



























Fire emergency and evacuation system

MW Search: https://www.meanwell.com/serviceGTIN.aspx

- · Public safety battery back-up
- Security system

GTIN CODE

- Uninterruptible DC-UPS system
- · Central monitoring system
- Industrial automation



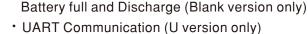
Features











Built-in battery charger UPS function

· TTL signals for status detection:

- Built-in buzzer alarm (U version only)
- Built-in AC and battery circuit ON/OFF switchs enhance safetyness during maintenance

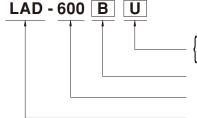
AC OK, Battery disconnect, Battery reverse polarity, Battery low,

- Forced UPS mode for battery maintenance
- Protections: Short circuit / Overload / Over voltage / Over temperature / Battery low voltage / Battery reverse polarity (No damage)
- -20 ~ +60°C wide operating temperature
- Output voltage adjustable (-20%~+5%) for CH1 by VR
- · Suitable for lead acid and lithium-ion batteries
- Design refer to GB17945/GB4717(U version only) system requirement
- 1U low profile
- 3 years warranty

# Description

LAD-600 series is a 600W economical AC/DC low profile security power supply with UPS function. Adopting the input range from 90Vac to 264Vac (115Vac/230Vac selectable by switch) and supports output 27.6V, 41.5V and 55.2Vdc. With high efficiency up to 91% and built-in AC, battery switch for easy maintenance. In addition, LAD-600 series not only provide TTL signals for AC OK, battery disconnect, battery reverse polarity (No damage), battery low detection, battery full and discharge, but also possess UART version so the users can monitor and control the status of the units, that enhance easy way for integration into security and fire systems directly.

# Model Encoding



Blank: TTL signal only

U: UART Communication only

Output voltage(B: 27.6V, C: 41.5V, D: 55.2V)

