

## Main Unit & Accessories

### ■ Omnilight II RM1100 Series Main Unit

Item	Model	Option Code	Description and Remarks
Omnilight II	RM1101	— □	4ch type
	RM1102	— □	8ch type
Standard accessories	AC power cable (AC adaptor) x 1, PC software CD x 1 and instruction manual x 1		

### Optional Units

Item	Model	Description and Remarks
Battery pack	T2UR18650F5928B	Li-Ion, DC7.4V, 2500mAh. *RM1100 series require two (2) batteries.
Battery charger	NC-LSC05-110V	AC100-110V (50Hz/60Hz) * For charging one battery at a time
	NC-LSC05-220V	AC220-240V (50Hz/60Hz) * For charging one battery at a time
Splash-resistant cover	RM11-402	
Carrying case	RM11-403	
Display arm mount	RM11-405	
	RM11-452	2GB, industrial use (for saving setting conditions & measured data)
	RM11-453	4GB, industrial use (for saving setting conditions & measured data)
SDHC memory card	RM11-454	8GB, industrial use (for saving setting conditions & measured data)
	0311-5175	Length: 2m, insulated BNC connector and alligator clip (+:red, -:black)
	0311-5198	Length: 2m, Insulated BNC connector without clip
Signal input cable	0311-5200	Length: 2m, Insulated BNC connector and metal BNC connector
	0311-5332	Logic IC cord (1pc)
	0311-5337	IC clip cord (4pcs/set)
Logic input cable	0311-5336	alligator clip cord(4pcs/set)
	1539S	For converting voltage inputs (up to 4) into logic signals H or L
	1540S	For pulse output of fluctuation (±10%, ±20%) in 100/120V AC
AC/DC voltage detector	1543S	For pulse output of fluctuation (±10%, ±20%) in 220/240V AC
	0311-5004	Length: 1.5m, connectors: pin tip and banana plug
Voltage output cable	0311-5006	Length: 1.4m, connectors: pin tip and pin tip jack
BNC adaptor	0243-3021	insulated BNC connector and S terminal plug

### Current Measuring Devices

Item	Model	Description and Remarks
AC/DC clamp meter	2009R (*1)	for high current (2000A, 400A / DC and 30 to 1kHz, φ55)
	8113 (*2)	for medium current (200A, 20A, 2A / DC to 1kHz, φ19)
Clamp adaptor	8112 (*2)	for low current (20A, 2A, 0.2A / 40 to 10kHz, φ8)
	8115 (*2)	for low current (AC130A, DC180A / DC, 40~1kHz, φ12)
Signal input cable (for clamp meter output)	0311-5184 (*3)	Length: 1.95m, small plug for microphone and insulated BNC

\*1: Use signal input cable (0311-5184) if connecting output from 2009R to RM1100

\*2: Use a BNC adaptor (0243-3021) if connecting output from 8112, 8113 and 8115 to RM1100

\*3: Cable for inputting output from 2009R to isolated BNC connector of RM1100

### Inspection Certificate with Data Sheet

Item	Model	Description and Remarks
Inspection Sheet with Data, for RM1101	5694-2063	
Inspection Sheet with Data, for RM1102	5694-2065	

### ■ Thermal Printer

Item	Model	Description and Remarks
Thermal printer	RM11-440-B01	For AC100-110V
	RM11-440-C01	For AC220-240V
Standard accessories	AC power cable (AC adaptor) x 1, Recording paper x 1 roll and user's manual x 1	
Battery pack for printer	BP-L0720-A1-E	Li-Ion, DC7.4V, 2,000mAh
Battery charger for printer	PWC-L07A1-W1-E	AC100-240V(50/60Hz)
AC power cable for battery charger	CB-US04-18A-E-B	For AC100-110V
	CB-CE01-18B-E-B	For AC220-240V
Cable for printer	0311-5335	Spare cable
Recording paper	YPS118	11.2mm x 25 m roll paper (10 rolls/box)

\*Above specifications are subject to change without notice.

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Catalog ref : NA036



#### WARNINGS & CAUTIONS

- Before using this product, please carefully read the provided Operation Manual "WARNINGS" & "CAUTIONS" section to ensure proper operation.
- Please do not place the product in high temperature, high humidity or high inert gas environments.

