

NEW

Compact / High power of 15kW

High power, Versatile
Programmable
DC power supply

REK series

● 6V to 850V ● 2.5A to 1200A ● 1.3kW to 15kW

LXI **CE**
(available by option) (except some models)



REK series

2U / 3U compact unit with
high power output 5.5kW / 15kW
Programmable DC power supply
with multi-function and excellent usability

1.3kW to 2.5kW models

3.2kW to 5.5kW models

8kW to 15.3kW models



Featuring broad output range and low noise switching configuration REK series is an ideal power supply for a variety of applications. In addition to its ultra slim body, which would not select the installation place, the sophisticated front panel design with smooth dial and individual output meters for voltage and current shall promise comfortable and smooth operation.



Compact and high power

15kW



Ideal for research and development with **low noise switching method**.



PFC circuit and **universal input** would not select the place of operation.



Various operations by connecting multiple power supplies, such as **master/slave**, is possible.



REK adopt **large 4-digit monitor display** for both voltage and current, which contributes to precise monitoring with better recognition.



Operability and safety are improved with new features of **key-lock function** and **acceleration rotary encoder**, which accelerate the output ramp up with the speed of rotating the encoder.

Lineup

Output			Model	Ripple		Dim. (P.09)
Voltage (V)	Current (A)	Power (kW)		(mVrms)	(mArms)*	
0 to 6	0 to 220	1.3	★ REK6-220	10	320	A
	0 to 310	1.9	REK6-310	10	1500	A
	0 to 530	3.2	REK6-530	10	900	D
0 to 8	0 to 300	2.4	REK8-300	10	3000	A
	0 to 600	4.8	REK8-600	10	3000	D
	0 to 1000	8	REK8-1000	45	8000	G
0 to 10	0 to 150	1.5	★ REK10-150	10	300	A
	0 to 240	2.4	★ REK10-240	10	500	A
	0 to 340	3.4	REK10-340	10	900	D
	0 to 510	5.1	REK10-510	10	1000	D
	0 to 1000	10	REK10-1000	45	4500	J
	0 to 1200	12	REK10-1200	50	4500	J
0 to 15	0 to 100	1.5	★ REK15-100	10	150	A
	0 to 160	2.4	★ REK15-160	10	300	A
	0 to 227	3.4	REK15-227	10	500	D
	0 to 340	5.1	REK15-340	15	600	D
	0 to 800	12	REK15-800	35	3500	J
0 to 20	0 to 80	1.6	★ REK20-80	10	160	A
	0 to 125	2.5	★ REK20-125	12	250	A
	0 to 170	3.4	REK20-170	15	300	C
	0 to 260	5.2	REK20-260	15	400	C
	0 to 420	8.4	REK20-420	30	2000	G
	0 to 500	10	REK20-500	30	2400	J
0 to 30	0 to 600	12	REK20-600	30	2400	J
	0 to 53	1.6	★ REK30-53	20	100	A
	0 to 84	2.5	★ REK30-84	20	160	A
	0 to 115	3.5	REK30-115	20	200	C
	0 to 180	5.4	REK30-180	20	260	C
	0 to 280	8.4	REK30-280	30	700	F
	0 to 333	10	REK30-333	30	800	I
0 to 35	0 to 400	12	REK30-400	30	800	I
	0 to 45	1.6	★ REK35-45	20	90	A
	0 to 72	2.5	★ REK35-72	20	150	A
	0 to 100	3.5	REK35-100	30	230	C
	0 to 155	5.4	REK35-155	30	280	C
0 to 40	0 to 210	8.4	REK40-210	35	350	F
	0 to 250	10	REK40-250	35	500	I
	0 to 300	12	REK40-300	35	500	I
0 to 45	0 to 35	1.6	★ REK45-35	20	70	A
	0 to 55	2.5	★ REK45-55	30	100	A
	0 to 78	3.5	REK45-78	30	130	C
	0 to 120	5.4	REK45-120	30	180	C
0 to 60	0 to 26	1.6	★ REK60-26	20	50	A
	0 to 42	2.5	★ REK60-42	18	80	A
	0 to 60	3.6	REK60-60	30	100	C
	0 to 90	5.4	REK60-90	30	135	C
	0 to 140	8.4	REK60-140	45	350	F
	0 to 170	10.2	REK60-170	45	500	I
0 to 80	0 to 250	15	REK60-250	45	500	I
	0 to 20	1.6	★ REK80-20	20	40	A
	0 to 31	2.5	★ REK80-31	20	60	A
	0 to 45	3.6	REK80-45	30	80	C
	0 to 68	5.4	REK80-68	30	100	C
	0 to 110	8.8	REK80-110	80	600	F
0 to 100	0 to 130	10.4	REK80-130	80	1000	I
	0 to 190	15.2	REK80-190	80	1200	I
	0 to 16	1.6	★ REK100-16	20	25	B
	0 to 25	2.5	★ REK100-25	25	50	B
	0 to 36	3.6	REK100-36	30	60	E
	0 to 55	5.5	REK100-55	30	80	E
0 to 150	0 to 85	8.5	REK100-85	100	350	F
	0 to 100	10	REK100-100	100	800	I
	0 to 150	15	REK100-150	100	1000	I

