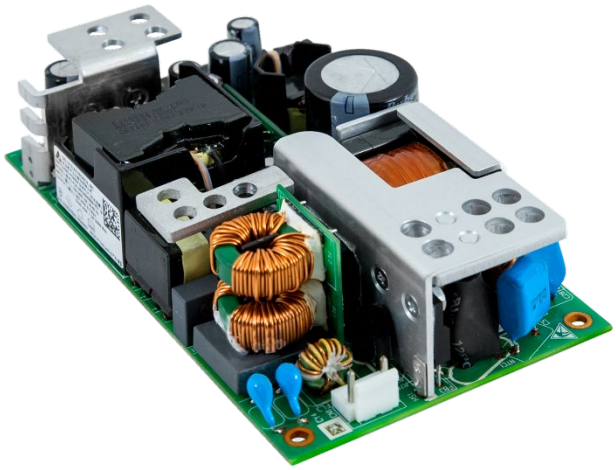
PJH Open Frame Power Supply

PJH-300W series / PJH-☐V300WB☐☐



PJH

Highlights & Features

- Major safety approvals include IEC/UL 60950-1, IEC/EN/UL 62368-1, IEC/EN 60335-1, IEC/EN 61558-1 and IEC/EN 61558-2-16
- Available for Class I or Class II (double isolation) configuration with universal AC input voltage range
- 300W fan cool and up to 240 W convection cool
- Standard industrial footprint of 3” x 5”
- Built-in active PFC, remote ON/OFF, remote sense, power good signal
- No load input power consumption < 0.5 W and low earth leakage current < 0.75 mA
- Extreme low temperature cold start at -40°C

Safety Standards

CB Certified for worldwide use

Model Number: PJH-☐V300WB☐☐
Unit Weight: 0.45 kg (0.99lb)
Dimensions (L x W x H): 127 x 76.2 x 35.8 mm (5.00 x 3.00 x 1.41 inch)

General Description

The PJH-300W product is specifically designed with small standard industrial 3” x 5” footprint for household electrical appliances with safety approvals for pollution degree 3 including IEC/EN 60335-1 and IEC/EN 61558-2-16, as well as IEC/UL 60950-1 and IEC/EN/UL 62368-1. The PJH Series of Open frame power supply with 300 W output power and provides up to 240W power convection cooled without additional metal plate. With external fan cooling, it can provide 300 W output power across a wide operating temperature range from -25°C to +70°C across the entire input voltage range of 90 to 264 Vac and features low earth leakage current less than 0.75 mA. The built-in active PFC product can configure with either Class I or Class II (double isolation) and is certified for EMI standards according to EN55032 Class B (with FG connection).

Model Information

PJH Open Frame Power Supply

Model Number	Input Voltage Range	Rated Output Voltage		Rated Output Current	
PJH-24V300WBB☐	90-264 Vac	V1: 24 Vdc	V_{SB}: 5 Vdc	V1: 12.5 A	V_{SB}: 1.2 A
PJH-24V300WBC☐			V_{SB}: 12 Vdc		V_{SB}: 0.5 A
PJH-36V300WBB☐		V1: 36 Vdc	V_{SB}: 5 Vdc	V1: 8.3 A	V_{SB}: 1.2 A
PJH-36V300WBC☐			V_{SB}: 12 Vdc		V_{SB}: 0.5 A

Model Numbering

PJ	H –	☐V	300W	B	☐	☐
Open Frame	Product Type H – Household Series	Output Voltage 24 V 36 V	Output Power	Package Type B – Open Frame	Voltage Standby B – 5 V* C – 12 V	Connector Type A – JST Connector B – Molex Connector* C – JWT Connector*

*Options, Molex comply Glow wire test 550°C, 750°C (te – ti ≤ 2s), 850°C.

All parameters are specified at 25°C ambient and AC input unless otherwise indicated.
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PJH Open Frame Power Supply
PJH-300W series / PJH-☐V300WB☐☐

Specifications

Model Number	PJH-24V300WB☐☐	PJH-36V300WB☐☐

Input Ratings / Characteristics

Nominal Input Voltage		100-240 Vac	
Input Voltage Range		90-264 Vac	
Nominal Input Frequency		50-60 Hz	
Input Frequency Range		47-63 Hz	
Input Current		< 4.0 A @ 115 Vac, < 2.0 A @ 230 Vac	
Efficiency*	100% load	> 93% @ 115 Vac > 94% @ 230 Vac	> 93% @ 115 Vac > 94% @ 230 Vac
Max Power Dissipation*	No Load	< 0.5 W @ 115 Vac & 230 Vac	Note: At Remote signal Off PSU
	100% Load	< 23 W @ 115 Vac & 230 Vac	< 23 W @ 115 Vac & 230 Vac
Max Inrush Current (Cold Start)		< 20 A @ 115 Vac, < 40 A @ 230 Vac	
Power Factor	100% load	> 0.95 @ 115 Vac & 230 Vac	
Earth Leakage Current (Touch Current)		< 0.75 mA @ 240 Vac	

*V_{SB} @ no load condition.

Output Ratings / Characteristics**

Nominal Output Voltage	PJH-300WBB☐	V1: 24 Vdc	V_{SB}: 5 Vdc	V1: 36 Vdc	V_{SB}: 5 Vdc
	PJH-300WBC☐	V1: 24 Vdc	V_{SB}: 12 Vdc	V1: 36 Vdc	V_{SB}: 12 Vdc
Factory Set Point Tolerance		V1: ± 0.2%	V_{SB}: -		
Output Voltage Adjustment Range		V1: 22.8-25.2 Vdc	V_{SB}: -	V1: 34.2-37.8 Vdc	V_{SB}: -
Output Current***	PJH-300WBB☐	V1: 0-12.5 A (300 W Max.)	V_{SB}: 0-1.2 A	V1: 0-8.3 A (300 W Max.)	V_{SB}: 0-1.2 A
	PJH-300WBC☐	V1: 0-12.5 A (300 W Max.)	V_{SB}: 0-0.5 A	V1: 0-8.3 A (300 W Max.)	V_{SB}: 0-0.5 A
Output Power	PJH-300WBB☐	V1: 300 W	V_{SB}: 6 W		
	PJH-300WBC☐	Note: Vout is in regulation until no load.			
Line Regulation	V1 and V_{SB}	< 0.5% (@ 90-264 Vac input, 0-100% load)			
Load Regulation	V1 and V_{SB}	< 1.0% (@ 90-264 Vac input, 0-100% load)			
PARD**** (20MHz)	PJH-300WB☐☐	V1: < 240 mVpp	V_{SB}: < 120 mVpp	V1: < 360 mVpp	V_{SB}: < 120 mVpp
		Note: At 100% load, 20 Hz to 20 MHz, warm up for 10mins.			
Rise Time	V1 and V_{SB}	< 100 ms @ nominal input (100% load)			
Start-up Time	V1 and V_{SB}	< 1,200 ms @ nominal input (100% load)			
Hold-up Time	V1	> 12 ms @ 115 Vac & 230 Vac (240 W) > 10 ms @ 115 Vac & 230 Vac (300 W)			
Dynamic Response (Overshoot & Undershoot O/P Voltage)		± 5% @ 90-264 Vac input, V1: 10-100% load, V_{SB}: 0-100% (Slew Rate: 2.5 A/μS, 50% duty cycle @ 5 Hz, 50 Hz, 1 KHz)			
Start-up with Capacitive Loads	V1	8,000 μF Max @ nominal input (100% load)			

