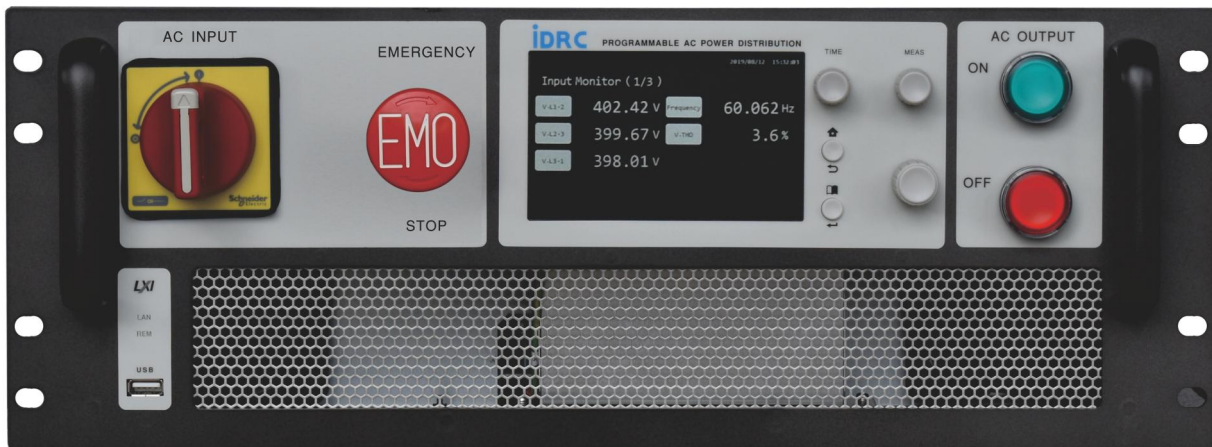


Programmable Power Distribution Unit series

PDU10 / PDU6 Programmable Power Distribution Unit

Patented innovational design and functions, equipped with digital controller, protection, remote, measurement and multiple connection in parallel, it sequentially controls and secures AC mains supply to the DC power supplies and provides useful CO₂e and efficiency readings.

Last the eco-friendly principle, PDU series remains stainless steel chassis; no plating and very few painting, state-of-the-art functions help you manage million power easily as well as environment protection.



World First Innovation

- PDU10/PDU6, 4U height, connect with 10/6 units 18kW iDRC DC power supply.
- Master-slave function, control millions watt DC power via single LAN cable.
- 5" 800x480 WVGA+touchscreen associate with knobs and buttons to form an intuitive human interface.
- Built-in AC mains monitoring system, it provides ten and up needful parameters such as V, A, Freq, VA, Watt, VAR, kWh, CO₂e and Efficiency.
- Two accumulators inside permanent and resettable.
- CE approved.
- LXI 1.5 approved

Electrical

- 3Ø180~460VAC, 47~63Hz Universal Input.
- Embedded system with multiple 32 bit ARM based MCU, fast boot time of 10 seconds or less.
- Built-in Timer, allows to set output running time.
- Built-in RTC, time remain reliable without a time server.
- Close case firmware upgrading, enhance protection to prevent upgrade failure.
- Full remote control via a single LAN cable.
- Definable power on number of slaves, off the surplus units to save energy.
- Easy to replace individual output terminal.

○ Safety

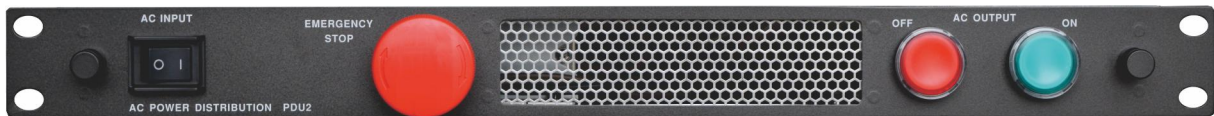
- SEMATECH std. EMO button- physically off all managed DC power supplies at once.
- Distinct AC output On/Off button, sequence On/Off DC power supplies.
- Lockable power switch to avoid accidental operation.
- Interlock function.

