

**NEW**

**30 kV** high-voltage and **30 W** high-power unit  
with just **2.76-inch** width

# Compact and Lightweight high power HV power supply

- ▶ Outstanding manageability with compact, lightweight and simple operation
- ▶ 3-digit meter that displays output voltage and current value at all times as a standard (function).
- ▶ Available for wide input voltage range of 100 V to 240 VAC

**EQ**  
series

1 to 30 kV / 1 to 30 mA

30 W



Weight : Approx. 1.5kg

# EQ series

**High power of 30W**  
in this bench-top size  
of **width 2.76-inch**



## FEATURES

- High voltage / power of 30 kV / 30 W
- Ultra compact and easy operation
- Voltage and current digital meter as a standard

## APPLICATIONS

- Insulator Testing
- All kinds of High-Voltage Testing
- For Biasing
- School teaching materials
- Electrostatic testing
- Capacitor Charging
- Electron Beams
- Ion Beams
- Aging of electronic components
- Inspection and Evaluation of inverters and power devices
- ATE(Automatic Test Equipment)

## SUMMARY

EQ series is an ultra compact versatile high voltage power supply with output voltage and current meters. Its compactness and light weight enable you to carry from lab to lab, and to place anywhere. It is an ideal supply for quick testing.

## LINEUP

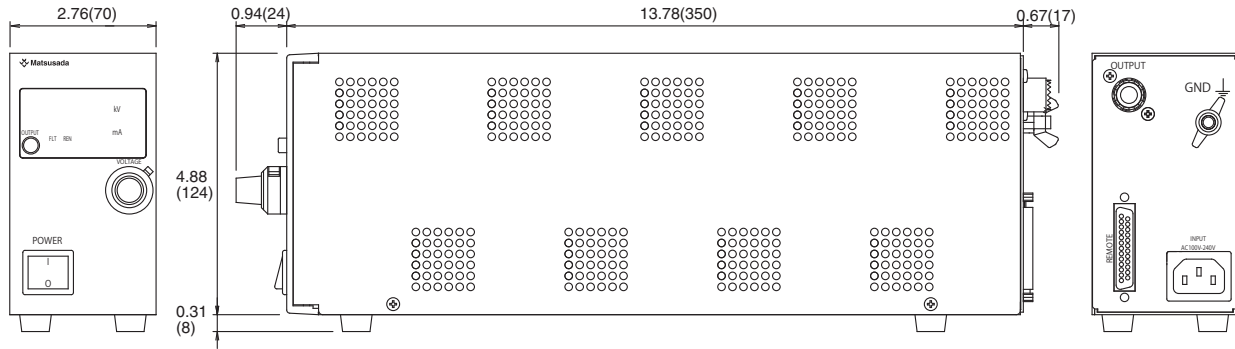
Output voltage	Output current	Output power	MODEL	Ripple	Weight (typ.)
0 to 1 kV	30 mA	30 W	EQ-1*30	0.05 %p-p	1.5 kg
0 to 3 kV	10 mA		EQ-3*10		
0 to 10 kV	3 mA		EQ-10*3	0.08 %p-p	1.6 kg
0 to 30 kV	1 mA		EQ-30*1		

\*P : positive N : negative

## SPECIFICATIONS

<b>Input voltage</b>	100 VAC to 240 VAC, 50 / 60 Hz, single phase	<b>Monitor output</b>	Output voltage monitor : 10 V / rated voltage (accuracy 2 % of full scale)
<b>Input current</b>	0.5 A typ(@ 100VAC)		Output current monitor : 10 V / rated current (accuracy 2 % of full scale)
<b>Output voltage control</b>	Local : 10-turn potentiometer on the front panel Remote : External control voltage 0 to 10 V (accuracy : $\pm 2$ %FS) input imp. $\geq 10$ k $\Omega$		(Both output impedance are 1 k $\Omega$ .)
<b>Voltage Regulation</b>	For Line : 0.01 % of max voltage for $\pm 10$ % input line change For Load : 0.01 % of max voltage for load change of 10 % to 100 %	<b>Other Functions</b>	HV ON / OFF with external relay (LS)
<b>Stability</b>	0.01 % / Hr	<b>Protection Functions</b>	Over voltage (Cut off at 105 % of rated output) Over current (Current limit with automatic crossover) Arc and short circuit
<b>Temperature coef.</b>	80 ppm / $^{\circ}$ C	<b>Temperature</b>	Operating : 0 to + 50 $^{\circ}$ C Storage : -20 to + 60 $^{\circ}$ C Humidity : 20 % to 80 %RH(no condensation)
<b>Output display</b>	Output voltage : 3-digit (accuracy $\pm 2$ % of full scale $\pm 1$ dgt) Output current : 3-digit (accuracy $\pm 2$ % of full scale $\pm 1$ dgt)	<b>Accessories</b>	AC input cable with 3-pin plug 2.5 m (1) Shielded HV output cable (FLying lead, 2.5 m) (1) Instruction manual (1)