Output			Model	Ripple		Dim. (P.09)
Voltage (V)	Current (A)	Power (kW)		(mVrms)	(mArms)*	
0 to 125	0 to 65	8.1	REK125-65	125	200	F
	0 to 80	10	REK125-80	125	300	I
	0 to 120	15	REK125-120	125	300	I
0 to 150	0 to 10	1.5	★ REK150-10	30	20	B
	0 to 16.6	2.5	★ REK150-16.6	25	35	B
	0 to 24	3.6	REK150-24	30	40	E
	0 to 36	5.4	REK150-36	30	55	E
	0 to 55	8.3	REK150-55	150	100	F
	0 to 70	10.5	REK150-70	150	200	I
0 to 200	0 to 100	15	REK150-100	150	200	I
	0 to 8	1.6	★ REK200-8	40	15	B
	0 to 12.5	2.5	★ REK200-12.5	40	25	B
	0 to 18	3.6	REK200-18	40	30	E
	0 to 27	5.4	REK200-27	40	40	E
	0 to 42	8.4	REK200-42	200	200	F
0 to 250	0 to 52	10.4	REK200-52	200	380	I
	0 to 75	15	REK200-75	200	530	I
	0 to 34	8.5	REK250-34	100	150	F
	0 to 42	10.5	REK250-42	250	280	I
	0 to 60	15	REK250-60	250	500	I
0 to 300	0 to 5.3	1.6	★ REK300-5.3	50	10	B
	0 to 8.3	2.5	★ REK300-8.3	50	18	B
	0 to 12	3.6	REK300-12	50	20	E
	0 to 18	5.4	REK300-18	50	30	E
	0 to 28	8.4	REK300-28	150	50	H
	0 to 35	10.5	REK300-35	150	100	K
0 to 400	0 to 50	15	REK300-50	150	100	K
	0 to 22	8.8	REK400-22	200	100	H
	0 to 26	10.4	REK400-26	200	100	K
	0 to 38	15.2	REK400-38	200	100	K
0 to 500	0 to 3.2	1.6	★ REK500-3.2	100	5	B
	0 to 5	2.5	★ REK500-5	100	12	B
	0 to 7	3.5	REK500-7	100	15	E
	0 to 11	5.5	REK500-11	100	20	E
	0 to 17	8.5	REK500-17	200	100	H
	0 to 20	10	REK500-20	200	100	K
0 to 600	0 to 30	15	REK500-30	200	100	K
	0 to 2.7	1.6	★ REK600-2.7	150	5	B
	0 to 4.1	2.5	★ REK600-4.1	150	10	B
	0 to 6	3.6	REK600-6	150	15	E
	0 to 9	5.4	REK600-9	150	15	E
	0 to 14	8.4	REK600-14	200	100	H
0 to 650	0 to 18	10.8	REK600-18	200	100	K
	0 to 25	15	REK600-25	200	100	K
	0 to 2.5	1.6	REK650-2.5	150	5	B
	0 to 3.8	2.5	REK650-3.8	150	10	B
	0 to 5.5	3.6	REK650-5.5	150	15	E
	0 to 8.5	5.5	REK650-8.5	150	15	E
0 to 850	0 to 13	8.5	REK650-13	250	50	H
	0 to 16	10.4	REK650-16	250	50	K
	0 to 23	15	REK650-23	300	100	K
	0 to 10	8.5	REK850-10	300	100	H
	0 to 12	10.2	REK850-12	300	100	K
0 to 18	0 to 18	15.3	REK850-18	300	100	K

*This is the value of the rated current in 10-100% of output voltage when connecting resistive load. Please contact our sales office about the value when connecting nonlinear load such as semiconductor of laser diode etc.

★ : CE marking models.

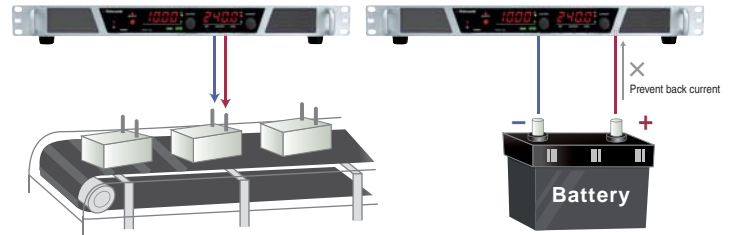
1.3kW, 1.5kW and 1.6kW models correspond to Low Voltage Directive and EMC Directive. 2.4kW and 2.5kW models correspond to Low Voltage Directive. The model which has not yet acquired CE marking at present is going to acquire it in future. Please refer for the latest acquisition situation to our sales office. In addition, the model which attached -LEt option, -LMi option or -L(400V) / -L(3P) / -L(1P) option is out of CE marking acquisition object. (See P.10 about these options.)

Standard function

Sink Current / Sink Current Prevention Function

REK series features **function to sink current**, and enable to decrease the voltage quickly when turning off the output or when control the voltage down, which increase the safety of operation. In case that continuous aging test in short interval, quick voltage fall time increase the efficiency of process. On the contrary by using **sink current prevention** function, it is possible to prevent voltage drop on the load by decreasing the current flow from load to power supply when turning off the power supply or when decrease the output voltage.

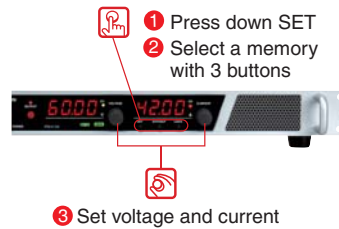
<NOTE> It is not possible to stabilize the output by controlling back current. In case of load which has inverse voltage or over rated voltage, such as inductive load or regenerative motor, protect the power supply by adding dummy resistor or diode to prevent back current.



Multi Setting Function

Function to memorize 3 different voltage and current settings in addition to standard preset function.

No need to adjust the output when different setting, and convenient function for production inspection process or testing which require frequent data taking.



Two Mode Lock Function

Function to select two different lock modes for two different purposes. "Full Lock" locks all the functions on front panel, and "Normal Lock" locks all the functions except for ON/OFF switch. "Full Lock" mode shall be good in case mis-operation have to be completely avoided, and "Normal Lock" mode shall be good in case to avoid mis-operation but secure the way for emergency stop of power supply. You can select the best mode according to your level of "Security".

(In both modes, emergency stop is possible with Power Switch.)

Full LOCK

Lock all the function other than reset lock mode. This mode is good for purpose to avoid mis-operation completely.

Normal LOCK

Lock voltage and current setting dial. This mode is good for purpose to avoid changing output setting by mistake or when easy emergency stop is required.