**For power de-rating from 50°C to 70°C, see power de-rating on page 3.
***V_{SB}: 100% load @ fan cool, 50% load @ convection.
****PARD is measured with an AC coupling mode, 5 cm wires, and in parallel with 0.47 μF ceramic capacitor & 10 μF electrolytic capacitor.

PJH Open Frame Power Supply
PJH-300W series / PJH-□V300WB□□

Model Number	PJH-24V300WB□□	PJH-36V300WB□□

Mechanical

Dimensions (L x W x H)		127 x 76.2 x 35.8 mm (5.00 x 3.00 x 1.41 inch)
Unit Weight		0.45 kg (0.99 lb)
Indicator	Green LED	DC OK
Cooling System	Convection	V1: 0-240 W V_{SB}: 0-3 W
	Fan Cool	V1: 0-300 W V_{SB}: 0-6 W Note: With 10 CFM fan cool, 10 cm distance between PSU and fan
Power Supply Header	Input (CN1)	B2P3-VH(LF)(SN)
	Output (CN102, 103)	TERMINAL M3 x 0.5
	Standby (CN101)	BM10B-SRSS-TB(LF)(SN)
Wire	Input (CN1)	AWG 18
	Output (CN102, 103)	AWG 16-10
	Standby (CN101)	AWG 32-28
Noise (1 Meter from power supply)		Sound Pressure Level (SPL) < 25 dBA

Environment

Surrounding Air Temperature	Operating	-25°C to +70°C (Cold Start -40°C)
	Storage	-40°C to +85°C
Power De-rating	Temperature (Convection)	Refer to Output Load De-rating VS Surrounding Air Temperature Fig.1 on Page 9
	Temperature (Fan Cool)	> 50°C de-rate power by 7.5W / °C (300 W @ 50°C, 225 W @ 60°C, 150 W @ 70°C with 10 CFM fan cool)
Operating and Storage Humidity		5 to 95% RH (Non-Condensing)
Operating Altitude	PD3	0 to 5,000 Meters (16,400 ft.), Class I
	PD2	0 to 3,000 Meters (9,840 ft.), Class II
Shock Test	Non-Operating	IEC 60068-2-27, Half Sine 30G for a duration of 18 ms, 3 times per direction, 9 times in total
Vibration	Non-Operating	IEC 60068-2-6, 10 Hz to 500 Hz @ 30 m/S² (3G peak); displacement of 0.35 mm; 60 min per axis for all X, Y, Z direction
Bump Test	Operating	IEC 60068-2-29, Half Sine 10 G (100 m/S²) for a duration of 11 ms, 1,000 times per direction, 6,000 times in total
Over Voltage Category		Design to OVC III according to IEC/EN 61558
Pollution Degree	Class I (with PE* connection)	PD3
	Class II	PD2

*PE: Primary Earth

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Model Number	PJH-24V300WB☐☐	PJH-36V300WB☐☐

Protections

Output Overvoltage	V1 and V_{SB}	SELV Output, Latch Mode • V1 fault, protect only V1 and V_{SB} still continuously operate • V_{SB} fault, protect both V1 and V_{SB}	
	V1	26 ~ 33 V, SELV Output, Latch Mode	39 ~ 46.8 V, SELV Output, Latch Mode
	5 V_{SB}	6.3 V - 7.7 V, SELV Output, Latch Mode	
	12 V_{SB}	13 V – 15 V, SELV Output, Latch Mode	
Overload / Overcurrent		130 ~ 180% of rated load current, Hiccup mode, Non-Latching (Auto recovery) • V1 fault, protect only V1 and V_{SB} still continuously operate • V_{SB} fault, protect both V1 and V_{SB}	
Over Temperature		Latch Mode	
Short Circuit		Hiccup Mode, Non-Latching (Auto-Recovery when the fault is removed) • V1 fault, protect only V1 and V_{SB} still continuously operate • V_{SB} fault, protect both V1 and V_{SB}	
Transient Surge Voltage Protection		MOV (Metal Oxide Varistor)	
Internal Fuse at L pin		T 5AL	
Protection Against Shock		Class I with PE* connection, Class II without PE* connection Note: Refer to the details in the Pollution Degree and EMC section	

*PE: Primary Earth

Reliability Data

MTBF	> 700,000 hrs. as per Telcordia SR-332 I/P: 115 Vac, O/P: 80% load or 240 W, Ta: 25°C
Expected Cap Life Time	10 years (115 Vac, 40% load or 120 W @ 40°C)

Safety Standards / Directives

Safety Entry Low Voltage			SELV (IEC 60950-1)
Electrical Safety		SIQ Bauart	EN 62368-1, EN 60335-1, EN 61558-1, EN 61558-2-16
		UL/cUL recognized	UL 60950-1 and CSA C22.2 No. 60950-1 (File No. E191395) UL 62368-1 and CSA C22.2 No. 62368-1 (File No. E191395)
		CB scheme	IEC 60950-1, IEC 62368-1, IEC 60335-1, IEC 61558-1, IEC 61558-2-16
		UKCA	BS EN 62368-1
CE			In conformance with EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU
UKCA			In conformance with Electrical Equipment (Safety) Regulations 2016 No. 1011 and The Electromagnetic Compatibility Regulations 2016 No. 1091
Galvanic Isolation	PD3, Class I	Input to Output	4.0 kVac
		Input to Ground	2.0 kVac (PD3, Class I) 4.0 kVac (PD2, Class II with Functional Ground)
		Output to Ground	1.5 kVac
Isolation Resistance		Input to Output	> 5 MOhm

