


Product Specification

Model BS27A-P350/12V		Created: October 19th, 2016	
Scope			
This specification applies to Model BS27A-P350/12V. This product is DC power supply to Back up optional DC stabilized power supply 'H Series' 'UZP Series' and 'mUZP Series' at blackout.			
General specification (All item are provided at normal temperature and humidity unless otherwise specified)			
Items		Specifications	Measurement condition etc.
Electrical	Input battery voltage	12VDC	Sealed lead-acid battery
	Preferred battery	PXL12023 (GS YUASA) , PXL12050 (GS YUASA)	
	Max. output capacity	150W (Peak 200W)	At forced air cooling speed of wind 1.5m/s※1
	Booster circuit output voltage	350VDC typ.	
	Over discharge protection	8.4VDC typ.	Back up operation shut down
	Charge Specification	13.6VDC / 0.5A typ.	Constant voltage constant current trickle charging method
	Fuse rating	40A 32V min.	
Environment	Operating Temp./Humidity	0~40°C/20~90%	No condensation
	Storage Temp./Humidity	-15~40°C/20~90%	※2
	Vibration	To endure the vibration acceleration of 2G with vibration frequency of 10 to 55Hz for 10 sweep cycles in each X-Y-Z direction.	JIS-C-60068-2-6 At no operation With the normal packaging.
	Mechanical shock	Lift one bottom edge up to 50mm and let it fall. Number of bumps:3 each of 4 edges. There shall be no malfunction observed.	JIS-C-60068-2-31 At no operation With the normal packaging.
Others	Insulation resistance	Primary-Secondary-FG : 50MΩ or more	At 500VDC
	Dielectric strength	Primary - FG, and Primary - Secondary : AC1.5kV/1minute Secondary - FG : DC500V/1minute	Cut-off current 10mA
	Dimensions	73(W)×38(H)×158(D)	Refer to the outline drawing in another page.
	Weight	0.2 kg typ.	
	Reliability Grade	FA	To follow our standard
	Short lifetime Component	-	
	Warranty	One year after delivery. If defects belong to us, the defective unit shall be repaired or replaced at our cost.	Except the operation out of the specification.
※1: 100W (Peak 200W) at natural air cooling. ※2: The characteristics of battery depend on temperature. Careful evaluation with final application is needed for low temperature operation.			
			
Drawn by	Reviewed by	Approved by	Drawing No.
Yodo	Mori	Tatsumi	6198-01-4-520
			1/5

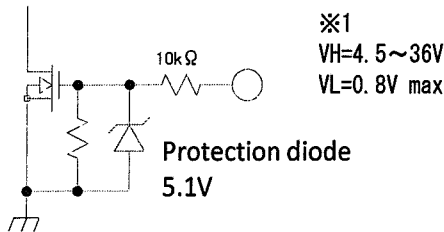
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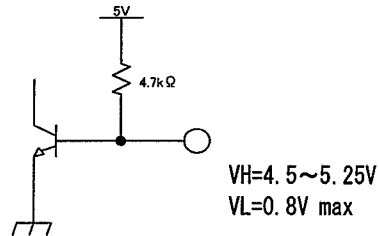
Input/Output signal specification

	Input signal	Description
	Back-up ON/OFF control signal (R_ON)	Backup synchronizing signal with UZP series With being applied with 5-36V from external, it shifts to backup standby mode.※1
	Charge control signal (CHG_ON)	Charging operation forced outage at 'L' input.
	Battery shutdown signal for TTL (SHUT_DOWN_T)	Battery connection shuts off at 'L' input with 60ms or longer. (valid only at battery backup operation)
	Battery start-up signal (WAKE_UP)	Start-up with battery at AC power failure. Forced start-up at 'L' input with 5s or longer.
	Mode switching signal (Jumper pin)	Switching between 'Mode H'(for H series) and 'Mode U'(for UZP series, mUZP series). (OPEN:Mode H, SHORT:Mode U)
	AC failure detection signal for TTL (AC_FAIL_T)	'H' is delivered at backup operation from a blackout.
	Low battery voltage signal for TTL (BATT_LOW_T)	'H' is delivered when battery voltage falls down to 9.4V typical.
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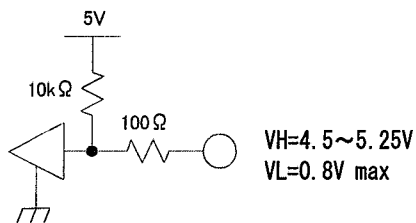
○ R_ON signal input circuit



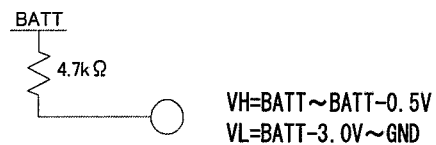
○ CHG_ON signal input circuit



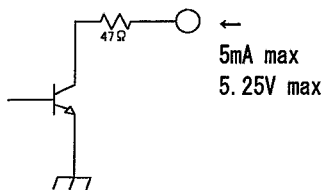
○ SHUT_DOWN_T signal input circuit



○ WAKE_UP signal input circuit



○ AC_FAIL_T, BATT_LOW_T signal output circuit



※1: Contact us if you need to apply 36V or higher voltage.

