

# ABC601 Series

## 600 W AC-DC Power Supplies

The ABC601 Series of industrial and medical AC-DC power supplies provides up to 600 W of regulated output power through wide input voltage range 85 – 305 VAC in single outputs of 24, 28, 36 or 48 VDC.

The ABC601 Series comes in two packages, U-frame chassis or enclosed with a front mounted fan, offering 12 and 5 VSB standby outputs and a full set of protection features.

The ABC601 Series features a built-in I-share circuit for parallel operation between power units to enhance total power. An optional OR-ing external circuit can be provided for N+1 redundant operation.

The ABC601 Series complies with the latest international safety standards for IT and medical equipment and displays the CE-Mark for the European Low Voltage Directive (LVD).



### Key Features & Benefits

- Universal input voltage range (85 – 305 VAC)
- Input surge current limiting
- 800 W peak power (up to 10 s)
- High efficiency up to 94%
- 24, 28, 36 and 48 VDC standard output voltages
- Low stand-by consumption (<0.35 W)
- Active PFC, EN 61000-3-2 compliant (Class C, >25% load)
- Low earth / touch leakage current
- Fan speed control circuit
- Over temperature, OV, OC and SC protections.
- Stand by +5 V, 1.5 A and auxiliary / fan 12 VDC, 1 A outputs
- Built-in current share signal for parallel operation
- Remote On / Off signal
- Power good and remote sense signals
- Medical safety approval to IEC 60601-1, 2x MoPP protection grade  
BF appliances compatible
- IEC 60601-1-2 4th edition EMC compliant
- IEC 62368-1 standards for Audio Video & IT equipment
- LED lighting approval to UL 8750
- RoHS 3 compliant (Directive EU 2015/863)



### Applications

- Video Wall Display and SSL Lighting
- Industrial Process Control and Automation
- Telecommunications
- Laboratory / Analysis Equipment
- Test and Measurement Equipment
- Medical Applications



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## 1. MODEL SELECTION

MODEL NUMBER	PACKAGE & COOLING	INPUT VOLTAGE RANGE [VAC]	NOM. OUTPUT VOLTAGE [VDC]	MAX. OUTPUT POWER [W]	MAX. OUTPUT CURRENT [A]	DIMENSIONS
ABC601-1T24-S	Enclosed Front Mounted Fan	85 - 305	24	600	25	107.0 x 206.0 x 41.0 mm 4.21 x 8.11 x 1.6 in
ABC601-1T24	U-Chassis Convection / Forced Air	85 - 305	24	600	25	107.0 x 178.5 x 41.0 mm 4.21 x 7.03 x 1.61 in
ABC601-1T28-S	Enclosed Front Mounted Fan	85 - 305	28	600	21.4	107.0 x 206.0 x 41.0 mm 4.21 x 8.11 x 1.6 in
ABC601-1T28	U-Chassis Convection / Forced Air	85 - 305	28	600	21.4	107.0 x 178.5 x 41.0 mm 4.21 x 7.03 x 1.61 in
ABC601-1T36-S	Enclosed Front Mounted Fan	85 - 305	36	600	16.7	107.0 x 206.0 x 41.0 mm 4.21 x 8.11 x 1.6 in
ABC601-1T36	U-Chassis Convection / Forced Air	85 - 305	36	600	16.7	107.0 x 178.5 x 41.0 mm 4.21 x 7.03 x 1.61 in
ABC601-1T48-S	Enclosed Front Mounted Fan	85 - 305	48	600	12.5	107.0 x 206.0 x 41.0 mm 4.21 x 8.11 x 1.6 in
ABC601-1T48	U-Chassis Convection / Forced Air	85 - 305	48	600	12.5	107.0 x 178.5 x 41.0 mm 4.21 x 7.03 x 1.61 in