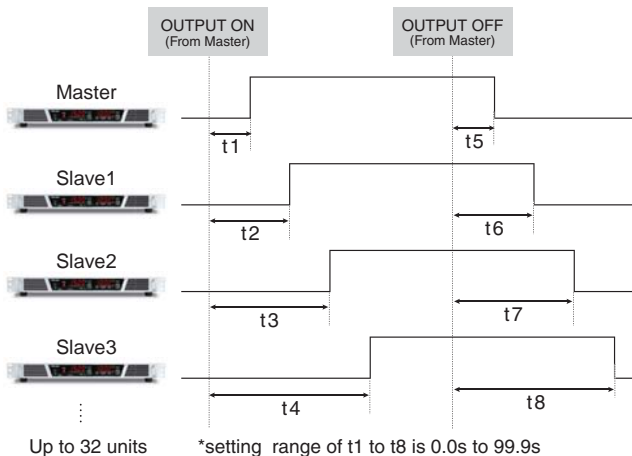
Delay Trigger Function

A start or stop of the output which put off time in OUTPUT ON/OFF is possible. This operation is available when you use Matsusada's plural DC power supplies (*1) which are set output voltage and current value individually and connected by the terminal for master slave connection (*2), not to speak of time to use one REK.

It is available only in the slave local operation. In the slave remote operation, it is necessary to use the same model of the same series.

In the slave local operation, setting output voltage and current value every connected power supply is available. In addition, in the slave remote operation, you can let each slave machine follow a master machine by one control function and can set output voltage and current value.

*1: R4K-80 series, RK-80 series and RK series apply. Please contact our sales office for details.
*2: Up to 32-unit.

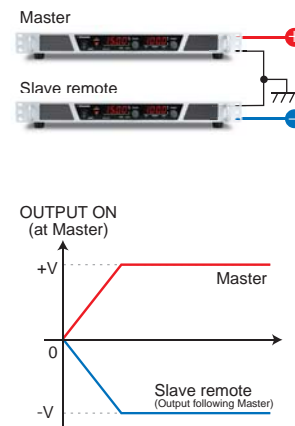


Dual Tracking, Multiple Outputs

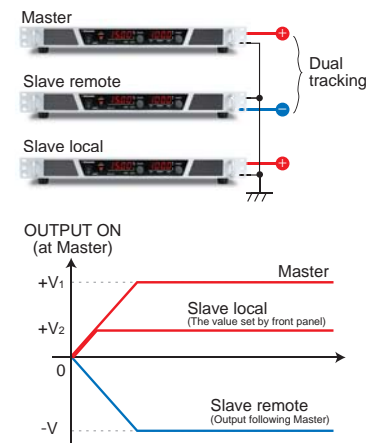
Dual tracking control, which enables both positive and negative outputs simultaneously in master slave operation, is possible. Multi outputs and various versatile operations are also possible by combining above dual tracking control and slave local mode. Positive and negative output(+V, -V) of dual tracking control and set output voltage of slave local mode can be output simultaneously by turning on the master unit.

*Please refer to P.10 for detail connection.

Dual Tracking



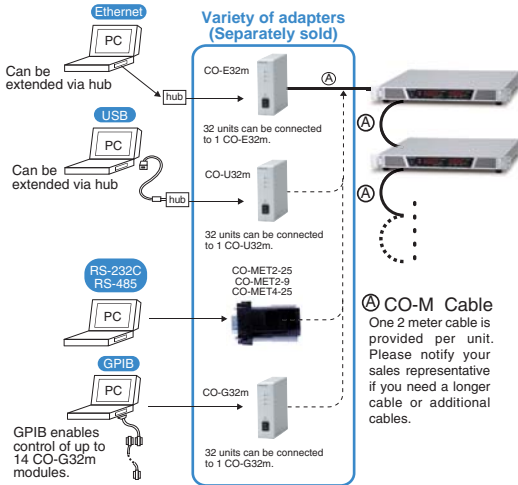
Multiple Outputs



Connection and Remote control

Digital Interface

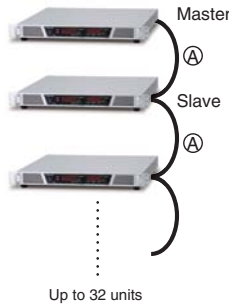
Able to one control master-slave operation in addition to digital control by USB / LAN(Ethernet) / RS-232C / RS-485 / GPIB



-LGob option will be needed if it will be used under specific condition. Please see P.10 for detail.

Master / Slave Control

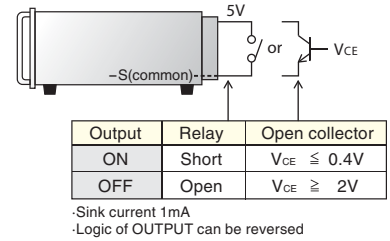
The Master / Slave control function allows you to control up to 32 units connected in parallel local from a single unit.



Master / Slave control is only possible with units with the same model number.
Also, master-slave function can be used only following condition.
● -LUs1, -LGob or -LEt option is not equipped.

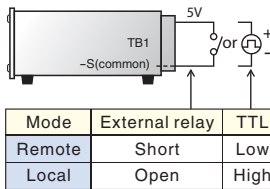
This is not a function that each power supply connected to parallel outputs current equally. When you hope for the equal current output, please refer to our sales office.

Remote Switch ON / OFF



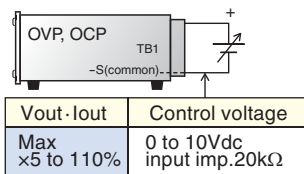
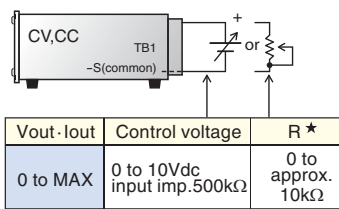
Remote Control

Remote/Local change

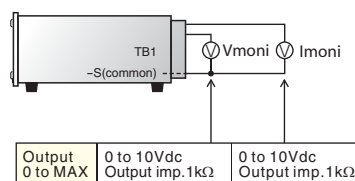


Each of voltage, current, OVP, OCP or all the modes can be switched by relay or TTL signal.

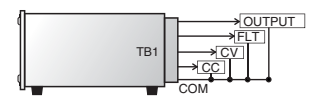
Output control



Output Monitor



Status Output



* On when OVP, OCP, OTP, ACF, reverse connection of sensing or interlock(LD) status.

