% to 100% (Voltage 0 to 1 V scaling conversion) *3		
External input/output sections	Digital input		Logic input (4 ch) or Pulse input (4 ch) *4 *5		
	Alarm output		4 ch (Open collector output)		
Functions	Trigger functions		External trigger input (1 ch), input signal level, time In combination with timer mode, date and time can be set, and a wide variety of trigger settings such as “Every Day Cycle” and “Every Hour Cycle” can be made	External trigger input (1 ch), Input signal level, time, duration, alarm	External trigger input (1 ch), Input signal level, time, duration
	Filter functions		Off, Line, 5 Hz, 50 Hz, 500 Hz	Off, 2, 5, 10, 20, 40 (moving average)	
	Calculation function		Statistical calculation *6: Average, peak, maximum, minimum, RMS (maximum of 2 can be set simultaneously)		
PCI/F	Type		LAN (100BASE-TX), USB2.0 (HIGH SPEED)		USB1.1 (FULL SPEED)
	Function	Ethernet functions	Web server function, FTP server function, NTP client function Realtime data transfer to the PC, Unit control from a PC	Web server function, FTP server function, FTP client function, NTP client function, Realtime data transfer to the PC, Unit control from a PC	—
		USB	Realtime data transfer to the PC		
Memory devices	Internal		RAM: approx. 64 MB Flash memory: approx. 256 MB	Flash memory: approx. 4 GB *7	
	External		USB memory *7		
Display			5.7-inch color LCD (QVGA: 320 × 240 dots)	5.7-inch color LCD (VGA: 640 × 480 dots)	4.3-inch color LCD (WQVGA: 480 × 272 dots)
Operating environment			0 to 40°C, 5% to 85% (15 to 35°C when operated on batteries)	0 to 45°C, 5% to 85% (0 to 40°C when operated on batteries, 15 to 35 °C when charging batteries)	
Vibration resistance			Equivalent to automobile parts Type 1 Category A classification		
Power supply			AC adaptor; AC100 to 240 V/50 to 60 Hz *8, DC drive: 8.5 V to 24 V, Battery: DC7.4 V (2 packs)		AC adaptor: AC100 to 240 V/50 to 60 Hz *8, DC drive: 8.5 V to 24 V, Battery: DC7.4 V
Power consumption			42 VA (When the AC adaptor is used)	32 VA (When the AC adaptor is used)	29 VA (When the AC adaptor is used)
Weight			approx. 1.1 kg (Excluding batteries and AC adaptor)	approx. 900 g (Including one terminal unit, excluding batteries and AC adaptor)	approx. 520 g (Excluding battery and AC adaptor)
External dimensions			232 × 150 × 80 mm	232 × 152 × 50 mm	194 × 117 × 42 mm
Accessories			User's Manual, Utility disk (CD-ROM), AC Adaptor/AC cable		

*1: Resistance temperature detector is non-isolated.
*2: BNC terminal and M3 screw type terminal of the same channel cannnot be used simultaneously.
*3: A humidity sensor ZR-XRH1 is necessary.
*4: A logic alarm cable ZR-XRL1 is necessary.
*5: Pulse input: Revolutions mode/Counts mode/ Inst. mode switch method
*6: Designate real-time or between-cursors mode (during playback)
*7: 1 file max. 2GB (The capacity will vary depending on the external memory used.)
*8: Be sure to use only the AC cable and AC adaptor provided as accessories.

