

Ultra Low Profile
and High Power !

Programmable DC Power Supply



Max. output voltage

10V to 1kV

Max. output current

1.2A to 1.2kA

Max. output power

750W to 15kW

RE series

- ▶ Analog control/High power DC power supplies
- ▶ Remote control is also available via various interfaces
- ▶ The best model is selectable with wide lineup



Our original switching technology has realized high power, compact and high efficient programmable DC power supply RE series.

RE series

USB
LAN
RS-232C
RS-485
GPIB



Minimum heat release coupled with its compactness of 1/10 the size and 1/20 the weight of conventional power supply have enabled high-density mounting. RE's low power consumption contributes to low running cost and environmental issues. Various remote control and monitor functions are standard and digital interface is available as option, which enable RE to support various systems.

The best model can be chosen for your application from wide lineup of 140 models, from 10 V to 650 V, and 750 W to 15 kW. Upgrading of up to 60 kW is possible with master/slave option. (Some models correspond to UL)

Lineup

Output voltage (V)	Output current (A)	Output power (kW)	Model	Ripple ^{*1} (mVrms)	Ripple ^{*2} (mA _{rms})	Dimensions (Refer to P6, 7)
10	75	750 W	RE10-75	10	150	b
	110	1.1	RE10-110	10	220	b
	200	2	RE10-200	10	400	d
	300	3	RE10-300	15	600	d
	400	4	RE10-400	15	800	f
	450	4.5	RE10-450	30	900	f
	750	7.5	RE10-750	20	2400	h ^{*3}
	820	8.2	RE10-820	30	3600	h ^{*3}
	1000	10	RE10-1000	30	4800	h ^{*3}
15	50	750 W	RE15-50	10	100	a
	80	1.2	RE15-80	10	160	b
	120	1.8	RE15-120	10	250	d
	200	3	RE15-200	10	400	d
	250	3.75	RE15-250	15	500	f
	300	4.5	RE15-300	15	600	f
	500	7.5	RE15-500	30	2500	h
	560	8.4	RE15-560	30	2500	h
	700	10.5	RE15-700	35	3500	h ^{*3}
20	38	760 W	RE20-38	10	80	a
	60	1.2	RE20-60	10	120	a
	100	2	RE20-100	10	200	d
	150	3	RE20-150	15	300	d
	200	4	RE20-200	10	400	f
	250	5	RE20-250	15	500	f
	375	7.5	RE20-375	30	1200	h
	400	8	RE20-400	20	2400	h
	430	8.6	RE20-430	35	2400	h
500	10	RE20-500	35	2400	h ^{*3}	
600	12	RE20-600	30	2400	h ^{*3}	

Output voltage (V)	Output current (A)	Output power (kW)	Model	Ripple ^{*1} (mVrms)	Ripple ^{*2} (mA _{rms})	Dimensions (Refer to P6, 7)
30	25	750 W	RE30-25	10	50	a
	40	1.2	RE30-40	15	80	a
	65	1.95	RE30-65	20	130	d
	100	3	RE30-100	20	200	d
	130	3.9	RE30-130	30	260	f
	170	5.1	RE30-170	30	340	f
	250	7.5	RE30-250	20	500	f
	290	8.7	RE30-290	30	700	h
	350	10.5	RE30-350	30	800	h
	400	12	RE30-400	20	800	h
35	22	770 W	RE35-22	10	50	a
	34	1.2	RE35-34	10	70	a
	60	2.1	RE35-60	20	120	d
	85	3	RE35-85	20	170	d
	115	4	RE35-115	20	230	f
	140	4.9	RE35-140	30	280	f
	215	7.5	RE35-215	35	1800	f
	240	8.4	RE35-240	35	2000	h
	300	10.5	RE35-300	35	2000	h
	340	11.9	RE35-340	35	2400	h
40	100	4	RE40-100	30	300	f
	220	8.8	RE40-220	30	350	h
45	17	765 W	RE45-17	18	40	a
	27	1.2	RE45-27	18	60	a
	45	2	RE45-45	30	90	c
	66	3	RE45-66	30	130	d
	90	4	RE45-90	30	180	f
	110	5	RE45-110	45	220	f
	165	7.5	RE45-165	45	750	f
	220	9.9	RE45-220	45	1100	h
260	11.7	RE45-260	45	1300	h	

Output voltage (V)	Output current (A)	Output power (kW)	Model	Ripple ^{*1} (mVrms)	Ripple ^{*2} (mA _{rms})	Dimensions (Refer to P6, 7)	
60	12.5	750 W	RE60-12.5	20	25	a	
	20	1.2	RE60-20	20	40	a	
	35	2.1	RE60-35	15	70	c	
	50	3	RE60-50	20	100	c	
	67	4	RE60-67	20	135	f	
	83	5	RE60-83	30	170	f	
	125	7.5	RE60-125	30	350	f	
	140	8.4	RE60-140	30	350	h	
	170	10.2	RE60-170	35	500	h	
	200	12	RE60-200	35	500	h	
80	220	13.2	RE60-220	35	500	h	
	250	15	RE60-250	25	500	h	
	110	8.8	RE80-110	80	600	h	
	100	7.5	750 W	RE100-7.5	20	15	a
		12	1.2	RE100-12	20	25	a
		20	2	RE100-20	20	40	c
		30	3	RE100-30	30	60	c
		40	4	RE100-40	30	80	e
		50	5	RE100-50	40	100	e
		75	7.5	RE100-75	60	300	f
84		8.4	RE100-84	60	350	h	
150	100	10	RE100-100	100	800	h	
	150	15	RE100-150	100	1000	h	
	5	750 W	RE150-5	30	10	a	
	8	1.2	RE150-8	30	20	a	
	14	2.1	RE150-14	25	30	c	
	20	3	RE150-20	30	40	c	
	27	4	RE150-27	30	55	e	
	33	5	RE150-33	60	70	e	
160	50	7.5	RE150-50	70	100	e	
	56	8.4	RE150-56	70	100	g	
	70	10.5	RE150-70	150	200	h	
	100	15	RE150-100	100	200	h	
	27	4.3	RE160-27	30	55	e	
	55	8.8	RE160-55	160	200	g	
	200	3.8	760 W	RE200-3.8	40	10	a
		6	1.2	RE200-6	40	15	a
10		2	RE200-10	40	20	c	
15		3	RE200-15	40	30	c	
20		4	RE200-20	200	40	e	
25		5	RE200-25	200	50	e	
37		7.4	RE200-37	200	280	e	
42		8.4	RE200-42	150	200	g	
250	50	10	RE200-50	200	380	h	
	75	15	RE200-75	200	530	h	
	35	8.7	RE250-35	100	150	g	

