



# Hi-Mini

## THYRISTOR CONTROL SYSTEM



### Hi-Mini Rectifier MB8C Series

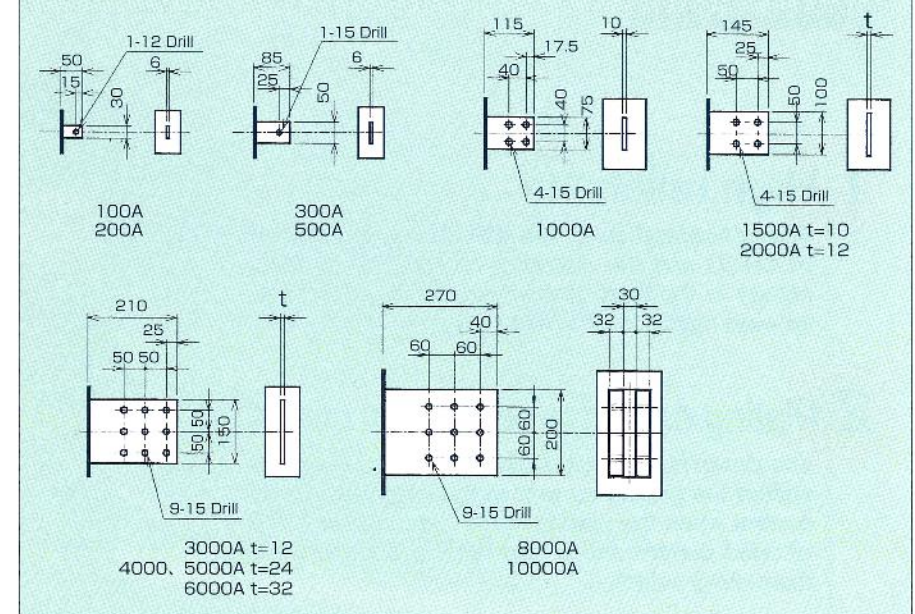
● Compact ● High performance ● High quality



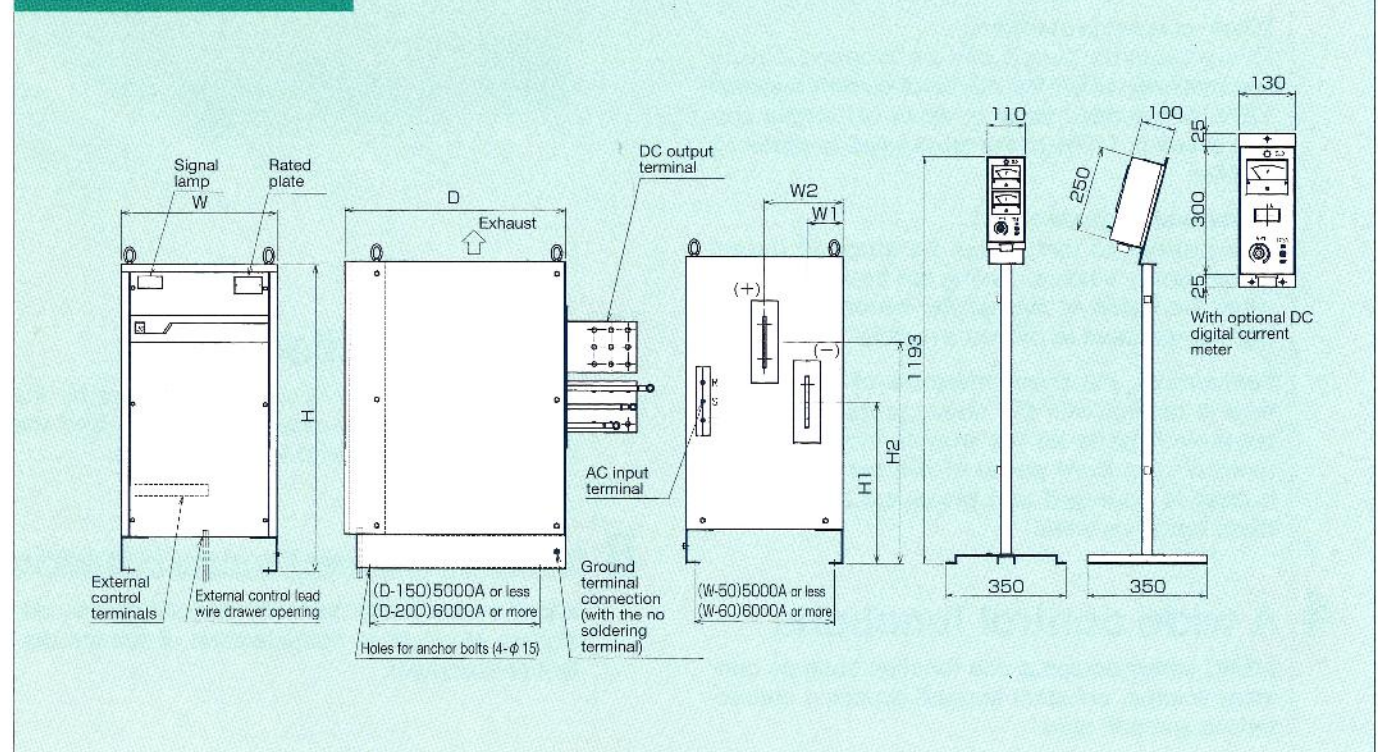
#### Input wire of the rectifier side (when input voltage is AC 200V)