Measurement Accuracy

Item		ZR-RX70A-□		ZR-RX45A-□/ZR-RX25A-□	
Voltage		±0.25% of F.S.		±0.1% of F.S.	
Temperature *1	Thermocouple	Measurement temperature range (°C)	Measurement accuracy	Measurement temperature range (°C)	Measurement accuracy
	R/S	0 ≤ TS ≤ 100	±7.0°C	0 ≤ TS ≤ 100	±5.2°C
		100 < TS ≤ 300	±5.0°C	100 < TS ≤ 300	±3.0°C
		R : 300 < TS ≤ 1600	±(0.05% of rdg + 3.0°C)	R: 300 < TS ≤ 1600	±(0.05% of rdg + 2.0°C)
		S : 300 < TS ≤ 1760	±(0.05% of rdg + 3.0°C)	S: 300 < TS ≤ 1760	±(0.05% of rdg + 2.0°C)
	B	400 ≤ TS ≤ 600	±5.5°C	400 ≤ TS ≤ 600	±3.5°C
		600 < TS ≤ 1820	±(0.05% of rdg + 3.0°C)	600 < TS ≤ 1820	±(0.05% of rdg + 2.0°C)
	K	–200 ≤ TS ≤ –100	±(0.05% of rdg + 3.0°C)	–200 ≤ TS ≤ –100	±(0.05% of rdg + 2.0°C)
		–100 < TS ≤ 1370	±(0.05% of rdg + 2.0°C)	–100 < TS ≤ 1370	±(0.05% of rdg + 1.0°C)
	E	–200 ≤ TS ≤ –100	±(0.05% of rdg + 3.0°C)	–200 ≤ TS ≤ –100	±(0.05% of rdg + 2.0°C)
		–100 < TS ≤ 8 00	±(0.05% of rdg + 2.0°C)	–100 < TS ≤ 8 00	±(0.05% of rdg + 1.0°C)
	T	–200 ≤ TS ≤ –100	±(0.1% of rdg + 2.5°C)	–200 ≤ TS ≤ –100	±(0.1% of rdg + 1.5°C)
		–100 < TS ≤ 400	±(0.1% of rdg + 1.5°C)	–100 < TS ≤ 400	±(0.1% of rdg + 0.5°C)
	J	–200 ≤ TS ≤ –100	±3.7°C	–200 ≤ TS ≤ –100	±2.7°C
		–100 < TS ≤ 100	±2.7°C	–100 < TS ≤ 100	±1.7°C
		100 < TS ≤ 1100	±(0.05% of rdg + 2.0°C)	100 < TS ≤ 1100	±(0.05% of rdg + 1.0°C)
	N	0 ≤ TS ≤ 1300	±(0.1% of rdg + 2.0°C)	0 ≤ TS ≤ 1300	±(0.1% of rdg + 1.0°C)
	W	0 ≤ TS ≤ 2000	±(0.1% of rdg + 2.5°C)	0 ≤ TS ≤ 2000	±(0.1% of rdg + 1.5°C)

Measurement Accuracy (ZR-RX45 only)

Resistance temperature detector	Measurement temperature range (°C)	Applied current	Measurement accuracy
Pt100	–200 to 850°C (FS = 1050°C)	1 mA	±1.0°C
JPt100	–200 to 500°C (FS = 700°C)	1 mA	±0.8°C
Pt1000	–200 to 500°C (FS = 700°C)	0.2 mA	±0.8°C

*1

● ZR-RX70
Operating environment 23°C±5°C
When 30 minutes or more have elapsed after power was switched on
Filter Line/GND connected;
Thermocouple used is T: 0.32 dia., others: 0.65 dia.

● ZR-RX25/RX45
Operating environment 23°C±5°C;
When 30 minutes or more have elapsed after power was switched on
Sampling 1 s/Filter ON (10 times)
GND connected
Thermocouple used is T: 0.32 dia., others: 0.65 dia.
Resistance temperature detector is available only for ZR-RX45.

Humidity Sensor ZR-XRH1 (Option)

Item	Description
Allowable temperature range	–25 to 80°C
Allowable humidity range	0% to 100%
Relative humidity measurement accuracy	±3% (5% to 98% at 25°C)
Response time	15 sec (90% response when membrane filter installed)
Sensor output	0 to 1 VDC
External dimensions	dia. 14 mm × 80 mm (excluding cable)
Cable length	3 m

