PSU Series Specifications

Model		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Rated output voltage (*1)		V	6	8	12.5	15	20	30	40	50	60	80	100	150	300	400	600
Rated output current (*2)		A	800	720	480	400	304	200	152	120	100	76	60	40	20	15.2	10.4
Rated output power		W	4800	5760	6000	6000	6080	6000	6080	6000	6000	6080	6000	6000	6000	6080	6240

Constant Voltage Mode		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Line regulation (*3)		mV	0.01% of rated output voltage +2mV														
Load regulation (*4)		mV	0.01% of rated output voltage +5mV														
Ripple and noise (*5)	p-p (*6)	mV	75	75	75	75	75	75	75	75	75	100	100	120	300	300	500
	r.m.s. (*7)	mV	10	10	10	10	10	10	10	10	10	15	15	25	35	35	120
Temperature coefficient		ppm/℃	100ppm/℃ after a 30 minute warm-up														
Temperature stability			0.05% of rated output voltage over 8hrs interval following 30 minutes warm-up. Constant line, load & temp.														
Warm-up drift			Less than 0.05% of rated output voltage +2mV over 30 minutes following power on.														
Remote snese compensation voltage (single wire)		V	1	1	1	1	1	1.5	2	2	3	4	5	5	5	5	5
Rise time (*8)	No load	ms	80	80	80	80	80	80	80	80	80	150	150	150	150	200	250
Fall time (*9)	Rated load	ms	10	50	50	50	50	80	80	80	80	150	150	150	150	200	250
	No load	ms	500	600	700	700	800	900	1000	1100	1100	1200	1500	2000	2500	3000	4000
Transient response time (*10)		ms	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Constant Current Mode		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Line regulation (*3)		mA	0.1% of rated output current				0.05% of rated output current										
Load regulation (*11)		mA	0.5% of rated output current									1% of rated output current					
Load regulation thermal drift			Less than 0.1% of rated output current over 30 minutes following load change.														
Ripple and noise (*12)	r.m.s.	mA	2000	1900	1500	1390	1250	650	365	245	170	140	116	104	30	20	15
Temperature coefficient		ppm/℃	100ppm/℃ after a 30 minute warm-up														
Temperature stability			0.05% of rated output current over 8hrs interval following 30 minutes warm-up. Constant line, load & temp.														
Warm-up drift			6~15V model : Less than 0.5% rated output current over 30 minutes following power on. 20~600V model : Less than 0.25% rated output current over 30 minutes following power on.														

Protection Function		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Over voltage protection (OVP)	Setting range	V	0.6 - 6.6	0.8 -8.8	1.25 - 13.75	1.5 - 16.5	2 - 22	3 - 33	4 - 44	5 - 55	5 - 66	5 - 88	5 - 110	5 - 165	5 - 330	5 - 440	5 - 660
	Setting accuracy	mV	60	80	125	150	200	300	400	500	600	800	1000	1500	3000	4000	6000
Over current protection (OCP)	Setting range	A	5 - 880	5 -792	5 - 528	5 - 440	5 - 334.4	5 - 220	5 - 167.2	5 - 132	5 - 110	5 - 83.6	5 - 66	4 - 44	2 - 22	1.52 - 16.72	1.04 - 11.44
	Setting accuracy	A	16	14.4	9.6	8	6.08	4	3.04	2.4	2	1.52	1.2	0.8	0.4	0.304	0.208
Under voltage limit (UVL)	Setting range		0 - 6.3	0 -8.4	0 - 13.12	0 - 15.75	0 - 21	0 - 31.5	0 - 42	0 - 52.5	0 - 63	0 - 84	0 - 105	0 - 157.5	0 - 315	0 - 420	0 - 630
Over temperature protection (OHP)	Operation		Turn the output off.														
Incorrect sensing connection protection (SENSE)	Operation		Turn the output off.														
Low AC input protection (AC-FAIL)	Operation		Turn the output off.														
Shutdown (SD)	Operation		Turn the output off.														
Power limit (POWER LIMIT)	Operation		Over power limit.														
	Value (fixed)		Approx. 105% of rated output power														

Front Panel			PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Display, 4 digits	Voltage accuracy	0.1% +	mV	12	16	25	30	40	60	80	100	120	160	200	300	600	800	1200
	Current accuracy	0.2% +	mA	2400	2160	1440	1200	912	600	456	360	300	228	180	120	60	45.6	31.2
Indications				GREEN LED's: CV, CC, V, A, VSR, ISR, DLY, RMT, LAN, M1, M2, M3, RUN, Output ON														
				RED LED's: ALM, ERR														
Buttons				Lock/Local(Unlock), PROT(ALM_CLR), Function(M1), Test(M2), Set(M3), Shift, Output														
Knobs				Voltage, Current														
USB port				Type A USB connector														

