

Even greater ripple noise and stability!! Ideal HV power supply for precise operation.

AF/AE series

AF series is one of the best seller model of Matsusada as high performance standard high voltage power supply.

AE series has even greater ripple noise and stability, and has long been selected from various national laboratories.

- Low ripple 10ppm, High stability 50ppm/Hr (AE)
- Wide line-up of high voltage power supply from 1kV to 150kV and 30W to 300W
- Local and remote operation
- Front panel adjustable overload trip level
- Remote and front panel monitoring of DC output voltage and current
- Automatic protection against overload, short circuit and arc
- GPIB interface option



APPLICATIONS

- CRT testing
- X-ray tube
- Electron Beams
- Ion Implantation
- Insulator Testing
- All kinds of High-Voltage Testing

SPECIFICATIONS

Input Voltage	AC115V±10% 1Ø
Output Voltage Control	Local mode : front panel "Coarse" and "Fine" 10-turn potentiometers Remote mode : external voltage source 0 to 10Vdc (input impedance 10kΩ typ) or by External 5kΩ potentiometer
Voltage Regulation	AF: Line : ±0.003% of maximum voltage for ±10% input line change Load : 0.003% of maximum voltage for 10 to 100% load change AE: Line : ±0.001% of maximum voltage for ±10% input line change Load : 0.001% of maximum voltage for 10 to 100% load change
Ripple	AF: 0.01%rms AE: 0.001%rms
Stability	AF: 0.01%/Hr 0.03%/8Hr AE: 0.005%/Hr 0.01%/8Hr
Temperature Coef.	AF: 0.01%/°C AE: 0.005%/°C
Overload Trip Level Adjust	Front panel 1-turn potentiometer 10% to 105% of maximum output current
Output Polarity	Positive, negative or reversible high voltage with respect to chassis ground. Units from 1kV to 50kV, the polarity may be reversed by swapping the internal cables. Units from 60kV to 150kV, by swapping the internal high voltage module.

Metering	AF: 3½-digit voltage and current meters ±1999, 1% accuracy AE: 4½-digit voltage meter ±19999, 1% accuracy 3½-digit current meter ±1999, 1% accuracy
Monitor Output	Voltage monitor 0 to 10V BNC connector, 1% accuracy (output impedance 1kW typ) Current monitor 0 to 10V BNC connector, 1% accuracy (output impedance 1kW typ)
Protection	Protection against over voltage, over current, short circuit and arc
Remote Functions	Remote HV ON/OFF External Interlock Remote Reset
Output Connector	Proprietary Matsusada HV connector on rear panel
Temperature	Operating : 0 to +45°C Storage : -20 to +75°C
Accessory	AC line input cable 2.5m(8.2ft) Shielded HV output cable 2.5m(8.2ft, flying lead) Instruction manual

*Specifications are at the maximum output after a warm-up period.
(Warm-Up:4Hr)