PC Software

Item	Special PC software ZR-SX10	Standard PC software	
	Wave Inspire RX (Since Ver.2.4) (Option Specifications)	Smart Viewer RXW (Since Ver.2.0) (Standard accessories)	Smart Viewer RX70 (Since Ver.2.0) (Standard accessories)
Compatible logger	ZR-RX25/RX45/RX70/RX20/RX40	ZR-RX25/RX45/RX20/RX40	ZR-RX70
Compatible operating system	Windows XP / Windows Vista / Windows 7		Windows 2000 / Windows XP / Windows Vista
CPU	Intel-compatible, 1 GHz or faster processor recommended, Intel Atom CPU not supported	Pentium 4: 2.0 GHz or faster processor recommended, Intel Atom CPU not supported	
Memory	Windows XP: 512 MB or more Windows Vista / Windows 7:1GB or more	512 MB or more (recommended: 1 GB or more)	
Display	1024 × 768 or higher, screen resolution, 65,535 color (16-bit color) or higher screen display	1024 × 768 or higher screen resolution	
Compatible interface	USB, LAN		
Standard functions	Review saved data, real-time capture of PC data, main unit setup, CSV file conversion		
Waveform operation	Direct operation of waveform by mouse or icons, Batch processing of selected waveform	Change CH scales individually by icons	
Waveform display	Display graphs in multi-window, X-Y View, FFT View, Handy function of switching waveform, Display function of grouping channel, Scrolling for all directions (up, down, right, left)	Display in single window, X-Y View between Cursors (only during replay), Display function of grouping channel	
Configuration function	Advanced channel grouping function, Advanced Listview setup function, Main unit setup	Channel grouping fuction, Main unit setup	
External control of sampling	—	Available (can set and display)	
Captured data	Binary file (original format): Captured data and the information of graph window are saved. CSV file: Captured data is saved in comma-separated value format: Binary files can be converted to CSV files all at once		
Others	Cursor function, Comment Input function, Excel transfer function		

*1: Even when using a PC with adequate specifications, capture errors occur at times because the PC is in bad condition. (For example, when other applications are open, or recording medium has no free area.) When you capture data using this software, please close all the other applications and save captured data to the hard disk.
*2: Don't start up other applications while this software is operating, and don't perform multiple operations. (For example, screen saver, virus scan program, copying and moving files, searching files, etc.)

■ System Configuration

Standard set

ZR-RX70A-□

- Main unit
- AC adaptor/AC cable
- User's manual
- Utility disk*

* Content of utility disk
–Standard PC software:
Smart Viewer RX70
–Special PC software:
Wave Inspire RX
(Trial version)
–Manual PC file

ZR-RX45A-□

- Main unit
- AC adaptor/AC cable
- User's manual
- Utility disk*

* Content of utility disk
–Standard PC software:
Smart Viewer RXW
–Special PC software:
Wave Inspire RX
(Trial version)
–Manual PC file

ZR-RX25A-□

- Main unit
- AC adaptor/AC cable
- User's manual
- Utility disk*

* Content of utility disk
–Standard PC software:
Smart Viewer RXW
–Special PC software:
Wave Inspire RX
(Trial version)
–Manual PC file

[ZR-RX common]

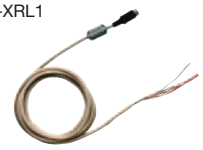
Special PC Software
ZR-SX10

DC Cable (2 m)
ZR-XRD1

Battery Pack
ZR-XRB1

Humidity Sensor (3 m)
ZR-XRH1

Logic Alarm Cable (2 m)
ZR-XRL1



[ZR-RX45 common]

Base Set
ZR-XRE1

Cable (Accessory, 0.5 m)

Extension Terminal Set
ZR-XRT1

[For ZR-RX70]

BNC-Crocodile Cable (2 m)
ZR-XRC1

ZR-RX45 Necessary option when channel is enhanced

Item	20 CH	40 CH	100 CH	200 CH
ZR-RX45 Main unit	1	1	1	1
Base Set (ZR-XRE1)	0	1	1	1
Extension Terminal Set (ZR-XRT1)	0	1	4	9

■ Model

Standard set

Item	Model
Data Logger	ZR-RX70A-□
	ZR-RX45A-□
	ZR-RX25A-□

Models compatible with power supply and voltage specifications for each country, as well as conforming to Chinese RoHS are also available. For details, please consult your dealer.