Distributor:

U110A3

# Omnilight II RM 1100

## Portable Data Acquisition System

### Powerful and Dependable

### RM1100 Excels in both Lab and Field

The Compact RM1100 Portable Data Recorder provides reliable data collection in challenging environments. A large 7-inch wide TFT LCD color touch screen display and refined GUI are ideal for quick Setup, Data Capture and Playback. Coupled with "Real Time", "Memory" and SD Card recording modes plus up to 1μsec sampling rate, the RM1100 handles the most demanding high speed applications. Recording to SD Card or PC via Ethernet ensures long time continuous recording. Waveform printing is available with optional thermal printer. This AC or battery-operated recorder with rugged casing satisfies your different requirements for Predictive Maintenance, Quality Control, R&D, Automobile Driving Test and remote-controlled data acquisition.

#### Signal Input up to 8 Channels

4 or 8 channels of both Voltage/Temperature and Logic inputs

#### Outstanding Usability

Dynamic waveform display on 7" wide & large LCD Touch-screen with GUI offers easy operation

#### Built Tough

Shock and drop resistance withstanding continuous vibration environments such as on-board vehicle tests (MIL-STD-810G 514.5C-1)

Wide operating temperatures:-20°C to +60°C (-4°F to +140°F)  
Compact & rugged case endures dusty and humid environments

#### Excellent Portability

Long term continuous operation with rechargeable batteries. Can also be powered with 8.5 ~ 24V DC (vehicle) as well as AC Lightweight (approx.1.5kg/ 3.3lbs) with full feature measurement capability

#### Measurement Capability

Three measuring modes: "Real-Time" (Paper), "Memory" (Snap-Shot) and "Filing" (SD card storage)

High speed recording up to 1μs (1MS/s) to Memory or SD card Long term recording to SD Card, PC or optional thermal printer



