PSW-360W Series Specifications

Model		PSW	30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
Rated output voltage		V	30	40	80	160	250	800
Rated output current		А	36	27	13.5	7.2	4.5	1.44
Rated output power		W	360	360	360	360	360	360
Power ratio		—	3	3	3	3.2	3.125	3.2
Constant Voltage Mode		PSW	30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
Line regulation (*1)		mV	18	23	43	83	128	403
Load regulation (*2)		mV	20	25	45	85	130	403
Ripple and noise (*3)	n n (*1)	mV	60	60	60	60	80	150
Kipple and holse (*5)	p-p (*4)	mV	7	<u> </u>	7	12	15	30
Temperature coefficient	r.m.s. (*5)		1	/	ge, after a 30 minute		15	30
Remote snese compensation voltage (single wire)		ppm/°C V	0.6			0.6	1	1
Rise time (*6)	Rated load	ms	50	50	50	100	100	150
Kise time (0)	No load	ms	50	50	50	100	100	150
Fall time (*7)	Rated load	ms	50	50	50	100	150	300
	No load		500	500	500	1000	1200	2000
Transient response time (*8)		ms ms	1	1	1	2	2	2000
Transferit response time (8)		1115	1	1	1	Δ.	2	
Constant Current Mode		PSW	30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
Line regulation (*1)		mA	41	32	18.5	12.2	9.5	6.44
Load regulation (*9)		mA	41	32	18.5	12.2	9.5	6.44
Ripple and noise	r.m.s.	mA	72	54	27	15	10	5
Temperature coefficient		ppm/°C	200ppm/°C of	rated output currer	nt, after a 30 minute	e warm-up.		
Dustantian Eurotian		PSW	20.26	40.27	90 12 5	160 7 2	250 4 5	800-1.44
Protection FunctionOver voltage protection (OVP)	Setting range	V rsw	30-36 3-33	40-27 4-44	80-13.5 8-88	160-7.2 16-176	250-4.5 20-275	20-880
Over voltage protection (OVP)		v			0-00	10-170	20-275	20-880
Over current protection (OCP)	Setting accuracy	Δ	$\pm (2\% \text{ of fated})$ 3.6-39.6	output voltage) 2.7-29.7	1.35-14.85	0.72-7.92	0.45-4.95	0.144-1.584
Over eutrent protection (OCF)	Setting range	A			1.55-14.65	0.72-7.92	0.45-4.95	0.144-1.364
Over temperature protection (OTD)	Setting accuracy		``````````````````````````````````````	output current)				
Over temperature protection (OTP)	Operation		Turn the outpu					
Low AC input protection (AC-FAIL)	Operation		Turn the outpu					
Power limit (POWER LIMIT)	Operation		Over power lin					
	Value (fixed)		Approx. 105%	of rated output po	ower			

Analog Programming and Monitoring		PSW	30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44		
External voltage control output voltage	at 23 °C \pm 5 °C		Accuracy and 1	inearity: ±0.5% of	rated output voltag	ge.		-		
External voltage control output current	at 23 °C \pm 5 °C		Accuracy and 1	inearity: ±1% of ra	ated output current.					
External resistor control output voltage	at 23 °C \pm 5 °C		Accuracy and 1	Accuracy and linearity: $\pm 1.5\%$ of rated output voltage.						
External resistor control output current	at 23 °C \pm 5 °C		Accuracy and 1	inearity: ±1.5% of	rated output current	nt.				
Output voltage monitor	at 23 °C \pm 5 °C		Accuracy: ±1%Accuracy: ±2%							
Output current monitor	at 23 °C \pm 5 °C		Accuracy: ±1%Accuracy: ±2%					⁄0		
Shutdown control			Turns the output	ut off with a LOW	(0V to 0.5V) or sh	ort-circuit.				
Output on/off control			Possible logic selections: Turn the output on using a LOW (0V to 0.5V) or short-circuit, turn the output off using a HIGH (4.5 5V) or open-circuit. Turn the output on using a HIGH (4.5V to 5V) or open-circuit, turn the output off using a LOW (0V 0.5V) or short-circuit.					× ×		
CV/CC/ALM/PWR ON/OUT ON indicator			Photocoupler o	pen collector outp	ut; Maximum volta	ige 30V, maximu	m sink current 8mA	ι.		

