

ARTESYN AIF500-ACDC SERIES

504 Watts ACDC Converter



Advanced Energy's Artesyn AIF500 family of wide range AC input, high efficiency and standard form factor full brick is an enormously flexible product with an extensive feature set. The low-profile unit which is designed specifically for contact-cooled designs is ideally suited to many different applications. Although it has been designed very much with remote-radio-head RF power supply requirements in mind for 5G telecommunication applications, they are equally at home in industrial applications. The unit features an internal inrush limiting function that is matched to the hold-up function of the module which makes designing applications much easier for the user.

AT A GLANCE

Total Power

504 W

Input voltage

90 to 264 VAC

of outputs

Single O/P



SPECIAL FEATURES

- Fully encapsulated, baseplate cooled full brick
- Wide AC input range
- Fully regulated output
- Power rating
 - 504 W high line
 - 504 W low line
- High efficiency - up to 93%
- I/O isolation of 4000 VDC
- Ambient temperature range of -40 to +85degC
- Protection features: UVLO, OVP, OCP
- No minimum load requirement
- Remote enable
- Power-Good status

- Active current share
- PMBus communication
- Auxiliary output
- Internal inrush limiter

SAFETY

- EN, UL/cUL/IEC/EN 62368-1 safety approved
- CE mark
- UKCA mark

WARRANTY

- 2 Years (Consult factory for extended terms)

Notes: HVDC output cannot be connected for parallel application

PATENT

Pending www.artesyn.com/ep-patents



ELECTRICAL SPECIFICATIONS

Input	
Input range (AC nominal)	100 to 240 VAC
Input surge (100 ms)	300 VAC
Input frequency	50 / 60 Hz
Total harmonic distortion	Less than 10%
Power factor	0.99 typ (> 300 W)
Standby input power (PSU enable off)	5 W
Output	
Output voltage set-point	12 VDC
Start up time	3.5 second
HVDC output @ 12 VDC	390 VDC (450 VDC capacitor)
Line regulation	0.2% Vout
Load regulation	4% Vout
Noise / ripple	120 mV pk-pk
Aux O/P	8 to 11 VDC (250 mA)
Minimum Load	No minimum load requirement
Current share accuracy	Better than 10% rated Iout
Control and protection	
Output voltage adjust range	12 VDC; +/-10% Vout
Overvoltage protection	125% Vout (latched protection)
Over load protection	120% rated Iout typ.
Over load protection type	Constant current, with voltage droop 1.33 V/A, 5x hiccup then latching
PSU-Good	Status signal
PFC enable	TTL compatible
Digital control	PMBus protocol

ORDERING INFORMATION

Model	Nominal Input voltage	Output	Maximum Power
AIF42BAC-(01)(N)(NT)L	100 to 240 VAC	12 VDC at 42 A	504 W

Note:

1. PARTS MUST BE COMPLETELY ASSEMBLED.
2. LISTED PART NUMBERS ARE GIVEN FOR REFERENCE ONLY. REFER TO BOM FOR UPDATED PART NUMBERS.
3. DIMENSIONS MARKED WITH OBROUND NEED TO BE INSPECTED.
4. FOR BARCODE LABEL PRINTING DETAILS, REFER TO LBLD1.

5. SURFACE FLATNESS :

CONCAVE INWARDS : 0.2 MM MAX.

CONVEX OUTWARDS : 0.38 MM MAX.

6. UNLESS OTHERWISE SPECIFIED

TOLERANCE AS BELOW.

WHOLE NO	ANGLE
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100
11	110
12	120
13	130
14	140
15	150
16	160
17	170
18	180
19	190
20	200
21	210
22	220
23	230
24	240
25	250
26	260
27	270
28	280
29	290
30	300
31	310
32	320
33	330
34	340
35	350
36	360