Rated wattage Series name



#### SPECIFICATION FOR TTL FUNCTION MODEL (Blank Version)

MODEL		LAD-600B		LAD-600C		LAD-600D	
	OUTPUT NUMBER	CH1	CH2	CH1	CH2	CH1	CH2
	DC VOLTAGE	27.6V	27.6V	41.5V	41.5V	55.2V	55.2V
	RATED CURRENT						
		18.74A	3A(Battery Charger		3A(Battery Charger)		3A(Battery Charge
	CURRENT RANGE	0 ~ 21.74A		0 ~ 14.45A		0 ~ 10.87A	
OUTPUT	RATED POWER	600.02W	1	599.67W	I	600.02W	
	RIPPLE & NOISE (max.) Note.2	270mVp-p		360mVp-p		360mVp-p	
	VOLTAGE ADJ. RANGE	CH1: 21.6 ~ 29V		CH1: 32.4 ~ 43.5V		Ch1: 43.5 ~ 58V	
	VOLTAGE TOLERANCE Note.3	±1.0%		±1.0%		±1.0%	
	LINE REGULATION	±0.5%		±0.5%		±0.5%	
	LOAD REGULATION	±0.5%		±0.5%		±0.5%	
	SETUP, RISE TIME	2000ms, 50ms/230V/	AC 2000ms 50r	ms/115VAC at full load			
	HOLD UP TIME (Typ.)	16ms/230VAC 12ms/115VAC at full load					
	BATTERY STATIC DISCHARGE		121115/115VAC at luil I	oau			
	CURRENT	<100µA					
	VOLTAGE RANGE	90 ~ 132VAC / 180 ~	90 ~ 132VAC / 180 ~ 264VAC by switch 240 ~ 370VDC (Default switch at 230VAC)				
	FREQUENCY RANGE	47 ~ 63Hz	20 TV TO BY OWNOR	210 010120 (2	oldali owiton di 2007	10)	
INPUT				1		1	
	EFFICIENCY (Typ.)	90%		91%		91%	
	AC CURRENT (Typ.)	12A/115VAC 7.	5A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 35A/1	115VAC 60A/230	VAC			
	LEAKAGE CURRENT	<0.5mA Peak / 240\	/AC				
		CH1:105 ~ 135%	CH2:90 ~ 110%				
		Protection type : CH	1 OLP, CH2 with batte	ery: The unit will enter to	UPS mode when CH	1 is around 105%	-120%,
				when total output of	f CH1 + CH2 reach ard	ound 125%~135%	output shuts down
	OVERLOAD Note.4	CH <sup>2</sup>	1 OLP, CH2 without be	attery:Shut down o/p vo	Itage,re-power on to r	emoved	
		CH2	2 : Constant current li	miting; fault condition de	oes not affect CH1 wo	rking,recovers aut	tomatically after fault
PROTECTION			condition is remov	ed (External fuse is ma	ndatory in series conn	ection with battery	for protection)
FROILCIION		CH1:21 - 26V		CH1.47 - EEV		CH1:50 - 60V	,
	OVER VOLTAGE Note.4	CH1:31 ~ 36V   CH1:47 ~ 55V   CH1:59 ~ 69V					
		Protection type: Shut down o/p voltage, re-power on to removed					
	OVER TEMPERATURE Note.4	Protection type: Shut down o/p voltage, re-power on to removed					
	BATTERY REVERSE POLARITY	Protected when reverse polarity , no damage, recovers automatically after fault condition is removed					
	BATTERY CUTOFF	21.5V±0.5V 32V±0.5V 43V±0.5V					
	AC OK	TTL signal, High / Open : AC Fail ; Low : AC OK ; Ice : max. 30mA@ 50VDC					
	BATTERY DISCONNECT/						
	REVERSE POLARITY	TTL signal, High / Open : Battery connect/normal ; Low : Battery disconnect/reverse polarity; Ice : max. 30mA@ 50VDC					0mA@ 50VDC
FUNCTION	BATTERY LOW	TTL signal, High / Open : Battery normal ; Low : Battery low; Ice : max. 30mA@ 50VDC					
	BATTERY FULL	TTI signal High / Or	en · Battery charging	; Low : Battery full ; Ice	: max 30mA@ 50VD	С	
	DISCHARGE		, ,	Discharge ; Ice : max. 30			
	WORKING TEMP.			noonal go , roo r maxi oo			
		-20 ~ +60°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-30 ~ +85°C, 10 ~ 95% RH non-condensing					
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)					
	VIBRATION	10 ~ 500Hz, 5G 10m	in./1cycle, 60min. ea	ch along X, Y, Z axes			
	SAFETY STANDARDS	UL62368-1, BS EN/E	UL62368-1, BS EN/EN62368-1,AS/NZS62368.1, EAC TP TC 004 approved; Design refer to GB 179				010
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-	-FG:100M Ohms / 50	0VDC / 25°C/ 70% RH			
		Parameter		andard	Test Level /	Note	
		Conducted	BS	S EN/EN55032 (CISPR3:			
SAFETY &	EMC EMISSION	Radiated	BS	S EN/EN55032 (CISPR32 AC TP TC 020	2), Class A		
EMC		Harmonic Current					
(Note 5 & 6)		Voltage Flicker					
		-				M-4-	
		Parameter		andard	Test Level /		
		ESD		S EN/EN61000-4-2			V contact; criteria A
		Radiated		S EN/EN61000-4-3		//m ; criteria A	
	EMC IMMUNITY	EFT / Burst	BS	S EN/EN61000-4-4	Level 3, 2K\	/; criteria A	
		Surge	BS	S EN/EN61000-4-5	Level 3, 1K\	//Line-Line ; 2KV/l	_ine-FG ;criteria A
		Conducted	BS	S EN/EN61000-4-6	Level 3, 10\	' ; criteria A	
		Magnetic Field		S EN/EN61000-4-8		/m ; criteria A	
		•					
	MTRE		1154.4K hrs min. Telcordia SR-332 (Bellcore); 169.9K hrs				
0711500	MTBF		`	silcole), 109.9K ilis il	IIII. WIIL-HIDDK-Z17	1 (20 0)	
OTHERS	MTBF DIMENSION PACKING	225*124*41mm (L*W 1.02Kg; 12pcs/13.5K	V*H)	silcore), 109.9K IIIS II	IIII. WIL-HUDK-217	1 (200)	

- 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and  $25^{\circ}$ C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1  $\mu$  F & 47  $\mu$  F parallel capacitor.

