

ARTESYN AIF500-ACDC SERIES

528 W 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 / 528 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
- High efficiency - up to 93%
- I/O isolation of 4000 VDC
- Ambient temperature range of -40 to +85 deg C
- 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	AIF42BAC	AIF11WAC
Output voltage set-point	12 VDC	48 VDC
Output current	42 A	11 A
Start up time	3.5 second	3.5 second
HVDC output	390 VDC (450 VDC capacitor) @ 12 VDC	390 VDC (450 VDC capacitor) @ 48 VDC
Line regulation	+/- 0.2% Vout	+/- 0.2% Vout
Load regulation	+/- 4% Vout	+/- 4% Vout
Noise / ripple	120 mV pk-pk	480 mV pk-pk
Aux O/P	8 to 11 VDC (250 mA)	8 to 11 VDC (250 mA)
Minimum load	No minimum load requirement	No minimum load requirement
Current share accuracy	Better than 10% rated lout	Better than 10% rated lout
Control and protection		
Output voltage adjust range	+/-10% Vout (10.8 to 13.2 VDC)	-8.3 to +17.9% Vout (44 to 56.6 VDC)
Overvoltage protection	125% Vout (latched protection)	127.5% Vout (latched protection)
Over load protection	120% rated lout	> 11.55 A (+/-0.25 A) or 554 W (+/-12 W), constant current > 12.6 A (+/-0.25 A), hiccup
Over load protection type	Constant current, with voltage droop 1.33 V/A, 5x hiccup then latching	Constant current with voltage droop 7.33 V/A, then hiccup when current exceeds 12.6 A
PSU-Good	Status signal	Status signal
PSU enable	TTL compatible	TTL compatible
Digital control	PMBus protocol	PMBus protocol

ORDERING INFORMATION TABLE 1

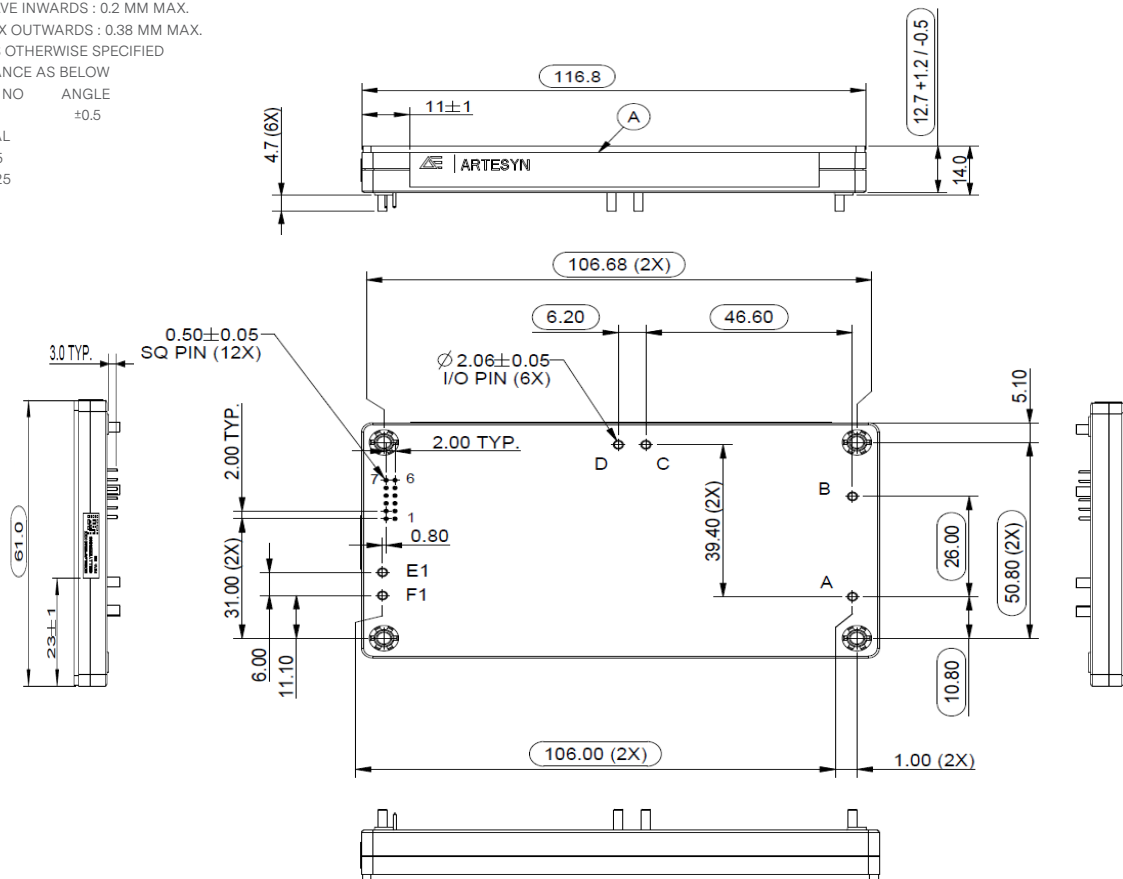
Model	Nominal Input voltage	Output	Maximum Power
AIF42BAC-01NT	100 to 240 VAC	12 VDC at 42 A	504 W
AIF11WAC-01NT	100 to 240 VAC	48 VDC at 11 A	528 W

ORDERING INFORMATION TABLE 2

AIF	XX	X	AC	-	0X	X	X
Brick Size	Input Current	Output Voltage	Input Voltage Type		Parallel Unit Quantity	Enable Logic	Mounting Type
AIF: full brick	42: 42 A	B: 12 VDC	AC: AC input		01: single / double unit	N: negative enable	T: non-thread insert
AIF: full brick	11: 11 A	W: 48 VDC	AC: AC input		02: three unit	Black: positive enable	Black: thread insert

Note:

- PARTS MUST BE COMPLETELY ASSEMBLED
 - LISTED PART NUMBERS ARE GIVEN FOR REFERENCE ONLY. REFER TO BOM FOR UPDATED PART NUMBERS.
 - DIMENSIONS MARKED WITH OBOUND NEED TO BE INSPECTED.
 - FOR BARCODE LABEL PRINTING DETAILS, REFER TO LBLD1.
 - SURFACE FLATNESS :
CONCAVE INWARDS : 0.2 MM MAX.
CONVEX OUTWARDS : 0.38 MM MAX.
 - UNLESS OTHERWISE SPECIFIED TOLERANCE AS BELOW
- | WHOLE NO | ANGLE |
|----------|-------|
| ±1 | ±0.5 |
- DECIMAL
.X ±0.5
.XX ±0.25



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 temperature min / max	-40 to +85 deg C 100 deg C baseplate
Storage temperature	-40 to +105 deg C
Humidity (non-condensing)	95% rel. Humidity
Calculated MTBF	>1Mil Hrs Telcordia

PHYSICAL CHARACTERISTICS

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



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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