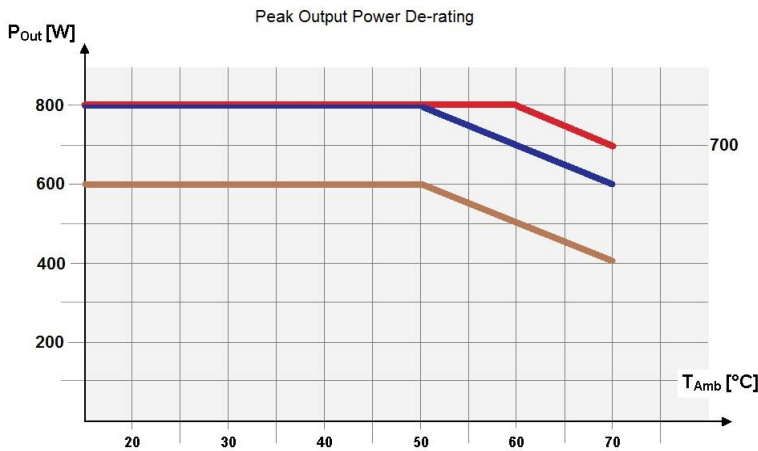
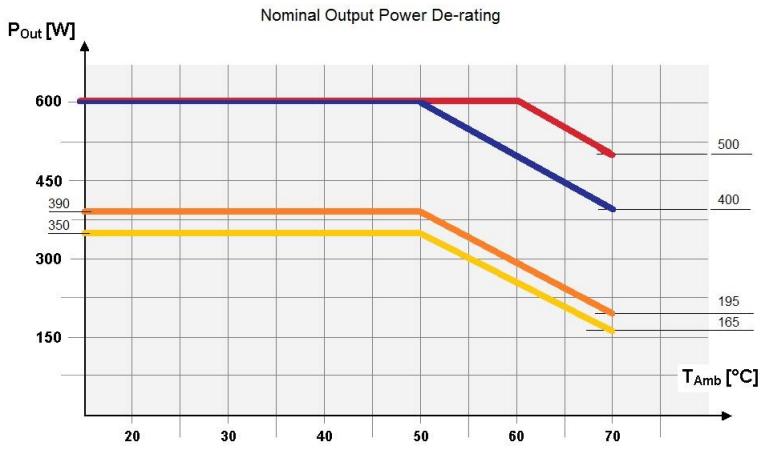
## 2. INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT	
AC Input Voltage	PS starts and operates at 85 V <sub>AC</sub> at all load conditions	85	100-277	305	V <sub>RMS</sub>	
DC Input Voltage		170	-	300	V <sub>DC</sub>	
Input Frequency	440 Hz with reduced PFC and output power rating. Consult factory for details.	47	50/60	440	Hz	
Input Current	RMS at 180 V <sub>AC</sub> , maximum load, 50 / 60 Hz RMS at 85 V <sub>AC</sub> , maximum load, 50 / 60 Hz	-	-	4.0 8.5	A	
Inrush Current	Cold start, 25 °C ambient, full load	115 V <sub>AC</sub> 230 V <sub>AC</sub>	-	-	20 30	A
Fusing	High breaking, 10 A, 250 V on each AC lines.	-	-	10	A	
Efficiency	At 115 V <sub>AC</sub>	20% rated load	89	-	-	%
		50% rated load	93	-	-	
		100% rated load	92	-	-	
	At 230 / 277 V <sub>AC</sub>	20% rated load	90	-	-	
	50% rated load	94	-	-		
	100% rated load	94	-	-		
Input Power Consumption	Power on, 115 V <sub>AC</sub> , no load	-	-	5	W	
	Power on, 230 V <sub>AC</sub> , no load	-	-	4		
	Stand by, 115, 230 V <sub>AC</sub> , no load	-	-	0.35		
Power Factor	From 50 to 100% of rated load, 230, 115 V <sub>AC</sub> , 50 / 60 Hz input voltages.	0.90	-	-	-	
THDi	From 50 to 100% rated load, 115, 230, 277 V <sub>AC</sub> 50 / 60 Hz.	-	-	20	%	
Harmonic Current Fluctuations and Flicker	Complies with EN 61000-3-2 at 230 V <sub>AC</sub> , 50/60 Hz, Class A, D. Complies with EN 61000-3-2 Class C at 230 V <sub>AC</sub> , 50/60 Hz, >150 W load. Complies with EN 61000-3-3 at nominal voltages and full load.					
Earth Leakage Current	Normal conditions					
	115 V <sub>RMS</sub> , 60 Hz	-	130	-	μA	
	230 V <sub>RMS</sub> , 50 Hz	-	240	-		
	264 V <sub>RMS</sub> , 60 Hz (worst case)	-	-	400		
277 V <sub>RMS</sub> , 60 Hz	-	-	-			
Touch Leakage Current	264 V <sub>RMS</sub> , 60 Hz					
	Normal Condition (NC)	-	-	100	μA	
	Single Fault Condition (SFC)	-	-	500		
Patient Leakage Current	264 V <sub>RMS</sub> , 60 Hz					
	Normal Condition (NC)	-	-	100	μA	
	Single Fault Condition (SFC)	-	-	500		