PJH Open Frame Power Supply
PJH-300W series / PJH-□V300WB□□

Model Number	PJH-24V300WB□□	PJH-36V300WB□□

EMC

Conducted Emissions	Input Line	Generic Standards: CISPR 11, CISPR 32, EN/BS EN 55011, EN/BS EN 55032, FCC Title 47, EN 55014-1 **Class B:** • For protection Class I, with PE* connection • For protection Class II, with FG** connection **Class A:** • For protection Class II, without FG connection *PE: Primary Earth, **FG: Functional Ground		
	Output Line	EN55014-1 Class A		
Radiated Emission		Generic Standards: CISPR 11, CISPR 32, EN/BS EN 55011, EN/BS EN 55032, FCC Title 47, EN 55014-1: Class B		
Immunity		Generic Standards: EN 55024, EN 55035, EN 55014-2, EN 61204-3		
Electrostatic Discharge	IEC 61000-4-2	Level 4 Criteria A[1] Air Discharge: 8 kV Contact Discharge: 15 kV		
Radiated Field	IEC 61000-4-3	Level 3 Criteria A[1] 80 MHz - 1 GHz, 10 V/M, 80% modulation (1 kHz) 1.4 GHz - 2 GHz, 10 V/M, 80% modulation (1 KHz) 2 GHz - 2.7 GHz, 10 V/M, 80% modulation (1 KHz)		
Electrical Fast Transient / Burst	IEC 61000-4-4	Level 3 Criteria A[1] 2 kV (Input power ports)		
Surge	IEC 61000-4-5	Level 3 Criteria A[1] Common Mode[3]: 2 kV Differential Mode[4]: 1 kV		
Conducted	IEC 61000-4-6	Level 3 Criteria A[1] 150 kHz-80 MHz, 10 Vrms		
Power Frequency Magnetic Fields	IEC 61000-4-8	Criteria A[1] 30 A/Meter		
Voltage Dips and Interruptions	IEC 61000-4-11	100% dip; 1 cycle (20 ms); Self Recoverable		
Low Energy Pulse Test (Ring Wave)	IEC 61000-4-12	Level 3 Criteria A[1] Common Mode[3]: 2 kV Differential Mode[4]: 1 kV		
Harmonic Current Emission		IEC/EN/BS EN 61000-3-2, Class A		
Voltage Fluctuation and Flicker		IEC/EN/BS EN 61000-3-3		
Voltage Sag Immunity SEMI F47 – 0706		80% of 200 Vac 70% of 200 Vac 50% of 200 Vac	160 Vac, 1000 ms 140 Vac, 500 ms 100 Vac, 200 ms	Criteria A[1] Criteria A[1] Criteria A[1]

1) Criteria A: Normal performance within the specification limits
2) Criteria B: Temporary degradation or loss of function which is self-recoverable
3) Asymmetrical: Common mode (Line to earth)
4) Symmetrical: Differential mode (Line to line)

PJH Open Frame Power Supply
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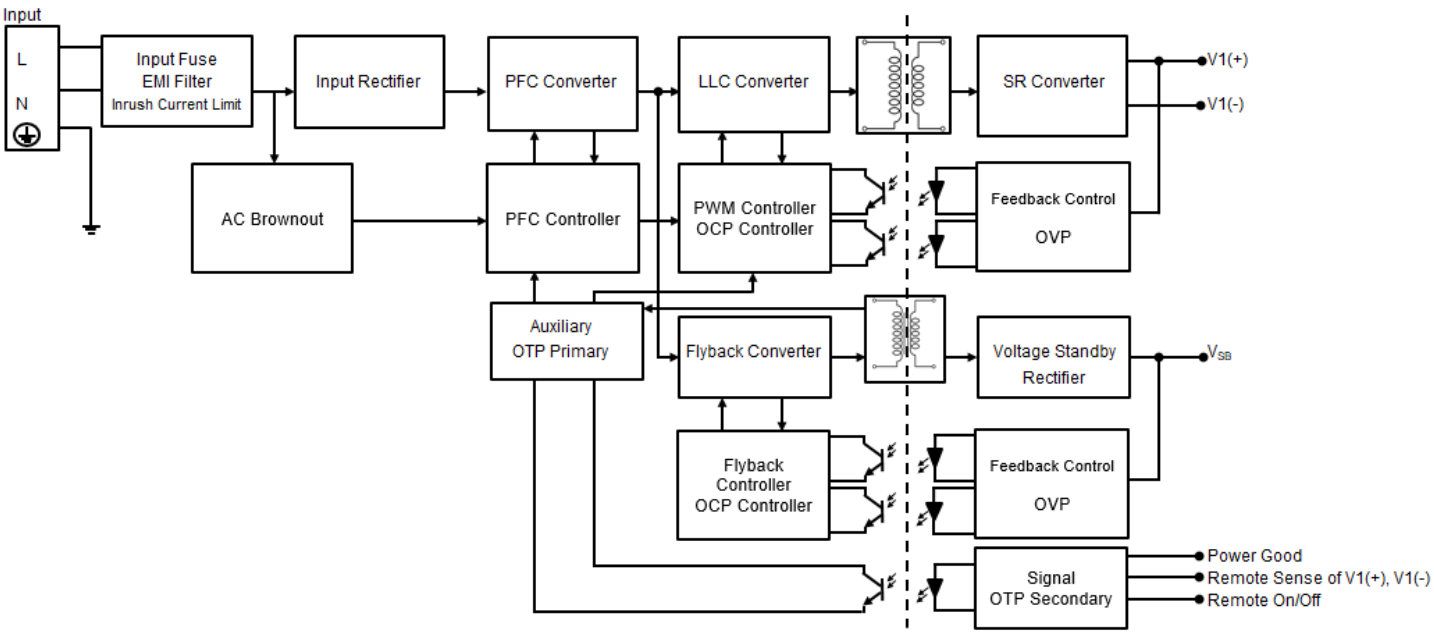
Block Diagram