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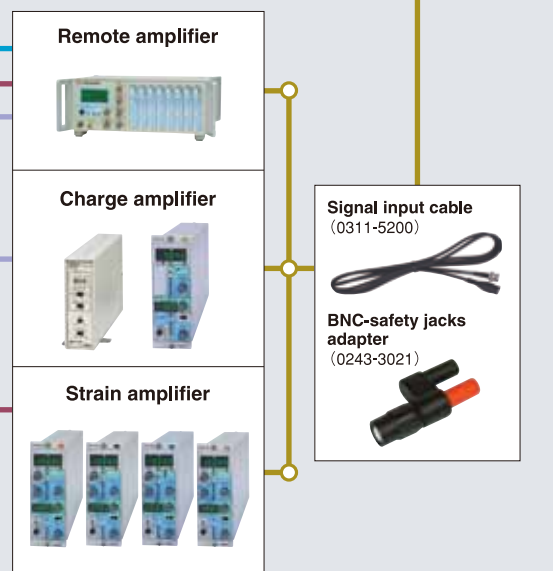
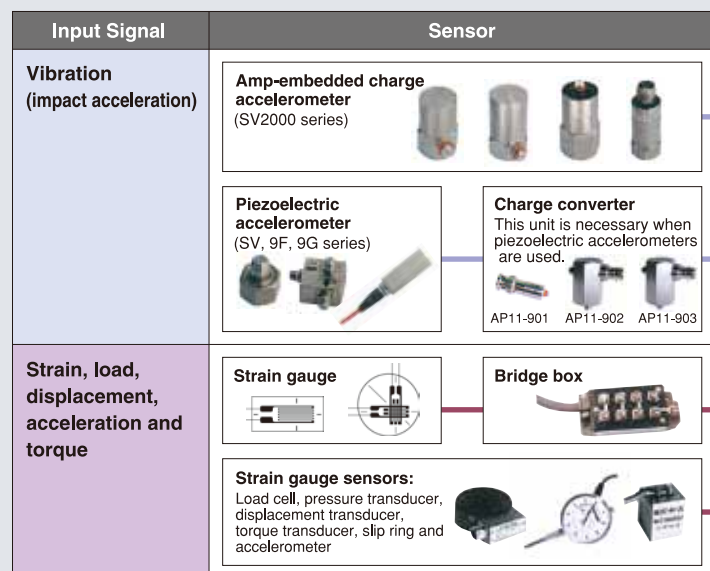
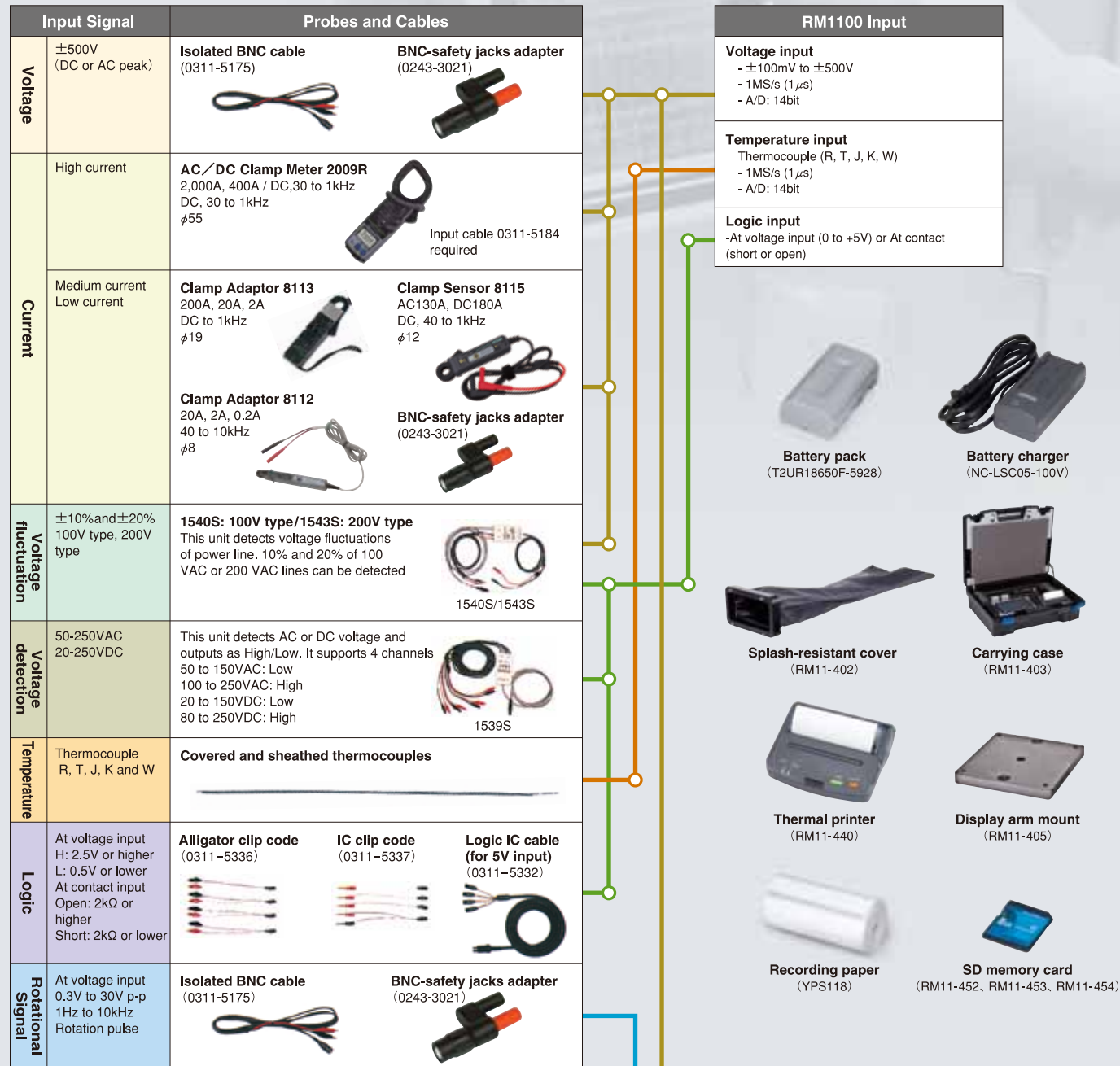
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# Block Diagram for Selecting Options