UL standard (Please contact our sales office)

Output voltage (V)	Output current (A)	Output power (kW)	Model	Ripple ^{*1} (mVrms)	Ripple ^{*2} (mA _{rms})	Dimensions (Refer to P6, 7)
300	2.5	750 W	RE300-2.5	50	5	a
	4	1.2	RE300-4	50	10	a
	6.5	2	RE300-6.5	50	15	c
	10	3	RE300-10	50	20	c
	13	3.9	RE300-13	300	30	e
	16	4.8	RE300-16	300	35	e
	25	7.5	RE300-25	100	50	e
	28	8.4	RE300-28	100	50	g
	35	10.5	RE300-35	300	100	g
	50	15	RE300-50	150	100	g
350	21	7.35	RE350-21	150	100	e
	24	8.4	RE350-24	150	100	g
	28	9.8	RE350-28	150	100	g
400	42	14.7	RE350-42	150	100	g
	18.7	7.5	RE400-18.7	200	100	g
	37.5	15	RE400-37.5	200	100	g
450	16.7	7.5	RE450-16.7	200	50	g
	33.3	15	RE450-33.3	200	100	g
500	1.5	750 W	RE500-1.5	150	5	a
	2.4	1.2	RE500-2.4	150	5	a
	4	2	RE500-4	150	10	c
	6	3	RE500-6	150	15	c
	8	4	RE500-8	500	20	e
	10	5	RE500-10	500	20	e
	15	7.5	RE500-15	200	50	e
	17	8.5	RE500-17	200	50	g
600	20	10	RE500-20	500	100	g
	30	15	RE500-30	200	100	g
	12.5	7.5	RE600-12.5	100	25	e
	25	15	RE600-25	100	50	g
650	1.2	780 W	RE650-1.2	200	5	a
	1.8	1.2	RE650-1.8	200	5	a
	3	2	RE650-3	200	10	c
	4.5	2.9	RE650-4.5	200	10	c
	6	3.9	RE650-6	200	15	e
	7.7	5	RE650-7.7	200	20	e
750	11	7.2	RE650-11	200	50	e
	13.5	8.8	RE650-13.5	250	50	g
	16	10.4	RE650-16	250	50	g
	23	15	RE650-23	300	100	g
	10	7.5	RE750-10 ^{*4}	300	30	*5
1000	20	15	RE750-20 ^{*4}	300	50	*5
	7.5	7.5	RE1000-7.5 ^{*4}	300	30	*5
	15	15	RE1000-15 ^{*4}	300	50	*5

*1 Rated output voltage when output current is 10% to 100% of rating.

*2 Rated output current when output voltage is 10% to 100% of rating.

*3 Height and number of fixing holes of busbar are different depending on the model. See P7 for details.

*4 To be released soon.

*5 Please contact our sales office.

Input Voltage/Current

Model (Output power)	Input voltage (±10% AC50/60 Hz)	Phase	Input current			Input current protection	
			When PFC (Typ.)*1	Normal (Typ.)*1	Rush (p-p)		
750 W to 765 W	115 V	1		12 A	60 A	Fuse 30 A	
	230 V	1		8 A	60 A		
1.1 kW to 1.2 kW	115 V	1		19 A	90 A		
	230 V	1		11 A	90 A		
1.8 kW to 2.1 kW	220 V	1		17 A	100 A		
	220 V	3		10 A	100 A		
2.9 kW to 3 kW	220 V	3		14 A	100 A		
3.75 kW to 4 kW	220 V	3	15 A	19 A	100 A		Circuit protector 30 A
4.5 kW to 5.1 kW	220 V	3	16 A	23 A	100 A		
7.35 kW to 7.5 kW	10 V, 15 V	3	25 A ^{*2}	35 A	100 A		Circuit protector 60 A
	20 V to 60 V	3	25 A	34 A	100 A		
	over 100 V	3	25 A	33 A	100 A		
8 kW to 10.5 kW	10 V, 15 V	3	36 A	46 A	100 A		
	20 V to 60 V	3	34 A	44 A	100 A		
	over 100 V	3	32 A ^{*3}	41 A	100 A		
11.7 kW to 12 kW	220 V	3	40 A ^{*3}	54 A	150 A	Circuit protector *2 100 A	
15 kW	220 V	3	50 A	68 A	150 A		

*1: At rated input voltage *2: Circuit protector 30 A *3: Circuit protector 60 A

Specifications

Output control *	Local : Constant voltage : 10-turn potentiometer on front panel Constant current: 10-turn potentiometer on front panel Remote: Constant voltage : external control voltage 0 Vdc to 10 Vdc or external variable resistor 0 Ω to 10 kΩ Constant current: external control voltage 0 Vdc to 10 Vdc or external variable resistor 0 Ω to 10 kΩ
Voltage regulation*	Line : 0.1% of maximum output (for AC ±10% input change) Load: 0.1% of maximum output (for 10% to 100% load change) (for only RE10-1000 and RE10-1200, load regulation is 0.15%)
Current regulation*	Input: 0.1% of maximum output (for AC ±10% input change) Load: 0.1% of maximum output (for 10% to 100% load change) (for only RE500-1.5, -2.4, 650-1.2, -1.8, both line and load regulation are 0.2%)
Stability *	0.05%/8 Hr of maximum output voltage
Temperature coefficient *	0.02%/°C of maximum output voltage 0.03%/°C of maximum output current
Output display *	Output voltage: 3-digit digital meter (accuracy is 1%FS ±1 dgt) Output current : 3-digit digital meter (accuracy is 1%FS ±1 dgt)
Monitor output *	Output voltage monitor: 10 V/maximum output voltage Output current monitor : 10 V/maximum output current
Protections	<p>Over voltage protection (OVP) Output is cut off at a set value. Setting range: 5% to 110% of output voltage Local setting: 1-turn volume on front panel Remote setting: External control voltage of 0 Vdc to 10 Vdc Reset : Manual recovery by OUTPUT switch or remote switch.</p> <p>Over temperature protection (OTP) Output is cut off when internal part is heated abnormally. Reset (after the temperature has gone down to normal): Automatic recovery or manual recovery by POWER switch (selectable).</p> <p>Input brownout (ACF) · Blackout protection Output is cut off when input decreased by 20% or more. Reset (when normal voltage value or recovery from blackout): Manual recovery by OUTPUT switch for blackout protection (re-output protection function). : Automatic recovery when blackout protection is canceled.</p>
Other functions	Remote sensing Remote switch ON/OFF (TTL or external relay) Status signal output (CV, CC, FLT)
Transient response time	Recovery time 1 ms (for 70% ⇔ 100% load change)
Operation temperature	0°C to +50°C (750 W to 5.1 kW) 0°C to +40°C (7.35 kW to 15 kW)
Storage temperature	-20°C to +70°C
Relative humidity	20% to 80%, non condensing
Dielectric voltage	Between input power supply and power supply, and between output terminals and chassis is AC1500 V: 1 minute
Accessories	·2.5 m input AC cable for single phase, 3-pin type (only models of 2.1 kW or less) (1) (AC input cable for three-phase is not attached. Please contact our sales office if any cable is needed.) ·Instruction manual (1) ·Remote connector cover (1) ·Metal fitting to change input voltage (1) (up to 1.2 kW models only)