Option

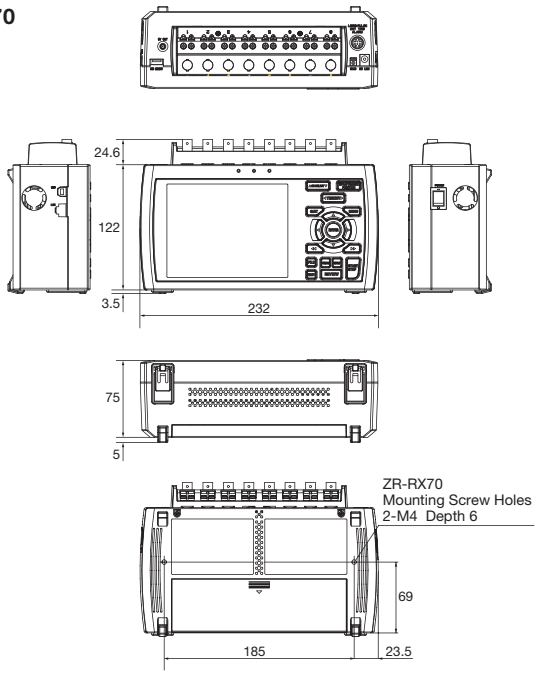
Item	Model
Battery Pack	ZR-XRB1
Humidity Sensor (3 m)	ZR-XRH1
DC Cable (2 m)	ZR-XRD1
Logic Alarm Cable (2 m)	ZR-XRL1
Base Set (For ZR-RX45)	ZR-XRE1
Extension Terminal Set (For ZR-RX45)	ZR-XRT1
BNC-Crocodile Cable (2 m) (For ZR-RX70)	ZR-XRC1
Special PC Software Wave Inspire RX	ZR-SX10

Please visit the Omron web site for details on calibration service formats and prices.
http://www.fa.omron.co.jp/
Extensive lineup of temperature sensors also available. For details, please visit the Omron web site.

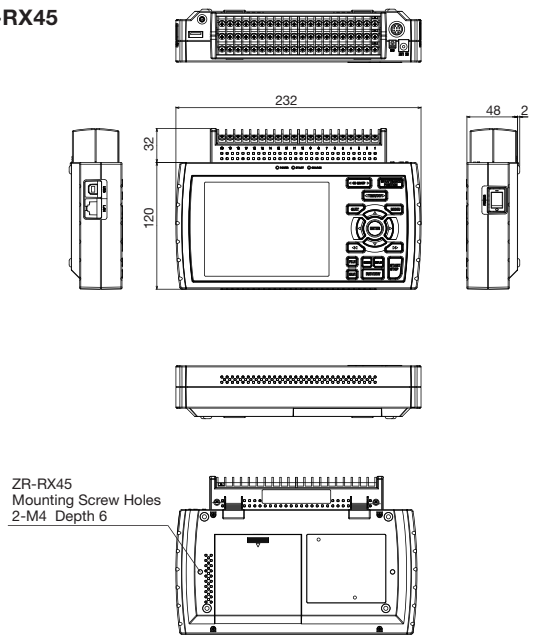
External Dimensions (Unit: mm)

Tolerance class IT16 applies to the dimensions unless otherwise specified.

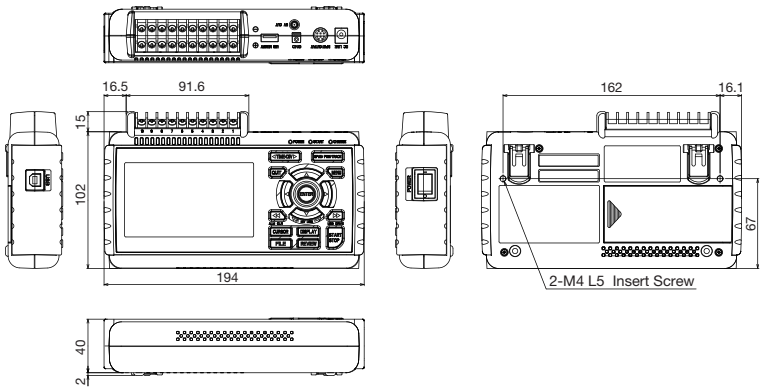
ZR-RX70



ZR-RX45



ZR-RX25



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