Current	Kinds of wire	Size of wire	Terminal size
100A	IV	2mm <sup>2</sup>	M6
200A	IV	2mm <sup>2</sup>	M6
300A	IV	2mm <sup>2</sup>	M6
500A	IV	5.5mm <sup>2</sup>	M6
1000A	IV	14mm <sup>2</sup>	M6
1500A	IV	22mm <sup>2</sup>	M8
2000A	IV	38mm <sup>2</sup>	M8
3000A	IV	60mm <sup>2</sup>	M8
4000A	WL1	60mm <sup>2</sup>	M8
5000A	WL1	80mm <sup>2</sup>	M8
6000A	WL1	100mm <sup>2</sup>	M8
8000A	WL1	80mm <sup>2</sup> × 2	M8
10000A	WL1	100mm <sup>2</sup> × 2	M8

#### Output terminal dimensions Unit = mm



#### External dimensions Unit = mm



※ Be sure to connect the ground wire to prevent short circuit and electrical shock for securing safety.  
 ※ Due to ongoing improvements, specifications may change without notice.



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# Hi-Mini MB8C series is the rectifier that rich know-how for many years was condensed.

## Major features

### 1 High reliability

The concentration of the electronics technology of CHUO and the utilization of HYBRID IC technology in the heat of the control circuit provides an even higher level of reliability.

### 2 Plating defective prevention circuit

The drooping characteristic control circuit can be shifted the plating current to the constant current control when the plating current reaches in 105% of rated current and prevented the occurrence of the plating defect.

### 3 A perfect protection circuit

#### [Over-current protection]

This protection circuit can be stopped output automatically when the AC input current exceeds 120% of the rated value or when DC output current exceeds 110% of the rated value to protect a rectifier.

#### [Overheating protection]

This protection circuit can be stopped output automatically when a cooling fan breaks down or when the inside of the rectifier becomes unusual high temperature to protect a rectifier.

Furthermore, the countermeasure of the unusual time is perfect with the above protection circuit because it turns on the trouble indicator lamp fixed on the front panel of the rectifier and a buzzer is sounded and gives the alarm when these functions work.

### 4 A wide control functions

MB8C series equips a rich function such as constant voltage, constant current, drooping characteristic and soft start.

### 5 A rich option

- Parallel operation device
- DC-AH METER
- External output control
- Digital communication
- Digital indication meter
- Current setting control device

### 6 Miniature, light weight, small space

As for the model of 3000A and under, it is possible that 2 sets of rectifiers are stacked easily by using the stacker (option).