Front Panel			PSW	30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44	
Display, 4 digits	Voltage accuracy	at 23 °C ± 5 °C; ± (0.1% +	mV	20	20	20	100	200	400	
	Current accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mA	40	30	20	5	5	2	
Indications				GREEN LED's: CV, CC, VSR, ISR, DLY, RMT, 20, 40, 60, 80, 100, %W, W, V, A						
				RED LED's: ALM						
Buttons				Function, OVP	/OCP, Set, Test, L	ock/Local, PWR D	SPL, Output			
Knobs				Voltage, Current						
USB port				Type A USB co	onnector					

Programming and Measurement (USB, LAN	N, GPIB)	PSW	30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
Output voltage programming accuracy	at 23 °C ± 5 °C; ± (0.1% +	mV	10	10	10	100	200	400
Output current programming accuracy	at 23 °C ± 5 °C; ± (0.1% +	mA	30	20	10	5	5	2
Output voltage programming resolution		mV	1	1	2	3	5	14
Output current programming resolution		mA	1	1	1	1	1	1
Output voltage measurement accuracy	at 23 °C ± 5 °C; ± (0.1% +	mV	10	10	10	100	200	400
Output current measurement accuracy	at 23 °C ± 5 °C; ± (0.1% +	mA	30	20	10	5	5	2
Output voltage measurement resolution		mV	1	1	2	3	5	14
Output current measurement resolution		mA	1	1	1	1	1	1

Series and Parallel Capability	PSW	30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
Parallel number	Units	3	3	3	3	3	3
Series number	Units	2	2	2	2	None	None

Input Characteristics		PSW	30-36	40-27	80-13.5	160	
Norminal input rating			100Vac to 240	Vac, 50Hz to 60H	z, single phase		
Input voltage range			85Vac ~ 265V	ac			
Input frequency range			47Hz ~ 63Hz				
Maximum input current	100Vac	А	5				
	200Vac	А	2.5				
Inrush current			Less than 25A	•			
Maximum input power		VA	500				
Power factor	100Vac		0.99				
	200Vac		0.97				
Efficiency	100Vac	%	77	78	78	7	
	200Vac	%	79	80	80	8	
Hold-up time			20ms or greate	er			

Interface Capabilities	PSW	30-36	40-27	80-13.5	160
USB		TypeA: Host, T	ypeB: Slave, Spee	d: 1.1/2.0, USB C	lass: CDC
LAN		MAC Address, Mask	DNS IP Address,	User Password, Ga	iteway IP
GPIB		Optional: GUG	-001 (GPIB to US	B Adapter)	

Environmental Conditions	PSW	30-36	40-27	80-13.5	160-
Operaing temperature		0° C to 50° C			
Storage temperature		-25 °C to 70 °C			
Operating humidity		20% to 85% R	H; No condensatio	n	
Storage humidity		90% RH or less	s; No condensation	1	
Altitude		Maximum 200	Om		

60-7.2	250-4.5	800-1.44
79	79	80
81	81	82
60-7.2	250-4.5	800-1.44
C(Commu	nications Device C	lass)
P Address,	Instrument IP Add	lress, Subnet
60-7.2	250-4.5	800-1.44

General Specifications		PSW	30-36	40-27	80-13.5	160			
Weight	main unit only	kg	Approx. 3kg			•			
Dimensions	(W×H×D)	mm^3	71×124×350						
Cooling			Forced air cool	ing by internal fan					
EMC			Complies with	th the European EMC directive 2004/108/EC for th the European Low Voltage Directive 2006/9 lities at 1500 Vac for 1 minute lities at 3000 Vac for 1 minute					
Safety			Complies with	ced air cooling by internal fan. nplies with the European EMC directive 2004/108/EC for nplies with the European Low Voltage Directive 2006/95/ abnormalities at 1500 Vac for 1 minute abnormalities at 3000 Vac for 1 minute					
Withstand voltage	Between input and chassis		No abnormalities at 1500 Vac for 1 minute						
	Between input and output		No abnormalities at 3000 Vac for 1 minute						
Vithstand voltage	Between output and chassis		No abnormalities at 500 Vdc for 1 minute for 30V, 40V, No abnormalities at 1500 Vdc for 1 minute for 250V, 800						
Insulation resistance	Between input and chassis		500 Vdc, 100 M	M Ω or more.					
	Between input and output		500 Vdc, 100 M	M Ω or more.					
	Between output and chassis		,	MΩ or more for 30° MΩ or more for 8°	, , ,	V and 250			

Notes:

*1: At 85 ~ 132Vac or 170 ~ 265Vac, constant load.