# Specifications

## Omnilight II RM1100 Series

Type	RM1101	RM1102
Display	7 inch TFT LCD display (800 x 480 dots)	
Operation panel	Touch panel	
Input	Channel	4ch
	Voltage/Temperature/Logic	4ch
Sampling Speed	with 1ch : 1MS/s (1 $\mu$ s) to 1S	with 1ch : 1MS/s (1 $\mu$ s) to 1S
	with 2ch : 500kS/s (2 $\mu$ s) to 1S	with 2ch : 500kS/s (2 $\mu$ s) to 1S
	with 4ch : 200kS/s (5 $\mu$ s) to 1S	with 4ch : 200kS/s (5 $\mu$ s) to 1S
Trigger	Source Ch	4ch + Logic 4ch
	Detecting Mode	OR, AND, OFF, TIMER
Storage Media	Internal Memory	2,000,000 data/ch
	External Media	SD Card, corresponding to SDHC
Communication	Interface	-LAN (10/100BASE-T) -RS-232C (for Thermal printer)
	External Control Terminals	REC ON/OFF, TRIGGER-IN, TRIGGER-OUT, MARK-IN
Operating Environment	Temperature/Humidity	Temperature: -20 to 60°C, Humidity: 35 to 80%RH
	Vibration Resistance	-compatible with MIL-STD-810G 514.5C-1 10Hz to 500Hz, Random wave 1hour each to X, Y, Z directions.
	Dust-proof / Splash-proof Construction	IP41(IEC60529) when optional RM11-402 Splash-resistant cover is used
Power Supply	-AC adaptor: IN 100 to 240V AC (50/60Hz)/OUT 12V DC	-DC power: 12VDC (with power cable: 8.5 to 24V DC)
	Battery Type/Operation Time	Li-Ion rechargeable batteries (4 hours in continuous use)
Power Consumption	approx. 9W	approx. 11W
	Dimensions	267(W) × 152(H) × 84(D)mm (excluding projection)
Weight	Approx. 1.5kg (not include AC adaptor and battery weight)	

Memory Mode	Memory Capacity	2,000,000 data/ch
	Memory Division	Division: 1 to 100 div Number of data: 1000 to 20,000; 1,000 to 2,000,000 data
Memory Filing	Storage Device	SD card
	Data Form	Data is saved on SD card in binary format every time when it is stored in memories.
Waveform Printing	Printing Density	Voltage axis: 8 dots/mm, Time axis: 8 dots/mm
	Copy Magnification	x100, x50, x20, x10, x5 to x1/10,000
Real-time Mode	Printer	Print out to an optional thermal printer via a single purpose cable
	Recording Speed	Max. 10mm/sec
	Recording Division	1, 2, 4 divisions
Filing Mode	Memory Media	SD card
	Data format	Sampling data, Peak data
X-Y Recording	Drawing Speed	100ms to 1s
	Number of X-Y Display	Max. 3 X-Y displays (Specify optional 3ch for X and Y axes)
Printout Function	Y-T Display	Measuring mode, year/month/day, measurement start time, data number, trigger conditions (trigger point, trigger date, trigger time), sampling speed, paper speed, time axis can be printed with waveforms. ON/OFF selectable.
	Channel Information	Print input unit settings when saved. ON/OFF selectable.
Screen Copy	Mark Print	Filing mode, Real-time mode, mark (date/time) print
	Line Width for Printing	Select base line boldness for each channel (1, 2, 3, or 4 dots)
Other Specifications	Multiple Language menu	10 Languages (English, French, German, Italian, Japanese, Korean, Portuguese, Spanish, Simplified Chinese and Traditional Chinese)
	Timer Function	Start time, end time and interval can be set.
Save/Readout of Settings	Screen Image Saving	Measuring conditions can be saved-Internal memory: up to 4 conditions, SD card: up to available storage space.
	Brightness control & Auto Off	Save screen image on SD card at BMP format (colored)
Voltage Input	Input channel	4ch
	Input Terminal	Isolated BNC connector
Accuracy	Range Accuracy	±0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100, 200,500 V-FS
	Linearity	within ±0.3% FS
Offset Accuracy	Max input voltage	within ±0.1% FS
	Allowable Input Voltage	within ±0.3% FS
CMV	CMV	±500V(DC or AC peak values)
	Frequency Response (W/B)	Range of ±5V to 500V: ±500V max (DC or AC peak values) Range of ±0.1V to 2V: ±40V max (DC or AC peak values)
Low Pass Filter	DC coupling	42V (DC or AC peak values) When using isolated BNC cable(optional): 300VAC
	AC coupling	DC to 400kHz (+0.5, within -3dB) AC coupling : 1 to 400kHz (+0.5, within -3dB)
Common Mode Rejection Ratio (CMRR)	Low Pass Filter	2 pole bessell type, -12dB/oct 5Hz, 50Hz, 500Hz, 50kHz, OFF
	Temperature Stability	80dB or more (at short input, 60Hz)
Withstand Voltage	Zero drift	Within ±0.03% FS/°C
	A/D Converter	Sensitivity : Within ±0.01% FS/°C at range ±100mV-FS
A/D Converter	Resolution	1.5kV AC(50/60Hz), 1min between input terminal - case or terminals
	Conversion speed	Resolution 14bit, Conversion speed 1 $\mu$ s