Common is floating in open collector output of common. With stand voltage 30Vdc, sink current 5mA or less.

Various Digital Control Functions

Control function	Output ON/OFF setting	
	Status output (fault/output/OVP/OCP/OTP/ACF/reversible sense connection/interlock)	
	Maximum 32 units digital control	
	One control function for multiple units	
Write function	Output voltage setting/Output current setting	Percent mode(100.00%), *voltage current value mode(maximum rated voltage and current value)
	OVP setting/OCP setting	Percent mode(100.0%), voltage current value mode(maximum over voltage/over current protection value)
Reading function	Output voltage reading/Output current reading	Percent mode(100.00%), *voltage current value mode(maximum rated voltage and current value)
	Output voltage setting/Output current setting	Percent mode(100.00%), *voltage current value mode(maximum rated voltage and current value)
	OVP setting/OCP setting	Percent mode(100.0%), voltage current value mode(maximum over voltage/over current protection value)

* Minimum value of each model is same as minimum display of front panel meter.

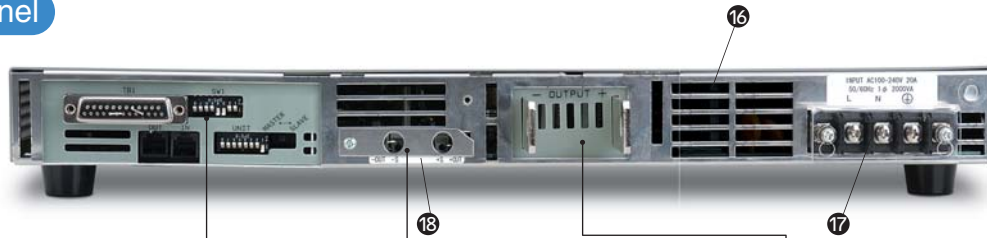
Functions

Sink Current / Sink Current Prevention Function

Front Panel



Rear Panel



Function setting switch(SW1)

[Voltage Control]

0V to 10V Local ↔ 0Ω to approx. 10kΩ

[Current Control]

0V to 10V Local ↔ 0Ω to approx. 10kΩ

[Blackout Protection]

OFF ↔ ON

[Fail safe]

OFF ↔ ON

Remote sensing

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

Output terminal

Terminal board (more than 100V models)

output cover

Busbar (up to 80V models)

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

- ① Air intake
- ② **OUTPUT**
Light on when output is ON.
- ③ **Output voltage, OVP setting display**
- ④ **Constant voltage mode**
- ⑤ **Output voltage, OVP setting dial**
- ⑥ **Output current, OCP setting display**
- ⑦ **Constant current mode**
- ⑧ **Output current, OCP setting dial**
- ⑨ **Power ON/OFF switch**
This has priority over all operations for safety reason.
- ⑩ **Output ON/OFF switch**
To be used to turn output on/off when local mode as well resetting protection functions.
- ⑪ **Keylock display**
Light on when key-lock condition.
- ⑫ **Remote programming display**
Light on when voltage/current remote control.
- ⑬ **Output preset switch**
- ⑭ **OVP/OCP setting switch**
- ⑮ **Keylock setting switch**
- ⑯ **Exhaust hole**
- ⑰ **AC input terminal (M4)**
- ⑱ **Not Sink Current switch**

Specifications

Input Voltage Input Current

Model	Rated input voltage	Input Voltage ^(50/60Hz) Max to Min	Phase	Input Current ^{*1}	Input Current Protection	Object Models
1.3 to 1.6kW	100 to 240VAC	85 to 264VAC ^{*2}	1	20A @ 100V	Fuse 30A	Standard
1.9 to 2.5kW	200 to 240VAC	180 to 264VAC ^{*3}	1	16A @ 200V		Standard
		180 to 264VAC	3	10A @ 200V		-L(3P)Option
3.2 to 3.6kW	200 to 240VAC	180 to 264VAC	1	26A @ 200V		-L(1P)Option
		180 to 264VAC	3	15A @ 200V		Standard
4.8 to 5.5kW	380 to 415VAC	342 to 460VAC	3	8A @ 400V	Fuse 15A	-L(400V)Option
	200 to 240VAC	180 to 264VAC	3	22A @ 200V	Fuse 30A	Standard
8 to 8.8kW	380 to 415VAC	342 to 460VAC	3	12A @ 400V	Fuse 20A	-L(400V)Option
	200 to 230VAC	180 to 253VAC	3	32A @ 200V	Fuse 50A	Standard
10 to 10.8kW	200 to 230VAC	180 to 253VAC	3	45A @ 200V	Fuse 75A	Standard
15 to 15.3kW	200 to 230VAC	180 to 253VAC	3	64A @ 200V	Fuse 100A	Standard

Power factor : 0.99 typ. (single phase)
0.95 typ. (three-phase 2.5 to 5.5kW models)
0.88 typ. (three-phase 8 to 15kW models)

*1 : At maximum output power

*2 : Rated input voltage range is between 100 to 240VAC(50/60Hz) while applying CE mark.

*3 : Rated input voltage range is between 200 to 240VAC(50/60Hz) while applying CE mark.

