

Software Function Specifications

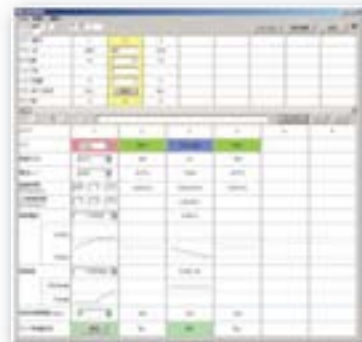
■ Control and Monitoring Screen

All the basic operations can be performed from this screen.

The screen consists of:

- Environment of each Monitor, Unit, Channel details:
Showing the operating condition of each charge and discharge unit.
- Environment of each Sequence and Pattern:
Showing the measuring conditions pre-set to each channel.

The trend graph indication, graph/dump, and measurement conditions setup are performed by clicking the button in a screen.



■ Measuring Condition Setting Function

The step and pattern include change conditions are created.

The step-finalizing conditions, pattern-finalizing conditions, and measurement-finalizing conditions are included in the changeover conditions.

The created conditions can be collectively copied to other channels by the copy&paste operation.

■ Trend Graph

The trend graph of voltage/current/ electric-power can be displayed at intervals of 1 second.

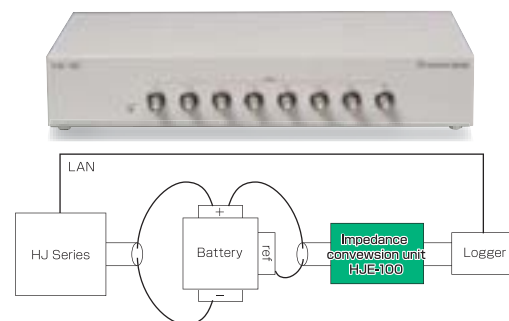
■ Dump Indication

It can do the 'dump indication' showing the selected items from the saved data.

All measured data can be outputted in a text file.

Impedance conversion unit HJE-100

Impedance conversion unit HJE-100 is a unit to reduce the influence caused by the leak electric current when it measures the cell voltage using a logger.



■ Impedance conversion unit specification

Items		HJE-100
Input	Number of channels	8ch
	Voltage Range	±10V
	Input impedance	10 ¹¹ Ω
	The insulation between the channel	DC100V 10 ⁹ Ω
	Connector	BNC receptacle
Power voltage		AC100V±10%
Power consumption		10VA
Dimensions (W×H×D mm)		330×62×171
Weight		2.5kg

Contents are subject to change without notice

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VEGETABLE OIL INK 2013-06NW0.5L

Battery Charge/Discharge System HJ Series



HD HOKUTO DENKO

Battery Charge/Discharge System HJ Series offers various function-specific models applicable to various measurements for Battery basic research, Life test and Evaluation test.

HJ-SD8/SD8H Series can provide the half-cell measurement by 3-electrode-method using the reference electrode and can provide the each characteristics evaluation test on positive and negative material (on independent four terminals and realizing the high input impedance)

Minimum Discharge Voltage can be set till -2V and can conduct the complete discharge test.

The PC connected to HJ series, it can perform the multi-channel simultaneous test and various battery characteristics data analysis.

HJ-SD8 Series

Features

1. Independent 8-channel charge and discharge control.
 2. Minimum data sampling time interval is 10 ms.
 3. Equipped with transient recorder function that collects the transient data at 10 ms. (at a moment of switching to discharge mode from charge mode during long-hour measurement.)
 4. Equipped with CC-CV operation which has digital control for minimum overshoot.
 5. Auto-select for current range.
 6. The digital filter reduces noise. (It can function at the setting of more than 500ms data saving time interval.)
 7. Equipped with Constant Power Control mode and Constant Resistance Control mode.
 8. The system status, measurement progress and pre-set measurement conditions can see on one screen.
 9. Capability to program maximum 20steps and 50patterns.
 10. Equipped with jump function which repeats the continuous few patterns.
 11. Equipped with High speed multi-step function : 1step-20stages(max) and 1stage can set at 10ms(minimum)
 12. Capability to control the maximum 16 units (128 channels) by using the server PC and client PC.
- Note** : One PC System can control 6 units (48 channels) maximum.



HJ-SD8H Series

Features

1. Fast Data Sampling Function:
Data acquisition at the interval of $100\mu s$ for the rapid voltage change.
Data sampling time interval can be set from $100\mu s$ till 10 ms.
Maximum data acquisition point is 100,000 points. (at the time of fast data sampling mode)
2. Ultra Fast Multi-stage method (Constant Current Control)
Minimum data retention time of one stage is from $100\mu s$ to 6s.
This function can program 50 stages on 1step.

Specifications : HJ-SD8 Series / HJ-SD8H Series

Type		HJ1001SD8/HJ1001SD8H	HJ1005SD8/HJ1005SD8H	HJ1010SD8/HJ1010SD8H
Channel	Number	8ch		
	Setting	Independent setting every each channel		
Control	Voltage	-2~10V		
	Current	0~±1A	0~±5A	0~±10A
	Step time	0.1 sec ~ 100 days (resolution 0.1sec)		
Range	Voltage	10V		
	Current	1A、100mA、10mA、1mA、 100μA、Auto	5A、500mA、50mA、 5mA、500μA、Auto	10A、1A、100mA、 10mA、1mA、Auto
Control method		CC、CC/CV、CP、CR(at discharge mode)		
Communication		Connect to PC by Ethernet		
Control accuracy	Voltage	±0.05% of control ±1mV		
	Current	±0.05% of control ±0.05%F.S. (over 10% of F.S.)		
	Voltage	±0.05% of reading ±1mV		
	Current	±0.05% of reading ±0.05%F.S.		
Protective circuit		overvoltage / overcurrent / voltage line disconnection detection		
Power voltage		AC100 ~ 240V single phase *1		AC200 ~ 240Vsingle phase
Power consumption		350VA	1000VA	2500VA
Dimensions(W×H×D mm)		434×225×500	434×225×635	434×597*2×450
Weight		19kg	30kg	50kg

※ 1 The attached power supply cable is AC100V use only.
※ 2 It includes a caster.(It is 550mm only body)
Notice : It cannot let HJ-SD8H series mix with HJ-SD8 series in the same system.

HJ0610SD8Y

Features

1. 48ch system is able to store in a 19-inch rack.
2. This model is using discharge energy for the charge energy of other channels by regenerative function of this system. (running cost is reduced greatly.)
3. 1PC System can control maximum 6 units (48 channels).
4. The software is same as HJ-SD8 series.



Specification

Type		HJ0610SD8Y
Channel	Number	8ch
	Setting	Independent setting every each channel
Setting range	Voltage	-2~6V
	Current	±10A
	Step time	0.1 sec ~ 100 days (resolution 0.1sec)
Current range		10A、1A、100mA
Control mode		CC、CC-CV、CP
Communication		Ethernet
Control accuracy	Voltage	±0.1%F.S.
	Current	±0.1%F.S.
Measurement accuracy	Voltage	±0.1%F.S.
	Current	±0.1%F.S.
Power voltage*		Single_phase
		AC200V,50/60Hz
Dimmension (W×H×D mm)*		436×263×632
Weight (one unit)*		25kg
Rack size (W×H×D mm)		600×1930×823 (without bolt)
Control PC		OS : Windows7 Professional 32bit

※ 8channels/1unit