PSW-Multi Series Module Specifications

Module Type			1	2	4	5	6	8
H/L Voltage Classicfication		–	L	L	L	L	H	H
Rated output voltage		V	30	40	80	160	250	800
Rated output current		A	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			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	405
Ripple and noise (*3)	p-p (*4)	mV	60	60	60	60	80	150
	r.m.s. (*5)	mV	7	7	7	12	15	30
Temperature coefficient		ppm/℃	100ppm/°C of rated output voltage, after a 30 minute 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			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/℃	200ppm/°C of rated output current, after a 30 minute warm-up					
Protection Function			30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
Over voltage protection (OVP)	Setting range	V	3-33	4-44	8-88	16-176	20-275	20-880
	Setting accuracy		± (2% of rated output voltage)					
Over current protection (OCP)	Setting range	A	3.6-39.6	2.7-29.7	1.35-14.85	0.72-7.92	0.45-4.95	0.144-1.584
	Setting accuracy		± (2% of rated output current)					
Over temperature protection (OTP)	Operation		Turn the output off					
Low AC input protection (AC-FAIL)	Operation		Turn the output off					
Power limit (POWER LIMIT)	Operation		Over power limit.					
	Value (fixed)		Approx. 105% of rated output power					
Analog Programming and Monitoring			30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
External voltage control output voltage	at 23 °C ± 5 °C		Accuracy and linearity: ±0.5% of rated output voltage.					
External voltage control output current	at 23 °C ± 5 °C		Accuracy and linearity: ±1% of rated output current.					
External resistor control output voltage	at 23 °C ± 5 °C		Accuracy and linearity: ±1.5% of rated output voltage.					
External resistor control output current	at 23 °C ± 5 °C		Accuracy and linearity: ±1.5% of rated output current.					
Output voltage monitor	at 23 °C ± 5 °C		Accuracy: ±1%				Accuracy: ±2%	
Output current monitor	at 23 °C ± 5 °C		Accuracy: ±1%				Accuracy: ±2%	
Shutdown control			Turns the output off with a LOW (0V to 0.5V) or short-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			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 ± 5 °C; ± (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, Lock/Local, PWR DSPL, Output					
Knobs			Voltage, Current					
USB port			Type A USB connector					
Programming and Measurement (USB, LAN, GPIB)			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
Input Characteristics			30-36	40-27	80-13.5	160-7.2	250-4.5	800-1.44
Efficiency	100Vac	%	77	78	78	79	79	80
	200Vac	%	79	80	80	81	81	82
Input Characteristics			Dual Channel			Triple Channel		
Norminal input rating			100Vac to 240Vac, 50Hz to 60Hz, single phase					
Input voltage range			85Vac ~ 265Vac					
Input frequency range			47Hz ~ 63Hz					
Maximum input current	100Vac	A	10			15		
	200Vac	A	5			7.5		
Inrush current			Less than 50A			Less than 75A		
Maximum input power		VA	1000			1500		
Power factor	100Vac		0.99					
	200Vac		0.97					
Hold-up time			20ms or greater					
Interface Capabilities			Dual Channel			Triple Channel		
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 USB Adapter)					
Environmental Conditions			Dual Channel			Triple Channel		
Operaing temperature			0 ˚C to 50 ˚C					
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			Dual Channel			Triple Channel		
Weight	main unit only	kg	Approx. 5.4kg			Approx. 7.7kg		
Dimensions	(W×H×D)	mm	142 x 124 x 350			214 x 124 x 350		
Cooling			Forced air cooling by internal fan					
EMC			Complies with the European EMC directive for Class A test and measurement products					
Safety			Complies with the European Low Voltage Directive and carries the CE-marking					
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, 80V, 160V models No abnormalities at 1500 Vdc for 1 minute for 250V, 800V models					
Insulation resistance	Between input and chassis		500 Vdc, 100 MΩ or more					
	Between input and output		500 Vdc, 100 MΩ or more					
	Between output and chassis		500 Vdc, 100 MΩ or more for 30V, 40V, 80V, 160V and 250V models 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.

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