Output control

Local: Constant voltage: rotary encoder on front panel
Constant current: rotary encoder on front panel
Remote: Constant voltage: external control voltage 0Vdc to 10Vdc or external variable resistor 0Ω to approx. 10kΩ
Constant current: external control voltage 0Vdc to 10Vdc or external variable resistor 0Ω to approx. 10kΩ

Voltage regulation

Line: 0.01% of maximum output (for AC±10% input change)
Load: 0.01%+2mV of maximum output (for 10% to 100% load change)

Current regulation

Line: 0.01% of maximum output (for AC±10% input change)
Load: 0.02%+5mA of maximum output (for 10% to 100% load change)

Stability

0.05%/8Hr of maximum output voltage

Temperature coefficient

0.01% / °C of maximum output voltage
0.04% / °C of maximum output current

Output display

Output voltage: 4-digit meter (±0.5%FS±1digit at 23°C±5°C)
Output current: 4-digit meter (±0.5%FS±1digit at 23°C±5°C)

Monitor output

Output voltage monitor: 10V / maximum output voltage
Output current monitor: 10V / maximum output current

Protections

Over voltage protection (OVP) Output is cut off at a set value.
Over current protection (OCP) Output is cut off at a set value.
Setting range: approx. 5% to 110% of rated output
Local setting: Rotary encoder on front panel
Reset: Manual recovery by OUTPUT switch or remote switch.
Over temperature protection (OTP)
Output is cut off when internal part is heated abnormally.
Reset (after the temperature has gone down to normal):
Manual recovery by OUTPUT switch or remote switch.
Input brownout (ACF)-Blackout protection
Output is cut off when input voltage decreased.
Reset (when normal voltage value or recovery from blackout):
Manual recovery by OUTPUT switch or remote switch
for blackout protection (re-output protection function).
Automatic recovery when blackout protection is canceled.
Sense reverse connection
Interlock

Other functions

Keylock to avoid misoperation.
Digital master slave operation. (up to 250V for series operation)
(Max 32 units for parallel or series connection.)
(Combination of parallel and series is not possible.)
Setting memory function
Quiet forced air cooling
Remote sensing
Remote switch ON/OFF (TTL or external relay)
Status signal output (CV, CC, FLT, OUTPUT)
Delay trigger function : ON delay and OFF delay can be set individually
(0.0 to 99.9 sec)
Multi set function : Voltage and current memory "a", "b" and "c" can be set in addition to standard preset function.

Transient response time

Recovery time 1ms (the time before returning to less than 10% of the setting voltage for 70% to 100% load change at the time of CV operating)

Operation temperature

Up to 1.6kW model 0°C to +50°C (when input is 120VAC to 264VAC.)
0°C to +40°C (when input is 85VAC to 120VAC.)
When the input voltage is below 100VAC, the output power is to be derated at 1.2kW max.

Storage temperature

-20°C to +70°C

Storage humidity

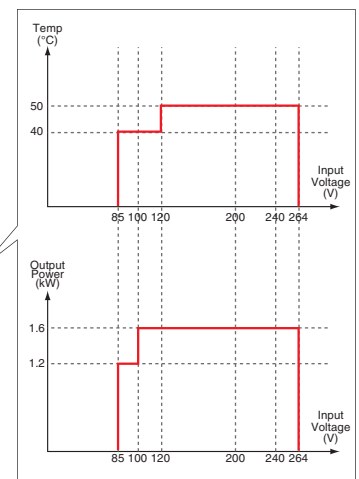
20% to 80% RH (no condensation)

Dielectric voltage

Between input power supply and output terminal : AC2000V 1 minute
Between input power supply and chassis : AC2000V 1 minute
Between output terminal and chassis : DC1000V 1 minute

Accessories

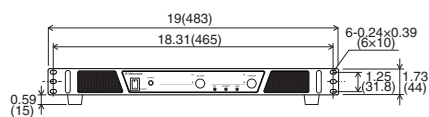
·Instruction manual (1)
·Remote connector cover (1)
·CO-M cable 2m (1) <when without interface option>



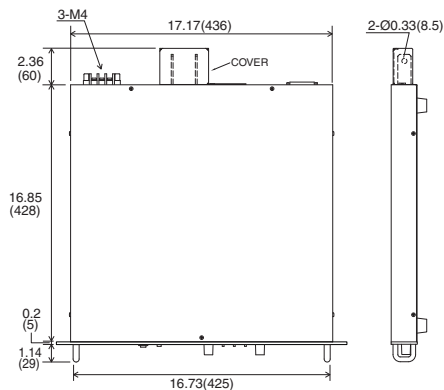
Dimensions inch(mm)

There are exhaust holes on rear panel for forced air cooling.
In case placed in a closed cabinet without extra room, apply additional forced cooling.

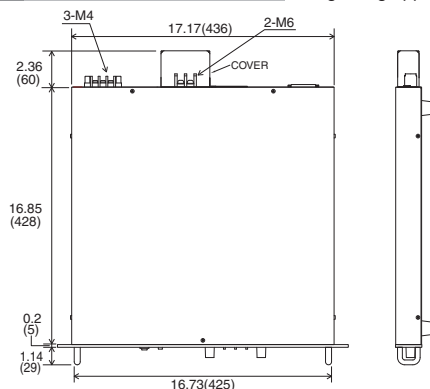
1.3kW to 2.5kW Models



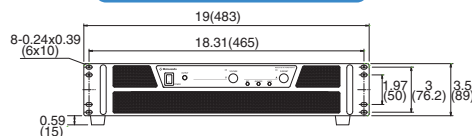
A Busbar output type Weight 8kg approx.



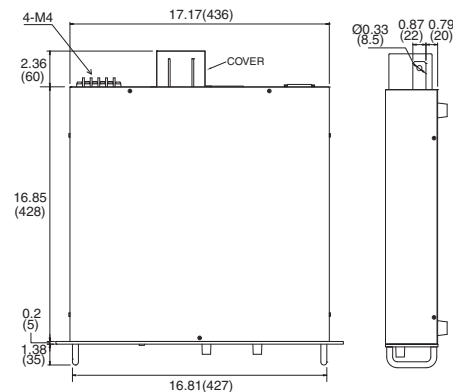
B Terminal board output type Weight 8kg approx.