Type	RM1101	RM1102
Temperature Input	Input channel	4ch
	Input Terminal	M3 screw terminal block
Thermocouple	Thermocouple	R, T, J, K, W
	Cold Junction Compensation	Internal/external switchable.
Measuring Range	within ±2°C (within ±1°C at stable temperature of 20°C at input terminal)	
	R type thermocouple R1760 (0~1760°C)	
	T type thermocouple T400 (-200~400°C)	
Range Accuracy	J type thermocouple J1100 (-200~1100°C)	
	K type thermocouple K500 (-200~500°C)	K1370 (-200~1370°C)
Frequency Characteristics	W type thermocouple W2300 (0~2300°C)	
	Within ±0.5% FS	
Low Pass Filter	DC to 50kHz (+0.5, within -3dB)	
	2 pole bessell type, -12dB/oct	
Common Mode Rejection Ratio (CMRR)	5Hz, 50Hz, 500Hz, 50kHz	
	80dB or more (at short input, 60Hz)	
Temperature Stability	Temperature Stability	within ±0.04% FS/°C: When used as temp amp/gain(R1760, T400, K500 Range)
	Withstand Voltage	1.5kV AC(50/60Hz), 1min between input terminal - case or terminals
A/D Converter	Resolution 14bit, Conversion speed 1 $\mu$ s	

Type	RM1101	RM1102
Logic Input	Number of Channel	4ch
	Input Connector	Circle DIN mini connector 1 pc
Input Signal	Logic input (isolated: between ch - case)	Circle DIN mini connector 2 pcs
	Set up voltage/contact input for each channel	
Voltage Input	Input voltage range : 0 to +5V (with logic cable: Input voltage 0 to 24V)	
	Detecting level: H approx. 2.5V or more, L approx. 0.5V or less	
Contact Input	Input current: 1 $\mu$ A	
	-Detection level: Short(H) ... 250 $\Omega$ or less	
Response Time	Open(L) ... 2k $\Omega$ or more	
	-Load current: Max. 2 mA	
Data Saving	Within 1 $\mu$ s (at input "H", level +5V or higher)	
Isolated Impedance	Record "1" or "0" when logic level is "H" or "L" respectively	
Withstand Voltage	Between input terminal - Ground : 100M $\Omega$ or more	
	Between input terminal - Ground : 500V AC for 1 min.	

## Thermal Printer RM-440 Specifications

Print	Type	Thermal line dot
	Dot/line	832 dots/line
Paper type	Resolution	8 dots/mm
	Paper width	112mm
Power source	Print width	104mm
	Communication type	Serial
Operation temperature	Power source	AC adapter(exclusive), Optional Li-Ion battery
	Humidity	Serial
Printer lifetime	Operation temperature	At discharge: 0 to 50 °C At charge: 0 to 35 °C
	Dimension	30 to 80%RH (No condensation)
Weight	Printer lifetime	50km
	Standard accessories	W145 × D135 × H58 mm
	Weight	Approx. 400g (not include AC adaptor and battery weight)
		AC Adaptor, Operation Manual, Recording paper, Printer cable (For an optional thermal printer via a single-purpose cable)

## Dimensions



The product specifications and design are subject to change without notice.