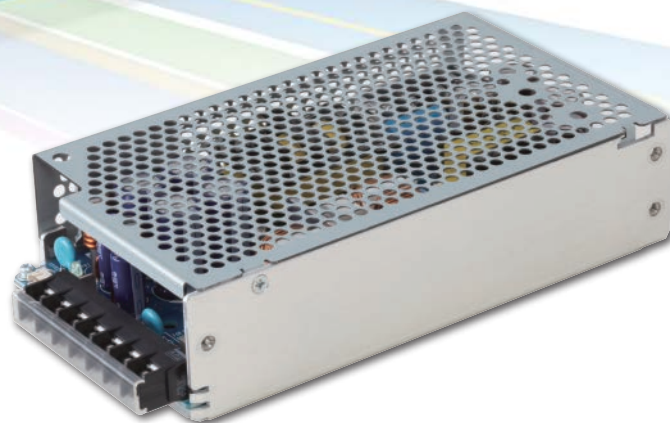


## Switching Power Supply

### 300W Ultra Low Noise AC/DC Switching Power Supply

# PFS300 A



Ultra Low Noise AC/DC Switching Power Supply made by Daitron  
 The breakthrough PFS300A series, compact, light-weight, high-efficient, provides clean DC power with a complex resonant converter.  
 The PFS300A switching power supply, keeping leakage current, conducted emission, and radiated emission low is an ideal solution for noise-sensitive applications, especially the equipment used in advanced hyperfine measurement, testing and medical & biotechnology fields.

- ◆ Reinforced Isolation ※ Medical Standard Input-to-output
- ◆ UltraLow Ripple & Noise (10mV)
- ◆ Low Conducted Emission, Low Radiated Emission
- ◆ Low Leakage Current (0.2mA/at 264Vac)
- ◆ Safety Standard : 62368-1, 60601-1

### Specification

		Model Number	PFS300A-12	PFS300A-15	PFS300A-24	PFS300A-30	PFS300A-48
Input	Input Voltage Range		Rating 100—240Vac Single Phase ( Range : 85~264Vac )				
	Frequency Range		Rating 50/60Hz ( Range : 47Hz~63Hz )				
	Input Current	100VAC/200VAC (*1)	4.0A / 2.0A (Io=100%)				
	Efficiency	100VAC/200VAC (*1)	80% / 83%	81% / 85%	83% / 87%		84% / 88%
	Inrush Current	100VAC / 200VAC (*1)	20A / 40A ( When it operates under cold start )				
	Leakage Current	100V/200V/264V(60Hz)	0.06mA typ / 0.15mA typ / 0.20mA max				
	Power Factor	100VAC/200VAC	0.98 / 0.93				
Output	DC Output Voltage		12Vdc	15Vdc	24Vdc	30Vdc	48Vdc
	Output Current		25A	20A	12.5A	10A	6.3A
	Maximum Output Power		300W	300W	300W	300W	302.4W
	Line Regulation / Load Regulation [Max]		48mV / 96mV	60mV / 120mV	96mV / 150mV	120mV / 188mV	192mV / 300mV
	Ripple Noise	(*2)	10mV typ				
Other Feature	OCV	(*3)	> 110% ( Shut down output )				
	OVP	(*3)	> 115% ( Shut down output )				
	Remote Sensing		Available				
	Remote Control		Available				
	Operation Indicator		LED lighting				
Mechanical	Cooling System		Forced air convection by external fan				
	Size ( W x H x D )		110.8 x 46.8 x 193 mm / 4.36" x 1.84" x 7.60" inch ( Without terminal stand )				
	Weight		950 g				
	Input & Output Terminal / Signal Terminal		Screw terminal / Connector				
Environmental Condition	Operating Temperature / Humidity	(*4)	- 10°C ~ 60°C ( With output ) / 30%RH ~ 90%RH ( Non Condensing )				
	Storage Temperature / Humidity		-20°C ~ 85°C / 10%RH ~ 95%RH ( Non Condensing )				
	Vibration Resistance		19.6m/s <sup>2</sup> ( 10~55Hz 1 minute Period 1 hour for each X,Y,Z direction )				
	Shock Resistance		196.1m/s <sup>2</sup> 11ms 1time for X,Y,Z direction				
Isolation	Isolation Voltage		INPUT- FG : AC2KV for 1min Cut off current 20mA ( Under normal temp & humidity condition ) INPUT- OUTPUT : AC4KV for 1min Cut off current 20mA ( Under normal temp & humidity condition ) OUTPUT-FG : AC500V for 1min Cut off current 20mA ( Under normal temp & humidity condition )				
	Isolation Resistance		INPUT-FG , INPUT-OUTPUT , OUTPUT-FG DC500V >100MΩ				
Others	Noise Immunity		EN61000-4-2, -3, -4, -5, -6, -8, -11				
	Conduction Noise		EN55022-B, FCC-B, VCCI-B				
	Safety Standard		UL60601-1, EN60601-1, CSA-C22.2 NO. 601.1-M90 UL62368-1, CSA-C22.2, NO. 62368-1, EN62368-1				
	CE Marking		Low voltage directive				