## 3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
V1 Output Voltages	±0.5% set point accuracy RS+ closed on +V1, RS- closed on V1 RTN, at 20% load.	-	24 28 36 48	-	V
V1 Output Power Rating	Convection cooling (Refer to the de-rating curves below) Forced air cooling Refer to the de-rating curves below) Peak (less than 10 s, after P_OK high)			400 600 800	W
V1 Output Current	V1: 24 V <sub>DC</sub> V1: 28 V <sub>DC</sub> V1: 36 V <sub>DC</sub> V1: 48 V <sub>DC</sub>			25.0 21.4 16.7 12.5	A
V1 Voltage Adjustment Range	Manually by potentiometer	-	-	±5	%V1
V1 Line Regulation	V <sub>AC</sub> : 85 – 305 V <sub>RMS</sub>	-	-	±0.1	%V1
V1 Load-Line-Cross Regulation	V <sub>AC</sub> : 85 – 305 V <sub>RMS</sub> ; I <sub>1</sub> : 0 – 100%	-	-	±2	%V1
V1 Ripple and Noise	Rated load, Peak-to-peak, 20 MHz BW. (100 nF ceramic, 10 µF tantalum at load) * 25% load changes at 1 A/µs	-	-	1	%V1
Transient Response: V1, 5V <sub>SB</sub> Voltage Deviation	24 V at 1000 µF load / I <sub>OUT</sub> > 2.5 A 28 V at 1000 µF load / I <sub>OUT</sub> > 2.5 A 36 V at 680 µF load / I <sub>OUT</sub> > 1.9 A 48 V at 560 µF load / I <sub>OUT</sub> > 1.25 A 5 V <sub>SB</sub> at 560 µF load / I <sub>OUT</sub> > 0.1 A	-	-	±5	%V1 %V <sub>SB</sub>
V1 Start-up Rise Time	85<V <sub>IN</sub> <305, any load conditions.	10	-	100	ms
V1 Hold-up Time	At nominal V <sub>IN</sub> , full load **	16	-	-	ms
V1 Current Sharing Accuracy	Two units in parallel at I <sub>1</sub> rated load. VS-Logic and I-Share signals connected together. RS+, RS- signals connected together and to the load	45.5	-	54.5	%I <sub>1</sub>
Start-up Delay	V1 in regulation after de-asserting PS_Inhibit V1 in regulation after AC is applied (worst case: 85 V <sub>AC</sub> ) 5 V <sub>SB</sub> in regulation after AC is applied (worst case: 85 V <sub>AC</sub> )	-	-	450 2050 1500	ms
Turn-on Overshoot		-	-	10 10	%V1 %V <sub>SB</sub>
Minimum Load	V1, V2, 5V <sub>SB</sub>	0	-	-	A
Maximum Load Capacitance		V1: 24 V <sub>DC</sub> V1: 28 V <sub>DC</sub> V1: 36 V <sub>DC</sub> V1: 48 V <sub>DC</sub>	- - - -	16000 15000 12000 8000	µF
V2 Output Voltage	V1 at nominal voltage	10.5	12.25	14.00	V
V2 Output Current	Convection / forced air cooling	-	-	1	A
5 V <sub>SB</sub> Output Voltage	±3% set point accuracy, 20% load.	-	5	-	V
5 V <sub>SB</sub> Output Current	Front Mounted Fan models (-S) U-Chassis models	-	-	1.5 1.2	A
5 V <sub>SB</sub> Load, line cross Regulation	V <sub>AC</sub> : 85 – 305 V <sub>RMS</sub> ; I <sub>SB</sub> : 0 – 100%	-	-	±5	%V <sub>SB</sub>

## 3.1 OUTPUT POWER DE-RATING CURVES



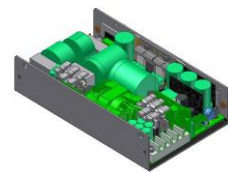
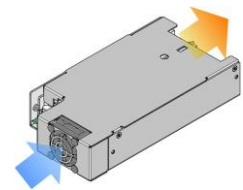
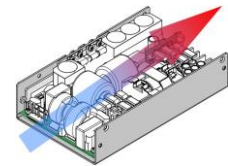
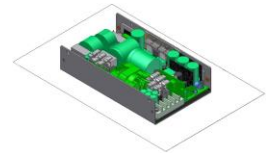
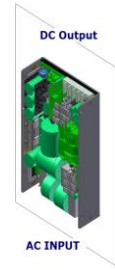
Natural Convection  
U-Chassis Models  
Vertical Mounting  
180 – 305 V<sub>AC</sub>

Natural Convection  
U-Chassis Models  
Horizontal Mounting  
180 – 305 V<sub>AC</sub>

Forced Air Cooling  
U-Chassis Models  
>500 LFM  
At 180 – 305 V<sub>AC</sub>  
>600 LFM  
At 85 – 180 V<sub>AC</sub>

