GW INSTEK

QUICK START GUIDE

PSU Series

EN

ISO-9001 CERTIFIED MANUFACTURER

The information in this quick start guide was correct at the time of printing. However we continue to improve our products and therefore reserve the right to change the specifications, equipment, and maintenance procedures at any time without notice.

SAFETY INSTRUCTIONS

Safety Symbols

These safety symbols may appear in the user manual or on the instrument.

 Warning	Warning: Identifies conditions or practices that could result in injury or loss of life.
 Caution	Caution: Identifies conditions or practices that could result in damage to the instrument or to other properties.
	DANGER High Voltage
	Attention Refer to the Manual
	Protective Conductor Terminal
	Do not dispose electronic equipment as unsorted municipal waste. Please use a separate collection facility or contact the supplier from which this instrument was purchased.

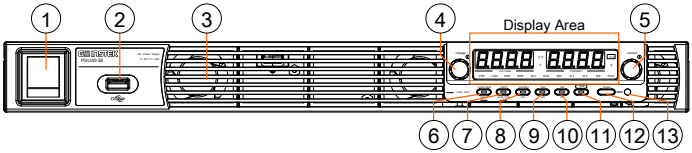
GETTING STARTED

Main Features

Performance	• High power density: 1500W in 1U • Universal input voltage 85~265Vac, continuous operation.
Features	• Active power factor correction. • Parallel master/slave operation with active current sharing. • Remote sensing to compensate for voltage drop in load leads. • 19" rack mounted ATE applications. • A built-in Web server. • OVP, OCP and OHP protection. • Preset memory function. • Adjustable voltage and current slew rates. • Bleeder circuit ON/OFF setting. • CV, CC priority start function. (Prevents overshoot with output ON)
Interface	• Built-in RS-232/485, LAN and USB interface. • Analog output programming and monitoring. • Optional interfaces: GPIB, Isolated Voltage (0-5V/0-10V) and Isolated Current (4-20mA) programming and monitoring interface. (Factory options)

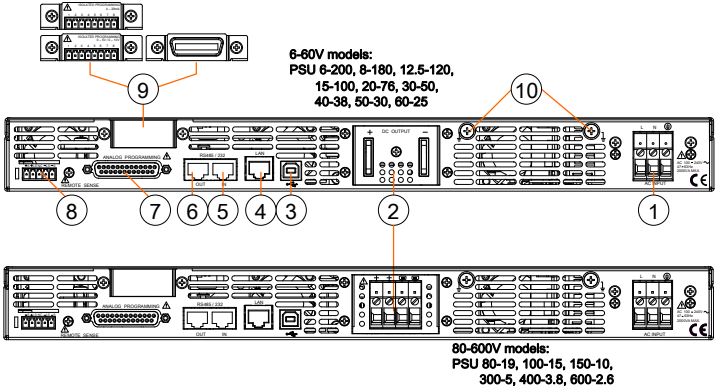
Appearance

Front Panel Overview



Description	
1. Power Switch	2. USB A Port
3. Air Inlet	4. Voltage Knob
5. Current Knob	6. Lock/Local Button
7. PROT Button(ALM_CLR Button)	8. Function Button(M1 Button)
9. Test Button(M2 Button)	10. Set Button(M3 Button)
11. Shift Button	12. Output Button
13. Output ON LED	

Rear Panel Overview



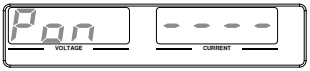
Description	
1. AC Inlet	2. DC Output
3. USB Port	4. LAN Port
5. Remote-IN Port	6. Remote-OUT Port
7. Analog Control	8. Remote Sense
9. Option Slot	10. Ground Screw

SET UP

Power Up

1. Connect the power cord to the socket on the rear panel.
2. Turn on the power switch on the front panel.

3. The power supply will show the Power On settings (Pon) at start up. If no Power On settings are configured, the PSU will recover the state right before the power was last turned OFF. If used for the first time, the default settings will appear on the display.



Note — You may also configure how the PSU will behave on startup by altering the Power On Configuration settings

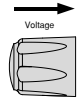
Power down

To turn the PSU power supply off, press the power switch again (0 position). It may take a few seconds for the power supply to fully turn off.

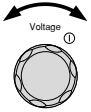
CAUTION — The power supply takes around 8 seconds to fully turn on or shutdown.
Do not turn the power on and off quickly. Please wait for the display to fully turn off.