* The specifications are applied between 10% and 100% of the rated output.

sold separately Single phase AC input cable (3-pin type)

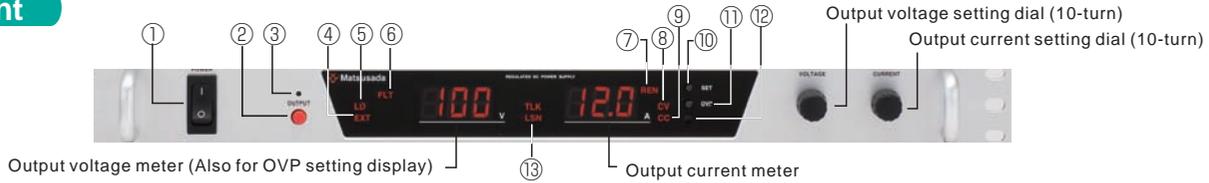
25 A/250 V single phase flying lead
Model CABLE TYPE 5 : Standard 2.5 m length
 CABLE TYPE 5 () : Extended length (2.5 m increment)
 <e.g.> 5 m: CABLE TYPE 5 (5)

Three-phase AC input cable

25 A/250 V for 1.8 kW to 3 kW models, flying lead
Model CABLE TYPE 6
 75 A/250 V for more than 3.75 kW models, flying lead
Model CABLE TYPE 7

Functions

Front



① POWER ON/OFF switch

This has priority over all operations for safety reasons.

② OUTPUT ON/OFF switch

This is used for urgent OFF or resume output in remote mode as well output ON/OFF in local mode. Also used for resetting protection function.

③ OUTPUT ON display LED

④ Remote programming display

This lights up during remote control of voltage or current.

⑤ External switch OFF display

⑥ Fault display (FLT)

This lights up when OVP, OTP or ACF has occurred.

⑦ Remote enable display

This lights up when controlling by built-in interface board.

⑧⑨ Operation mode

(constant voltage or constant current)

⑩ Output preset switch

This is pressed down when output is being set by digital meter and output setting knob, then OUTPUT switch is turned ON to output.

**The output voltage/current setting of the preset function is for reference. In order to achieve the accuracy of the specification, follow the steps.*

-Voltage: Set the voltage by outputting with no load and checking it.

-Current: Set the current by outputting with the output terminal shorted and gradually increasing the current.

⑪ OVP setting switch

⑫ OVP setting volume

This volume sets OVP setting value that is displayed on voltmeter when is pressed down.

⑬ Communication status display

(only when interface board is built in)

⑭ Only when option

-USB/RS-232C/RS-485/GPIB interface board
-Isolate remote program board

⑮ Exhaust hole

⑯ AC input connector (M4)

M6 type for model over 3.75 kW

⑰ GND terminal (M4)

Rear



Function setting switch (SW1)

• Voltage control

0 V to 10 V Local ↔ 0 Ω to 10 kΩ approx.

• Current control

0 V to 10 V Local ↔ 0 Ω to 10 kΩ approx.

• Over temperature protection

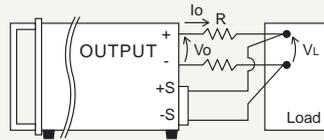
Manual reset ↔ Auto reset

• Blackout protection

ON ↔ OFF (ON/OFF by AC)

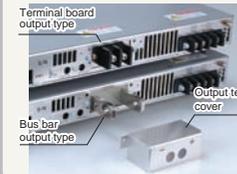
Remote sensing

Prevents voltage drop down ($V_o - V_L$) due resistance (R) or deterioration of stability by contact resistance (Max 0.5 V)



Output terminal

The form differs depending on the MODEL. Please check which form in Dimension.

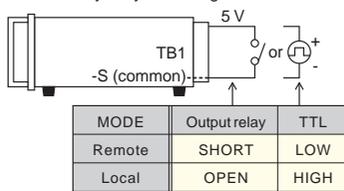


To an output terminal cover for terminal board models, two places of holes of 8 mm in diameter are arranged as standard specifications. A diameter bigger than 8 mm is also available. Please contact our sales office for details.

Remote control connector (TB1)

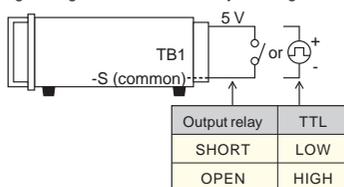
Remote/Local change

Each of voltage, current, OVP or all the modes can be switched by relay or TTL signal

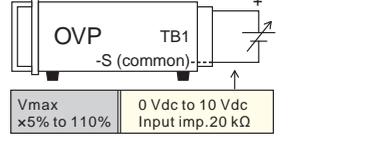
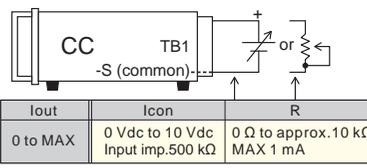
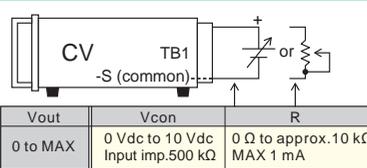


Remote switch ON/OFF

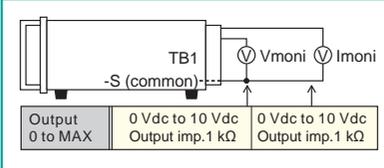
Output can be turned ON/OFF by relay or TTL signal. Logic of signal can be selected by entering 5 V.