Enclosed Front Mounted  
Fan Models  
85 – 305 V<sub>AC</sub>

Natural Convection  
Any Orientation  
85 – 305 V<sub>AC</sub>



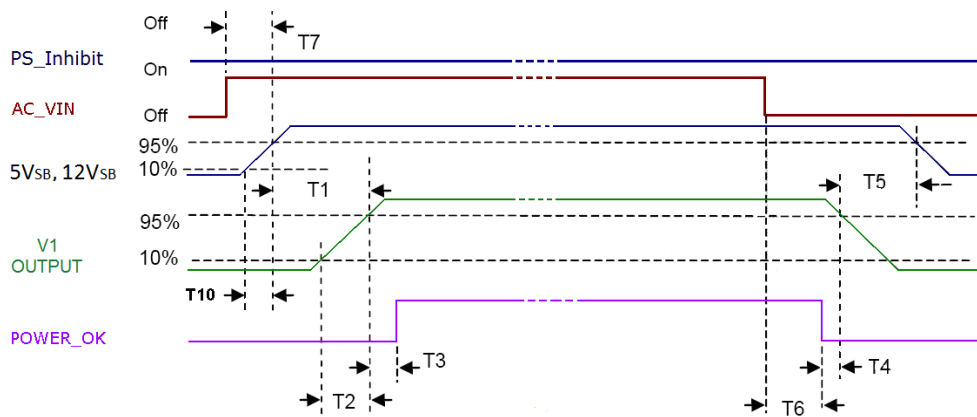
## 4. SIGNALS, CONTROLS & TIMING SPECIFICATIONS

Base signals and controls are accessible from signal connector P204.

SIGNAL	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
+PS_Inhibit	Active high. Input low voltage	0	-	1.5	V
	Input high voltage ( $I_{IN} = 300 \mu A$ )	3.5	-	5.5	V
	V1 and V2 disabled when PS_Inhibit is pulled high 5V <sub>SB</sub> not affected by PS_Inhibit				
-PS_Inhibit	V1 and V2 enabled when PS_Inhibit is open or low Active low (reverse control, same voltage levels)				
P_OK *	Logic level low (<10 mA sinking)	-	-	0.7	V
	Logic level high (100 $\mu A$ sourcing)	2.4	-	5.5	V
	Low to high time after V1 in regulation	40	-	350	ms
	Power down warning time	1	-	-	ms
5V <sub>SB</sub> Output	Active and in regulation after a $85 < V_{AC} < 305$ is applied	-	-	1500	ms
	5V <sub>SB</sub> not affected by PS_Inhibit				

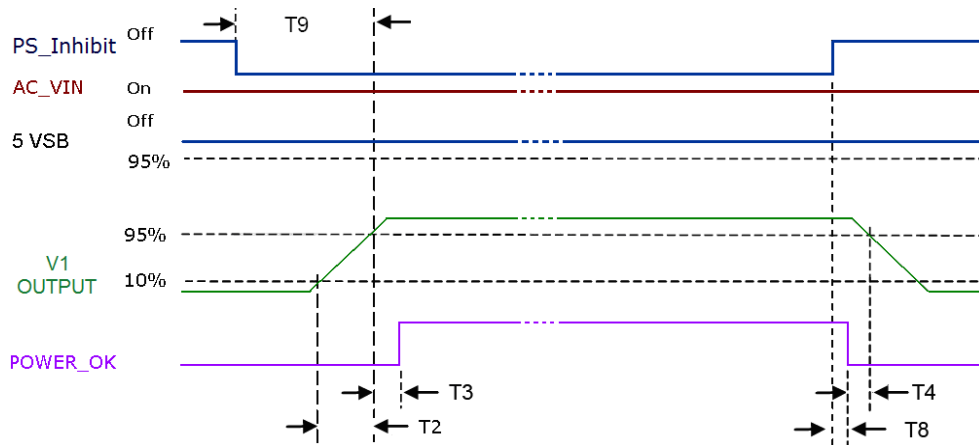
\* When V1 is On, a P\_OK low may indicates V1 under voltage condition. When two ABC601 operate in parallel, P\_OK low in one unit indicates that it is not sharing the expected amount of current (current sharing fault). A 10 k $\Omega$  internal pull up to 5V<sub>SB</sub> is used; do not add any other external pull up.

### AC/DC INPUT OFF-TO-ON AND ON-TO-OFF TIMINGS



5V <sub>SB</sub> On – V1 On	$250 \text{ ms} \leq T1 \leq 550 \text{ ms}$
V1 rise time	$10 \text{ ms} \leq T2 \leq 100 \text{ ms}$
5V <sub>SB</sub> rise time	$3 \text{ ms} \leq T10 \leq 40 \text{ ms}$
V1 On – POWER_OK delay	$200 \text{ ms} \leq T3 \leq 350 \text{ ms}$
Power down warning	$T4 \geq 1 \text{ ms}$
V1 Off – 5V <sub>SB</sub> Off	$T5 \geq 0.5 \text{ s (V1 load > 25 W)}$
AC Off – POWER_OK low	$T6 \geq 15 \text{ ms}$
AC_On – 5V <sub>SB</sub> turn on time	$T7 \leq 1.5 \text{ s}$

**PS\_INHIBIT OFF-TO-ON AND ON-TO-OFF TIMINGS**



V1 rise time	$10\text{ ms} \leq T2 \leq 100\text{ ms}$
V1 On - POWER_OK delay	$200\text{ ms} \leq T3 \leq 350\text{ ms}$
Power down warning	$T4 \geq 1\text{ ms}$
PS_Inhibit - POWER_OK low timing	$T8 \leq 2\text{ ms}$
PS_Inhibit - V1 On delay	$T9 \leq 450\text{ ms}$