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Connector pin assignment

Connector Name	Pin No.	Function	Note
CN12 Back-up hook up connector2	1	Back-up output_+	Connector1 and Connector2 have a commonality. (Connect at inside)
	2	-	
	3	Back-up output_-	
CN10 Back-up hook up connector1	4	AC input detection signal	Valid only H series
	5	on/off detection signal	Valid only H series
	6	Start-up signal	Valid only UZP series & mUZP series

Connector Name	Pin No.	Function	Note
12V battery hook up connector	1	Battery Input_+	
	2	Battery Input_-	

Connector Name	Pin No.	Function	Note
CN6 Back-up Signal Connector (SIG_T)	1	AC_FAIL_T	
	2	SHUT_DOWN_T	
	3	BATT_LOW_T	
	4	-	
	5	FAN_M	Connect with 'Rotation pulse' at inside
	6	-	
	7	GND	
	8	-	
	9	-	
	10	VCC5V	

Connector Name	Pin No.	Function	Note
CN5 Back-up Control Connector	1	VCC5V	
	2	R_ON	
	3	CHG_ON	
	4	GND	
	5	WAKE_UP	
	6	V_BATT	

Connector Name	Pin No.	Function	Note
CN4 Service connector for FAN	1	FAN+	Max.0.2A
	2	FAN-	
	3	Rotation pulse	Conect with 'FAN-M' at inside

Connector Name	Pin No.	Function	Note
CN7 Jumper pin	-	Mode switching signal	



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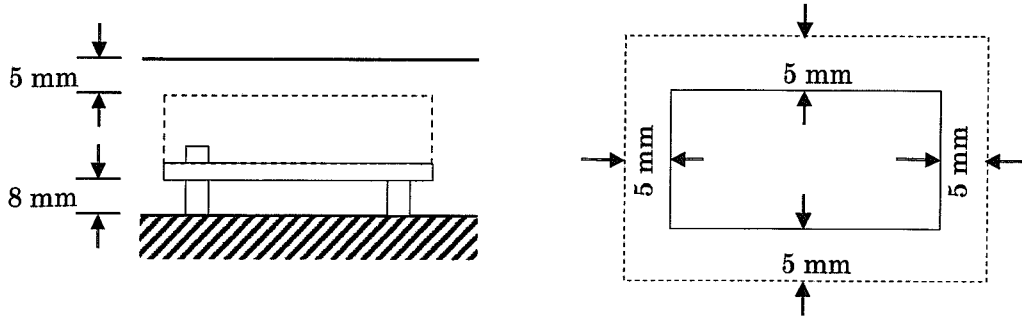
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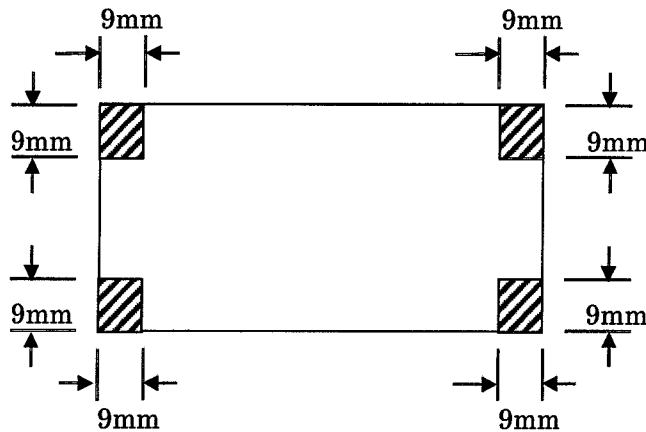
The precaution of Installation

In order to meet the insulation and the dielectric strength standard, follow this dimensions below.



Install the power supply so that natural air convection and air ventilation are expected to keep the temperature rise around the power supply low.

The unit shall be installed with all 4 mounting holes on PCB and within the diagonal range below.



The installation shall be done with the condition that can have enough conduction to the same metal plate.

If it not have the conduction, some noise characteristics might not have enough performance.

This power supply is designed for intergrating.
Please use it with appropriate installation and display.



Drawn by

Yodo

Reviewed by

Mori

Approved by

Satsumi

Drawing No.

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Precautions before use

Hazard

Electrical shock hazards

This power supply is designed for integrating. High potentials exist inside the power supply. When integrating the power supply into an instrument or system, use appropriate safe procedure to avoid electrical shock hazards.

Heat

This product consists of some components which become high temperature at operation. Please cool it with appropriate measures.

Output shortage

Do not get output terminals shorted. When shorted, internal capacitors discharge at once to cause serious accident due to spark, etc. resulting in shortening lifetime of this unit.

Wire connection

High potentials exist inside this power supply.
For operator safety, be sure to insertion and extraction of connectors should be done after complete discharge.

Warning

Water proof·dust proofing

Do not sink or wet this product with water or seawater.
It causes heat or fault.

Caution

Usage to other devices

This product is dedicated device used for backup at blackout, to the applicable power supplies.
Do not use it for other devices or other application. Use it only with batteries
These differences of specifications may cause damages to battery or device.

Operation noise

Occasionally noise may be heard under specified operating conditions but it is due to the low-frequency components of switching, and therefore it is normal operation.



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