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PJH Open Frame Power Supply
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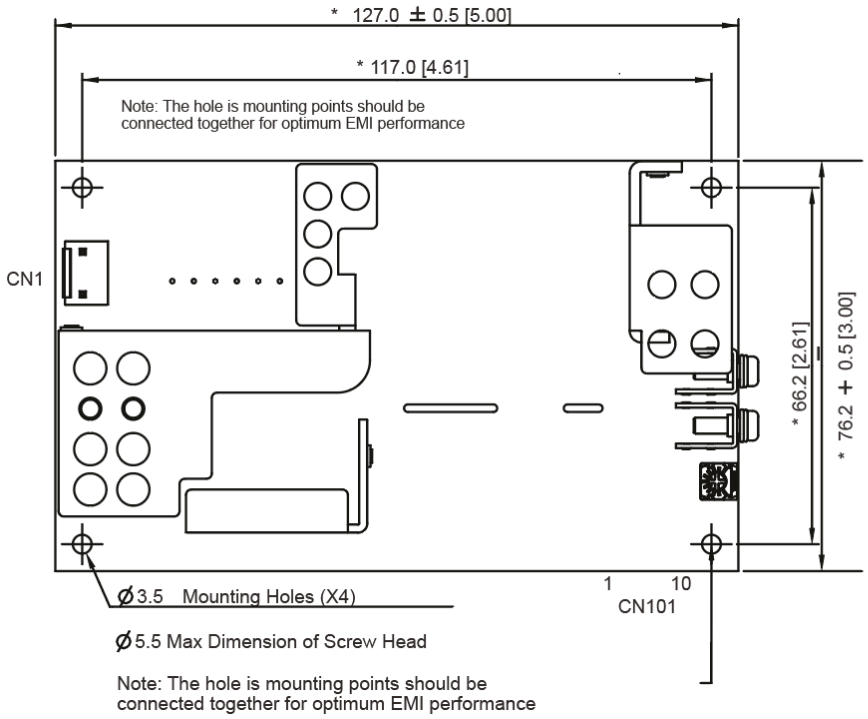
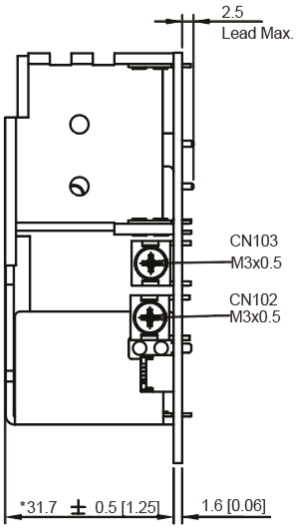
Dimensions

L x W x H: 127 x 76.2 x 35.8 mm [5.00 x 3.00 x 1.41 inch]



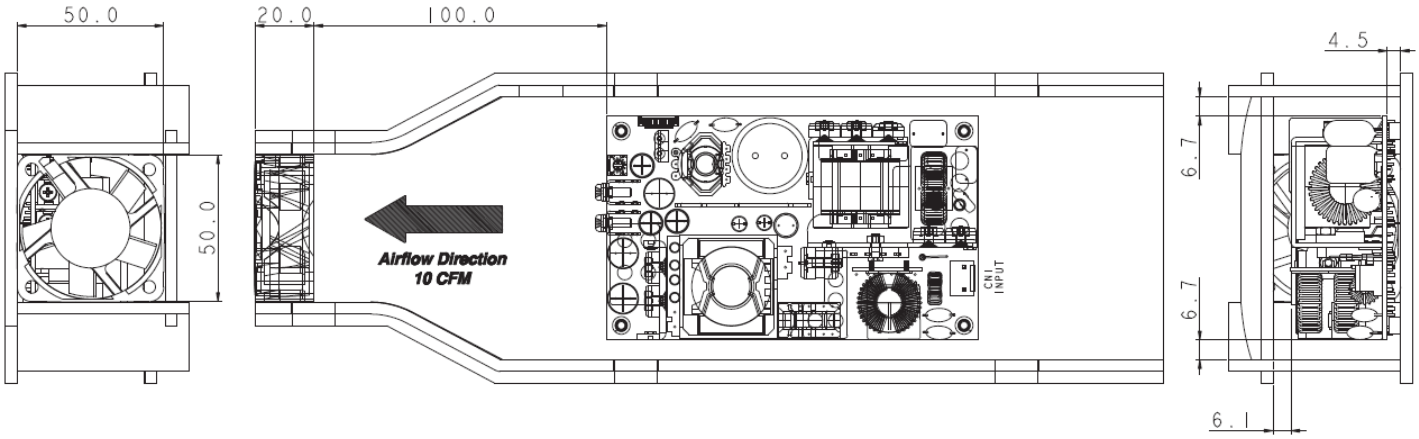


Designation	Device Description
CN1	Input Connector Pin 1: Neutral Pin 2: Line
CN101	Control and V_{SB} Connector Pin 1: GND Pin 2: $5V_{SB}$ (for PJH-300WBB☐) $12V_{SB}$ (for PJH-300WBC☐) Pin 3: GND Pin 4: $5V_{SB}$ (for PJH-300WBB☐) $12V_{SB}$ (for PJH-300WBC☐) Pin 5: GND Pin 6: Remote On/Off Pin 7: GND Pin 8: Power Good Pin 9: Remote Sense of V1(-) Pin 10: Remote Sense of V1(+)
CN102	Output Connector: V1(+)
CN103	Output Connector: GND

PJH Open Frame Power Supply
PJH-300W series / PJH-□V300WB□□

Engineering Data

Installation of Forced Air



**Unit: mm

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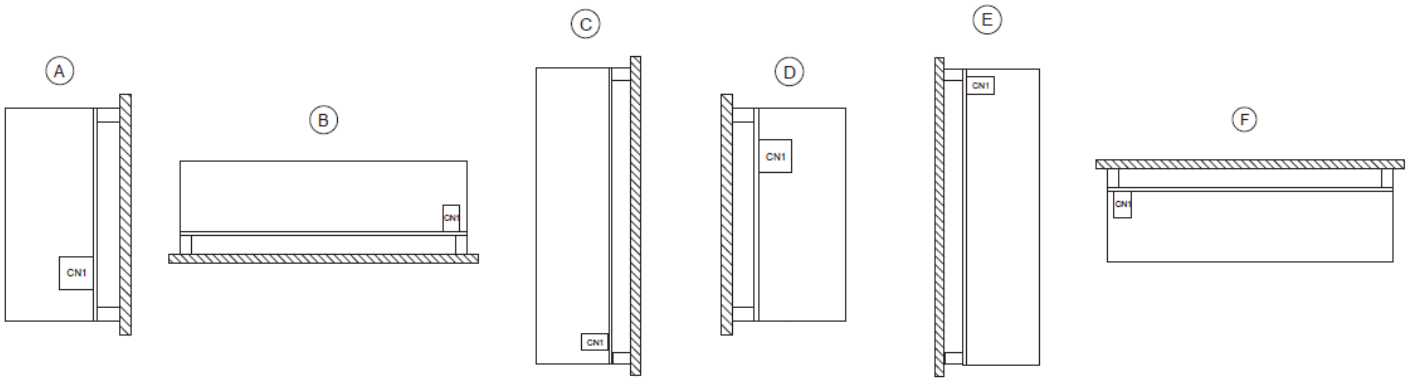
Mounting Orientation