## 5. PROTECTION SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Input Under Voltage	Auto-recovering, hiccup mode.	58	65	75	V <sub>AC</sub>
Input Fuse	High breaking, 10 A, 250 V on L and L1.	-	-	10	A
Over Current	At nominal input voltages				
	V1: Hiccup mode, auto-recovering (>10 s)	108	-	132	%I <sub>Rated</sub>
	V1: Hiccup mode, auto-recovering (<10 s)	135	-	163	%I <sub>Rated</sub>
	V2: PTC limiting, auto-recovering.	-	-	-	
5V <sub>SB</sub> : Hiccup mode, auto-recovering:	U-Chassis models	1.3	-	3.6	A
	Front Mounted Fan models (-S)	1.6	-	3.6	A
Short Circuit	At nominal input voltages				
	V1: Hiccup mode, auto-recovering.	-	-	-	
	V2: PTC limiting, auto-recovering.	-	-	-	
	5V <sub>SB</sub> : Hiccup mode, auto-recovering.	-	-	-	
Over Voltage	V1, Power shut down, latch off.	120	-	145	%V <sub>NOM</sub>
	5V <sub>SB</sub> , Hiccup mode, auto-recovering.	-	-	150	
Over Temperature (on primary stage)	Shut down, latch off.	-	-	-	°C
Over Temperature (on secondary side)	Hiccup mode, auto-recovering.	-	-	-	°C
Isolation: Input-to-Output	Reinforced (2x MoPP).	5660	-	-	V <sub>DC</sub>
	Production tested at 4242 V <sub>DC</sub>	4000	-	-	V <sub>AC</sub>
Isolation: Input-to-Earth	Basic (1x MoPP)	2121	-	-	V <sub>DC</sub>
	Production tested at 2121 V <sub>DC</sub>	1500	-	-	V <sub>AC</sub>
Isolation: V1/5V <sub>SB</sub> to V2	Basic	100	-	-	V <sub>AC</sub>
Isolation: Output-to-Earth	Basic (1x MoPP)	1500	-	-	V <sub>AC</sub>
Means of Protection:	2x MoPP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 250 V <sub>AC</sub> , 50/60 Hz up to 4000 m				
Primary to secondary	2x MoPP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 277 V <sub>AC</sub> , 50/60 Hz up to 3000 m				
	2x MoOP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 277 V <sub>AC</sub> , 440 Hz (50/60 Hz)				
Means of Protection:	1x MoPP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 250 V <sub>AC</sub> , 50/60 Hz up to 4000 m				
	1x MoPP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 277 V <sub>AC</sub> , 50/60 Hz up to 3000 m				
Primary to Protection Earth	1x MoOP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 277 V <sub>AC</sub> , 440 Hz (50/60 Hz)				
	1x MoPP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 250 V <sub>AC</sub> , 50/60 Hz up to 4000 m				
Means of Protection:	1x MoPP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 277 V <sub>AC</sub> , 50/60 Hz up to 3000 m (U-chassis variant only)				
	1x MoOP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 277 V <sub>AC</sub> , 440 Hz (U-chassis variant only)				
Secondary to Protection Earth	1x MoOP (IEC 60601-1 3 <sup>rd</sup> edition) at 100 – 277 V <sub>AC</sub> , 440 Hz (U-chassis variant only)				
Equipment Protection Class	Class I, compatible with BF (Body Floating) ME				

## 6. ENVIRONMENTAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature Range	No de-rating up to 50°C	-20	-	50	°C
Operating Temperature Range with Derating	See derating curves & conditions in the Output Specifications section	-	-	70	°C
Storage Temperature	As per IEC/EN 60721-3-1 Class 1K4				
Transportation Temperature	As per IEC/EN 60721-3-2 Class 2K4	-40	-	85	°C
Humidity	RH, Non-condensing Operating.			90	%
	Non-operating			95	%
Operating Altitude	MoPP (100 – 250 V <sub>AC</sub> , 50/60 Hz)			4000	
	MoPP (100 – 277 V <sub>AC</sub> , 50/60 Hz)			3000	
	MoOP, ITE grade			5000	m
	Power de-rating above 1800 m				
Shock	<b>EN 60068-2-27</b>				
	Operating: Half sine, 30 g, 18 ms, 3 axes, 6x each (3 positive and 3 negative). Non-Operating: Half sine, 50 g, 11 ms, 3 axes, 6x each (3 positive and 3 negative).				
Vibration	<b>EN 60068-2-64</b>				
	Operating: Sine, 10 – 500 Hz, 1 g, 3 axes, 1 oct/min., 60 min. Random, 5 – 500 Hz, 0.02 g <sup>2</sup> /Hz, 1 g <sub>RMS</sub> , 3 axes, 30 min. Non-Operating: 5 – 500 Hz, 2.46 g <sub>RMS</sub> (0.0122 g <sup>2</sup> /Hz), 3 axes, 30 min.				
MTBF	Full Load, 40 °C ambient 80% Duty cycle, Telcordia SR-332 Issue 2	300000	-	-	Hours
Useful Life	Nominal V <sub>IN</sub> , 80% load, 40 °C ambient (IPC9592)	-	4	-	Years