○ Interface

- Built-in 2 LAN(LXI) ports, saves the cost of an extra switch hub.
- Fast LAN response time of 3ms.
- SCPI compatible
- Alarm signal output and interlock mechanism prevent potential injury.
- Support USB plug and play, easy to store and read data.

PDU2 Power Distribution Unit

Economic Design for sequential on or off of 2 slaves.



○ World First Innovation

- PDU2, 1U height, control 2 units 18kW iDRC DC power supply.
- MAX power rate at 36KW
- CE approved

○ Electrical

- 3Ø180~460VAC, 47~63Hz universal Input
- Sequential power ON/OFF.
- Easy to replace output terminal.

○ Safety

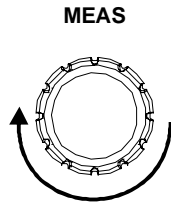
- SEMATECH std. EMO button, physically off all managed DC power supply at once.
- Distinct AC Output On/Off button to On/Off DC power supply in sequence..

note.: *1. The format of USB flash drive should be FAT16(2GB) or FAT32(32GB) USB2.0

Functions and Displays of PDU10/PDU6

PDU10/PDU6 provide various readings in different pages.

Turn MEAS knob to switch between pages



MSD 2017/08/03 08:00:42

Input Monitor (1/3)

V-L1-2	400.02 V	Frequency	60.00 Hz
V-L2-3	400.89 V	V-THD	0.1 %
V-L3-1	398.80 V		

MSD 2017/08/03 08:01:04

Output Measure 1 (2/3)

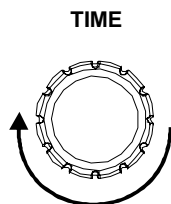
V-L1-2	400.06 V	Curr-L1	397.86 A
V-L2-3	400.88 V	Curr-L2	401.97 A
V-L3-1	398.74 V	Curr-L3	399.81 A
V-L-L	399.89 V	Curr-Sum	1199.64 A

MSD 2017/08/03 08:01:10

Output Measure 2 (3/3)

V-L-L	399.88 V	P	276.977 kW
Curr-Sum	1199.62 A	S	276.980 kVA
V-THD	0.0 %	PF	0.999
Curr-THD	0.0 %	Effi.	0.0 %

Dedicated TIME knob for all time related parameters adjustment



MSD 2017/08/03 08:01:16

Watt Hour (1/3)

Wh	0.0 kWh
INT Time	0.0 Sec

Start Stop Reset

MSD 2017/08/03 08:01:21

CO2 Emissions (2/3)

CO2 Rate	276.962 kg/h
Total CO2	0.00000 t
Coefficient	1.000 kg/kWh

Start Stop Reset

MSD 2017/08/03 08:12:12

Output Time (3/3)

Output On at	2017/08/03 08:11:48
Output Off In	0.0 Sec

Web Server Function

PDU10/PDU6 provide web GUI function, it allows user to control the DC power system via ethernet.

Instrument Welcome Page	
Device Model	PDU10
Manufacturer	IDRC
Serial Number	000000
Description	PDU10_000000
LXI Extended Features	LXI HSLIP
LXI Version	1.4 LXI Device Specification 2011
Hostname	PDU10_000000.local
MAC Address	70:46:42:8C:65:F1
TCP/IP Address	192.168.42.203
Firmware Revision	0.36.00
Instrument Address String	TCPIP0::192.168.42.203::5025::SOCKET TCPIP0::192.168.42.203::HSLIP0::INSTR
Device Indicator	Inactive <input type="button" value="Toggle"/>