Output Load De-rating VS Surrounding Air Temperature

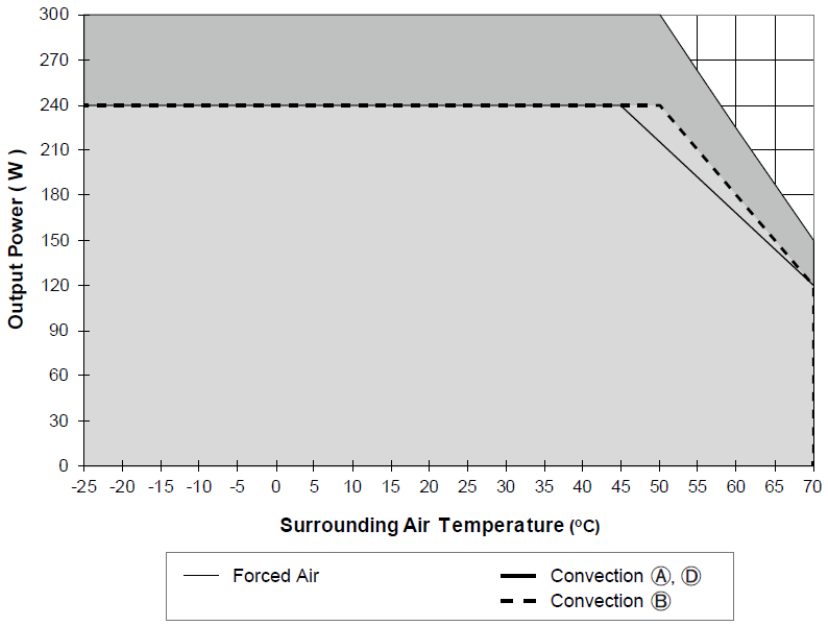


Fig. 1 De-rating for All Recommended Mounting Orientation

Note

1. Power supply components may degrade, or be damaged, when the power supply is continuously used outside the shaded region, refer to the graph shown in Fig. 1.
2. If the output capacity is not reduced when the surrounding air temperature exceeds its specification as defined on Page 3 under “Environment”, the device will run into Over Temperature Protection. When activated, power supply will latch, until the surrounding air temperature is lowered or the load is reduced as far as necessary to keep the device in working condition, and require removal/re-application of input AC voltage in order to restart.
3. In order for the device to function in the manner intended, it is also necessary to keep a safety distance as recommended in the safety instructions while the device is in operation.
4. Depending on the surrounding air temperature and output load delivered by the power supply, the device can be very hot!

Temperature	Power De-rating	PJH-☐V300WBB☐	PJH-☐V300WBC☐
Fan cool (All orientation)	> 50°C de-rate power by 7.5 W / °C (300 W @ 50°C, 225 W @ 60°C, 150 W @ 70°C with 10 CFM fan cool)	V1 = 300 W,5 V/1.2 A V1 = 150 W, 5 V/0 A	V1 = 300 W, 12 V/0.5 A V1 = 150 W, 12 V/0 A
Convection (Orientation Ⓐ,Ⓑ,Ⓓ only)	**Orientation Ⓐ,Ⓓ** > 45°C de-rate power by 4.6W / °C (240 W @ 45°C, 171 W @ 60°C, 125 W @ 70°C) Ensure sufficient convection cooling always maintain a distance of ≥ 30mm below the device while the device is in operation. **Orientation Ⓑ** > 50°C de-rate power by 5.75 W / °C (240 W @ 50°C, 182.5 W @ 60°C, 125 W @ 70° C)	**Orientation Ⓐ,Ⓑ,Ⓓ** V1 = 240 W, 5 V/0.6 A V1 = 125 W, 5 V/0 A	**Orientation Ⓐ,Ⓑ,Ⓓ** V1 = 240 W, 12 V/0.25 A V1 = 125 W, 12 V/0 A

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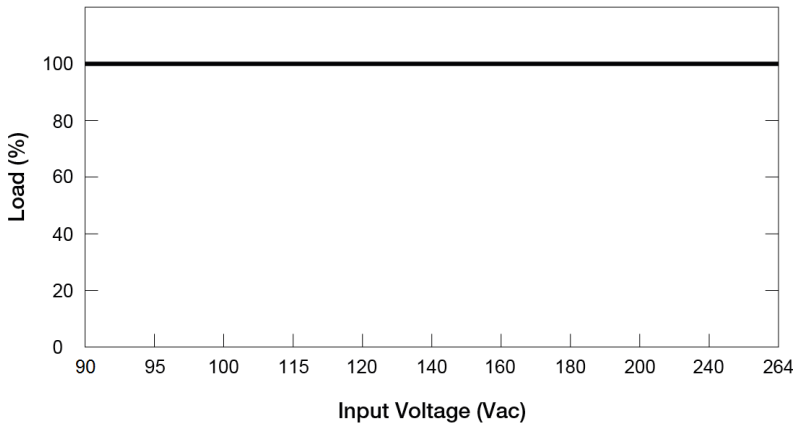
Output Load De-rating VS Input Voltage



- No output power de-rating across the entire input voltage range

PJH Open Frame Power Supply
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Assembly & Installation

Ⓐ Mounting holes for the open frame type of power supply[1)].
Ⓑ Mounting holes should be connected to the system's protective earth (PE) for Class I or functional ground (FG) for Class II[1)].
Ⓒ This surface belongs to customer's end system or panel where the power supply is mounted.

1) Note: 4 x Ø3.5 mounting holes; Ø5.5 max dimension of screw head. Recommended mounting torque for tightening: 4-8Kgf.cm.