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## 7. ELECTROMAGNETIC COMPATIBILITY (EMC) – EMISSIONS

PARAMETER	DESCRIPTION / CONDITION	STANDARD	PERFORMANCE CLASS
Conducted	115, 230, 277 V <sub>RMS</sub> , Maximum load	EN 55032 (ITE) EN 55011 (ISM) EN 60601-1-2 (Medical) FCC Part 15	B
Radiated	At 10 m distance	EN 55032 (ITE) EN 55011 (ISM) EN 60601-1-2 (Medical) FCC Part 15	B *
Line Voltage Fluctuation & Flicker	At 20%, 50% and 100% maximum load. Nominal input voltages	EN 61000-3-3	
Harmonic Current Emission	230 V <sub>AC</sub> input voltage, 50 / 60 Hz 230 V <sub>AC</sub> 50 / 60 Hz, >150 W load	EN 61000-3-2 EN 61000-3-2	A, D C

\* Performance referred to the enclosed package. Radiated emission relevant to the U-Chassis package, should be assessed at system level.

## 8. ELECTROMAGNETIC COMPATIBILITY (EMC) – IMMUNITY

PARAMETER	DESCRIPTION / CONDITION	STANDARD	TEST LEVEL	CRITERIA	
ESD	Reference standard for the medical version	EN 60601-1-2, 4 <sup>th</sup> edition			
	Reference standards for ITE	EN 55024			
	Reference standard for Industrial/IMS equipment	EN 61000-6-2			
ESD	15 kV air discharge, 8 kV contact, at any point of the system.	EN 61000-4-2	4	A	
Radiated Field	10 V/m, 80-1000 MHz, 1 kHz/2 Hz 80% AM. Dwell time is 3 sec for 2 Hz modulation Dwell time is 1 sec for 1 kHz modulation	EN 61000-4-3	3	A	
Electric Fast Transient	±2 kV on AC power port for 1 minute	EN 61000-4-4	3	A	
Surge	±2 kV line to line; ± 4 kV line to earth on AC power port	EN 61000-4-5	4	A	
Conducted RF Immunity	10 V <sub>RMS</sub> , 0.15-80 MHz, 1 kHz, 80% AM	EN 61000-4-6	3	A	
Dips and Interruptions	200 – 277 V <sub>AC</sub> :	Drop-out to 0% for 10 ms	EN61000-4-11	A	
		Dip to 40% for 5 cycles (100 ms)	EN61000-4-11	A	
		Dip to 70% for 25 cycles (500 ms)	EN61000-4-11	A	
		Drop-out to 0% for 5 s	EN61000-4-11	B	
	100 – 127 V <sub>AC</sub> :	Drop-out to 0% for 10 ms	EN 61000-4-11		A
		Dip to 40% for 5 cycles (100 ms) Dip to 70% for 25 cycles (500 ms) Drop-out to 0% for 5 s	EN 61000-4-11 EN 61000-4-11 EN 61000-4-11		A (derate to 150 W) A (derate to 400 W) B

## 9. SAFETY AGENCIES APPROVALS

CERTIFICATION BODY	SAFETY STANDARDS	CATEGORY
CSA/UL	CSA C22.2 No. 60950-1, UL 60950-1 and UL 62368-1	Audio Video and Information Technology Equipment
	CSA C22.2 No.60601-1, ANSI/AAMI ES60601-1 3 <sup>rd</sup> edition + A1 Including Risk Management Assessment	Medical
	UL8750, CSA C22.2 No 250.13	Lighting
IEC IECCE CB Certification	IEC/EN 62368-1	Audio Video and Information Technology Equipment.
	IEC/EN 60601-1 3 <sup>rd</sup> edition+A1 Including Risk Management Assessment	Medical
CE	Directive 2014/35/EU: Electrical Safety: Low Voltage electrical equipment (LVD)	Audio Video and Information Technology Equipment
	Directive 93/42/CEE: Safety Requirement of the Medical Device	Medical
	Directive 2014/30/EU: Electromagnetic Compatibility (EMC)	
	Directive EU 2015/863: RoHS 3	
	Designed to meet IEC/EN/UL/CSA 61010-1 2 <sup>nd</sup> edition	

## 10. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION
Weight	820 g (1.8 lb)
	1055 g (2.32 lb)
Overall Dimensions	107.0 x 178.5 x 41.0 mm (4.21 x 7.03 x 1.61 in)
	107.0 x 206.0 x 41.0 mm (4.21 x 8.11 x 1.61 in)

