



3
YEARS
WARRANTY

ROHS
COMPLIANT

REACH
COMPLIANT

+85°C
-40°C
AMBIENT TEMP.



Automation



Datacom



IPC



Industry



Measurement



Telecom



Automobile



Boat



Charger



Medical



PV



Railway

UL US CB CE UK CA



PEAK
POWER

3000
VAC
Reinforced
Insulation

ADJ.
Output
Voltage

Internal
EN55032
Class
Filter **B**

LOW
Leakage
Current

LOW
Standby
Power

Operating
Altitude
5000
meter

Protection
Class I
Class II

FAN
Speed
Control

REMOTE
ON
OFF

POWER
GOOD

OCP

OTP

OVP

SCP

OVCIII

PART NUMBER STRUCTURE

TAF300 **U** **S** **12** **A** - **M** **F3**

Series Name

Universal
Input
(VAC)

Output
Quantity

Output
Voltage
(VDC)

Protection
Type

Package
Options

Application
Options

Fan Control
Options

Electrical
Options

85-264

Single

12:12V
15:15V
18:18V
24:24V
28:28V
36:36V
48:48V
53:53V

A: CLASS I
B: CLASS II

: Open type
E1: Enclosed type
U2: Base plate type
D1: Din rail type

: AC Input
C: OVC III(2000m)
G: DC Input

F3: No External FAN with
fixed fan speed control
F4: No External FAN with
variable fan speed control

: Standby power
Remote control
Power Good signal
N: None

For E1/D1 Type Only

F1: External FAN with
fixed fan speed control

F2: External FAN with
variable fan speed control

TECHNICAL SPECIFICATION All specifications are typical at 230VAC input, full load and 25°C unless otherwise noted

Model Number	Input Range	Output Voltage	Output Current		Input Power @ No Load	Efficiency	Maximum Capacitor Load
			Natural Convection	Forced Air Cooling With 21 CFM			
			A	A			
	VAC	VDC			W	%	uF
TAF300US12A-MF3	85 ~ 264	12	15	25	0.3	91	20000
TAF300US15A-MF3	85 ~ 264	15	12	20	0.3	92	12000
TAF300US18A-MF3	85 ~ 264	18	10	16.66	0.3	93	9000
TAF300US24A-MF3	85 ~ 264	24	7.5	12.5	0.3	93	2400
TAF300US28A-MF3	85 ~ 264	28	6.42	10.71	0.3	93	2000
TAF300US36A-MF3	85 ~ 264	36	5	8.33	0.3	93	1000
TAF300US48A-MF3	85 ~ 264	48	3.75	6.25	0.3	93	650
TAF300US53A-MF3	85 ~ 264	53	3.4	5.67	0.3	93	470

INPUT SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Operating input voltage range	AC input		85		264	VAC
	DC input		120		370	VDC
Input frequency	AC input		47		63	Hz
Input current	100VAC and Full Load				3.9	A
	240VAC and Full Load				1.6	
No load input power	230VAC	Option-F(with Fan)		3		Watts
		Others		0.3		
Leakage current	264VAC				300	μA
Power Factor	230VAC and Full Load		0.9			
Start up time					2000	ms
Rise time				30		ms
Hold up time	115VAC and 225W		10			ms
Input inrush current	230VAC	Cold start			70	A
Input protection	Internal fuse in line and neutral				T5.0A/250VAC	

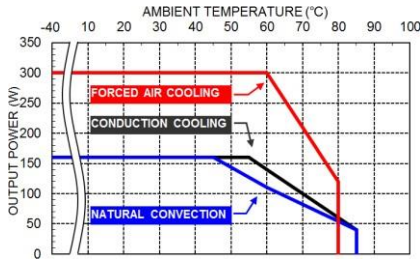
OUTPUT SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Output power	Forced air cooling				300	Watts
	Natural convection				180	
Output peak power	Peak power				360	Watts
	Peak power time			5		s
	Peak power duty			20		%
	Average operation power (% of Full Load)			50		%
Initial set voltage accuracy	230VAC and Full Load		-1.0		+1.0	%
Line regulation	Low Line to High Line at Full Load		-0.2		+0.2	%
Load regulation	No Load to Full Load		-0.5		+0.5	%
	10% Load to 90% Load		-0.4		+0.4	
Voltage adjustability	Maximum output deviation is inclusive of remote sense		-10		+10	%
Minimum load				0		%
Ripple and noise	Measured by 20MHz bandwidth With a 1μF/100V 1206 X7R MLCC					mVp-p
		12Vout		120		
		15Vout		150		
		18Vout		180		
		24Vout		240		
		28Vout		280		
		36Vout		360		
		48Vout		480		
	53Vout		530			
Temperature coefficient			-0.02		+0.02	%/°C
Transient response	Load step from 50 ~ 75% change at 2.5A/μs Recovery within 1% Vout	Peak deviation		3		% Vout
		Recovery time		600		μs
Over voltage protection	% of Vout(nom); Latch mode		115		135	%
Over load protection	% of Iout rated; Hiccup mode			150		%
Short circuit protection			Continuous, automatics recovery			
Main output remote control	Positive Logic Referenced to "-Control" *Standby power always present	Main power ON		Open or 3 ~ 12 VDC		
		Main power OFF		Short or 0 ~ 1.2VDC		
Main output Power Good signal	Referenced to "GND"	Input current of Control	-0.5		1	mA
		Power good				Low
Standby power supply	Standby and fan power supply total power 8W	Power off			Open collector	
Fan power supply		5Vout			1000	mA
		12Vout			500	mA

GENERAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Isolation voltage	1 minute (Reinforced insulation)	Input to Output Input (Output) to F.G.	3000 2000			VAC
Isolation resistance	500VDC		0.1			GΩ
Switching frequency	230VAC, Full load			140		kHz
Safety approvals	IEC/ EN/ UL 62368-1				UL:E193009 CB:UL(Demko)	
Weight		Open type Enclosed type Base plate type Din rail type			210g (7.40oz) 318g (11.21oz) 260g (9.17oz) 340g (11.99oz)	
MTBF	MIL-HDBK-217F Ta=25°C, Full load				1.056 x 10 ⁶ hrs	

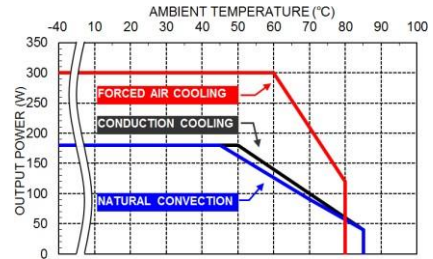
ENVIRONMENTAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Operating ambient temperature	With derating	Option -F (With Fan) Others	-40 -40		+80 +85	°C
Storage temperature range		Option -F (With Fan) Others	-40 -40		+80 +85	°C
Over temperature protection	Internal thermistor ; Hiccup mode			125		°C
Operating altitude					5000	m
Shock					IEC60068-2-27	
Vibration					IEC60068-2-6	
Relative humidity	Non-condensing				5% to 95% RH	

EMC SPECIFICATIONS						
Parameter	Conditions		Level			
EMI	EN55032 and FCC Part 15		Conducted			Class B
			Radiated			Class A
Harmonic currents	EN61000-3-2	Full Load				Class A
Voltage flicker	EN61000-3-3					
EMS	EN55024					
ESD	EN61000-4-2					Perf. Criteria A
Radiated immunity	EN61000-4-3	20 V/m				Perf. Criteria A
Fast transient	EN61000-4-4	± 2kV				Perf. Criteria A
Surge	EN61000-4-5	DM ± 1kV and CM ± 2kV				Perf. Criteria A
Conducted immunity	EN61000-4-6	20 Vr.m.s				Perf. Criteria A
Power frequency magnetic field	EN61000-4-8	30 A/m				Perf. Criteria A
Dip and interruptions	EN61000-4-11					

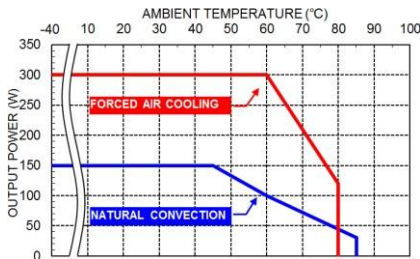
CHARACTERISTIC CURVE



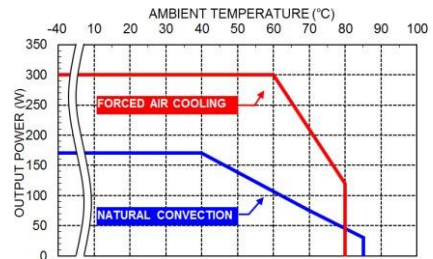
Derating Curve vs. Ambient Temperature
Vin=115VAC Open type



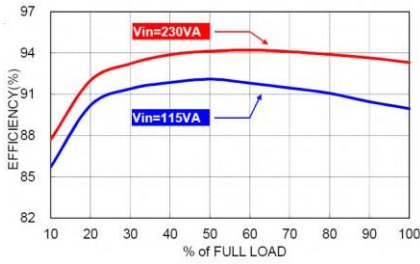
Derating Curve vs. Ambient Temperature
Vin=230VAC Open type