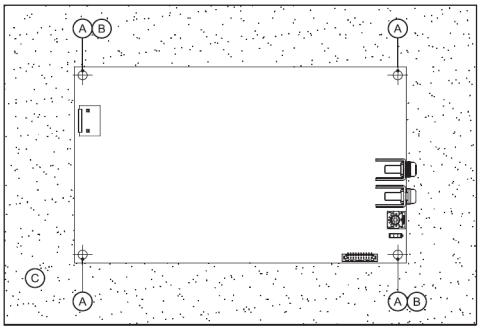

Fig. 2 Installation of the Device

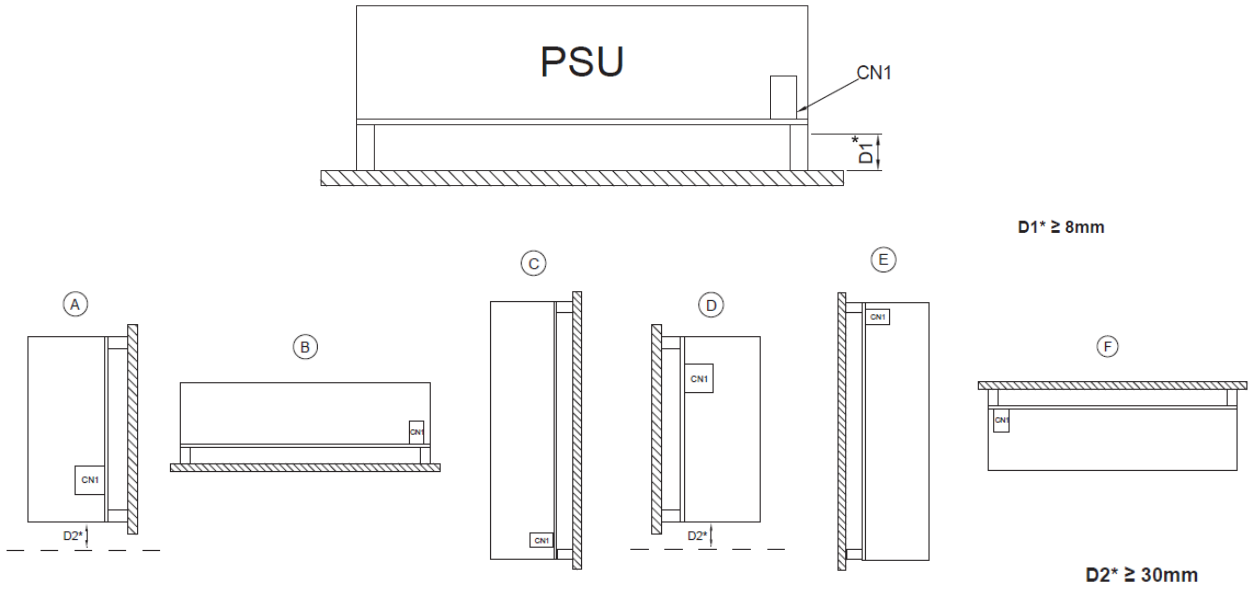

Fig. 3 Assembly Reference

- Any excessive twisting or bending may damage the device's PCB. Please handle the device with care.
- Please refer to Table 1 for the recommended Mating Connector, Terminal and AWG wire size.

Table 1

		Power Supply Header	Mating Connector	Terminal	AWG
Input (CN1)	**JST**	B2P3-VH(LF)(SN)	VHR-3N	SVH-21T-P1.1	18
Standby (CN101)		BM10B-SRSS-TB(LF)(SN)	SHR-10V-S	SSH-003T-P0.2	32-28
Input (CN1)	**Molex**	26-62-4030	26-03-3031	6838 Series	18
Standby (CN101)		104141-1010	104142-1000	104539-8002	32-30
Input (CN1)	**JWT**	A3963WV2-3P-D	A3963H02-3P	A3963T0P-2	18
Standby (CN101)		A1002WV0-10PS-5E	A1002H00-10P-66	A1002TOP-2	36-28

PJH Open Frame Power Supply
PJH-300W series / PJH-□V300WB□□

Safety Instructions

- The device is not recommended to be placed on low thermal conductive surface, for example, plastics.
- Please insert an insulation sheet between the system and product, if the safety distance is < 8 mm (0.31 inch) for D1 (Refer to Fig. 3 Assembly Reference)
- For Ⓐ, Ⓓ orientations, ensure sufficient convection cooling, always maintain a distance of ≥ 30 mm (1.18 inch) for D2 below the device while the device is in operation.
- Installation of forced air, to ensure sufficient air flow, always maintain a distance and air flow direction as recommended in page 8 while the device is in operation.
- Note that the device can become very hot depending on the ambient temperature and load of the power supply. Do not touch the device while it is in operation or immediately after power is turned OFF. Risk of burning!
- Do not touch the terminals while power is being supplied. Risk of electric shock.
- Prevent any foreign metal, particles or conductors to enter the device through the openings during installation. It can cause: Electric shock; Safety Hazard; Fire; Product failure.
- For Protection against shock to Class I with PE (protection earth) and Class II with or without FG (functional ground) product, the two mounting holes (marked Ⓑ in Fig. 2) need to be connected together to the system's protective earth or functional ground. Pollution degree and EMC performance with different connections please refer to environment and EMC section.
- Warning: The power supply must be mounted by metal screws onto a grounded metal surface. It is highly recommended that the Earth terminal on the connector be connected to the grounded metal surface.

External Input Protection Device

The unit is protected at the L pin, with an internal fuse that cannot be replaced. The power supply has been tested and approved on 20A (UL) and 16A (IEC) branch circuits without additional protection device. An external protection device is only required if the supplying branch has an ampacity greater than above. Thus, if an external protective device is necessary, or, utilized, a minimum value of 10A B- or 6A C- characteristic breaker should be used.

PJH Open Frame Power Supply
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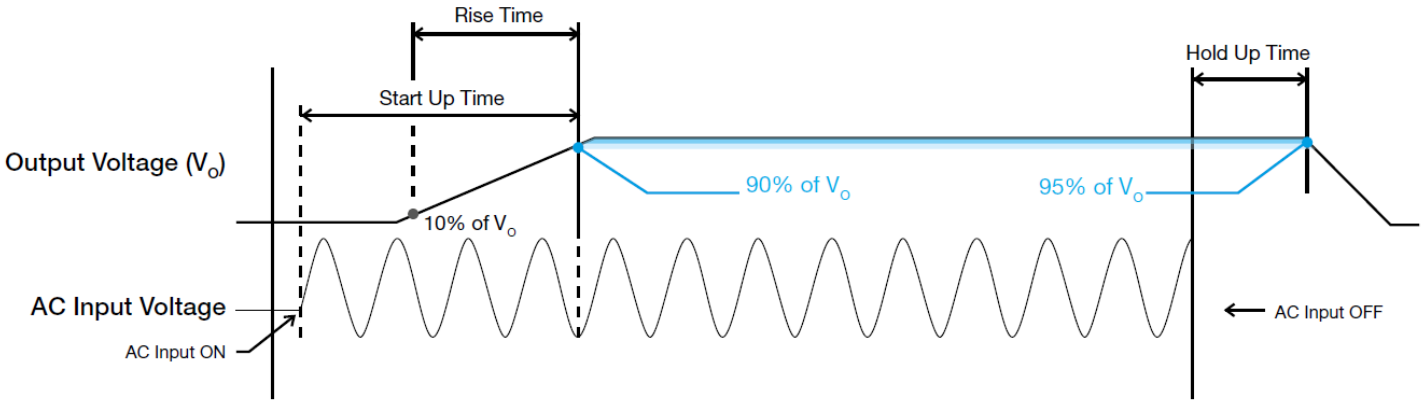
Functions

■ **Graph illustrating the Start-up Time, Rise Time, and Hold-up Time**



Start-up Time

The time required for the output voltage to reach 90% of its final steady state set value, after the input voltage is applied.