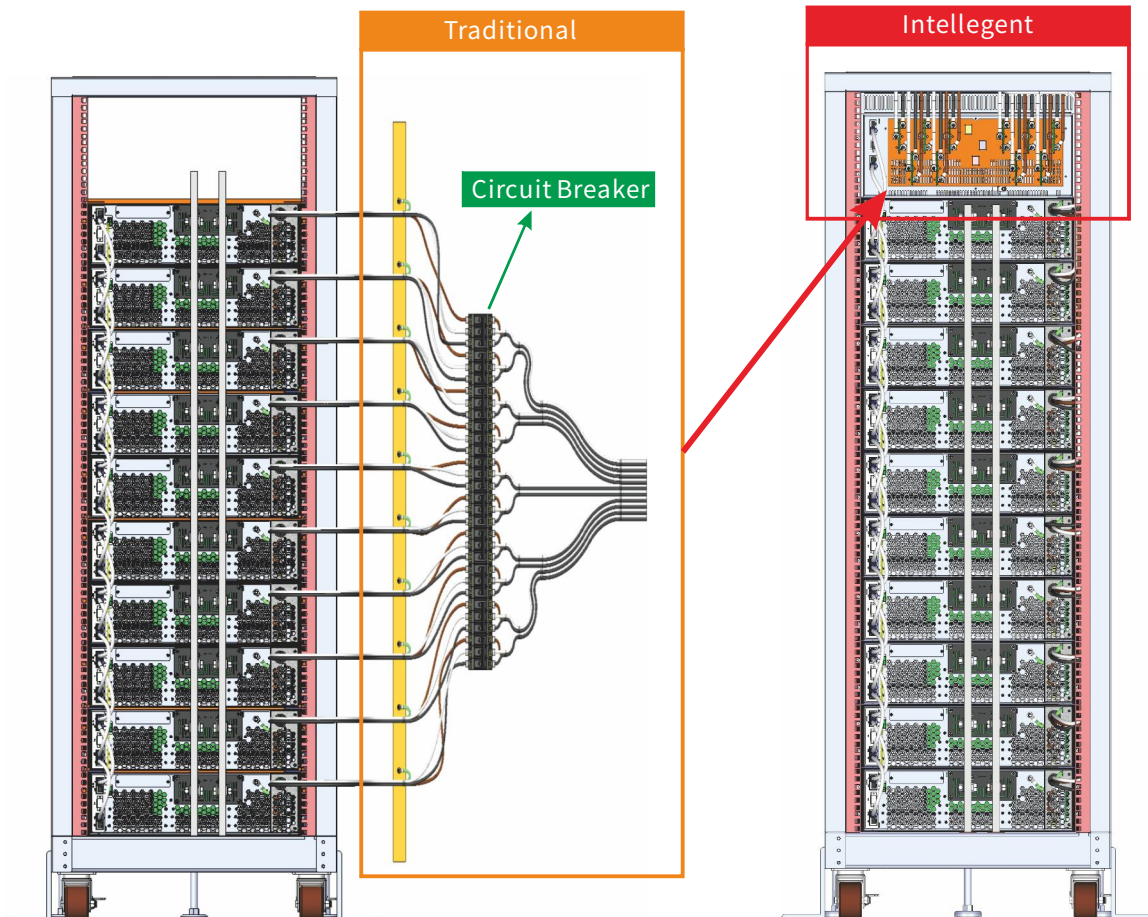
<Web server information>

Output	OFF	
Integrate	OFF	
Freq:	60.00	Hz
U ₁₂ :	400.19	V
U ₂₃ :	401.01	V
U ₃₁ :	398.83	V
THD _U :	0.1	%
I ₁ :	397.95	A
I ₂ :	402.18	A
I ₃ :	399.80	A
THD _I :	0.1	%
P:	277.134	kW
S:	277.137	kVA
PF:	1.000	
Effi:	0.0	%
WH:	0.0	kWh
Int. time:	0	Sec
CO ₂ Rate:	277.133	kg/h
Total CO ₂ :	0.00000	t
Off in:		

<Parameters>

PDU Application Example

Patented innovative Power Distribution Unit series consolidate microprocessor and management of two hundred thousand VA AC mains in a 4U height chassis. It significantly simplifies the control and wiring for a 180kW DC Power System.