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

*3: Measure with JEITA RC-9131B (1:1) probe

*4: Measurement frequency bandwidth is 10Hz to 20MHz.

*5: Measurement frequency bandwidth is 5Hz to 1MHz.

*6: From 10% to 90% of rated output voltage, with rated resistive load.

*7: From 90% to 10% of rated output voltage, with rated resistive load.

*8: Time for output voltage to recover within 0.1% + 10mV of its rated output for a load change from 50 to 100% of its rated output current.

*9: For load voltage change, equal to the unit voltage rating, constant input voltage.

0-	-7.	.2	

250-4.5

800-1.44

For Class A test and measurement products.

95/EC and carries the CE-marking.

OV, 160V models. 7 models.

250V models.

PSW-720W Series Specifications

Model		PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88
Rated output voltage		V	30	40	80	160	250	800
Rated output current		А	72	54	27	14.4	9	2.88
Rated output power		W	720	720	720	720	720	720
Power ratio			3	3	3	3.2	3.125	3.2
Constant Voltage Mode		PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88
Line regulation (*1)		mV	18	23	43	83	128	403
Load regulation (*2)		mV	20	25	45	85	130	405
Ripple and noise (*3)	p-p (*4)	mV	80	80	80	80	100	200
	r.m.s. (*5)	mV	11	11	11	15	15	30
Temperature coefficient		ppm/°C	100ppm/°C of	rated output voltag	ge, after a 30 minut	e warm-up.		
Remote snese compensation voltage (single wire)		V	0.6	0.6	0.6	0.6	1	1
Rise time (*6)	Rated load	ms	50	50	50	100	100	150
	No load	ms	50	50	50	100	100	150
Fall time (*7)	Rated load	ms	50	50	50	100	150	300
	No load	ms	500	500	500	1000	1200	2000
Transient response time (*8)		ms	1	1	1	2	2	2
Constant Current Mode		PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88
Line regulation (*1)		mA	77	59	32	19.4	14	7.88
Load regulation (*9)		mA	77	59	32	19.4	14	7.88
Ripple and noise	r.m.s.	mA	144	108	54	30	20	10
Temperature coefficient		ppm/°C			nt, after a 30 minut			
Protection Function		PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88
Over voltage protection (OVP)	Setting range	V	3-33	4-44	8-88	16-176	20-275	20-880
	Setting accuracy		\pm (2% of rated	output voltage)				
Over current protection (OCP)	Setting range	А	5-79.2	5-59.4	2.7-29.7	1.44-15.84	0.9-9.9	0.288-3.168
	Setting accuracy		\pm (2% of rated	output current)				
Over temperature protection (OTP)	Operation		Turn the outpu	t off.				
Low AC input protection (AC-FAIL)	Operation		Turn the outpu	t off.				
Power limit (POWER LIMIT)	Operation		Over power lin	nit.				
	Value (fixed)		Approx. 105%	of rated output po	wer			

	PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88	
at 23 °C \pm 5 °C		Accuracy and l	inearity: ±0.5% of	rated output volta	ge.	-		
at 23 °C \pm 5 °C		Accuracy and l	inearity: $\pm 1\%$ of r	ated output current	•			
at 23 °C \pm 5 °C		Accuracy and l	inearity: $\pm 1.5\%$ of	frated output volta	ge.			
at 23 °C \pm 5 °C		Accuracy and linearity: $\pm 1.5\%$ of rated output current.						
at 23 °C \pm 5 °C		Accuracy: ±1%	, D			Accuracy: ±2%	0	
at 23 °C \pm 5 °C		Accuracy: ±1% Accuracy: ±2%						
		Turns the output off with a LOW (0V to 0.5V) or short-circuit.						
		 Possible logic selections: Turn the output on using a LOW (0V to 0.5V) or short-circuit, turn the output off using a HIGH (4.5V to 5V) or open-circuit. Turn the output on using a HIGH (4.5V to 5V) or open-circuit, turn the output off using a LOW (0V to 0.5V) or short-circuit. 						
		Photocoupler of	open collector outp	out; Maximum volta	age 30V, maximum	n sink current 8mA	Α.	
	PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88	
at 23 °C ± 5 °C; ± (0.1% +	mV	20	20	20	100	200	400	
at 23 °C ± 5 °C; ± (0.1% +	mA	70	60	40	30	10	4	
		GREEN LED's: CV, CC, VSR, ISR, DLY, RMT, 20, 40, 60, 80, 100, %W, W, V, A						
	at 23 °C \pm 5 °C at 23 °C \pm 5 °C	at 23 °C \pm 5 °Cat 23 °C \pm 5 °CPSWat 23 °C \pm 5 °C; \pm (0.1% + mV	at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Possible logic and Iat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$; $\pm (0.1\% + mV)$ 20at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$; $\pm (0.1\% + mA)$ 70	at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 0.5\%$ ofat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.\%$ of r.at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.5\%$ ofat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.5\%$ ofat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.5\%$ ofat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ Turns the output off with a LOWPossible logic selections: Turn the output on using a LOW $5V$) or open-circuit. Turn the output on using a HIGH $0.5V$) or short-circuit.Photocoupler open collector outputPhotocoupler open collector outputat $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$; $\pm (0.1\% + mV$ 2020at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$; $\pm (0.1\% + mA$ 7060	at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 0.5\%$ of rated output volta, at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.5\%$ of rated output current at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.5\%$ of rated output volta, at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.5\%$ of rated output volta, at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy and linearity: $\pm 1.5\%$ of rated output current at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$ Accuracy: $\pm 1\%$ at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$; $\pm (0.1\% + mV$ 20 $20 \ 20$ 20 at $23 \ ^{\circ}C \pm 5 \ ^{\circ}C$; $\pm (0.1\% + mA$ 70 $60 \ 40$	at 23 °C \pm 5 °CAccuracy and linearity: \pm 0.5% of rated output voltage.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1% of rated output current.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output voltage.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output voltage.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output voltage.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output current.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output current.at 23 °C \pm 5 °CAccuracy: \pm 1%at 23 °C \pm 5 °C; \pm (0.1% + mV20202020100at 23 °C \pm 5 °C; \pm (0.1% + mA70604030	at 23 °C \pm 5 °CAccuracy and linearity: \pm 0.5% of rated output voltage.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1% of rated output current.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output voltage.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output current.at 23 °C \pm 5 °CAccuracy and linearity: \pm 1.5% of rated output current.at 23 °C \pm 5 °CAccuracy: \pm 1%at 23 °C \pm 5 °C; \pm (0.1% + mV202020100at 23 °C \pm 5 °C; \pm (0.1% + mA70at 23 °C \pm 5 °C; \pm (0.1% + mA70at 23 °C \pm 5 °C; \pm (0.1% + mA70at 23 °C \pm 5 °C; \pm (0.1% + mA70at 23 °C \pm 5 °C; \pm (0.1% + mA70at 23 °C \pm 5 °C; \pm 0.1% + mA70at 23 °C \pm 5 °C; \pm 0.1% + mA70	

Front Panel			PSW	30-72	40-54	80-27	160
Display, 4 digits	Voltage accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mV	20	20	20	1
	Current accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mA	70	60	40	
Indications				GREEN LED's	: CV, CC, VSR, IS	R, DLY, RMT, 20), 40, 60,
				RED LED's: A	LM		
Buttons				Function, OVP	/OCP, Set, Test, L	ock/Local, PWR D	SPL, Ou
Knobs				Voltage, Curren	nt		
USB port				Type A USB co	onnector		