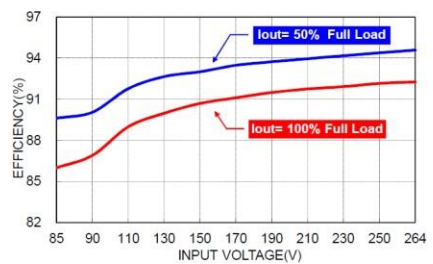
Derating Curve vs. Ambient Temperature
Vin=115VAC Enclosed type / Din rail type



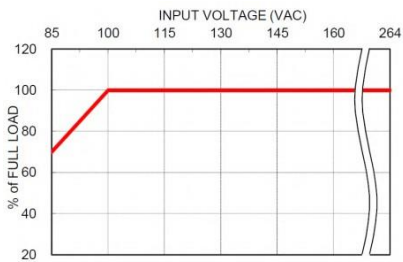
Derating Curve vs. Ambient Temperature
Vin=230VAC Enclosed type / Din rail type



Efficiency vs. Output Load
TAF300US24 with Forced air cooling



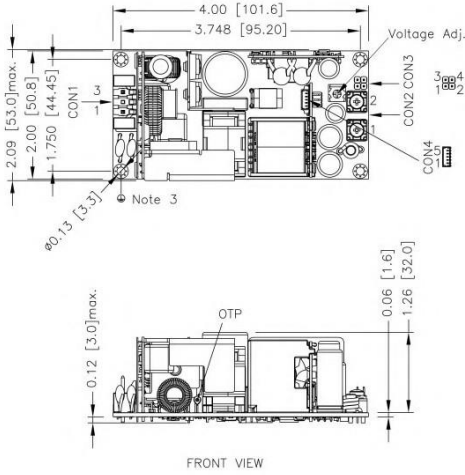
Efficiency vs. Input Voltage
TAF300US24 with Forced air cooling



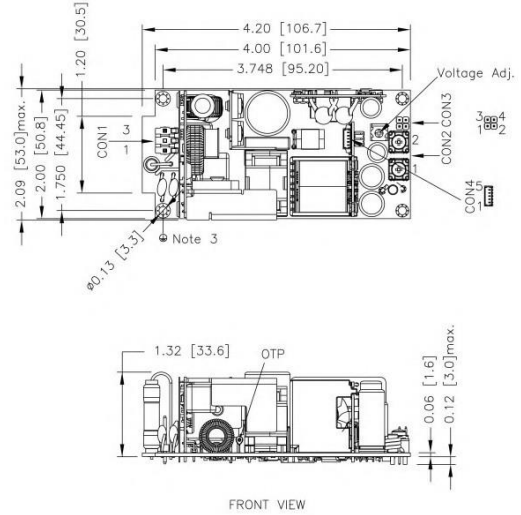
Derating Curve vs. Input Voltage
TAF300

MECHANICAL DRAWING

Open type- AC Input



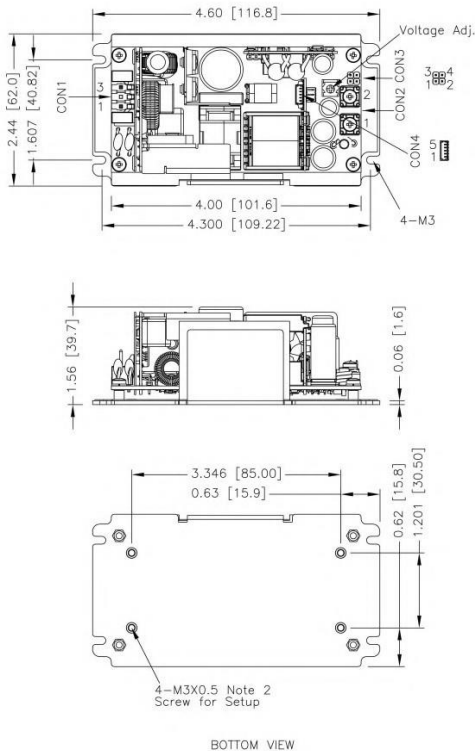
Open type- DC Input



1. All dimensions in inch [mm]
Tolerance : x.xx±0.02 [x.x±0.5]
x.xxx±0.01 [x.xx±0.25]
2. The CON2 locked torque: MAX 16.8Kgf.cm/1.65N.m
3. The screws holes can be considered as PE connection for CLASS I application.