Rise Time

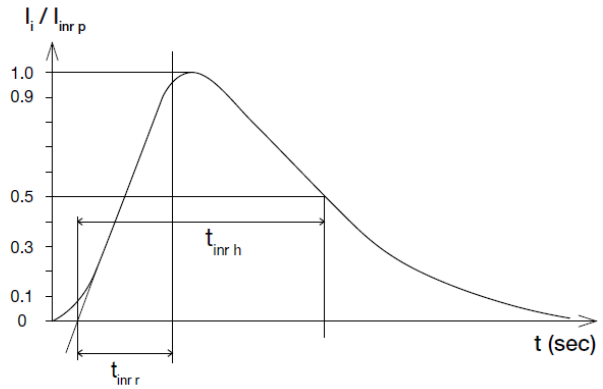
The time required for the output voltage to change from 10% to 90% of its final steady state set value.

Hold-up Time

Time between the collapse of the AC input voltage, and the output falling to 95% of its steady state set value.

Inrush Current

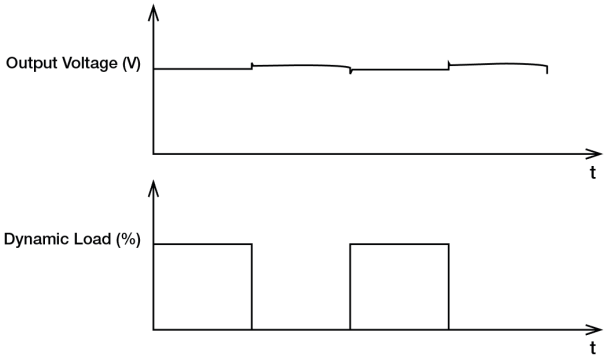
Inrush current is the peak, instantaneous, input current measured and, occurs when the input voltage is first applied. For AC input voltages, the maximum peak value of inrush current will occur during the first half cycle of the applied AC voltage. This peak value decreases exponentially during subsequent cycles of AC voltage.



Dynamic Response

The power supply output voltage will remains within ±5% of its steady state value, when subjected to a dynamic load from 10% to 100% of its rated current.

■ **50% duty cycle / 5 Hz to 1 KHz**



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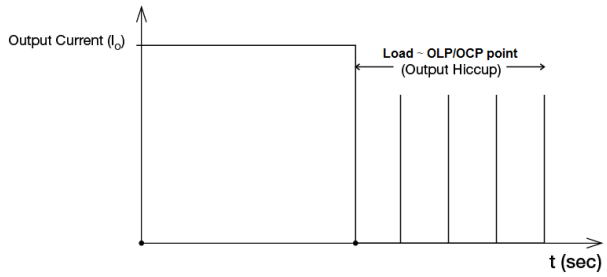
Overload & Overcurrent Protections (Auto-Recovery)

The power supply's Overload (OLP) and Overcurrent (OCP) Protections will be activated when either output's current (I_O) exceeds its specification as defined on Page 4 under "Protections". In such occurrence, the output voltage (V_O) will start to droop and once the power supply has reached its maximum power limit, the protection is activated and the power supply will go into "Hiccup mode" (Auto-Recovery). The power supply will recover once the fault condition of the OLP and OCP is removed and I_O is back within the specifications.



It is not recommended to prolong the duration of I_O when it is less than OLP/OCP point, but greater than 100%, since such an overload condition may cause damage to the PSU.

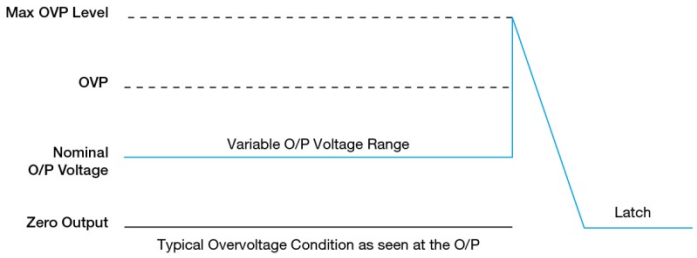
Short Circuit Protection (Auto-Recovery)

The power supply's output OLP/OCP function also provides protection against short circuits. When a short circuit is applied, the output current will operate in "Hiccup mode", as shown in the illustration in the OLP/OCP section on this page. The power supply will return to normal operation after the short circuit is removed.

Overvoltage Protection (Latch Mode)

The power supply's overvoltage protection circuit will be activated when its internal feedback circuit fails. The output voltage shall not exceed its specifications defined on Page 4 under "Protections". Power supply will latch off, and require removal/re-application of input AC voltage in order to restart.

The power supply should be latch



Over Temperature Protection (Latch Mode)

As described in load de-rating section, the power supply also has Over Temperature Protection (OTP). In the event of a higher operating temperature at 100% load; or, when the operating temperature is beyond what is recommended in the de-rating graph, the OTP circuit will be activated. When activated, power supply will latch off, until the surrounding air temperature drops to its normal operating temperature or the load is reduced as recommended in the de-rating graph. Removal/re-application of input AC voltage will then be required in order to restart.

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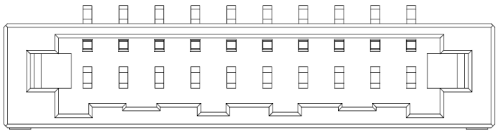
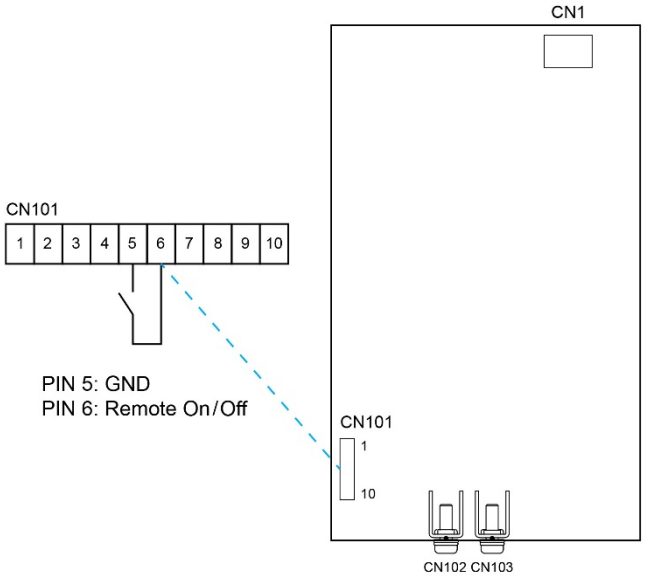