Programming and Measurement (USB, LAN	, GPIB)	PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88
Output voltage programming accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mV	10	10	10	100	200	400
Output current programming accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mA	60	50	30	15	10	4
Output voltage programming resolution		mV	1	1	2	3	5	14
Output current programming resolution		mA	2	2	2	2	1	1
Output voltage measurement accuracy	at 23 °C ± 5 °C; ± (0.1% +	mV	10	10	10	100	200	400
Output current measurement accuracy	at 23 °C ± 5 °C; ± (0.1% +	mA	60	50	30	15	10	4
Output voltage measurement resolution		mV	1	1	2	3	5	14
Output current measurement resolution		mA	2	2	2	2	1	1

Series and Parallel Capability	PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88
Parallel number	Units	3	3	3	3	3	3
Series number	Units	2	2	2	2	None	None

Dutput

Input Characteristics		PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88	
Norminal input rating			100Vac to 240	Vac, 50Hz to 60H	z, single phase				
Input voltage range			85Vac ~ 265V	ac					
Input frequency range			$47 \text{Hz} \sim 63 \text{Hz}$						
Maximum input current	100Vac	А	10						
	200Vac	А	5						
Inrush current			Less than 50A						
Maximum input power		VA	1000						
Power factor	100Vac		0.99						
	200Vac		0.97						
Efficiency	100Vac	%	77	78	78	79	79	80	
	200Vac	%	79	80	80	81	81	82	
Hold-up time			20ms or greate	er	•				
	·	-	-						
Interface Canabilities		PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88	

Interface Capabilities	PSW	30-72	40-54	80-27	160-14.4	250-9	800-2.88
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					
GPIB		Optional: GUG	-001 (GPIB to USI	B Adapter)			

Environmental Conditions	PSW	30-72	40-54	80-27	160-	
Operaing temperature		0° C to 50° C				
Storage temperature		-25° C to 70° C				
Operating humidity		20% to 85% RI	H; No condensatio	No condensation No condensation		
Storage humidity		90% RH or less	s; No condensation	1		
Altitude		Maximum 2000)m			

0-14.4	250-9	800-2.88

General Specifications		PSW	30-72	40-54	80-27	160
Weight	main unit only	kg	Approx. 5.3kg			
Dimensions	(W×H×D)	mm^3	142×124×350			
Cooling			Forced air cool	ing by internal fan	•	
EMC			Complies with	the European EM	C directive 2004/1	08/EC for
Safety			Complies with	the European Low	Voltage Directive	e 2006/95/
Withstand voltage	Between input and chassis		No abnormaliti	es at 1500 Vac for	1 minute	
	Between input and output		No abnormaliti	es at 3000 Vac for	1 minute	
	Between output and chassis			5.3kg	,	
Insulation resistance	Between input and chassis		500 Vdc, 100 N	$M\Omega$ or more.		
	Between input and output		500 Vdc, 100 N	$M\Omega$ or more.		
	Between output and chassis					V and 250

Notes:

*1: At 85 ~ 132Vac or 170 ~ 265Vac, constant load.

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

*3: Measure with JEITA RC-9131B (1:1) probe

*4: Measurement frequency bandwidth is 10Hz to 20MHz.

*5: Measurement frequency bandwidth is 5Hz to 1MHz.

*6: From 10% to 90% of rated output voltage, with rated resistive load.

*7: From 90% to 10% of rated output voltage, with rated resistive load.

*8: Time for output voltage to recover within 0.1% + 10mV of its rated output for a load change from 50 to 100% of its rated output current.

*9: For load voltage change, equal to the unit voltage rating, constant input voltage.

0-14.4	250-9	800-2.88
or Class A t	test and measureme	ent products.
5/EC and c	arries the CE-mark	ing.
V, 160V m	odels.	
models.		
50V model	S.	

