ARTESYN AIF13WAC-01NT MODEL

600 W ACDC Converter

Advanced Energy's Artesyn AIF13WAC-01NT model 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

600 W

Input voltage

100 to 240 VAC

# of outputs

Single O/P

PMBus® Power Management. Defined.

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°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

WARRANTY

- 2 Years (Consult factory for extended terms)

Notes: HVDC output cannot be connected for parallel application

PATENT

Pending www.artesyn.com/ep-patents

Pending

artesyn.com/IP

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	5 W (PSU enable off)
Output	
Output Voltage Set-point	48 VDC
Output Current	12.8 A
Output Voltage Adjust Range	-8.3% to +17.9% Vout, (44 to 56.6 VDC)
HVDC Output	395 VDC (450 VDC capacitor) at 48 VDC
Ripple/noise	480 mV pk-pk
Start-up Time	3.5 second
Line Regulation	+/- 0.2% Vout
Load Regulation	+/- 4% Vout
Aux O/P	8 to 11 VDC (250 mA)
Minimum Load	No minimum load requirement
Control and Protection	
Current Share Accuracy	Better than 10% rated Iout
Overvoltage Protection	127.5% Vout (latched protection)
Over Load Protection	106% to 125% rated Iout
Over Load Protection Type	Constant current with voltage droop 6.02 V/A when exceeds 14.08 A or 676 W +/- 12 W, then hiccup when current exceeds 15.36 A
PSU-Good	Status signal
PSU Enable	TTL compatible
Digital Control	PMBus protocol

ORDERING INFORMATION TABLE

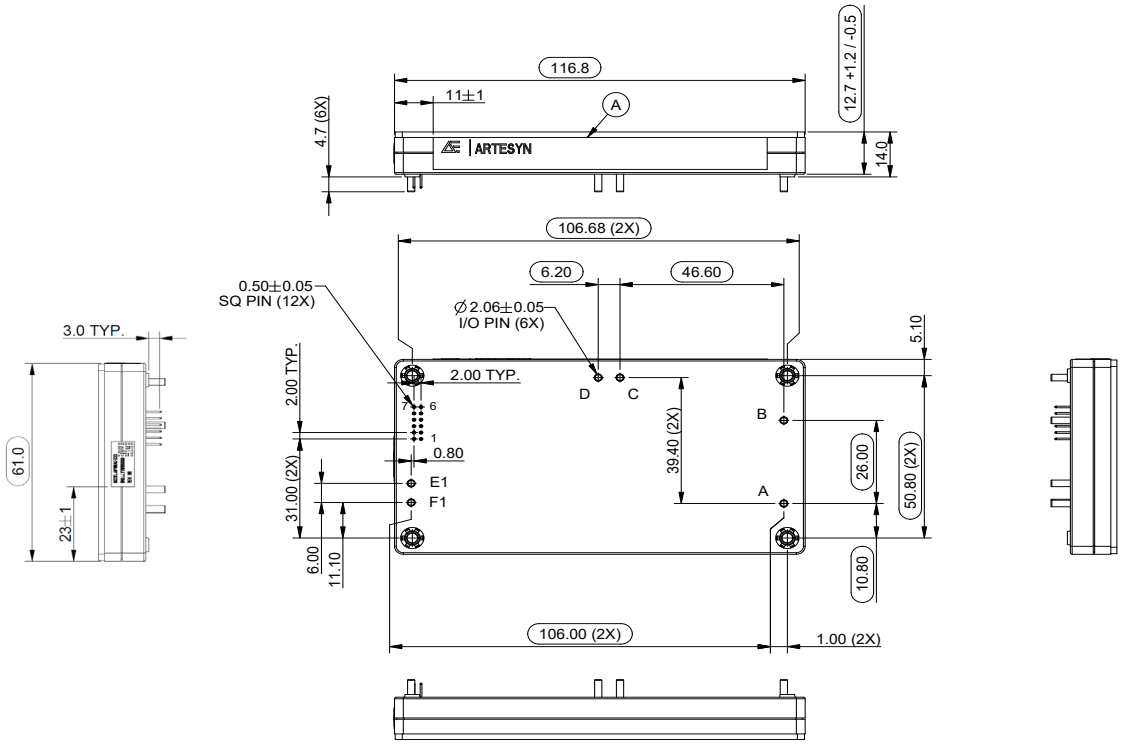
Model	Nominal Input voltage	Output	Maximum Power
AIF13WAC-01NT	100 to 240 VAC	48 VDC at 12.8 A	600 W

AIF	XX	X	AC	-01	X	X
Brick Size	Output Current	Output Voltage	Input Voltage		Enable Logic	Mounting Type
AIF: full brick	13: 12.8 A	W: 48 VDC	AC: AC input		N: negative enable	T: non-thread insert

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 to +85°C, 100°C baseplate
Storage Temperature	-40 to +105°C
Humidity (non-condensing)	95% rel. Humidity
Calculated MTBF	>1Mil Hrs Telcordia

MECHANICAL DRAWING



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.
3. FOR BARCODE LABEL PRINTING DETAILS, REFER TO LBLD1.
4. SURFACE FLATNESS :
   CONCAVE INWARDS : 0.2 MM MAX.
   CONVEX OUTWARDS : 0.38 MM MAX.
5. UNLESS OTHERWISE SPECIFIED
   TOLERANCE AS BELOW
   WHOLE NO ANGLE
   ±1 ±0.5
   DECIMAL
   .X ±0.5
   .XX ±0.25

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)

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

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four 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 | TRUST

For international contact information,
visit advancedenergy.com.

powersales@aei.com (Sales Support)
productsupport.ep@aei.com (Technical Support)
+1 888 412 7832

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