Output control

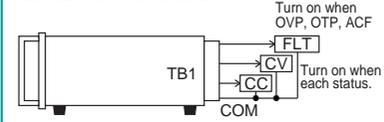


Output monitor



Status output

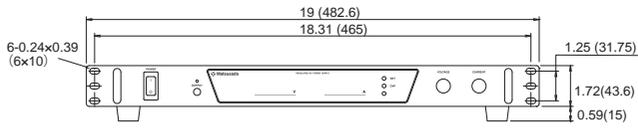
Common is floating in open collector output of common that is common to each. Withstanding voltage 30 Vdc. Sink current 5 mA or less.



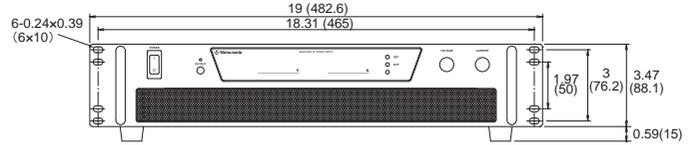
*Please use TB1 in floating as TB1 and minus output is connected in the internal part.

Dimensions inch (mm)

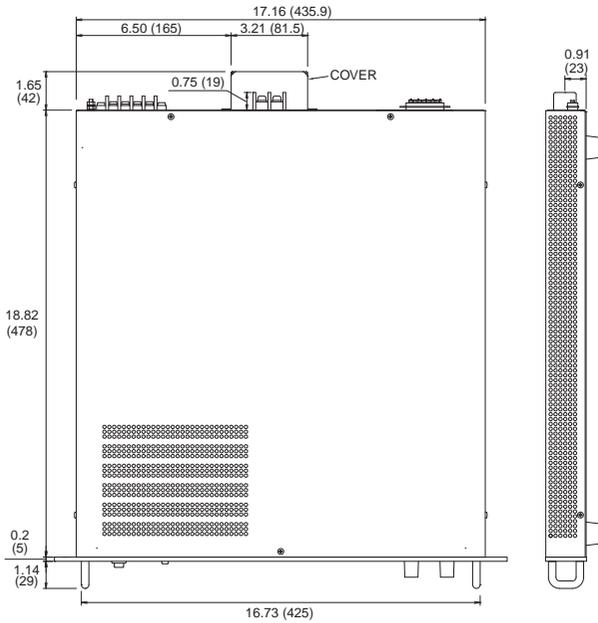
[1U size] Inhaling hole is on side of unit.
Secure more than 4"(100 mm) of space.



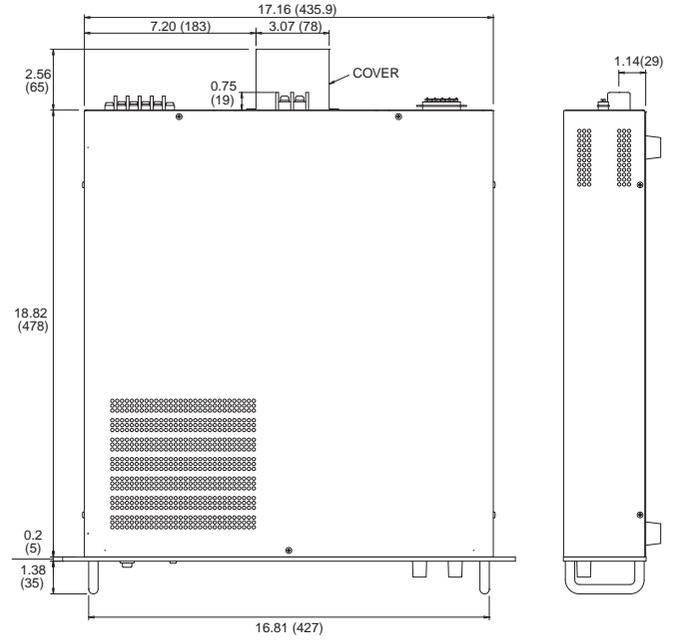
[2U size] Inhaling hole is on front panel.
Secure more than 11.8"(300 mm) of space.