Programming and Measurement (RS-232/485, USB, LAN, GPIB)		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Output voltage programming accuracy	0.05% +	mV	3	4	6.25	7.5	10	15	20	25	30	40	50	75	150	200	300
Output current programming accuracy	0.2% +	mA	800	720	480	400	304	200	152	120	100	76	60	40	20	15.2	10.4
Output voltage programming resolution		mV	0.2	0.27	0.4	0.5	0.7	1	1.3	1.7	2	2.7	3.4	5.2	10.2	13.6	20.4
Output current programming resolution		mA	24	24	16	13.2	10	6.8	4.8	4	3.2	2.6	2	1.36	0.76	0.52	0.36
Output voltage measurement accuracy	0.1% +	mV	6	8	12.5	15	20	30	40	50	60	80	100	150	300	400	600
Output current measurement accuracy	0.2% +	mA	1600	1440	960	800	608	400	304	240	200	152	120	80	40	30.4	20.8
Output voltage measurement resolution		mV	0.2	0.27	0.4	0.5	0.7	1	1.3	1.7	2	2.7	3.4	5.2	10.2	13.6	20.4
Output current measurement resolution		mA	24	24	16	13.2	10	6.8	4.8	4	3.2	2.6	2	1.36	0.76	0.52	0.36

Input Characteristics		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Norminal input rating			B type : 1P2W 200V models、C type : 3P3W 200V models、D type : 3P4W 400V models														
Input voltage range			B type : 1P2W 170-265Vac、C type : 3P3W 180-253Vac、D type : 3P4W 360-440Vac														
Input frequency range			47Hz～63Hz														
Maximum input current	200Vac / 400Vac	A	B type : 44A、C type : 29A、D type 22A														
Inrush current			B type：1P2W 200V models Less than 200A. C type：3P3W 200V model Less than 100A. D type：3P4W 400V model Less than 100A.														
Power factor	200Vac / 400Vac		0.98 @1 Phase 200Vac / 0.95 @ 3 Phase 200/400Vac														
Efficiency (*13)		%	78.5	81	85	85	86	86	87	87	87	87	87	87	87	87	87
Hold-up time			20ms or greater														

Interface Capabilities		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
USB			TypeA: Host, TypeB: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class)														
LAN			MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask														
RS-232 / RS-485			Complies with the EIA232D / EIA485 Specifications														
GPIB (Factory Option)			SCPI - 1993, IEEE 488.2 compliant interface														

Environmental Conditions		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Operaing temperature			0˚C to 50˚C (*14)														
Storage temperature			-25˚C to 70˚C														
Operating humidity			20% to 85% RH; No condensation														
Storage humidity			90% RH or less; No condensation														
Altitude			Maximum 2000m														

General Specifications		PSU	6-800	8-720	12.5-480	15-400	20-304	30-200	40-152	50-120	60-100	80-76	100-60	150-40	300-20	400-15.2	600-10.4
Weight	main unit only	kg	Less than 37.4kg														
Dimensions	(W×H×D)	mm^3	423×174.4×447.2														
Cooling			Forced air cooling by internal fan.														
EMC																	
Safety																	
Withstand voltage			AC to Chassis : 1500Vac / 1min AC to Output terminal : 3000Vac / 1min Vout≦150V Output terminal to Chassis : 1000Vdc / 1min 150<Vout≦600 Output terminal to Chassis : 1500Vdc / 1min														
Insulation resistance			Chassis and output terminal; chassis and AC input; AC input and output terminal: 100MΩ or more (DC 1000V)														

Notes:

(*1) Minimum voltage is guaranteed to maximum 0.2% of the rated output voltage.

(*2) Minimum current is guaranteed to maximum 0.4% of the rated output current.

(*3) Single phase 200V models: 170-265Vac. Three phase 200V models : 180-253Vac. Three phase 400V models : 360-440Vac.

(*4) From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.

(*5) Measured at rated output voltage and current with JEITA RC-9131B probe

(*6) Measurement frequency bandwidth is 10Hz to 20MHz.

(*7) Measurement frequency bandwidth is 5Hz to 1MHz.

(*8) From 10% to 90% of rated output voltage, with rated resistive load.

(*9) From 90% to 10% of rated output voltage, with rated resistive load.

(*10) Time for output voltage to recover within 2% of its rated output for a load change from 50 to 100% of its rated output current. Voltage set point from 10% to 100% of rated output.

(*11) For load voltage change, equal to the unit voltage rating, constant input voltage.

(*12) For 6V~20V model the ripple is measured at 2V ~ rated output voltage and full output current. For other models, the ripple is measured at 10 ~ 100% output voltage and full output current.

(*13) Single phase and three phase 200V models : at 200Vac input voltage. Three phase 400V models : at 400Vac input voltage. At rated output power.

(*14) If install the front panel filter kit, the temperature is guaranteed to 40˚C.