(\*1) Conditions: Ta=25 degree C Typical value at maximum output power (Inrush current value doesn't include part of within 0.1msec to input filter)

(\*2) The typical ripple voltage in the standard specification is a value measured using 100MHz oscilloscope in the anechoic chamber under the JEITA measuring method (Condition: Ta=25°C, Vin=100Vac Typical value at rated output)

(\*3) Upon over voltage or over current conditions, input power must be removed to allow unit reset to occur within a few minutes.

(\*4) Derating is required by operating temperature. Follow the overload and specification in manual to avoid the damage of power supply.

※ This power supply is intended to be used as a component of a larger system of electrical equipment.

User is responsible for the safe design when this product is to be integrated in the equipment which requires particularly high quality and reliability and there is a possibility to endanger persons or property by a failure or malfunction of this product.



# PFS300 A

## Mechanical Drawings

### TB101

Pin#

- ① L : AC Line
  - ② N : AC Neutral
  - ③  $\perp$  : Frame Ground
  - ④ -V : - Output terminal
  - ⑤ -V : - Output terminal
  - ⑥ +V : +Output terminal
  - ⑦ +V : +Output terminal
- ※Terminal screws area all M4

### CN501

Pin#

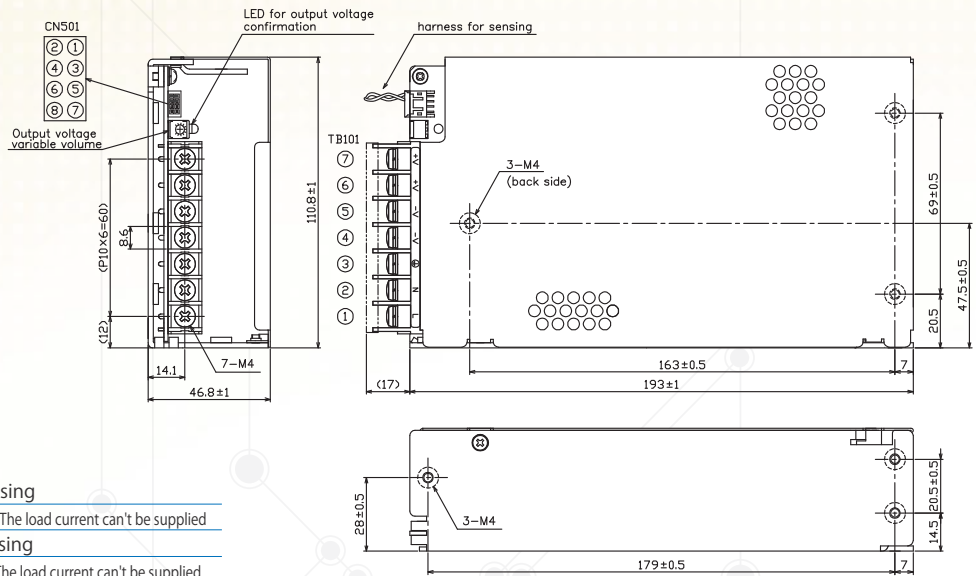
- ① +S : +Output Remote Sensing
- ② +VS : +Output Voltage Check \* The load current can't be supplied
- ③ -S : - Output Remote Sensing
- ④ -VS : - Output VoltageCheck \* The load current can't be supplied
- ⑤ : Not in use
- ⑥ : Not in use
- ⑦ +R : +Remote Control ON/OFF
- ⑧ -R : - Remote Control ON/OFF