3. Tolerance : includes set up tolerance, line regulation and load regulation.

- 4. Once the protection is triggered, the input voltage needs to be disconnected, and the cold machine will wait for 3 minutes before restarting.

  5. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on
- a 360mm\*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. All the radiation tests require an additional 20\*30\*13 NIZN magnetic clasp or magnetic ring to the battery output line. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI\_statement\_en.pdf)
- 6. This power supply does not meet the harmonic current requirements outlined by BS EN/EN61000-3-2. Please do not use this power supply

under the following conditions:

NOTE

- a) the end-devices is used within the European Union, and
  b) the end-devices is connected to public mains supply with 220Vac or greater rated nominal voltage, and
  c) the power supply is:
   installed in end-devices with average or continuous input power greater than 75W, or
   belong to part of a lighting system

Exception: Power supplies used within the following end-devices do not need to fulfill BS EN/EN61000-3-2 a) professional equipment with a total rated input power greater than 1000W;

- b) symmetrically controlled heating elements with a rated power less than or equal to 200W

  7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
- ※ Product Liability Disclaimer: For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx



#### SPECIFICATION FOR UART COMMUNICATION FUNCTION MODEL (U Version)

600W Economical Security/Fire Alarm PSU with Battery Charger/UPS

MODEL		LAD-600BU		LAD-600CU		LAD-600DU			
	OUTPUT NUMBER	CH1	CH2	CH1	CH2	CH1	CH2		
	DC VOLTAGE	27.6V	27.6V	41.5V	41.5V	55.2V	55.2V		
	RATED CURRENT	18.74A	3A(Battery Charger		3A(Battery Charger)		3A(Battery Charge		
	CURRENT RANGE	0 ~ 21.74A		0 ~ 14.45A		0 ~ 10.87A			
	RATED POWER	600.02W		599.67W		600.02W			
	-								
DUTPUT	RIPPLE & NOISE (max.) Note.2			360mVp-p		360mVp-p			
	VOLTAGE ADJ. RANGE	CH1: 21.6 ~ 29V		CH1: 32.4 ~ 43.5V	1	CH1: 43.5 ~ 58V			
	VOLTAGE TOLERANCE Note.3	±1.0%		±1.0%		±1.0%			
	LINE REGULATION	±0.5%		±0.5%		±0.5%			
	LOAD REGULATION	±0.5%		±0.5%		±0.5%			
	SETUP, RISE TIME	2000ms, 50ms/230V	AC 2000ms, 50	ms/115VAC at full load					
	HOLD UP TIME (Typ.)	16ms/230VAC	6ms/230VAC 12ms/115VAC at full load						
	BATTERY STATIC DISCHARGE	<100µA							
	CURRENT	τιουμπ							
	VOLTAGE RANGE	90 ~ 132VAC / 180 ~	264VAC by switch	240 ~ 370VDC (D	efault switch at 230V	AC)			
	FREQUENCY RANGE	47 ~ 63Hz							
MDUT	EFFICIENCY (Typ.)	90%		91%		91%			
INPUT	AC CURRENT (Typ.)	12A/115VAC 7.	5A/230VAC						
	INRUSH CURRENT (Typ.)	COLD START 35A/1		VAC					
	LEAKAGE CURRENT	<0.5mA Peak / 240\							
		CH1:105 ~ 135%	CH2:90 ~ 110%						
				ery: The unit will enter to	o UPS mode when CH	1 is around 105%~1	20%		