PDU Series Specifications

Model number	PDU10	PDU6	PDU2
Control unit	1~10	1~6	1~2
Input & Output Specification			
Input Voltage range	180~460VAC , Optional 480VAC type:432~528VAC		
Nominal voltage	200/208/220/380/400/415VAC		
Phase/Wires	3-phase / 3 wires		
Frequency range	45Hz ~ 65Hz		
Max Current(at 180V 3-phase)	600A	360A	120A
Max Power	180kVA	108kVA	36kVA
System settings			
Nominal voltage	Selectable 200/208/220/380/400/415VAC		-
Frequency	Selectable 50Hz/60Hz		-
Power OFF timer	DDD/HH/MM		-
Number of Interlock I/O	1~3		-
CO ₂ emission coefficient	0.000kg/kWh ~ 9.999 kg/kWh		-
Sequential Control settings			
Power ON sequence	The power ON order is from the last Slave unit to the Master unit.		
Power OFF sequence	The power OFF order is from the Master unit to the last Slave unit.		
ON/OFF control	Manual/Timer/Remote		-
Input measurement			
Voltage (L1, L2, L3)	Range	600V / 300V	
	Resolution	0.01V	
	Accuracy	± 0.2%	
Frequency	Resolution	0.001Hz	
	Accuracy	± 0.2%	
Output measurement			
Current (L1, L2, L3)	Range	600A / 300A / 60A	600A / 300A / 60A
	Resolution	0.01A	
	Accuracy	± 0.8%	
Active Power (P)	Resolution	0.001kW	
	Accuracy	± 1.5%	
Apparent Power (S)	Resolution	0.001kVA	
	Accuracy	± 1.5%	
Power Factor	Resolution	0.001	
	Accuracy	± 1%	
Kilo-Watt-Hour	Resolution	0.1 kWh	
	Accuracy	± 1.5%	
CO ₂ emission	Real time	0000.000 ~ 9999.999kg	
	Accumulate	0000.0000t ~ 9999.9999t	
Efficiency (DC power supply output/input)	Resolution	0.1%	
	Accuracy	± 1.5%	
Voltage	Resolution	0.1%	
Total Harmonic Distortion	Accuracy	± 1%	
Current	Resolution	0.1	
Total Harmonic Distortion	Accuracy	± 1%	
Safety and Protection			
Emergency Stop	EMS button on the front panel		
OVP	+10% of Nominal input		
UVP	-10% of Nominal input		
OCP	+10% of Max. input current		
OLP	Adjustable from 18kVA to 180kVA	Adjustable from 18kVA to 108kVA	
Frequency	± 3Hz at 50Hz/60Hz		
Phase loss	Alarm and stop operation when lose any phase.		
Status Indication on the LCD display			
REMOTE	REMOTE will show on the LCD display when the PDU is connected to PC		
KEY LOCK	KEY LOCK will show on the LCD display when the keys are locked		
Error	ERR will show on the LCD display when any error occurs		
Digital interface - LAN			
Standard	LXI		
Line ending character	Reception : LF , END ; Transmission : LF+END		
External Control I/O			
EMS	1. Multiple rack cabinet EMS can be connected in series. 2. Extendable EMS switch.		
Interlock	Equipped with three interlock connectors (in series).		

PDU Series Specifications

Model number	PDU10	PDU6	PDU2	
Control units	1~10	1~6	1~2	
General specification				
Auxiliary Power Supply	Input voltage	180~460VAC ,Optional 480VAC for 15kW model		
	Frequency	45Hz ~ 65Hz		
	Power consumption	≤55W	≤46W	≤35W
	Standby power	≤30W	≤30W	≤10W
Environmental Condition	Operating environment	Indoor use		
	Operating temperature	0°C ~ 50°C		
	Operating humidity	30%rh ~ 80%rh (no condensation), 80% RH at 30°C , . Decrease linearly to 50% RH at 40°C		
	Storage temperature	-20°C ~ 70°C		
	Storage humidity	10%rh ~ 80%rh (no condensation)		
	Altitude	Up to 2000m		
Withstanding voltage	Cooling method	Forced air cooling		
	Primary - Chassis	DC2500V		
	Primary - Secondary	DC2500V		
Secondary - Chassis	DC2500V			
Physical specification				
Display panel	TFT LCD Touchscreen 127mm(5" - 800x480)		-	
Dimensions (W x H x D)	440 x 176 x 849.6 mm		-	
Weight	40kg	35kg	12kg	
Accessories				
LAN cable	2m		-	
RS485 cable	1pc (AWG24-2m)		-	

*1. All parameters are measured after 30 minutes warm-up. Ambient temperature at 23±5°C, Humidity Under 80% RH, AC Voltage : 415V±5%, Frequency : 50/60Hz±5%.