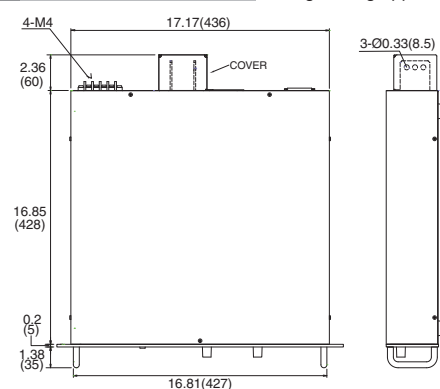
3.2kW to 5.5kW Models



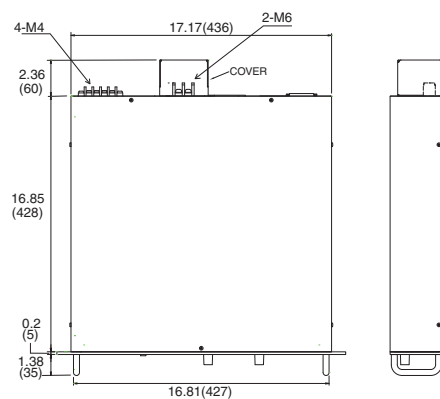
C Busbar output type Weight 14kg approx.



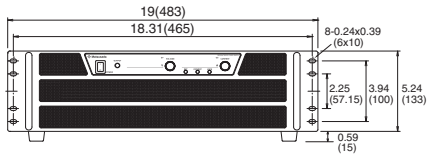
D Busbar output type Weight 14kg approx.



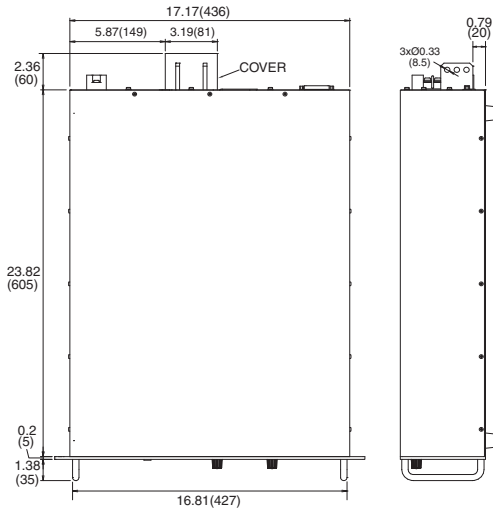
E Terminal board output type Weight 14kg approx.



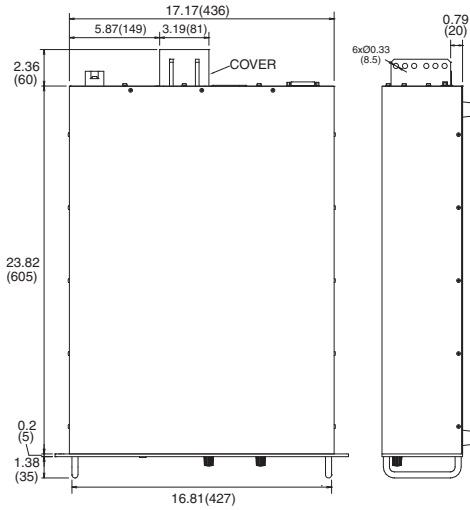
8kW to 8.8kW Models



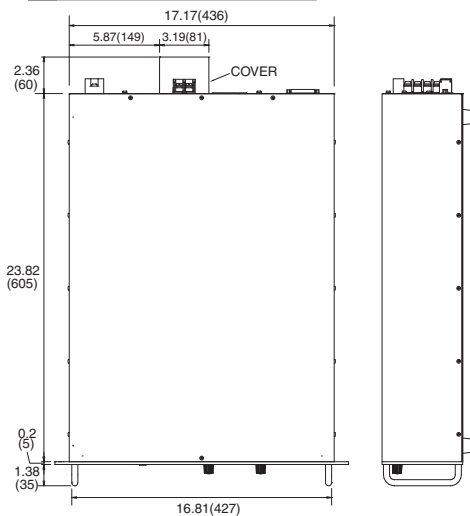
F Busbar output type Weight 25kg approx.



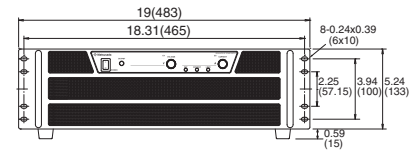
G Large busbar output type Weight 25kg approx.



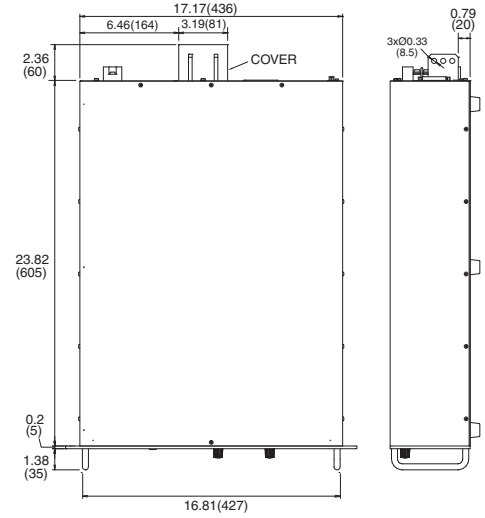
H Terminal board output type Weight 25kg approx.



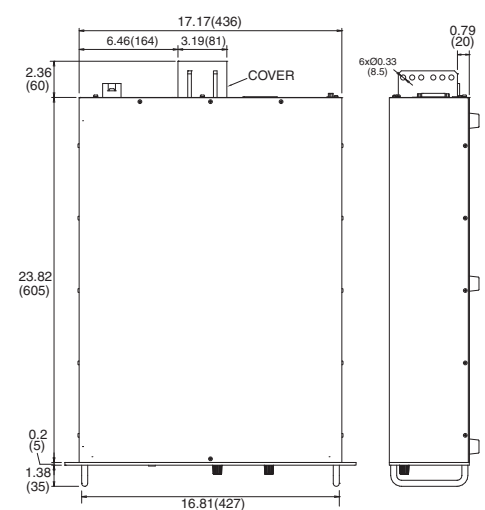
10kW to 15.3kW Models



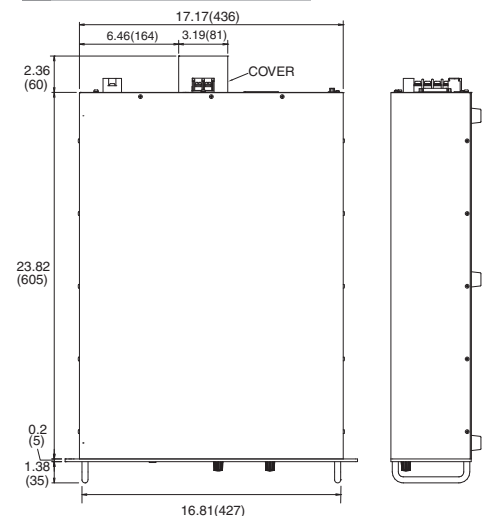
F Busbar output type Weight 25kg approx.