	OVERLOAD Note.4	Trotoction type : orr	TOLI, OTIL WILL DULL	,	of CH1 + CH2 reach are		,		
	OVERLOAD Note.4	CH.	1 OLP CH2 without h	attery:Shut down o/p vo			atpat shats down		
				miting; fault condition d	0 / 1		matically after fault		
		011		ed (External fuse is ma		•	•		
PROTECTION				T		1			
	OVER VOLTAGE Note.4	CH1:31 ~ 36V		CH1:47 ~ 55V		CH1:59 ~ 69V			
	OVER VOLINGE ROLL	Protection type : Shut down o/p voltage, re-power on to removed							
	OVER TEMPERATURE Note.4	Protection type : Shut down o/p voltage, re-power on to removed							
	BATTERY REVERSE POLARITY	Protected when reverse polarity , no damage, recovers automatically after fault condition is removed							
	BATTERY CUTOFF	21.5V±0.5V							
		115VAC Input : Signa	als AC failure and acti	vates when input voltage	ge <75VAC				
		Recover the main power supply when input voltage >87VAC							
	AC OK	230VAC Input : Signals AC failure and activates when input voltage <165VAC							
FUNCTION				upply when input voltage	•				
	CHARGER CIRCUIT FAIL	Battery disconnected, battery reverse polarity , signal failure							
		Battery low( fire alarm system selectable by UART)							
	BUZZER ALARM	AC fail, Battery low, I	AC fail, Battery low, battery disconnected, battery reverse connect, overload status (evacuation system selectable by UART)						
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 95% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-30 ~ +85°C, 10 ~ 95% RH non-condensing							
LHVINONIILHI	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)							
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes							
						. OD 47045 0040	004747		
	SAFETY STANDARDS	UL62368-1, BS EN/EN62368-1, AS/NZS62368.1, EAC TP TC 004 approved; Design refer to GB 17945-2010, GB4717					GB4/1/		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE			0VDC / 25°C/ 70% RH					
		Parameter		andard	Test Level /	Note			
		Conducted		EN/EN55032 (CISPR3	2), Class A				
				C TP TC 020					
SAFETY &	EMC EMISSION	Radiated		EN/EN55032 (CISPR3	2), Class A				
EMC				C TP TC 020					
Note 5 & 6)		Harmonic Current							
		Voltage Flicker		-					
		Parameter	Sta	andard	Test Level /	Note			
		ESD	BS	EN/EN61000-4-2	Level 3, 8KV	air; Level 2, 6KV co	ontact; criteria A		
		Radiated	BS	EN/EN61000-4-3	Level 3, 10V	/m ; criteria A			
	EMC IMMUNITY	EFT / Burst	BS	EN/EN61000-4-4	Level 3, 2KV	′; criteria A			
	EMC IMMUNITY	Surge		EN/EN61000-4-5		/Line-Line ;2KV/Line	e-FG :criteria A		
				EN/EN61000-4-6	Level 3, 10V	-	,		
		Conducted		LIVE IVO I U U U -4-U	Level 3, 10 V	, ontona A			
		Conducted  Magnetic Field		EN/EN61000 4 9	Lovel 4 204	/m : oritoria A			
	MTDF	Magnetic Field	BS	EN/EN61000-4-8		/m ; criteria A			
	МТВБ	Magnetic Field 1019.6K hrs min.	BS Telcordia SR-332 (Be	EN/EN61000-4-8 ellcore); 144.4K hrs r					
OTHERS	MTBF DIMENSION	Magnetic Field	BS Telcordia SR-332 (Be						