Fig. 4 Pin Assignment of CN101

Designation	Device Description	
CN101	Pin 1: GND Pin 2: 5 V_{SB} (for PJH-300WBB☐) 12 V_{SB} (for PJH-300WBC☐) Pin 3: GND Pin 4: 5 V_{SB} (for PJH-300WBB☐) 12 V_{SB} (for PJH-300WBC☐)	Pin 5: GND Pin 6: Remote On/Off Pin 7: GND Pin 8: Power Good Pin 9: Remote Sense of V1(-) Pin 10: Remote Sense of V1(+)

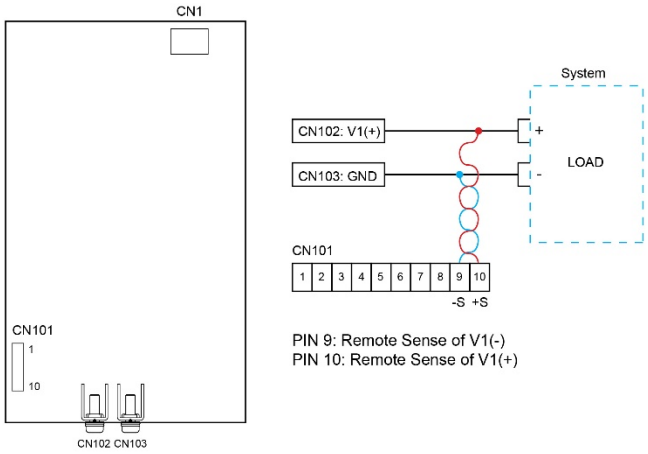
Remote On/Off

The Remote On/Off function can be enabling or disable the main output V1 only. Once the pin 6 (Remote On/Off pin) at CN101 pulled down to a low level of 0.3 volts, or shorted to GND (DC-Return), it will be disable V1; and, floated (no connection to the Remote On/Off pin), or pulled up to a value greater than or equal to 3 volts in order to enable the main output V1. When the V1 is disabled, the V_{SB} will still continuously operate.



Remote Sense

Remote sense feature can be used to compensate for the extra voltage drop on output wires that are connected from the main output terminals, to the load. With wires connected from the remote sense pin 9 and 10 at CN101, at the same locations as the wires from the main output, the remote sense function can compensate up to 500mV voltage drop. The power supply will not be damaged if the remote sense pins are shorted, or if a reverse/inverted polarity connection is made to the load. To use this function, the twisted pair of the Remote Sense pins are recommended.



All parameters are specified at 25°C ambient and AC input unless otherwise indicated.
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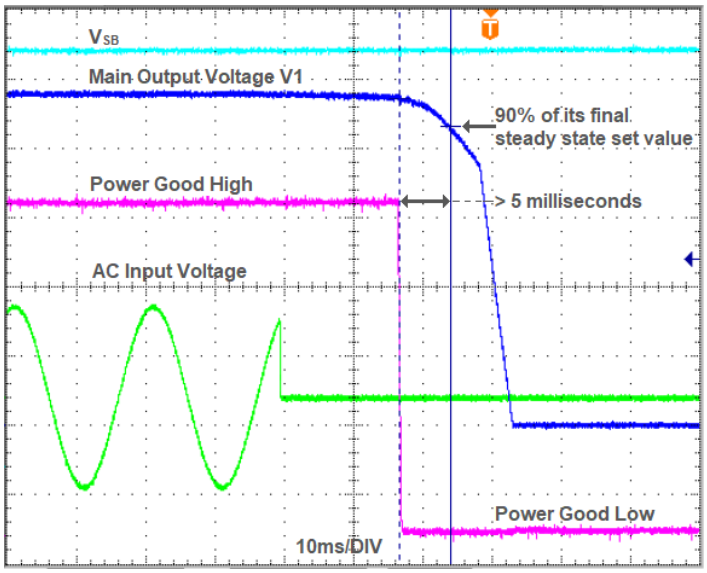
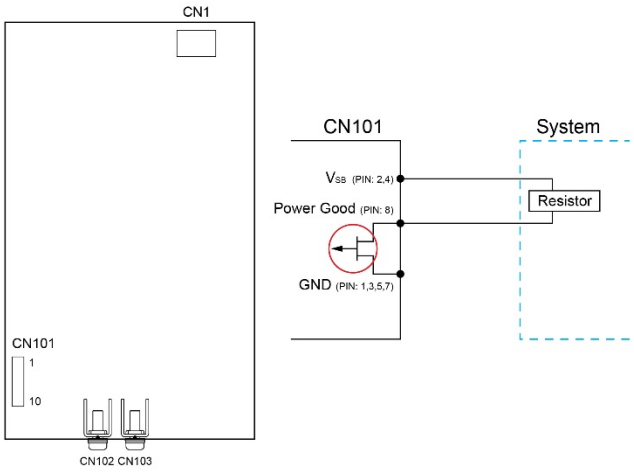
Power Good

Power Good pin 8 at CN101 is an open collector transistor. A pull-up resistor (suggested value 10 Kohm, 1/8 W) can be added between V_{SB} pin 2 or pin 4 at CN101 and the Power Good pin 8 (refer to figure below). When AC input is ON, Power Good pin will be high. When AC input is OFF, Power Good pin will be low. There will be a minimum of 5 milliseconds (typical 7-10 milliseconds) at 240 W load between the time the power good goes to low level, and the time when the output reaches 90% of its final steady state set value.





All parameters are specified at 25°C ambient and AC input unless otherwise indicated.
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Others

PFC – Norm EN 61000-3-2

Line Current Harmonic content

Typically, the input current waveform is not sinusoidal due to the periodical peak charging of the input capacitor. In industrial environment, complying with EN 61000-3-2 is only necessary under special conditions. Complying to this standard can have some technical drawbacks, such as lower efficiency as well as some commercial aspects such as higher purchasing costs. Frequently, the user does not profit from fulfilling this standard, therefore, it is important to know whether it is mandatory to meet this standard for a specific application.

Attention

Delta provides all information in the datasheets on an “AS IS” basis and does not offer any kind of warranty through the information for using the product. In the event of any discrepancy between the information in the catalog and datasheets, the datasheets shall prevail (please refer to www.DeltaPSU.com for the latest datasheets information). Delta shall have no liability of indemnification for any claim or action arising from any error for the provided information in the datasheets. Customer shall take its responsibility for evaluation of using the product before placing an order with Delta.

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