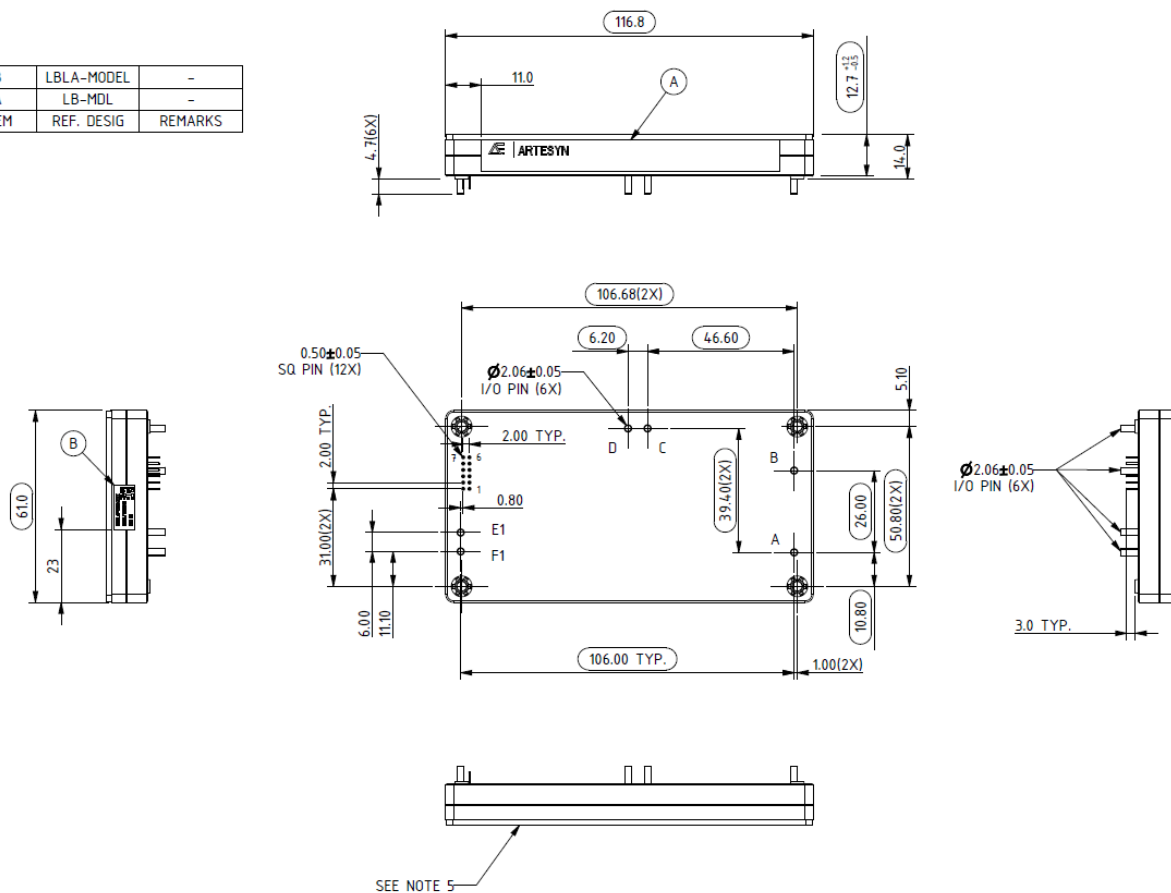
SEE NO	ANGLE
±1	±0.5

DECIMAL

X ± 0.5

 ± 0.25

B	LBLA-MODEL	-
A	LB-MDL	-
ITEM	REF. DESIG	REMARKS



PIN ASSIGNMENTS

Pin Number	Signal Name
1	SENSE +VE
2	SDA
3	SCL
4	I2C ADDRESS
5	SYNC START
6	SIGNAL GND
7	AUX O/P
8	PSU-GOOD (STATUS)
9	C-SHARE
10	PSU ENABLE
11	O/P V-ADJ
12	SENSE -VE
A	AC-IN L1
B	AC-IN L2
C	HVDC +VE
D	HVDC -VE
E1	O/P +VE
F1	O/P -VE

ENVIRONMENTAL SPECIFICATIONS

Operating Temp Min / Max	-40 deg C / +85 deg C 100 degC baseplate
Storage Temperature	-40 to 105 degC
Humidity (non-condensing)	95% rel. Humidity
Calculated MTBF	>1Mil Hrs Telcordia

PHYSICAL CHARACTERISTICS

Isolation Voltage	Input to output Input to baseplate Output to baseplate	4000 VDC 2500 VDC 100 VDC
Weight		260 g typ.
Size		4.6" x 2.4" x 0.55" (116.84 x 60.96 x 13.95 mm)



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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