- 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1  $\mu$  F & 47  $\mu$  F parallel capacitor.

- Ripple & noise are measured at 20vintz of bandwidth by using a 12 twisted pair-wire terminated with a 0.1 \(\mu\) F & 47 \(\mu\) F parallel capacitor.
   Tolerance: includes set up tolerance, line regulation and load regulation.
   Once the protection is triggered, the input voltage needs to be disconnected, and the cold machine will wait for 3 minutes before restarting.
   The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm\*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. All the radiation tests require an additional 20\*30\*13 NIZN magnetic clasp or magnetic ring to the battery output line. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI\_statement\_en.pdf) 6.This power supply does not meet the harmonic current requirements outlined by BS EN/EN61000-3-2. Please do not use this power supply
- under the following conditions:
  a) the end-devices is used within the European Union, and

NOTE

- b) the end-devices is connected to public mains supply with 220Vac or greater rated nominal voltage, and c) the power supply is: installed in end-devices with average or continuous input power greater than 75W, or

- belong to part of a lighting system

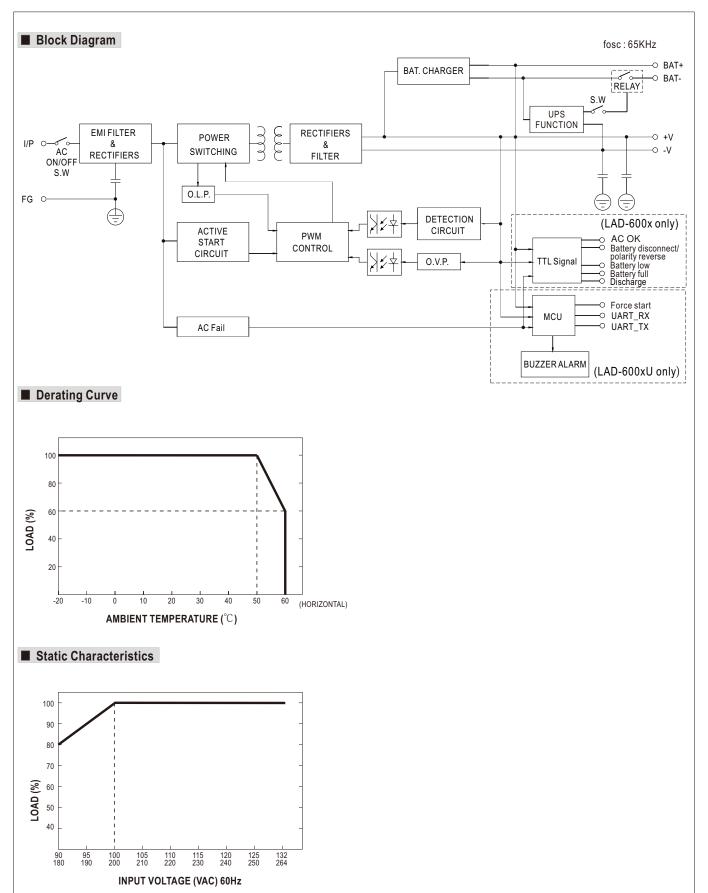
  Exception: Power supplies used within the following end-devices do not need to fulfill BS EN/EN61000-3-2

  a) professional equipment with a total rated input power greater than 1000W;

  b) symmetrically controlled heating elements with a rated power less than or equal to 200W

  7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
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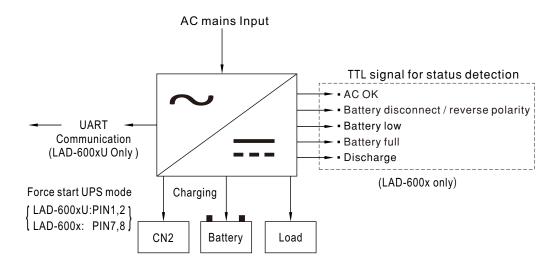




## ■ Suggested Application

#### 1.DC-UPS function

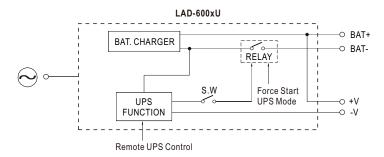
When AC voltage drops below 75/165VAC, The UPS function will activate and power source switch battery backup.



## 2.UART Communication Function (U version only)

The power supply uploads various fault signals, power supply working status, single battery voltage, main voltage, output voltage and output current to the controller through the UART, and changes the power supply working status according to the controller instructions. For details, please refer to the user manual.

#### 2.1 Forced Start & Remote UPS Control(U version only)



#### Force start UPS mode:

According to fire safety regulation, UPS power supply must equip with force start UPS function. In case of emergency, maintenance or testing, personal can active the UPS mode of by shorting PIN1 and PIN2 of LAD-600xU to ensure the energy supply to the loads. When operating under UPS mode, the BAT. UVP alarm is still active, but the BAT. UVP protection will be disable, therefore, the battery will be fully discharged until system shuts down.

Pin 1 & 2	Status
Short	Forced start
Open	Normal



#### Note:

<sup>1</sup>st priority of UPS mode: Force start UPS function by internal relay.



#### ※ Remote UPS mode:

According to fire safety regulation, UPS power supply must equip with remote UPS function. So the power supply unit can be linked to the fire alarm system, user's system will be able to detect the status of PIN3 and PIN4 LAD-600xU with UART communication. When PIN 3 and PIN 4 is shorted, the power supply will enter remote UPS mode, therefore the UPS mode will be active and the status signal will also send to the fire alarm system for indication. Personal or the system can use the signal as trigger threshold for other alarm systems to decide when and how to enter the emergency sequence. Under this condition, BAT. UVP alarm and protection are still active.