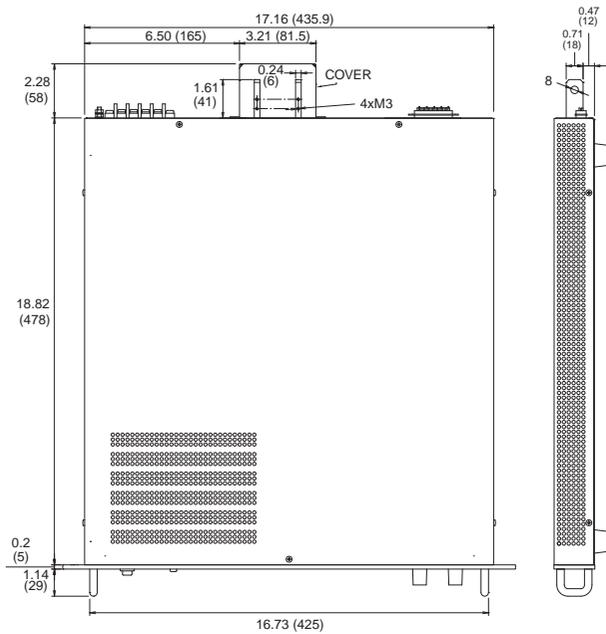
a. Terminal board type



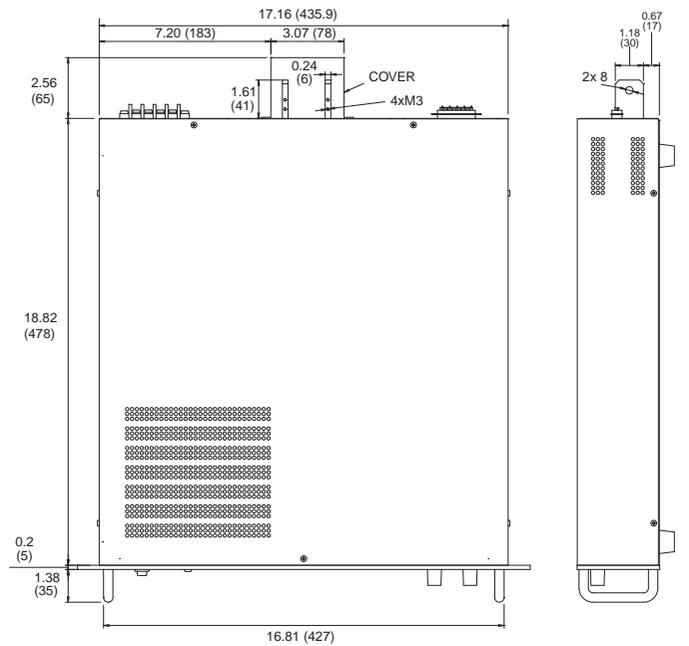
c. Terminal board type



b. Bus bar type

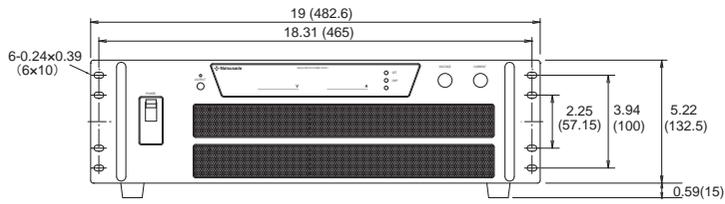


d. Bus bar type

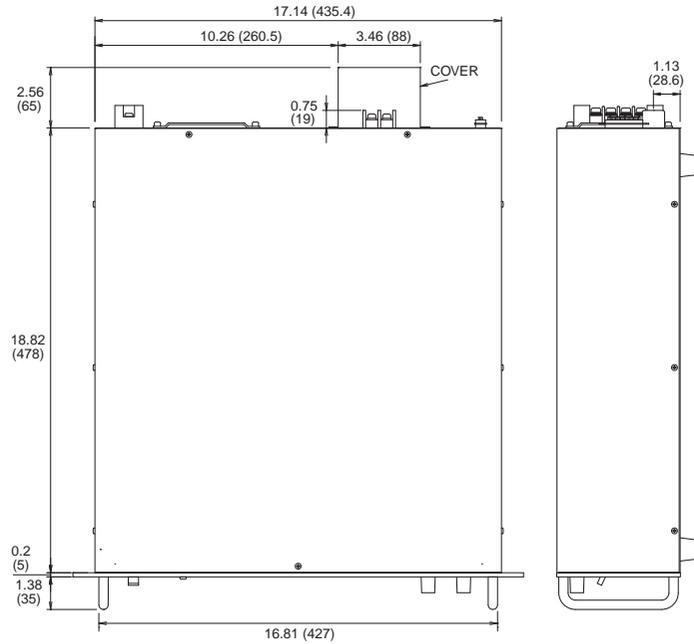


All models have exhaust hole for forced air cooling on rear panel.
 When mounting on a cabinet where a space of 1.18"(300 mm) or more cannot be secured, please arrange a measure such as forced draft vent.

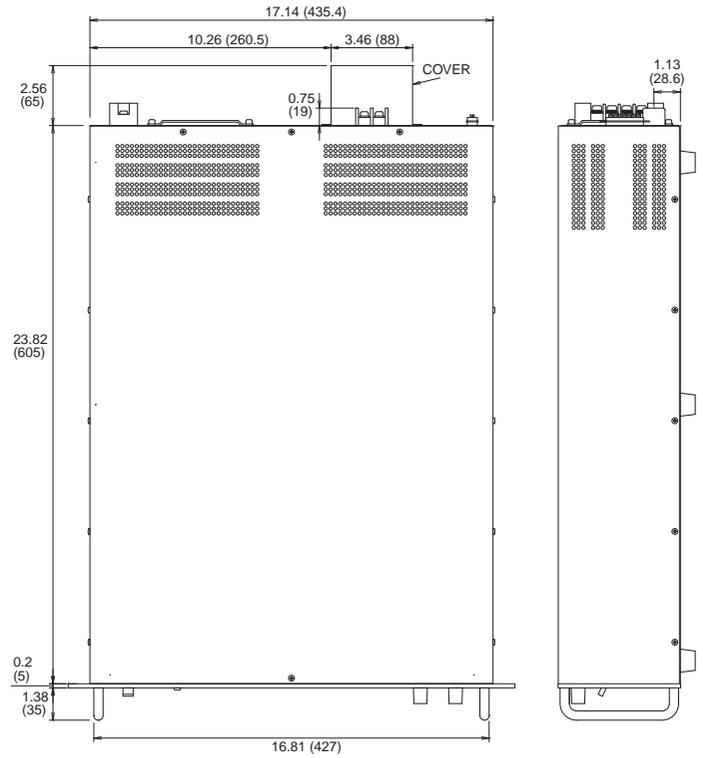
[3U size] Inhaling hole is on front panel.
 Secure more than 11.8"(300 mm) of space.