## External output control (Option)

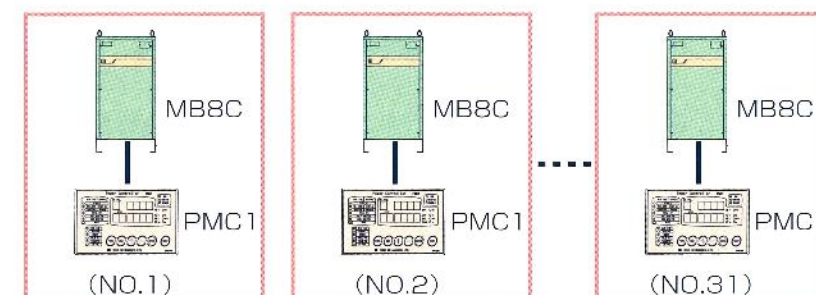
### 1 Digital communication

High rank (communication master)  
(Personal computer or PLC)

PWC-P



PWC-C  
Interface  
RS-232C/RS-485  
Interface/converter



This digital communication system can communicate with maximum 31 sets of PMC1 by the high rank (communication master) only. And it can control the changes of the various setting value, the monitor and the operation: on-off of the rectifier.

※PMC1 (the power controller) is a device to centralized control with using the digital lines MB8C of the analog control.

### 2 Analog communication

As for the type MB8C, it is possible that analog communication is done the monitor of the output voltage and the output current and the output setting value of the voltage and the current by the external signal (ex.: 0~5V or 4~20mA) insulated from the output circuit of the rectifier.

## Major specifications

Input source AC200V, 3 $\phi$ , 50/60Hz  
AC380V, 400V and others made on order.  
Output range Voltage: 25% to 100% of rated voltage  
Current: 5% to 100% of rated current

MB8C-□□□-□□□  
Indicates rated output voltage  
Ex.: 080...8V  
120...12V  
150...15V  
Indicates rated output current  
Ex.: 101...100A  
102...1000A  
152...1500A  
103...10000A

Input capacity  (kVA)		Current (A)	100	200	300	500	1000	1500	2000	3000	4000	5000	6000	8000	10000
		Voltage (V)	Model	101	201	301	501	102	152	202	302	402	502	602	802
	6	060	1.0	1.8	2.8	4.5	8.5	12.5	16.7	25.0	33.6	42.0	52.5	71.0	89.5
	8	080	1.2	2.2	3.4	5.6	10.6	15.7	21.0	31.5	42.0	52.3	62.5	85.0	98.0
	10	100	1.4	2.7	4.1	6.6	12.8	19.0	25.5	38.2	50.3	62.8	78.0	105.0	130.0
	12	120	1.6	3.1	4.7	7.6	15.0	22.4	30.2	45.0	60.2	73.8	92.0	121.0	150.0
15	150	1.9	3.7	5.6	9.4	18.5	27.5	37.2	55.2	74.2	92.6	112.0	151.0	190.0	
External dimensions (mm)	Width	W	260	260	260	300	400	400	460	460	600	600	700	750	750
	Depth	D	450	450	450	450	550	550	650	650	750	750	850	1,000	1,000
	Height	H	600	600	600	600	800	800	900	900	1,200	1,200	1,550	1,750	1,750
	Position of output terminal	W <sub>1</sub>	40	40	40	40	50	50	105	105	150	150	100	100	100
		H <sub>1</sub>	345	345	345	345	475	475	475	475	600	600	600	700	700
		W <sub>2</sub>	100	100	100	120	175	175	230	230	300	300	350	375	375
		H <sub>2</sub>	345	345	345	345	475	475	650	650	800	800	1,040	1,140	1,140
Weight (kg)	12V	60	75	75	85	140	175	230	275	415	450	630	850	950	
Cooling System		Self cooling			Forced cooling										

■ Input capacity (kVA) is reference value.

### 7 Quiet operation sound

Very quiet operation sound was realized by the adoption of the low noise cooling fan and the improvement of the wind tunnel structure.

### 8 Durability and environmental resistance characteristics

Improvement in the durability was realized by designing structure in consideration of the installation environment.

### 9 A wide variation

A wide selection of rectifier is offered, including five models of output voltages: 6, 8, 10, 12 and 15V, as well as 13 models with output currents from 100A to 10,000A.

Models over 15V may also be made on order.

### 10 Usage

- Various kinds of plating
- electrolysis
- anodizing and others