Pin 3 & 4	Status
Short	Remote UPS control
Open	Normal



#### Note:

2<sup>nd</sup> priority of UPS mode: UPS function can be activate by controlling with this signal, since the controller is still normal, the relay can be controlled through communication protocol.

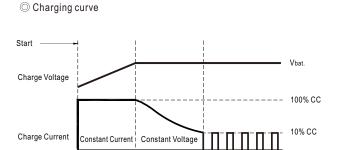
#### 2.2 Charging Curve for Different Battery (U version only)

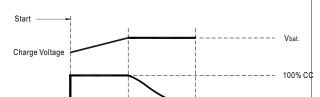
Pin 5 & 6	Battery Type
Short	Li-ion batteries
Open	Lead-acid (Pb) batteries



O Charging curve

Charge Current





Constant Current | Constant Voltage

O Apply to Lead-acid batteries

O Apply to Li-ion batteries

## 2.3 Mode Selection for Buzzer(U version only)

Pin 7 & 8	Status
Short	Fire alarm system
Open	Evacuation system

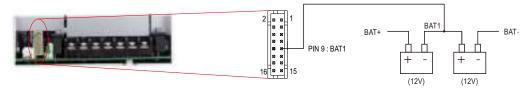


LAD-600BU Open circuit for fire alarm, Short circuit for evacuation; LAD-600CU/DU Open circuit for evacuation, Short circuit for fire alarm.

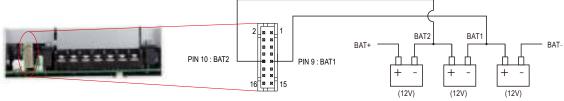


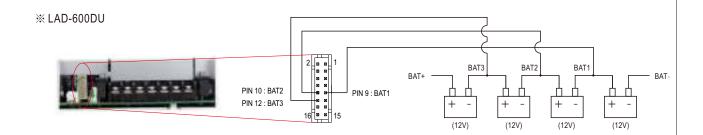
## 2.4 Battery Inspection

## **※ LAD-600BU**



## **\*** LAD-600CU





## 2.5 UART Communication Interface(U version only)

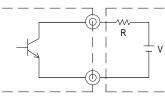
Communication provides functions such as control, setting, and monitoring. The parameters include the backup power switch, battery undervoltage point ,etc.





## 3. Function signals by TTL and UART

- TTL Signal is sent out through pins from CN2.
- External voltage source is required for the TTL signal. The maximum voltage is 50VDC and the maximum sink current is 30mA.



External voltage and resistor

(The max. sink current is 30mA at 50VDC)

#### 3.1 AC OK: Detection of AC status

• TTL Signal for Blank version

Between pin 1 and pin 4	Description
Low (0.3V max. at 30mA)	The signal is "Low" when the AC input is normal
High or open (External applied voltage 50V max.)	The signal turns to be "High" when the AC input is abnormal



• Signal for UART Version

AC OK is achievable through UART communication protocol, please refer to for more detail: <a href="http://www.meanwell.com/manual.html">http://www.meanwell.com/manual.html</a>

## 3.2 Battery Disconnected/Reverse Polarity: Battery status detection

• TTL Signal for Blank version

Between pin 2 and pin 4	D	escription
Low (0.3V max. at 30mA)	Ti	he signal is "Low" when the battery is not connected or inversely connected
High or open (External applied voltage 5	0V max.)	ne signal turns to be "High" when the battery is connected or normal



Note. The signals of battery disconnected and reverse polarity can only be detected during the first power transmission , it is can not be detected at any time.

• Signal for UART Version

Battery Disconnected/Reverse Polarity is achievable through UART communication protocol, please refer to for more detail: http://www.meanwell.com/manual.html



## 3.3 Battery Low: Battery low detection

• TTL Signal for Blank version

Between pin 3 and pin 4	Description
Low (0.3V max. at 30mA)	The signal is "Low" when the battery is under voltage protected
High or open (External applied voltage 50V max.)	The signal turns to be "High" when the battery is normal

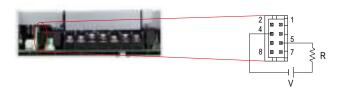


• Signal for UART Version Battery Low is achievable through UART communication protocol, please refer to for more detail: http://www.meanwell.com/manual.html