PSW-1080W Series Specifications

Model		PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32
Rated output voltage		V	30	40	80	160	250	800
Rated output current		А	108	81	40.5	21.6	13.5	4.32
Rated output power		W	1080	1080	1080	1080	1080	1080
Power ratio		_	3	3	3	3.2	3.125	3.2
Constant Voltage Mode		PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32
Line regulation (*1)		mV	18	23	43	83	128	403
Load regulation (*2)		mV	20	25	45	85	130	405
Ripple and noise (*3)	p-p (*4)	mV	100	100	100	100	120	200
	r.m.s. (*5)	mV	14	14	14	20	15	30
Temperature coefficient		ppm/°C	100ppm/°C of	rated output voltag	ge, after a 30 minut	e warm-up.		
Remote snese compensation voltage (single wire)		V	0.6	0.6	0.6	0.6	1	1
Rise time (*6)	Rated load	ms	50	50	50	100	100	150
	No load	ms	50	50	50	100	100	150
Fall time (*7)	Rated load	ms	50	50	50	100	150	300
	No load	ms	500	500	500	1000	1200	2000
Transient response time (*8)		ms	1	1	1	2	2	2
Constant Current Mode		PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32
Line regulation (*1)		mA	113	86	45.5	26.6	18.5	9.32
Load regulation (*9)		mA	113	86	45.5	26.6	18.5	9.32
Ripple and noise	r.m.s.	mA	216	162	81	45	30	15
Temperature coefficient	1.111.5.	ppm/°C			nt, after a 30 minute		50	15
↓			**	•		•		
Protection Function		PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32
Over voltage protection (OVP)	Setting range	V	3-33	4-44	8-88	16-176	20-275	20-880
	Setting accuracy		\pm (2% of rated	output voltage)		•		
Over current protection (OCP)	Setting range	А	5-118.8	5-89.1	4.05-44.55	2.16-23.76	1.35-14.85	0.432-4.752
	Setting accuracy		\pm (2% of rated	output current)		•		
Over temperature protection (OTP)	Operation		Turn the outpu	t off.				
Low AC input protection (AC-FAIL)	Operation		Turn the outpu	t off.				
Power limit (POWER LIMIT)	Operation		Over power lin	nit.				
	Value (fixed)		Approx. 105%	of rated output po	ower			

Analog Programming and Monitoring		PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32		
External voltage control output voltage	at 23 °C \pm 5 °C		Accuracy and 1	inearity: ±0.5% of	rated output voltag	ge.	-			
External voltage control output current	at 23 °C \pm 5 °C		Accuracy and 1	inearity: $\pm 1\%$ of ra	ated output current.					
External resistor control output voltage	at 23 °C \pm 5 °C		Accuracy and 1	Accuracy and linearity: $\pm 1.5\%$ of rated output voltage.						
External resistor control output current	at 23 °C \pm 5 °C		Accuracy and linearity: $\pm 1.5\%$ of rated output current.							
Output voltage monitor	at 23 °C \pm 5 °C		Accuracy: ±1% Accuracy: ±2%					,)		
Output current monitor	at 23 °C \pm 5 °C		Accuracy: ±1%Accuracy: ±2%)		
Shutdown control			Turns the output	it off with a LOW	(0V to 0.5V) or sh	ort-circuit.	-			
Output on/off control			Possible logic selections: Turn the output on using a LOW (0V to 0.5V) or short-circuit, turn the output off using a HIGH (4.5V to 5V) or open-circuit. Turn the output on using a HIGH (4.5V to 5V) or open-circuit, turn the output off using a LOW (0V to 0.5V) or short-circuit.					× ×		
CV/CC/ALM/PWR ON/OUT ON indicator			Photocoupler open collector output; Maximum voltage 30V, maximum sink current 8mA.							

Front Panel			PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32
Display, 4 digits	Voltage accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mV	20	20	20	100	200	400
	Current accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mA	100	80	50	30	20	6
Indications				GREEN LED's	CV, CC, VSR, IS	R, DLY, RMT, 20	, 40, 60, 80, 100, 9	₩, ₩, V, A	
				RED LED's: A	LM				
Buttons				Function, OVP	OCP, Set, Test, Lo	ock/Local, PWR D	SPL, Output		
Knobs				Voltage, Curren	nt				
USB port				Type A USB co	onnector				