G Large busbar output type Weight 25kg approx.



H Terminal board output type Weight 25kg approx.



Options

-LMi : Multi-digital interface

*1

Enable digital control via LAN port in conformity with LXI,USB(USBTMC) port and RS-485. This option attaches IVI driver corresponding to SCPI command. It makes it easy for control program development with various programming languages such as LabView, VisualBasic and C# etc. by using IVI driver.

The model with these options does not have CE marking.



-LUs1 : USB Interface Board

*1*2

-LEt : Ethernet Interface Board

*1*2

The models with USB or LAN interface integrate it with -LMi option model. But the conventional -LUs1 option and -LEt option models continue the production, too. Please refer to our sales office for details.

-LGlob : Optical Interface Board

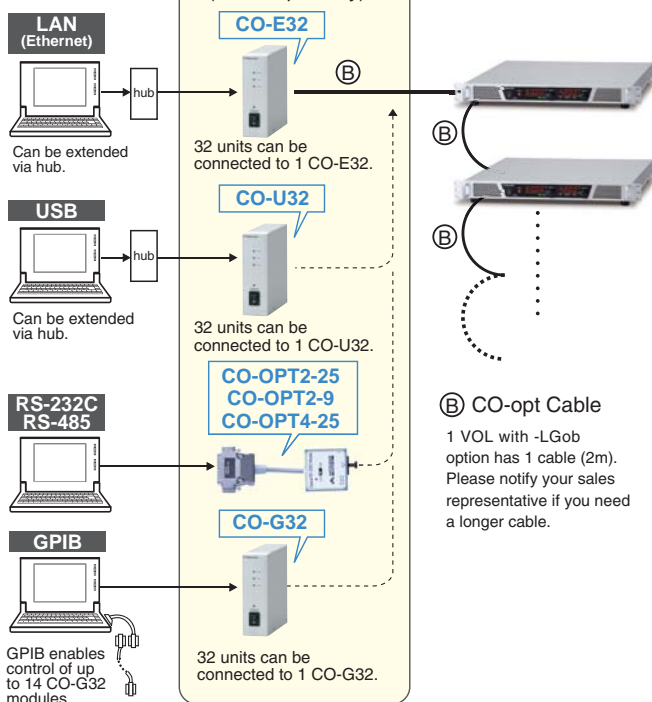
*1*2

- LGlob : Optical interface board + optical cable 2m
- LGlob(Fc5) : Optical interface board + optical cable 5m
- LGlob(Fc10) : Optical interface board + optical cable 10m
- LGlob(Fc20) : Optical interface board + optical cable 20m
- LGlob(Fc40) : Optical interface board + optical cable 40m

Optical communication offers insulation control. It is to prevent malfunction such as transient phenomenon by surge, lightning induction, and exogenous noise.

Converters

(need separately)



Select the -LGlob option when using power supply following environmental condition Factories which has a lot of noise
(ex.)in case of using power supplies and loads near motors and coils.
In case using power supply with high voltage floating(more than 250V)
The length between power supply and controller unit(PC or PLC) is more than 2-meter

-L(SCPI) : SCPI command

Enable control via SCPI command.

-L(400V), -L(3P), -L(1P) Input voltage / phase

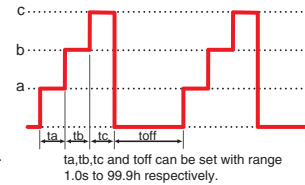
See page 7 for detail.

The model with these options does not have CE marking.

-LDe : Pulse / Ramp sequence, Master follow function(-LDe option)

A. Pulse Sequence

Using the stored voltage and current setting in each memory of a, b and c and multi set function, sequence operation is possible. The setting of repetition to say nothing of a continuous driving can be set. Various different operations, such as repetition of memory a and b or b, c and off, are possible by setting the set time of memory a, b, c, and/or off to be 0.0. Thus, it makes this model suitable for evaluation test or other applications.



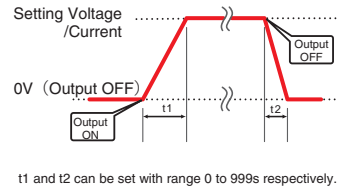
B. Ramp

This function controls the ramping up and down the voltage and current to the set value (or from set voltage and current value to 0V/0A). It is convenient to increase(decrease) the voltage and current value slowly.

*The Ramp sequence can be selected from [both set voltage and current], [only set voltage], and [only set current].

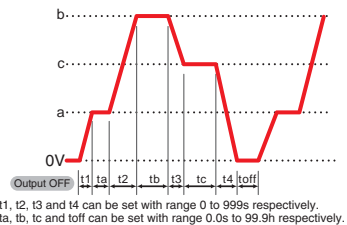
* Master follow function cannot be used with -LGlob, -LUs1, and -LEt option.

*The Ramp sequence can be selected from [both set voltage and current], [only set voltage], and [only set current].



C. Combination of Pulse and Ramp Sequence

Features of pulse sequence operation and ramp sequence operation can be combined for more convenient operation. In addition, by adding multi set function, sequence operation can be operated using stored voltage and current settings in each memory. The setting of repetition to say nothing of a continuous driving can be set. For example it is possible to slowly ramp up and down the voltage and current to the three different settings, and so, it is useful on various scenes.

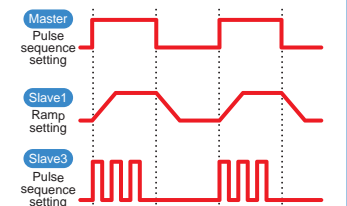


D. Master follow

When the pulse sequence operation and the ramp work master-slave, the output signal to the slave unit is transmitted. The slave unit can be output in an output status different from the master unit.