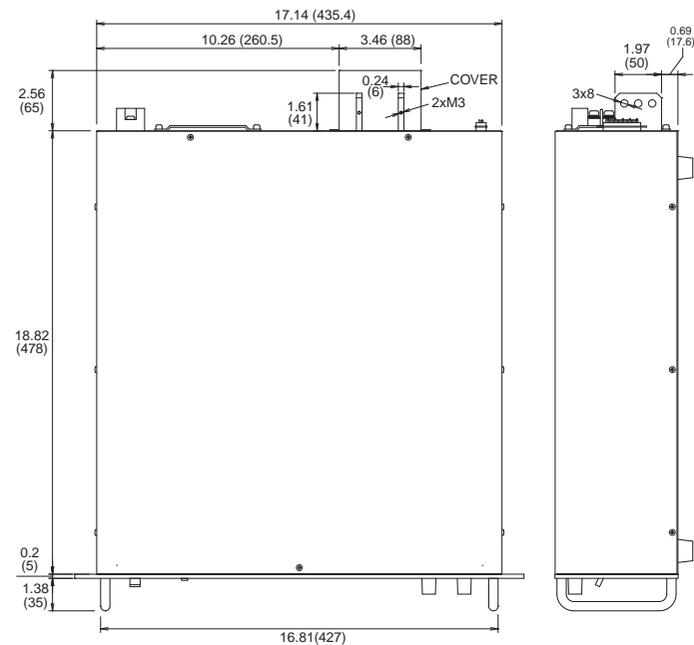
e. Terminal board type



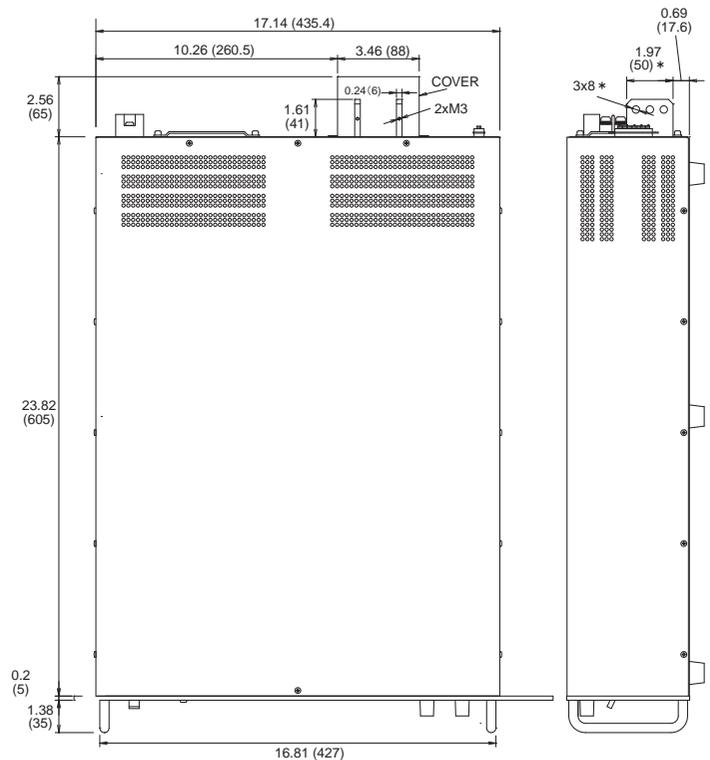
g. Terminal board type



f. Bus bar type



h. Bus bar type

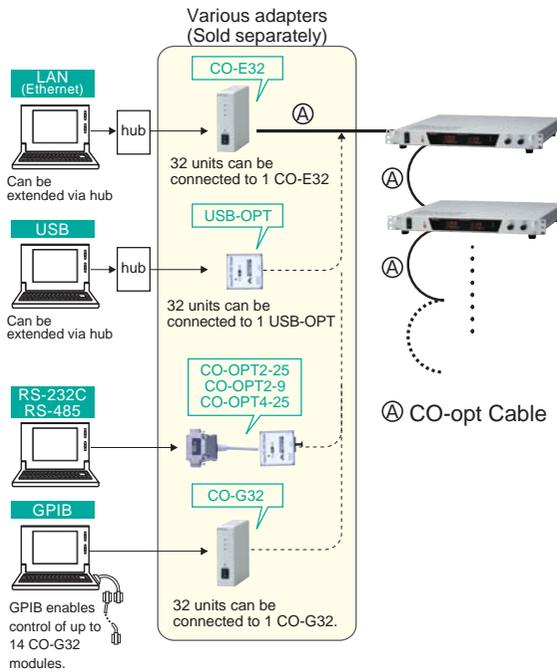


(*) Height of busbars is 3.86"(98mm), number of holes is 6 for RE10-750, RE10-820, RE10-1000, RE10-1200, RE15-700, RE20-500 and RE20-600.

-LGoB: Optical Interface Board *1

- LGoB : Optical Interface Board + 2 meters long optical cable
- LGoB(Fc5) : Optical Interface Board + 5 meters long optical cable
- LGoB(Fc10) : Optical Interface Board + 10 meters long optical cable
- LGoB(Fc20) : Optical Interface Board + 20 meters long optical cable
- LGoB(Fc40) : Optical Interface Board + 40 meters long optical cable

It is isolated by optical communication. It makes it possible to prevent malfunction caused by transient phenomenon such as surge, lightning, induction, and external noise due to perfectly isolated by optical fiber.



In case power supply will be use following condition, make sure this options selected.

- Noisy environment such as factories.
(ex. usage of motor and coil around load or power supply)
- Usage on high voltage floating (more than 250 V)
- In case the distance between power supply and controller (PC or PLC) is longer than 2-meter long.

- LU_{s1} USB interface board *1
- LE_t Ethernet interface board *2
- LGB GPIB interface board *1
- LC_p Constant power control *3
(Voltage control is eliminated. Limited at maximum rated voltage)
- LO_{cp} Over current protection (OCP)*4
Cut off the output at set current value. Local setting only.
Setting range: 5% to 110% of maximum rated current
Local setting: 1-turn volume on front panel
Reset : Manual recovery by OUTPUT switch or remote switch

*1. These options cannot be selected together. Only one of each can be selected. And, when you connect "Load", "RE series" and "PC", if you prevent the influence on the PC by the noise that occurred with load, please choose -LGoB option. With that in mind, we recommends using it combining our adapter (separated item).
*2. Ethernet is a registered trademark of Xerox Corporation.
*3. This option cannot be chosen simultaneously with -LGoB, -LU_{s1}, -LE_t, -LGB or -LIs/
-LIs10. However, in being required, please contact our sales office.
But, this option cannot be chosen simultaneously with -LO_{cp} or -LMs.
*4. This option cannot be chosen simultaneously with -LC_p.
*5. -LPfc and -L(400V) or -L(440V) cannot be chosen simultaneously.