## DIMENSIONS inch(mm)

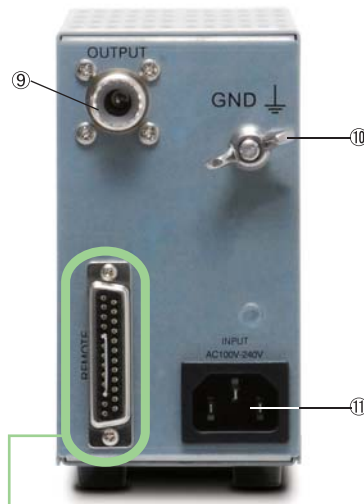


## FUNCTION

### Front



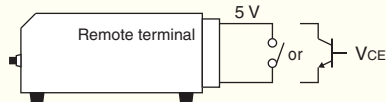
### Rear



- ① **Output ON display (LED)**
- ② **OUTPUT ON / OFF switch**  
Output ON / OFF at local mode, Emergency OFF at remote mode, and re-output
- ③ **POWER ON / OFF switch**  
This has priority over all operations.
- ④ **Fault display (LED)**  
Light up only when Over current protection or Over voltage protection activated
- ⑤ **Remote control display (LED)**  
Light up when it is in remote mode.
- ⑥ **Output voltage meter**
- ⑦ **Output current meter**
- ⑧ **Output voltage adjustable potentiometer**  
(10-turn, lockable)
- ⑨ **HV output connector**
- ⑩ **GND Terminal(M6)**
- ⑪ **AC inlet**

### REMOTE CONNECTOR

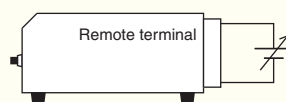
#### REMOTE SWITCH ON / OFF



Output	External relay	Open collector
ON	Short	$V_{CE} \leq 0.4 \text{ V}$
OFF	Open	$V_{CE} \geq 2 \text{ V}$

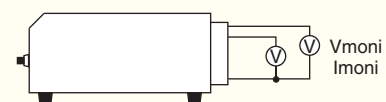
Sink Current  $\geq 10 \text{ mA}$

#### OUTPUT CONTROL



Output voltage	Vcon
0 to MAX	0V to 10 V Input imp. $\geq 10 \text{ k}\Omega$

#### OUTPUT MONITOR



Vout : 0 V to 10 V

Monitor polarity equals output polarity.

Iout : 0 V to +10 V

Both of output imp. is 1 k $\Omega$ .

## OPTION

**-LCt** Limit the current by cutting output off at the time of over current(manual return)

When ordering, add the above option mark to the end of the model number.  
<e.g.>EQ-10N3-LCt

## INPUT / OUTPUT CABLE

Input		Output
<b>CABLE TYPE 1</b> 125 V / 10 A (standard)	<b>CABLE TYPE 3</b> 250 V / 10 A (separate)	<b>CN-□-MHVP</b> (standard)



**USA/Canada : +1-888-652-8651**

other countries : +81-6-6150-5089

# Customer Inquiry Sheet (EQ series)

Please copy this page and above fax number after filling out form below.

☐ I would like

- ☐ A quotation    ☐ An explanation of product    ☐ A demonstration    ☐ To purchase
- ☐ Other ( )

■ Give us your requirement / comment

■ Please fill in below.

Address:	
Company:	
Dept.:	Title:
Name:	
Tel:	Fax:
E-mail:	

### 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 unavailable 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

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


**Matsusada Precision Inc.**

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