### CN502 (not included)

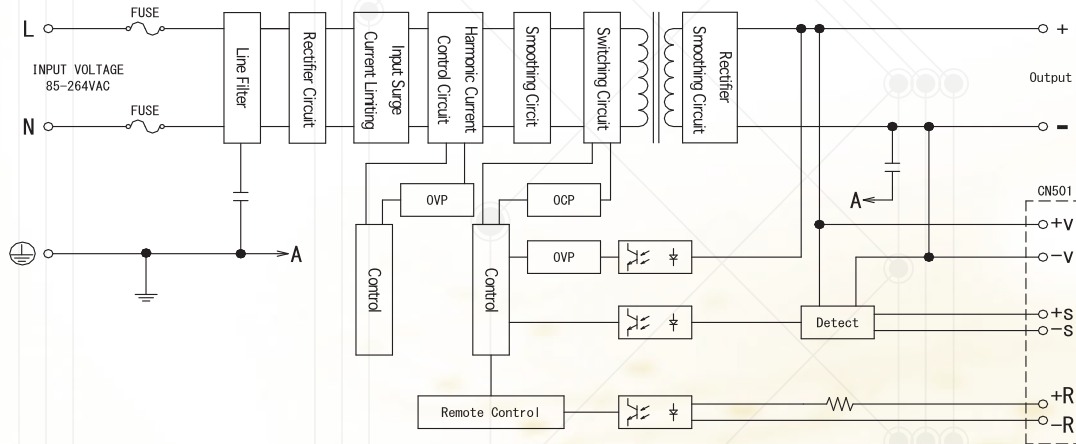
for proper connection to CN501

Connector P/N S8B-PHDSS (Manufacturer: JST)  
Housing PHDR-08VS

Terminal SPHD-001T-P0.5  
Crimping tool AP-K2N



## Block Diagram



**Daitron**  
DAITRON CO., LTD.

Product: <http://www.daitronpower.com>

Corporate: <http://www.daitronglobal.com>

E-mail: [ask-global@daitron.co.jp](mailto:ask-global@daitron.co.jp)

Head Office

6-11, Miyahara 4-chome, Yodogawa-ku, Osaka 532-0003 Japan

Phone: \_\_\_\_\_

Sales Promotion Dept.

15-1, Fujimidai 3chome, Kunitachi, Tokyo 186-0003, Japan

Phone: +81-42-571-8433

Daitron Inc.

9720 SW Hillman Court Suite 805, Wilsonville OR 97070, U.S.A.

Phone: +1-503-682-7560

Daitron (Korea) Co., Ltd.

7th Floor, ENC Venture Dream Tower 6 cha, 41, Digital-ro 31-gil, Guro-Gu, Seoul, 08375, Korea

Phone: +82-2-6910-3300

Daitron (Shanghai) Co., Ltd.

Ruijin Building Annex, 7F 701, No.205 South Maoming Road, Huangpu district, Shanghai, 200020 China

Phone: +86-21-6093-2193

Daitron (Shenzhen) Co., Ltd.

Room 1617, 16/F, Pacific Commercial&Trade Building, No.4028 Jiabin Road, Luohu District, Shenzhen, 518010 China

Phone: +86-755-2590-4712

Daitron (H.K) Co., Ltd.

Room 806-07, 9 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

Phone: +852-2838-0682

Daitron Co.,Ltd. Taipei Branch

13F, No. 80, Sec. 2, Zhongxiao E. Rd., Zhongzheng Dist., Taipei City, 10050 Taiwan

Phone: +886-2-2394-5134

Daitron Co.,Ltd. Manila Office

Unit 503, Coherco Financial Tower, Trade St., Cor. Investment Drive, Madrigal Business Park, Ayala Alabang, Muntinlupa City, Metro Manila, Philippines

Phone: +63-2-8550-2832

Daitron Co.,Ltd. Hanoi Office

5th Floor, Toserco Building, No. 273, Kim Ma Street, Giang Vo Ward, Ba Dinh District, Ha Noi City, Viet Nam

Phone: +84-28-7109-9832

Daitron (Thailand) Co., Ltd.

75/105(Suite:A) 38th Fl., Ocean Tower 2, Soi Sukhumvit 19 (Wattana), Sukhumvit Road, Khlong Toey Nua, Wattana, Bangkok 10110, Thailand

Phone: +66-2-661-7265

Daitron (Malaysia) Sdn. Bhd.

Level 25 Unit 8, Menara Permata Damansara (Oval Tower) No. 685, Jalan Damansara 60000 Kuala Lumpur, Malaysia

Phone: +60-3-7732-2081