LINEUP

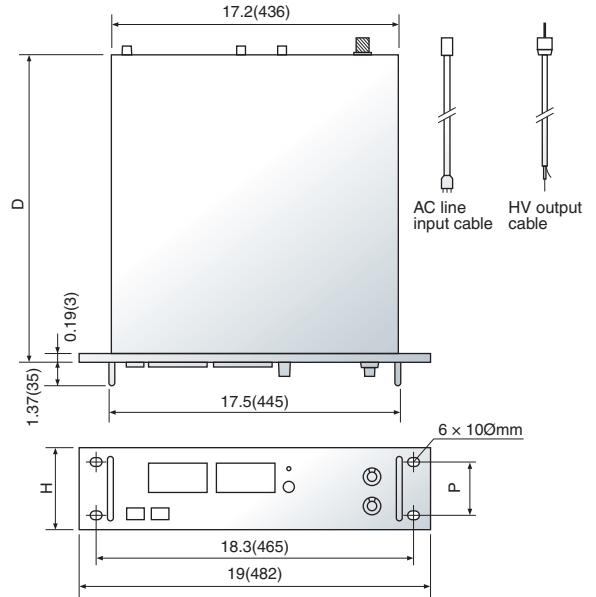
AF Series

Output voltage (kVdc)	Output current (mA)	Output power (W)	MODEL			(*)2 Case Type
			Positive polar output	Negative polar output	Reversible polar output (*)1	
1	30	30	AF-1P30	AF-1N30	AF-1R30	(A)
	60	60	AF-1P60	AF-1N60	AF-1R60	(A)
	120	120	AF-1P120	AF-1N120	AF-1R120	(C)
3	10	30	AF-3P10	AF-3N10	AF-3R10	(A)
	20	60	AF-3P20	AF-3N20	AF-3R20	(A)
	40	120	AF-3P40	AF-3N40	AF-3R40	(A)
	60	180	AF-3P60	AF-3N60	AF-3R60	(C)
	80	240	AF-3P80	AF-3N80	AF-3R80	(C)
5	6	30	AF-5P6	AF-5N6	AF-5R6	(A)
	12	60	AF-5P12	AF-5N12	AF-5R12	(A)
	25	125	AF-5P25	AF-5N25	AF-5R25	(A)
	35	175	AF-5P35	AF-5N35	AF-5R35	(C)
	50	250	AF-5P50	AF-5N50	AF-5R50	(C)
10	3	30	AF-10P3	AF-10N3	AF-10R3	(A)
	6	60	AF-10P6	AF-10N6	AF-10R6	(A)
	12	120	AF-10P12	AF-10N12	AF-10R12	(A)
	18	180	AF-10P18	AF-10N18	AF-10R18	(C)
	25	250	AF-10P25	AF-10N25	AF-10R25	(C)
20	30	300	AF-10P30	AF-10N30	AF-10R30	(C)
	1.5	30	AF-20P1.5	AF-20N1.5	AF-20R1.5	(B)
	3	60	AF-20P3	AF-20N3	AF-20R3	(B)
	6	120	AF-20P6	AF-20N6	AF-20R6	(C)
	9	180	AF-20P9	AF-20N9	AF-20R9	(C)
30	12	240	AF-20P12	AF-20N12	AF-20R12	(C)
	15	300	AF-20P15	AF-20N15	AF-20R15	(C)
	1	30	AF-30P1	AF-30N1	AF-30R1	(B)
	2	60	AF-30P2	AF-30N2	AF-30R2	(B)
	4	120	AF-30P4	AF-30N4	AF-30R4	(C)
40	6	180	AF-30P6	AF-30N6	AF-30R6	(C)
	8	240	AF-30P8	AF-30N8	AF-30R8	(C)
	10	300	AF-30P10	AF-30N10	AF-30R10	(C)
	0.75	30	AF-40P0.75	AF-40N0.75	AF-40R0.75	(C)
	1.5	60	AF-40P1.5	AF-40N1.5	AF-40R1.5	(C)
50	3	120	AF-40P3	AF-40N3	AF-40R3	(C)
	4.5	180	AF-40P4.5	AF-40N4.5		(C)
	6	240	AF-40P6	AF-40N6		(C)
	7.5	300	AF-40P7.5	AF-40N7.5		(C)
	0.6	30	AF-50P0.6	AF-50N0.6	AF-50R0.6	(C)
60	1.2	60	AF-50P1.2	AF-50N1.2	AF-50R1.2	(C)
	2.5	125	AF-50P2.5	AF-50N2.5	AF-50R2.5	(C)
	3.5	175	AF-50P3.5	AF-50N3.5		(C)
	5	250	AF-50P5	AF-50N5		(C)
	0.5	30	AF-60P0.5	AF-60N0.5	AF-60R0.5	(C)
80	1	60	AF-60P1	AF-60N1	AF-60R1	(C)
	2	120	AF-60P2	AF-60N2	AF-60R2	(C)
	3	180	AF-60P3	AF-60N3		(C)
	4	240	AF-60P4	AF-60N4		(C)
	0.75	60	AF-80P0.75	AF-80N0.75	AF-80R0.75	(D)
100	1.5	120	AF-80P1.5	AF-80N1.5		(D)
	0.1	10	AF-100P0.1	AF-100N0.1	AF-100R0.1	(D)
	0.3	30	AF-100P0.3	AF-100N0.3	AF-100R0.3	(D)
	0.6	60	AF-100P0.6	AF-100N0.6		(D)
	1	100	AF-100P1	AF-100N1		(D)
120	1.2	120	AF-100P1.2	AF-100N1.2		(D)
	0.5	60	AF-120P0.5	AF-120N0.5		(E)
	1	120	AF-120P1	AF-120N1		(E)
150	0.5	75	AF-150P0.5	AF-150N0.5		(E)
	0.8	120	AF-150P0.8	AF-150N0.8		(E)