- LIs/
-LIs10 Isolated remote control *1
Output control signal is isolated from common (=output⊖)
so that floating of control signal is not required when negative output operation or series connection
(isolation voltage from output⊖ is below 250 V)
- Output control [-LIs]
CV: External control voltage 0 Vdc to 5 Vdc
CC: External control voltage 0 Vdc to 5 Vdc
[-LIs10]
CV: External control voltage 0 Vdc to 10 Vdc
CC: External control voltage 0 Vdc to 10 Vdc
- Monitor output [-LIs]
Output voltage monitor: 5 V/Maximum output voltage
Output current monitor: 5 V/Maximum output current
[-LIs10]
Output voltage monitor: 10 V/Maximum output voltage
Output current monitor: 10 V/Maximum output current
- Other functions [-LIs/-LIs10]
Remote switch ON/OFF,
status signal output (CC, OUTPUT and Stand-by)

- LL_p 10-turn potentiometer with lock (both voltage and current)
...only for models less than 300 V
- LPfc Power factor correction circuit (Three-phase input of 3.75 kW to 15 kW type only)*5
Size of the case will be different. Contact nearby sales office for more details for this option.
- L(220V) Input voltage: 220 Vac ±10%
For 750 W to 1.2 kW models
Input current will be about 105% of typical value (→P.5).
- L(230V) Input voltage: 230 Vac ±10%
For 1.8 kW to 15 kW models
Input current will be about 95% of typical value (→P.5).
- L(240V) Input voltage: 240 Vac ±10%
For all models
[The models that original input voltage is 230 V]
Input current will be about 95% of typical value (→P.5).
[The models that original input voltage is 220 V]
Input current will be about 90% of typical value (→P.5).
- L(400V) Input voltage: 400 Vac ±10%
For 7.5 kW to 15 kW models
Size of the case will be different. Contact nearby sales office for more details for this option.
- L(440V) Input voltage: 440 Vac ±10%
For 7.5 kW to 15 kW models
Size of the case will be different. Contact nearby sales office for more details for this option.

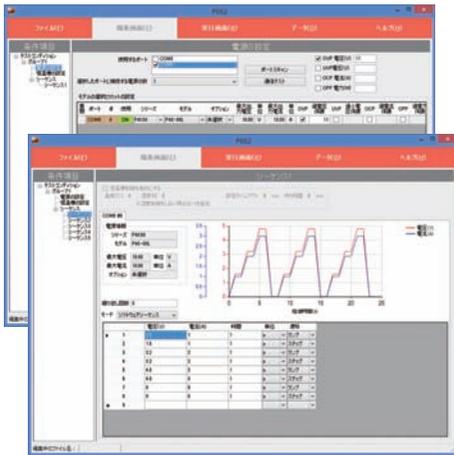
Add above -L mark to the model number when ordering
<e.g> RE15-250-LGoB(Fc5)LpPfc(240V)
<e.g> RE100-100-LCpls10LpOcp(400V)
alphabetical, number order.

The sequence software for power supplies and electronic loads

PSS2 series

PSS2 is the dedicated software which can actuate various power supplies, electronic loads and digital controller for power supplies manufactured by Matsusada Precision Inc. with simple set up. It is the perfect for the aging test, the burn-in test and the withstand voltage test for electronic parts, and for the endurance test, intermittent / continuous operation test or various simulation test for electric component of automobile.

EXAMPLES FOR OPERATION OF PSS2



1

Set-up test condition

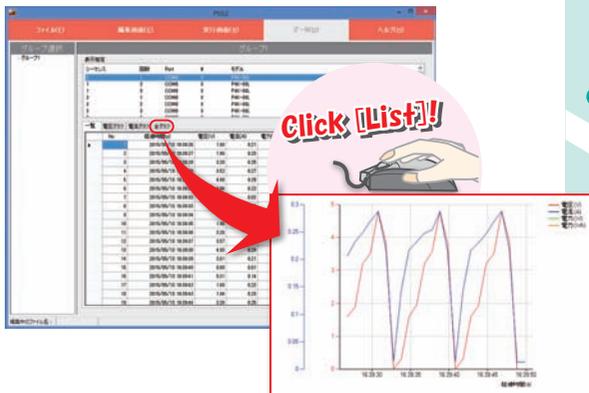
Make-up test conditions like as setting the power Supplies or action sequence and so on. Number of settable sequence pattern is max. 16, it is possible to set various test conditions fitted the target like as selection of the action mode and setting of any protection function, etc.



2

Execution of Test

It is possible to test each group setup. On the operation display, it is possible to monitor on the one screen required information like as sequence, the status of the thermostatic chamber and the power supply, and voltage / current at testing. Also when execute in parallel plural group, it is possible to monitor these status together.



3

Confirmation of Measured Data

It is possible the test data completed. It is possible to confirm values of each sequence, the individual graph or the packaged graph. Also it is possible to output measured data with CSV style and then to sum up or analyze them with the spreadsheet software.

Matsusada Lineups of Other Power Supply Series

Feel free to contact us for the details.

Palmtop Size DC Power Supply

R4K-36 series

R4K-36 series is a palm-sized DC power supply with a power output up to 36 W.



<Features>

- Ultra-compact and lightweight body at only 500 g
- Four-digit meter enabling specific setting and reading
- Digital interface as standard feature

<Output>

·2 V to 40 V/0.2 W to 36 W

Rack Mount Type High Power HV Power Supply

AU series

AU series is a high power HV power supply in 1U rack mount type with a maximum output of 60kV/300W. The multi-functional power supply featuring high quality performance as well as multipurpose functions is suitable for many applications.



<Features>

- Its wide range of lineups
- Extensive remote function
- Ultra slim and space-saving body

<Output>

·1 kV to 120 kV/30 W to 2200 W

Bench Top Type High Power DC Power Supply

RK series

RK series is a benchtop high power DC power supply with a wide range of power output at 400 W/800 W/1200 W.



<Features>

- Low noise switching method
- Universal input
- Sink current function/Sink current prevention function

<Output>

·6 V to 800 V/400 W, 800 W or 1200 W

Bench Top Type Low ripple High Power HV Power Supply

ES series

ES series offers a high voltage power supply lineup with an ultra-low ripple of 5mV. The HV power supply features a high performance in such a compact body.



<Features>

- Compact size and bench top type
- Ultra-low ripple, high stability
- Its wide range of lineups

<Output>

·1kV to 5kV / 3W to 15W

Compact Rack Mount Type DC Power Supply

REK series

REK series is an ultra-compact DC power supply in 44 mm height panel (up to 2.5 kW model).



<Features>

- High power output up to 15 kW
- Low noise switching method
- Sequence operation (option)

<Output>

·6 V to 1500 V/ 770 W to 15 kW

Rack Mount Type High Power DC Turbo Power Supply

PRT series

PRT series offers approx. three times higher voltage/current outputs than previous models with a maximum power 15kW.



