

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, EN61000-3-2 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
- IT approval to IEC/EN 60950-1
- LED lighting approval to UL 8750



Applications

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

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 _{AC} at all load conditions	85	100-277	305	V _{RMS}
DC Input Voltage		170	-	300	V _{DC}
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 _{AC} , maximum load, 50 / 60 Hz RMS at 85 V _{AC} , maximum load, 50 / 60 Hz	-	-	4.0 8.5	A
Inrush Current	Cold start, 25 °C ambient, full load	115 V _{AC} 230 V _{AC}	- -	20 30	A
Fusing	High breaking, 10 A, 250 V on each AC lines.	-	-	10	A
Efficiency	At 115 V _{AC}	20% rated load	89	-	-
		50% rated load	93	-	-
		100% rated load	92	-	-
Efficiency	At 230 / 277 V _{AC}	20% rated load	90	-	-
		50% rated load	94	-	-
		100% rated load	94	-	-
Input Power Consumption	Power on, 115 V _{AC} , no load	-	-	5	W
	Power on, 230 V _{AC} , no load	-	-	4	
	Stand by, 115, 230 V _{AC} , no load	-	-	0.35	
Power Factor	From 50 to 100% of rated load, 230, 115 V _{AC} , 50 / 60 Hz input voltages.	0.90	-	-	-
THDi	From 50 to 100% rated load, 115, 230, 277 V _{AC} 50 / 60 Hz.	-	-	20	%
Harmonic Current Fluctuations and Flicker	Complies with EN 61000-3-2 at 230 V _{AC} , 50/60 Hz, Class A, D. Complies with EN 61000-3-2 Class C at 230 V _{AC} , 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 _{RMS} , 60 Hz	-	130	-	μA
	230 V _{RMS} , 50 Hz	-	240	-	
	264 V _{RMS} , 60 Hz (worst case)	-	-	400	
277 V _{RMS} , 60 Hz	-	-	-		
Touch Leakage Current	264 V _{RMS} , 60 Hz				
	Normal Condition (NC)	-	-	100	μA
Patient Leakage Current	Single Fault Condition (SFC)	-	-	500	
	264 V _{RMS} , 60 Hz				
Patient Leakage Current	Normal Condition (NC)	-	-	100	μA
	Single Fault Condition (SFC)	-	-	500	