* Master follow function cannot be used with -LGlob, -LUs1, and -LEt option.

*The Ramp sequence can be selected from [both set voltage and current], [only set voltage], and [only set current].



Note The operation accuracy of the timer when sequencing is 0.5%.
Be careful when you use it by the long-term running operation.

-L(Mc0.5), -L(Mc0.15)

*3

Communication cable extension

The length of CO-M cable will be 0.5-meter long 0.15-meter long.
(You can choose only either.)

Single phase AC input cable (3-pin type) separate

25A / 250V single phase open terminal

Model CABLE TYPE 5 : Standard 2.5m length
CABLE TYPE 5() : Extended length(1m increment)
<e.g.> 5m : CABLE TYPE 5(5)

*1 These options cannot be selected together. Only one of each can be selected.

*2 If you select this option, standard digital interface and master-slave function will not be equipped. Also, please see the CO series catalog for detail of function of digital interface function.

*3 -L(Mc0.5) or -L(Mc0.15) option cannot be selected with -LGlob, -LUs1 or -LEt option.

When ordering, suffix the above option number to the model number.

<e.g.> REK30-84-L(Mc0.5)(3P)
REK100-36-LDeGlob(Fc20)(1P)
REK500-11-LDeUs1(400V)
(Alphabetical order)

Operation example

REK power supply of same model number can be connected in series or parallel to increase output voltage or current.

Series operation

[caution]
Total output voltage is to be up to 250V. Therefore for models with output voltage of over 250V, series operation cannot be conducted. Output current is to be the smallest current of those. Additionally, because it leads to the negative output, the common of the remote signal, please do not connect two sets of common.

Parallel operation

[caution]
Please keep all the settings of voltage the same. Output current will be the summation of each current. And, please keep OVP level of power supply maximum to prevent any damage.

Split operation

[caution]
Because it leads to the negative output, the common of the remote signal, please do not connect two sets of common.



TECHNICAL NOTE

Connection · Operation

■ Connection of load

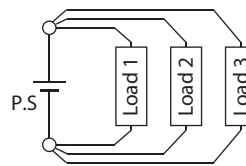
- Please use a short lead wire that is sufficiently thick for the connection.
- Please use PVC electric cable (105°C) that can fully tolerate the voltage used. It is necessary to consider current capacity, length limit of output wire by sensing (0.5V/lead) and so on for wiring with load. Please refer to the following diagram to determine the thickness of cable.

AWG	mm ²	Max 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

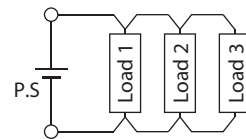
Use several cables or copper bar for model over 350A.

■ Parallel connection of load

○ Good example



✗ Bad example

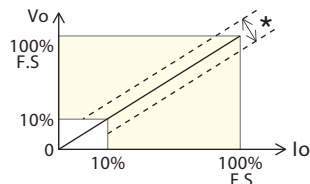


Definition of specifications

Specifications in this catalog, except otherwise specified, refer to values when maximum rating output (full scale★) after 2-hour warm up.

Applicable scope of specifications

"F.S × catalog value(★)" is applied for ripple, stability, regulations and temperature coefficient, and "value if F.S × ±1%(★)" is applied for high-voltage output linearity, monitor linearity and display linearity, both in the range of 10% to 100% of maximum rating output.



Ripple

Indication is in rms that includes high-frequency noise.

Preset

Preset value does not show the actual output status accurately. If you need an accurate setting, conduct actual output without load and set a voltage. Also for setting current, conduct output after shorting the output terminal and gradually raise current before setting at a desired value.

When selecting DC power supply

► Important Notice

Products on this catalog have been manufactured with consideration of safety as DC power supply, however please follow instruction manual for operation and make sure to ground the ground terminal for your safety.

Products on this catalog have been manufactured on the precondition that they are used in ground electric potential or within the range of the above series operation. Please contact our sales staff when using the product for floating of high electric potential, etc.

Products on this catalog are manufactured with consideration for protection against load discharge. However for specific experiment or continuous discharge such as sputtering, product may need discharge resistance between power supply and load or could not be used at all. Please consult with our sales staff in advance.

We recommend that you contact our sales staff with your requirement before choosing a product so that you can get the best product and the safety as high-voltage equipment is assured.



USA/canada : +1-888-652-8651
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Please copy this page and above fax number after filling out form below.

☐ A quotation ☐ An explanation of product ☐ A demonstration ☐ To purchase

☐ Other ()

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Dept.:	Title:
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Tel:	Fax:
E-mail:	

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. If any Product is showed to be defective as satisfactory to us, 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. Regarding RoHS compliance, Matsusada Precision Inc. does not intentionally use objectionable substances in the products listed within this catalog. Matsusada Precision Inc. manufactures products using components which, according to our suppliers, are "RoHS compliant parts". However, Matsusada Precision does not analyze each and every unit to confirm. Therefore, there may be some customized products which do not comply to RoHS. Please contact your nearby sales office for confirmation.


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San Jose Office : 2570 N.First Street Suite 200 San Jose, CA 95131
Tel: +1-408-273-4573 Fax: +1-408-273-4673

New York Office : 80 Orville Drive Suite 100 Bohemia, NY 11716
Tel: +1-631-244-1407 Fax: +1-631-244-1496

Dallas Office : 5430 LBJ Freeway, Suite 1200 Dallas, TX 75240
Tel: +1-972-663-9336 Fax: +1-972-663-9337

Boston Office : 859 Willard St. One Adams Place, Suite 418 Quincy, MA 02169
Tel: +1-617-663-5711 Fax: +1-617-663-5331

International Office : Osaka-City, Osaka Japan
Tel: +81-6-6150-5088 Fax: +81-6-6150-5089
Headquarters : 745 Aoji-cho Kusatsu Shiga 525-0041 Japan
Tel: +81-77-561-2111 Fax: +81-77-561-2112

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