### 10.1 OUTLINE DRAWING & CONNECTIONS – U-CHASSIS MODELS

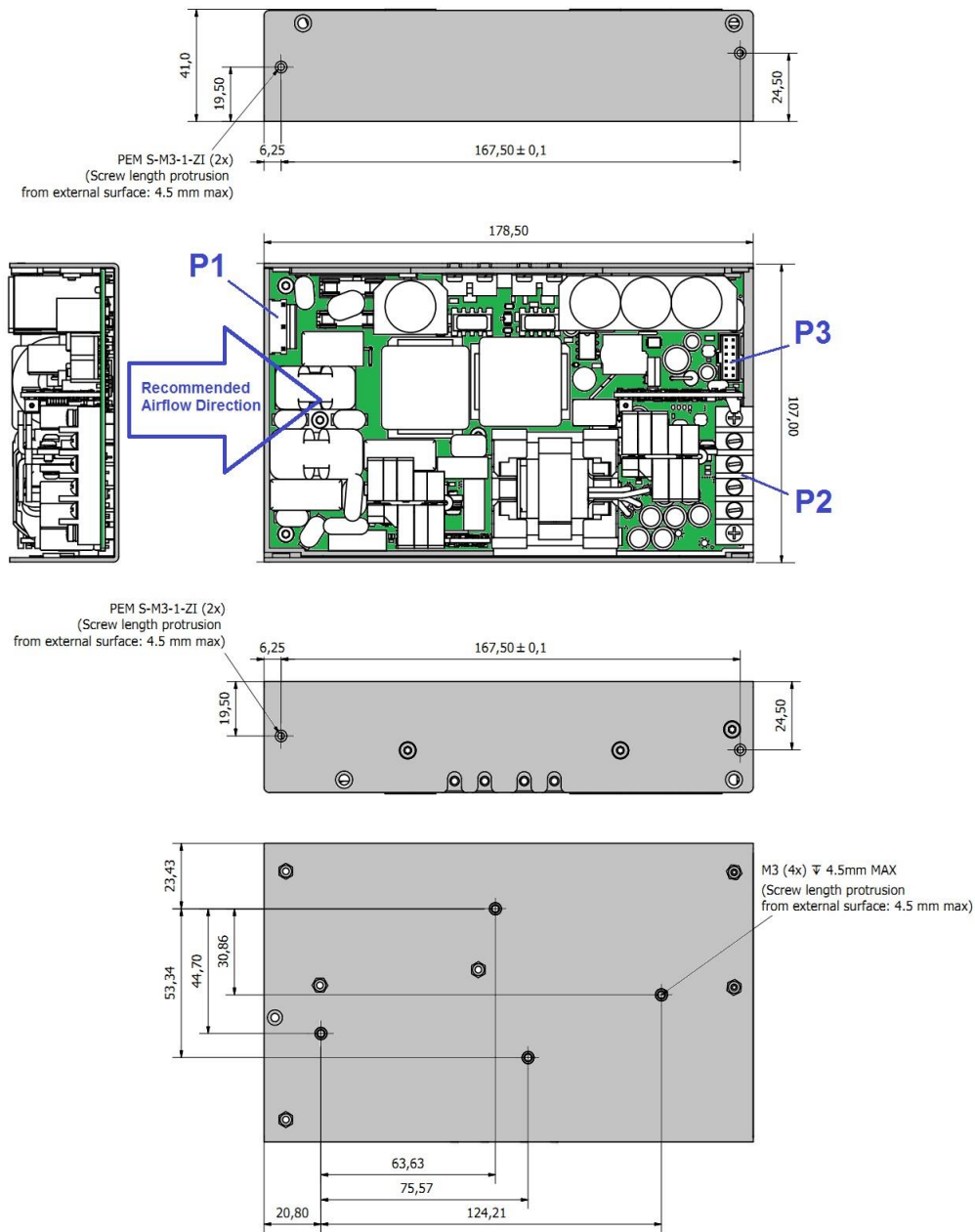


Figure 1. Mechanical drawing - U-Chassis Model

10.2 OUTLINE DRAWING & CONNECTIONS – FRONT MOUNTED FAN MODELS (-S)

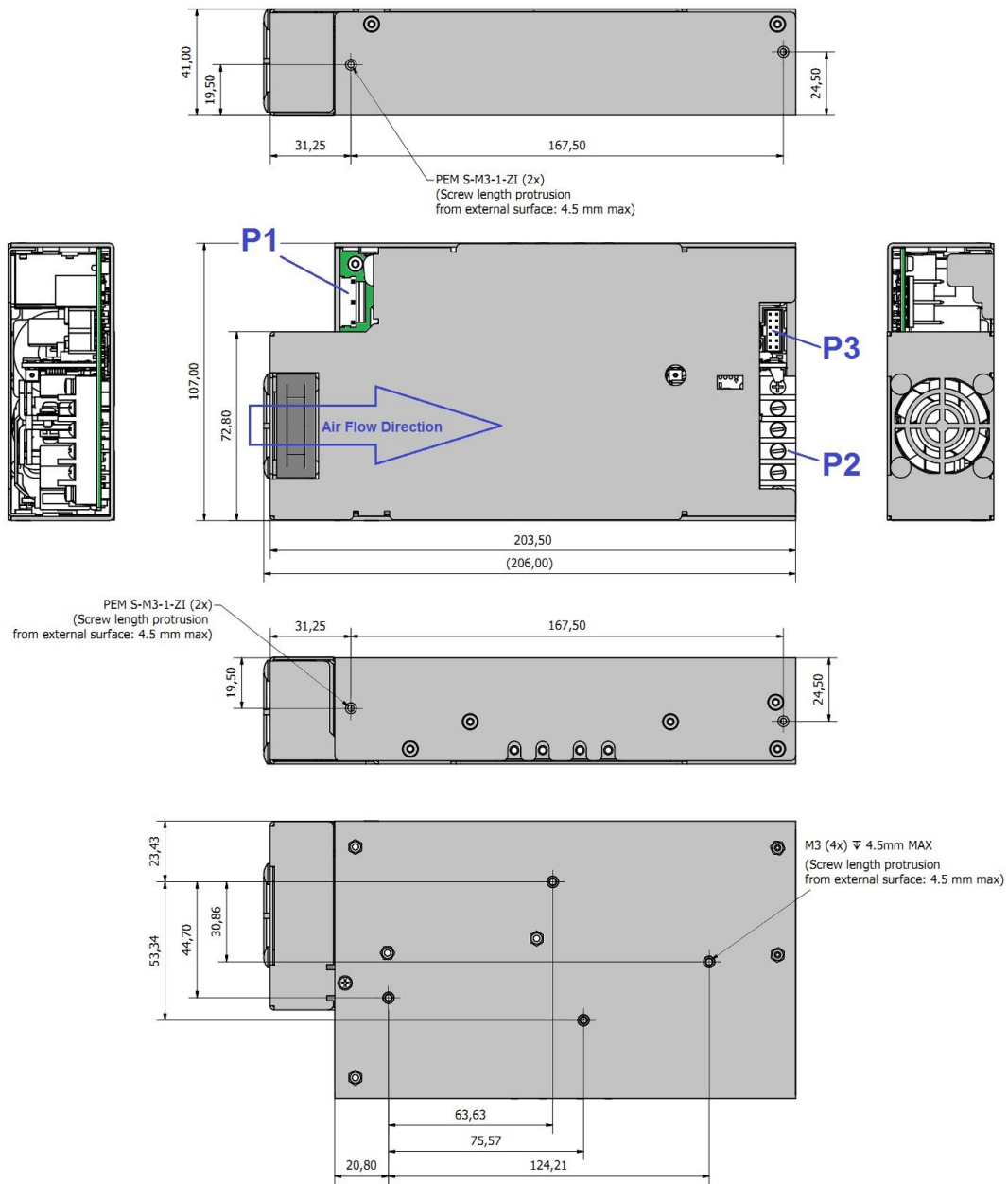


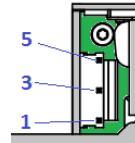
Figure 2. Mechanical drawing – Front Mounted Fan Models (-S)

## 11. CONNECTIONS AND PIN DESCRIPTION

### AC INPUT CONNECTOR – P1

**Molex 26-62-4051**

Mates with  
 Molex 09-93-0500 (housing)  
 Molex 08-52-0071 (terminal phosphor bronze, tin finishing)  
 Use 18 AWG minimum wires

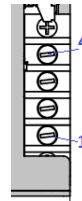


PIN REF.	FUNCTION
1	L1
3	L
5	PE

### DC OUTPUT CONNECTOR – P2

**KARSON 520-041-2-1-00**

Or equivalent

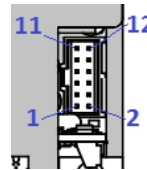


PIN REF.	FUNCTION
1 – 2	+V1
3 – 4	V1 RTN

### SIGNAL CONNECTOR – P3

**Molex 90130-1112**

Mates with  
 Molex 90142-0012 (housing)  
 Molex 90119-0109 (terminal)  
 Use 22-24 AWG wires



PIN REF.	FUNCTION
1	RTN
2	-V2
3	+5V <sub>SB</sub>
4	+V2
5	RS <sup>-</sup>
6	RS <sup>+</sup>
7	+PS_Inhibit
8	I-Share
9	P_OK
10	VS_Logic
11	-PS_Inhibit
12	RTN

**For more information on these products consult: [tech.support@psbel.com](mailto:tech.support@psbel.com)**

**NUCLEAR AND MEDICAL APPLICATIONS** - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

**TECHNICAL REVISIONS** - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.