Programming and Measurement (USB, LAN, O	GPIB)	PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32
Output voltage programming accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mV	10	10	10	100	200	400
Output current programming accuracy	at 23 °C \pm 5 °C; \pm (0.1% +	mA	100	80	40	20	15	6
Output voltage programming resolution		mV	1	1	2	3	5	14
Output current programming resolution		mA	3	3	3	3	1	1
Output voltage measurement accuracy	at 23 °C ± 5 °C; ± (0.1% +	mV	10	10	10	100	200	400
Output current measurement accuracy	at 23 °C ± 5 °C; ± (0.1% +	mA	100	80	40	20	15	6
Output voltage measurement resolution		mV	1	1	2	3	5	14
Output current measurement resolution		mA	3	3	3	3	1	1

Series and Parallel Capability	PSW	30-108	40-81	80-40.5	160-21.6	250-13.5	800-4.32
Parallel number	Units	3	3	3	3	3	3
Series number	Units	2	2	2	2	None	None

Input Characteristics		PSW	30-108	40-81	80-40.5	160
Norminal input rating			100Vac to 240	Vac, 50Hz to 60H	z, single phase	
Input voltage range			85Vac ~ 265Vac			
Input frequency range			$47Hz \sim 63Hz$			
Maximum input current	100Vac	Α	15			
	200Vac	А	7.5			
Inrush current			Less than 75A			
Maximum input power		VA	1500			
Power factor	100Vac		0.99			
	200Vac		0.97			
Efficiency	100Vac	%	77	78	78	7
	200Vac	%	79	80	80	8
Hold-up time			20ms or greater			

Interface Capabilities	PSW	30-108	40-81	80-40.5	160-
USB		TypeA: Host, T	ypeB: Slave, Spee	d: 1.1/2.0, USB Cl	lass: CDC
LAN		MAC Address, Mask	DNS IP Address,	User Password, Ga	ateway IP
GPIB		Optional: GUG	-001 (GPIB to US	B Adapter)	

Environmental Conditions	PSW	30-108	40-81	80-40.5	160-
Operaing temperature		0° C to 50° C			
Storage temperature		-25° C to 70° C			
Operating humidity		20% to 85% RI	H; No condensatio	n	
Storage humidity		90% RH or less	s; No condensation	1	
Altitude		Maximum 2000)m		

0-21.6	250-13.5	800-4.32
70	70	80
79 81	79 81	80 82
01	01	02
0-21.6	250-13.5	800-4.32
C(Commu	nications Device C	lass)
	Instrument IP Add	
0-21.6	250-13.5	800-4.32

General Specifications		PSW	30-108	40-81	80-40.5	160-
Weight	main unit only	kg	Approx. 7.5kg			•
Dimensions	(W×H×D)	mm^3	214×124×350			
Cooling			Forced air cool	ing by internal fan		
EMC			Complies with	the European EMC	C directive 2004/10	08/EC for
Safety			Complies with	the European Low	Voltage Directive	2006/95/
Withstand voltage	Between input and chassis	No abnormalities at 1500 Vac for 1 minute				
	Between input and output	No abnormalities at 3000 Vac for 1 minute				
	Between output and chassis		No abnormalities at 500 Vdc for 1 minute for 30V, 40V, No abnormalities at 1500 Vdc for 1 minute for 250V, 800			
Insulation resistance	Between input and chassis		500 Vdc, 100 N	$M\Omega$ or more.		
	Between input and output	500 Vdc, 100 M Ω or more.				
	Between output and chassis		500 Vdc, 100 MΩ or more for 30V, 40V, 80V, 160V and 25 1000 Vdc, 100 MΩ or more for 800V models.			

Notes:

*1: At 85 ~ 132Vac or 170 ~ 265Vac, constant load.

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

*3: Measure with JEITA RC-9131B (1:1) probe

*4: Measurement frequency bandwidth is 10Hz to 20MHz.

*5: Measurement frequency bandwidth is 5Hz to 1MHz.

*6: From 10% to 90% of rated output voltage, with rated resistive load.

*7: From 90% to 10% of rated output voltage, with rated resistive load.

*8: Time for output voltage to recover within 0.1% + 10mV of its rated output for a load change from 50 to 100% of its rated output current.

*9: For load voltage change, equal to the unit voltage rating, constant input voltage.

n	01	6
0	-21	.0

250-13.5

800-4.32

For Class A test and measurement products.

95/EC and carries the CE-marking.

OV, 160V models. 7 models.

250V models.