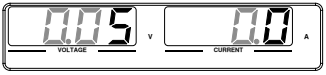
Background	The PSU power supplies use a novel method of configuring parameter values only using the voltage or current knobs. The knobs are used to quickly edit parameter values at 0.01, 0.1 or 1 unit steps at a time. When the user manual says to set a value or parameter, use the steps below.
Example	Use the Voltage knob to set a voltage of 10.05 volts.

1. Repeatedly press the Voltage knob until the least significant digit is highlighted. This will allow the voltage to be edited in 0.01 volt steps.

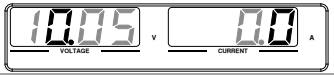


2. Turn the Voltage knob till 0.05 volts is shown on the voltage display





3. Repeatedly press the Voltage knob until the most significant digit is highlighted. This will allow the voltage to be edited in 1 volt steps.
4. Turn the Voltage knob until 10.05 is shown.



Note

Notice the Set key becomes illuminated when setting the current or voltage.

If the voltage or current knobs are unresponsive, press the Set key first.

SPECIFICATIONS

The specifications apply when the PSU is powered on for at least 30 minutes.

Output				
Model	PSU		30-50	80-19
Rated Output Voltage[*1]	V		30	80
Rated Output Current[*2]	A		50	19
Rated Output Power	W		1500	1520
Constant Voltage Mode				
Model	PSU		30-50	80-19
Line regulation[*3]	mV		5	10
Load regulation[*4]	mV		5	10
Ripple and noise[*5]	p-p[*6]	mV	60	80
	r.m.s.[*7]	mV	8	8
Temperature coefficient	ppm/°C		100ppm/°C of rated output voltage, after a 30 minute warm-up.	
Remote sense compensation voltage (single wire)	V		1.5	4
Rise time[*8]	Rated load	ms	80	150
	No load	ms	80	150
Fall time[*9]	Rated load	ms	80	150
	No load	ms	900	1200
Transient response time[*10]	ms		1	1

Constant Current Mode				
Model		PSU	30-50	80-19
Line regulation[*3]		mA	7	3.9
Load regulation[*11]		mA	15	8.8
Ripple and noise[*12]	r.m.s.	mA	125	57
Temperature coefficient		ppm/°C	100ppm/°C of rated output current, after a 30 minute warm-up.	

Protection Function				
Model		PSU	30-50	80-19
Over voltage protection (OVP)	Setting range	V	3 - 33	5 - 88
	Setting accuracy	V	300	800
Over current protection (OCP)	Setting range	A	5 - 55	1.9 - 20.9
	Setting accuracy	A	1000	380
Under voltage limit (UVL)	Setting range		0 - 31.5	0 - 84

Model	PSU	30-50	80-19
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	

General Specifications			
Model	PSU	30-50	80-19
Weight	Less than 8.7kg(main unit only)		
Dimensions	(W×H×D)	423mm×43.6mm×447.2mm	
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	AC to Chassis: 1500Vac/1min AC to Output terminal: 3000Vac/1min Output terminal to Chassis: 1000Vdc/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 At 85 ~ 132Vac or 170 ~ 265Vac, constant load.
*4 From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.
*5 Measure with JEITA RC-9131B (1:1) 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 0.5% of its rated output for a load change from 10 to 90% of its rated output current. Voltage set point is from 10% to 100% of rated output.
*11 For load voltage change, equal to the unit voltage rating, constant input voltage.
*12 For 6V model the ripple is measured at 2 ~ 6V output voltage and full output current. For other models, the ripple is measured at 10 ~ 100% output voltage and full output current.

For other detailed specification about PSU seies product, please refer to the PSU user manual.

Declaration of Conformity

We
GOOD WILL INSTRUMENT CO., LTD.
declare that the below mentioned product
satisfies all the technical relations application to the product within the scope of council:
Directive: EMC; LVD; WEEE; RoHS
The product is in conformity with the following standards or other normative documents

◎ **EMC**	
EN 61326-1 :	Electrical equipment for measurement, control and laboratory use — EMC requirements
Conducted & Radiated Emission EN 55011 / EN 55032	Electrical Fast Transients EN 61000-4-4
Current Harmonics EN 61000-3-2 / EN 61000-3-12	Surge Immunity EN 61000-4-5
Voltage Fluctuations EN 61000-3-3 / EN 61000-3-11	Conducted Susceptibility EN 61000-4-6
Electrostatic Discharge EN 61000-4-2	Power Frequency Magnetic Field EN 61000-4-8
Radiated Immunity EN 61000-4-3	Voltage Dip/ Interruption EN 61000-4-11 / EN 61000-4-34
◎ **Safety**	
EN 61010-1 :	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements

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