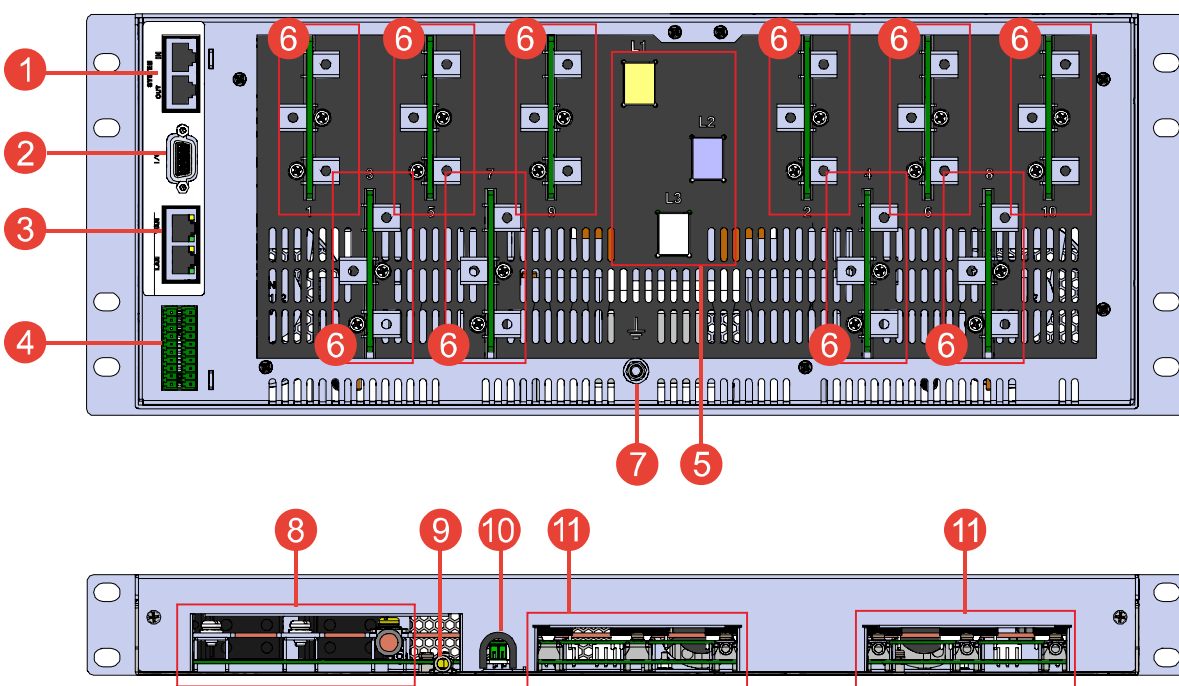
Rear Panel

PDU10/PDU6

- ① Master/Slave Port
- ② I/O Port-1
- ③ LAN (LXI) connector
- ④ I/O Port-2
- ⑤ Line In
- ⑥ Line Out
- ⑦ Ground Terminal