## 3.4 Battery Full: Battery full detection

• TTL Signal for Blank version

Between pin 4 and pin 5	Description
Low (0.3V max. at 30mA)	The signal is "Low" when the battery is fully charged
High or open (External applied voltage 50V max.)	The signal turns to be "High" when the battery is charged



• Signal for UART Version Battery Full is achievable through UART communication protocol, please refer to for more detail: http://www.meanwell.com/manual.html



#### 3.5 Discharge: Discharge detection

• TTL Signal for Blank version

Between pin 4 and pin 6	Description
Low (0.3V max. at 30mA)	The signal is "Low" when the power supply is discharging
High or open (External applied voltage 50V max.)	The signal is "High" when the main power is working



• Signal for UART Version

Discharge is achievable through UART communication protocol, please refer to for more detail: http://www.meanwell.com/manual.html

#### 3.6 Forced Start: Forced start UPS mode

• TTL Signal for Blank version

Pin 7 & 8	Status
Short	Forced start UPS mode
Open	Normal



• Signal for UART Version

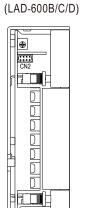
Forced Start is achievable through UART communication protocol, please refer to for more detail: http://www.meanwell.com/manual.html

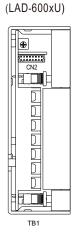
Case No.

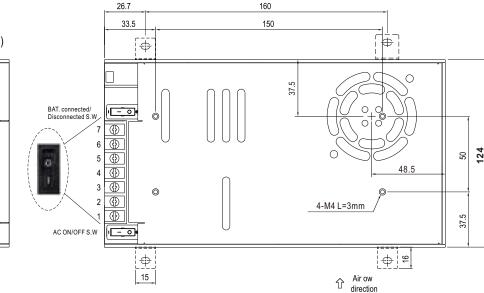
Unit:mm

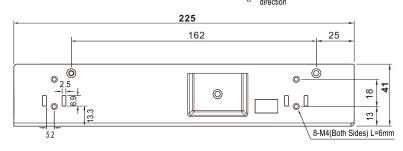


# ■ Mechanical Specification









## ※ Connector Pin No. Assignment(CN2) (LAD-600x)

Pin No.	Assignment(TTL Signal)	Mating Housing	Terminal
1	AC OK		
2	Battery disconnect/ reverse polarity		
3	Battery low	TKD DUO	TVD DUT 40/1 5\
4	GND	TKP DH2 or equivalent	TKP DHT-1S(LF) or equivalent
5	Battery full	or equivalent	or equivalent
6	Discharge		
7,8	Open : normal Short : forced start UPS mode		

#### Terminal Pin No. Assignment(TB1)

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG ±
4	DC OUTPUT -V
5	DC OUTPUT +V
6	BAT -
7	BAT +

## <u> (1</u>

DC OUTPUT -V and BAT - can not be shorted.

## Connector Pin No. Assignment(CN2) (LAD-600xU)

Pin No.	Assignment	Mating Housing	Terminal
1.0	Short : forced start	TKP DH2 or equivalent	TKP DHT-1S(LF) or equivalent
1,2	Open : normal		
3,4	Short : Remote UPS control		
3,4	Open : normal		
F.0	Short : Li- ion batteries		
5,6	Open : Lead-acid (Pb) batteries		
7,8	Fire alarm/ Evacuatione option		
9	BAT1		
10	BAT2		
11	NC		
12	BAT3		
13	UART_RX		
14	UART_TX		
15	GND		
16	3.3V		

+3.3V(ref) for testing use only;can't supply power over 1mA for a long time



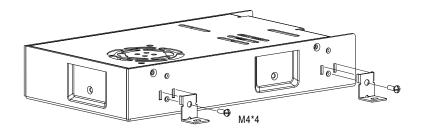
# ■ Accessory List

Bracket (Optional accessory, Should ordered seperately)

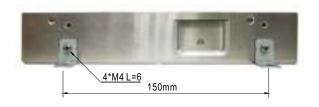
MW's Order No.	Item	Quantity
PGG2MHS012		4pcs/per model

600W Economical Security/Fire Alarm PSU with Battery Charger/UPS

# ■ Installation Diagram









## ■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html