1. All dimensions in inch [mm]
Tolerance : x.xx±0.02 [x.x±0.5]
x.xxx±0.01 [x.xx±0.25]
2. The CON2 locked torque: MAX 16.8Kgf.cm/1.65N.m
3. The screws holes can be considered as PE connection for CLASS I application.

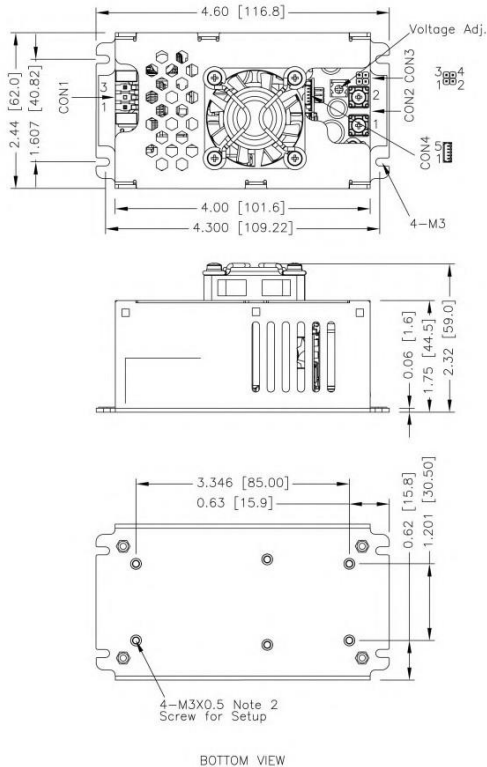
Base plate type



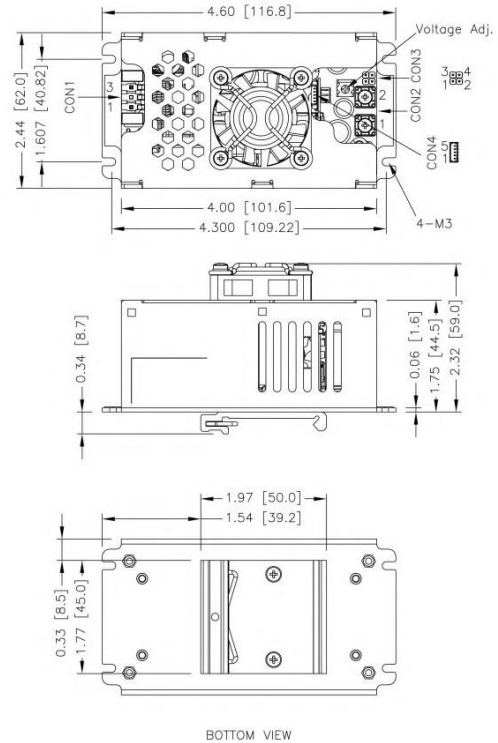
1. All dimensions in inch [mm]
Tolerance : x.xx±0.02 [x.x±0.5]
x.xxx±0.01 [x.xx±0.25]
2. The screw locked torque: MAX 5Kgf.cm/0.49N.m
3. The CON2 locked torque: MAX 16.8Kgf.cm/1.65N.m

MECHANICAL DRAWING

Enclosed type with FAN



Din rail type with FAN



1.All dimensions in inch [mm]

Tolerance : x.xx±0.02 [x.x±0.5]

x.xxx±0.01 [x.xx±0.25]

2.The screw locked torque: MAX 5Kgf.cm/0.49N.m

3.The CON2 locked torque: MAX 16.8Kgf.cm/1.65N.m

1.All dimensions in inch [mm]

Tolerance : x.xx±0.02 [x.x±0.5]

x.xxx±0.01 [x.xx±0.25]

2.The CON2 locked torque: MAX 16.8Kgf.cm/1.65N.m

CONNECTOR CONNECTIONS

CON1 – Input Connector

Pin Number	AC Input	DC Input
Pin 3	Line	DC+
Pin 1	Neutral	DC-

Mates with

Molex housing : **09-50-8031**

Molex crimp terminals : **2478,6838,45570**

CON3 – Aux Connector

Pin 1	+Fan
Pin 2	-Fan
Pin 3	+V Sense
Pin 4	-V Sense

Mates with

Molex housing : **90143-0004**

Molex crimp terminals : **90119**

CON2 – Output Connector

Pin 1	+Vout
Pin 2	-Vout

Mates with

KST ring terminal : **RVS2-3.7**

CON4 – Aux Connector

Pin 1	+Standby
Pin 2	-Standby
Pin 3	+PG
Pin 4	-Control
Pin 5	+Control

Mates with

Molex housing : **51021-0500**

Molex crimp terminals : **50058,50079**