<Features>

- Ready for expansion up to 150 kW by increasing the output current with parallel connections
- Available for sequence setting and programming without a PC
- Internal resistance variation for simulating rechargeable batteries

<Output>

·80 V to 150 V/5 kW, 10 kW, 15 kW

Rack Mount Type High Power HV Power Supply

EPR series

EPR series is a desk-top high power HV power supply with a sufficient output up to 150W. The series is widely available for aging, electron beam and capacitor charging.



<Features>

- Compact size and simple operation
- Voltage/Current meters as standard feature
- Digital control option

<Output>

·1 kV to 30 kV / 30 W to 150 W

Rack Mount Type High Power HV Power Supply

AK series

AK series is a high power HV power supply featuring superior performance and high stability with a power output up to 6.4 kW. Extensive remote control functions are available in different applications.



<Features>

- High power of space-saving body
- Auto switching for CV/CC modes
- Efficient protection circuit

<Output>

·1 kV to 120 kV/3.0 kW to 6.4 kW

Connection/Applied Operation

■ Connection of Load

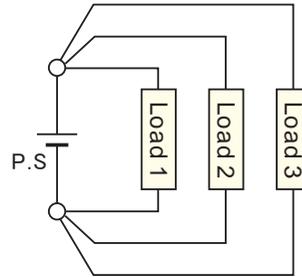
- Connect short lead wires of adequate gauge.
 - Use PVC cable (105°C) that can withstand the working voltage.
- Wiring to the load requires consideration of factors including the current capacity of the cable and the output cable length limitations due to sensing (0.5 V/lead). Please refer to the table below to determine the gauge of the cable.

AWG	mm ²	Maximum current (A)
18	1.1	2
16	1.3	7
14	2.1	11
12	3.3	18
10	5.3	23
8	8.4	39
6	13	67
4	21	106
2	33	170
1	42	209
1/0	53	270
2/0	67	330
3/0	85	350

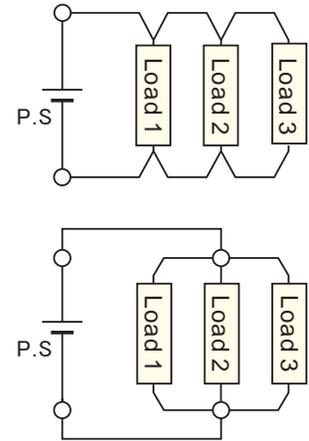
When 350 A or higher, use multiple cables or a copper bar.

■ Parallel Connection of Load

○ *Good example*



✗ *Bad example*



A power supply has no direct branching, but the load is branched using cables.

Selecting a DC Power Supply

▶ Please be sure to read.

Although the products described in this catalog are manufactured with full consideration for safety on the basis of DC power supply, follow the instruction manual for operation, and use them with the ground terminal grounded for safety.

The products described in this catalog are manufactured on the assumption that they will be used with ground potential or within the scope of serial operation. Please consult with a sales representative when using them with high potential floating, etc.

Please consult with a sales representative in advance, as although the products described in this catalog are manufactured with full consideration for protection against load discharge, there may be cases where discharge resistance is required or cannot be used between the power supply and load when used for partially continuous discharge, such as sputtering, or special pressure tests.

We recommend that you contact your sales representative with your request prior to making a selection, so that you can ensure the safety of the power supply device and select the ideal product.

Contact us for various kinds of Power supplies

As a pioneer of power supply manufacturing,
Matsusada Precision offers solutions to meet various
needs with its expertise through direct sales.
Please visit our website and contact us for more information.

Contact Us www.matsusada.com

Contact with phone or fax



USA	Other country or region
North Carolina office TEL(704)496-2644 FAX(704)496-2643	International office in Japan TEL+81-6-6150-5088 FAX+81-6-6150-5089

Manufacturer warranty

We warrant the specification, unless otherwise specified, at max. rated output after warm up, and scope of application is between 10% and 100% of max. rated output. We warrant that products contained in this catalog (hereinafter, the "Products") are free from defects in material and workmanship under normal use for a period of one (1) year from the date of shipment thereof. However, the warranty period for X-ray detectors and X-ray source shall be either one (1) year from the date of shipment or 1,000 hours, whichever shorter. The above warranty shall not apply to any Product which, at our sole judgment, has been: i) Repaired or altered by persons unauthorized by us; or ii) Connected, installed, adjusted or used otherwise than in accordance with the instructions furnished by us (including being used in an inappropriate installation environment, such as in corrosive gas, high temperature and humidity). We are not liable for any loss, damage or failure of the Products after the shipment thereof caused by external factors such as disasters. We will not inspect, adjust or repair any of our power supply products in the field or at any customer site. If you suspect that there has been a power supply failure in the field, please inspect your whole unit by yourself in an effort to determine that the problem is, in fact, arising out of our power supply products. If it is found that the problem is arising out of such power supply product after inspection, please contact your local sales office for additional troubleshooting. A "Return Merchandise Authorization" is required in case the power supply must be sent back to the factory in Japan for inspection and repair. We, at our sole discretion repair or replace such defective products at no cost to the purchaser. We assume no liability to the purchaser or any third party for special, incidental, consequential, or other damages resulting from a breach of the foregoing warranty. This warranty excludes any and all other warranties not set forth herein, express or implied, including without limitation the implied warranties of merchantability or fitness for a particular purpose. The Products are not designed and produced for such applications as requiring extremely high reliability and safety, or involving human lives (such as nuclear power, aerospace, social infrastructure facility, medical equipment, etc.). The use under such environment is not covered by this warranty and may require additional design and manufacturing processes. No modification or supplement of this warranty shall be binding unless in writing and signed by a duly authorized officer of Matsusada. Matsusada reserves the right to make any changes in the contents of catalogs or specifications at any time without advance notice. Due to compelling reason such as unavailability of components used, products might be un available or unable to repair. The products specified in catalogs or specifications are designed for use by the person who has enough expertise or under the control of such person, and not for general consumers. Schematics of products shall not be submitted to users. Test result or test data for the products shall be available upon request with charge.

Make sure you read the specification in the latest catalog before you order. Contact nearby sales office for the latest catalog.

PLEASE SEE THE LINK BELOW FOR THE COMPLETE WARRANTY TERMS

<https://www.matsusada.com/site/warranty.html>

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