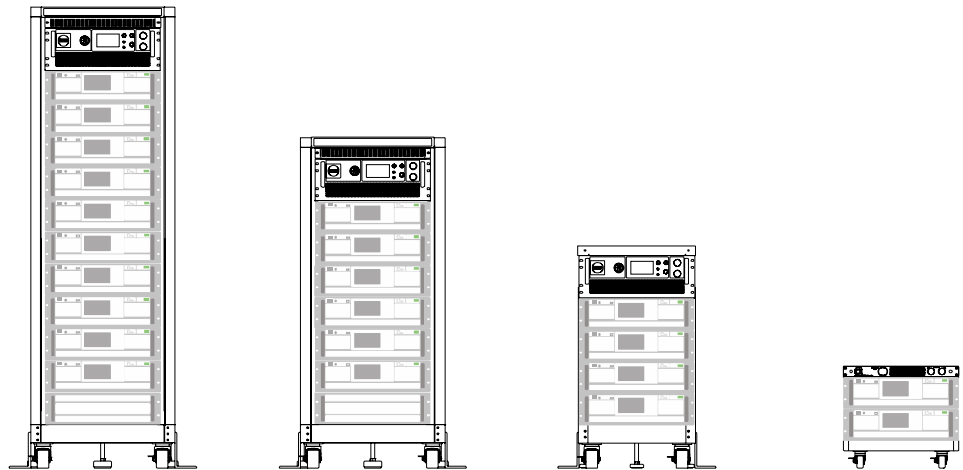
PDU2

- ⑧ Line In
- ⑨ Ground Terminal
- ⑩ I/O Port
- ⑪ Line Out



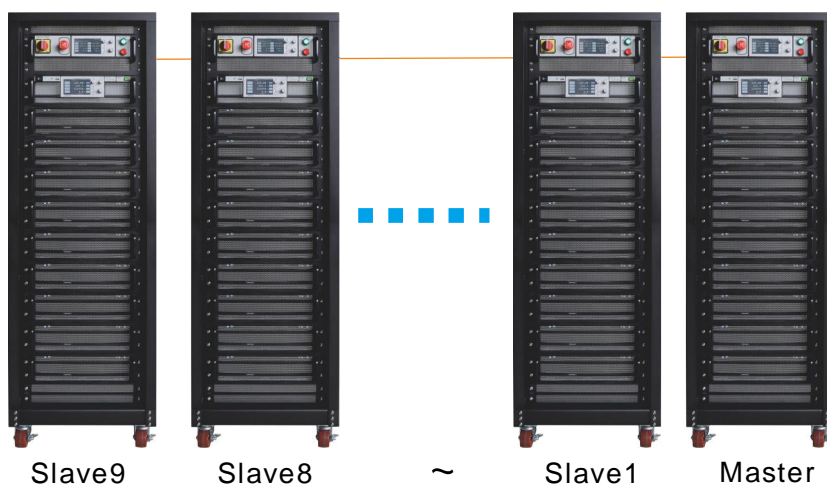
DC-RACK Series Specifications

- 4 kinds of rack for 150kW / 90kW / 60kW / 30kW (15kW type) or 180kW / 108kW / 72kW / 36kW (18kW type) DSP-Wx wide range DC power supply.
- Professional wiring at factory.
- Standard PDU series handles master/slave control between racks.
- Accessories include anti-tilt stand, inner power cable/copper bar and installation tool kits.



Model number	DC-RACK10	DC-RACK6	DC-RACK4	DC-RACK2
Description	10 unit DSP-Wx in parallel	6 unit DSP-Wx in parallel	4 unit DSP-Wx in parallel	2 unit DSP-Wx in parallel
Height	38U	26U	16U	7U
Model no.	PDU10	PDU6	PDU6	PDU2
Application model	DSP-WR , DSP-WE , DSP-WA , DSP-WAe Series Wide Range Programmable DC Power Supply DSP-WS , DSP-WAs Series Solar Array Simulator			
Capacity	10	6	4	2
Power range	180kW ~ 5kW	108kW ~ 5kW	72kW ~ 5kW	36kW ~ 5kW
Rack Dimension(WxHxD)mm	601 x 1915 x 1000	601 x 1380 x 1000	490 x 932 x 996	482 x 426 x 722
Rack Dimension included stand (WxHxD)mm	783.2 x 1915 x 1035.6	783.2 x 1380 x 1035.6	667.1 x 932 x 1038	482 x 426 x 778

Paralleling **100** units up to **1800kW**



- Unique digital synchronization technique.
- PDU master/slave control capability
Manage million power via a single Ethernet cable.



Computer