AE Series

Output voltage (kVdc)	Output current (mA)	Output power (W)	MODEL			(*)2 Case Type
			Positive polar output	Negative polar output	Reversible polar output (*)1	
1	15	15	AE-1P15	AE-1N15	AE-1R15	(A)
	30	30	AE-1P30	AE-1N30	AE-1R30	(A)
3	10	30	AE-3P10	AE-3N10	AE-3R10	(A)
	20	60	AE-3P20	AE-3N20	AE-3R20	(A)
5	6	30	AE-5P6	AE-5N6	AE-5R6	(A)
	12	60	AE-5P12	AE-5N12	AE-5R12	(A)
10	3	30	AE-10P3	AE-10N3	AE-10R3	(A)
	6	60	AE-10P6	AE-10N6	AE-10R6	(A)
20	1.5	30	AE-20P1.5	AE-20N1.5	AE-20R1.5	(B)
	3	60	AE-20P3	AE-20N3	AE-20R3	(B)
30	1	30	AE-30P1	AE-30N1	AE-30R1	(B)
	2	60	AE-30P2	AE-30N2	AE-30R2	(B)
40	0.75	30	AE-40P0.75	AE-40N0.75	AE-40R0.75	(C)
	1.5	60	AE-40P1.5	AE-40N1.5	AE-40R1.5	(C)
50	0.5	25	AE-50P0.5	AE-50N0.5	AE-50R0.5	(C)
	1	50	AE-50P1	AE-50N1	AE-50R1	(C)
60	0.5	30	AE-60P0.5	AE-60N0.5	AE-60R0.5	(C)
	1	60	AE-60P1	AE-60N1	AE-60R1	(C)
80	0.3	24	AE-80P0.3	AE-80N0.3		(D)
	0.75	60	AE-80P0.75	AE-80N0.75		(D)
100	0.3	30	AE-100P0.3	AE-100N0.3		(E)
120	0.25	30	AE-120P0.25	AE-120N0.25		(E)
150	0.2	30	AE-150P0.2	AE-150N0.2		(E)

DIMENSIONS inch(mm)



Case Type	H	P	D
(A)	5.24 (133)	2.25 (57.15)	19 (482)
(B)	6.96 (177)	4 (101.6)	19 (482)
(C)	6.96 (177)	4 (101.6)	21.7 (550)
(D)	8.74 (222)	5.75 (146)	21.7 (550)
(E)	10.5 (266)	7.5 (190.5)	24 (610)

OPTIONS

LC	Current limiting Front panel adjustable 10% to 105% of maximum output current.
LW	Slow start 10 second HV output ramp up
L(230V)	Input Voltage AC230V±10%, 1Ø
LG	GPIB Connection (need CO Series GPIB Adaptor)

* P--Positive output N--Negative output
<e.g.> AF-1R30 : 0 to ±1kV / 30mA
AE-150N0.2 : 0 to -150kV / 0.2mA

*1) Unit less than 50kV, the polarity may be reversed by swapping the internal cable.
Unit over 60kV, by swapping internal high voltage module.

*2) See Dimensions.