



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



3000 VAC
Reinforced
Insulation

ADJ.
Output
Voltage

Internal
EN55032
Class **B**

LOW
Leakage
Current

LOW
Standby
Power

Protection
Class I
Class II

Operating
Altitude
5000
meter

OCP

OVP

SCP

PART NUMBER STRUCTURE

T	A	D	100	U	S	12	B	-			
Application	Package Code	Dimension Code	Output Power (W)	Input Voltage (VAC)	Output Quantity	Output Voltage (VDC)	Protection Type		Connector Options	Application Options	Conformal Coating Options
Industry Application	A: Open type U: U chassis type E: Enclosed type D: Din rail type			U: Universal 85 ~ 264	S: Single	12: 12 15: 15 24: 24 28: 28 36: 36 48: 48	B: CLASS II _: CLASS I		☐ : JST M: Molex T: Terminal Block	☐ : None C: OVC III	☐ : None R: Conformal Coating

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

Model Number	Input Range VAC	Output Voltage VDC	Output Current Natural Convection A	Input Power No Load W	Efficiency %	Maximum Capacitor Load μF
TAD100US12B TUD100US12B TED100US12B TDD100US12B	85 ~ 264	12	8.34	0.3	91	6950
TAD100US15B TUD100US15B TED100US15B TDD100US15B	85 ~ 264	15	6.67	0.3	92	4450
TAD100US24B TUD100US24B TED100US24B TDD100US24B	85 ~ 264	24	4.17	0.3	92	1750
TAD100US28B TUD100US28B TED100US28B TDD100US28B	85 ~ 264	28	3.58	0.3	92	1280
TAD100US36B TUD100US36B TED100US36B TDD100US36B	85 ~ 264	36	2.78	0.3	91	770
TAD100US48B TUD100US48B TED100US48B TDD100US48B	85 ~ 264	48	2.09	0.3	91	430

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	115VAC and Full Load			1.15	A
	230VAC and Full Load			0.55	
No load input power	230VAC			0.3	Watts
Leakage current	264VAC			300	μA
Power Factor		0.95			
Start up time				1000	ms
Rise time			20		ms
Hold up time	115VAC and Full Load	22			ms
Input inrush current	230VAC			100	A
Input protection	Internal fuse			T3.15A/250VAC	

OUTPUT SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Output power					100	Watts
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			-10		+10	%
Minimum load				0		%
Ripple and noise	Measured by 20MHz bandwidth					mVp-p
	With a 10 μ F/25V 1206 X7R MLCC	12Vout		120		
		15Vout		150		
	With a 1 μ F/50V 1206 X7R MLCC	24Vout		160		
		28Vout		180		
		36Vout		190		
	With a 0.1 μ F/100V 1206 X7R MLCC			340		
Temperature coefficient			-0.02		+0.02	%/°C
Transient response	Load step from 50 ~ 75% change at 2.5A/ μ s	Peak deviation			3	% Vout
		Recovery time		500		μ s
Over voltage protection	% of Vout(nom); Latch mode		115		135	%
Over load protection	% of Iout rated; Hiccup mode		115		150	%
Short circuit protection			Continuous, automatic recovery			

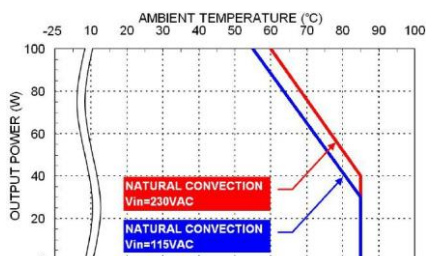
GENERAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Isolation voltage	1 minute (Reinforced insulation)	Input to Output Input (Output) to F.G.	3000 1500			VAC
Isolation resistance	500VDC		0.1			G Ω
Switching frequency				60		kHz
Safety approvals	IEC/ EN/ UL 62368-1 (OVC III)				UL:E193009 CB:UL(Demko)	
Weight					156g (5.50oz)	
					194g (6.84oz)	
					210g (7.41oz)	
					232g (8.18oz)	
MTBF	MIL-HDBK-217F Ta=25°C, Full load				7.903 x 10 ⁵ hrs	

ENVIRONMENTAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Operating ambient temperature	Natural convection and Full load (with derating)					°C
	-40°C start up : 80% Load,max. @ Vin > 100VAC		-40		+85	
	-40°C start up : 100% Load,max. @ Vin > 200VAC					
Storage temperature range			-40		+85	°C
Operating altitude					5000	m
Shock					IEC60068-2-27	
Vibration					IEC60068-2-6	
Relative humidity	Non-condensing				5% to 95% RH	

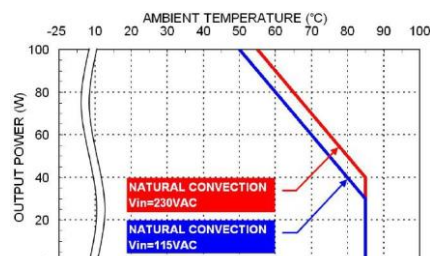
EMC SPECIFICATIONS

Parameter	Conditions	Level
EMI	EN55032 and FCC Part 15 External components may be required for class I application.	Conducted ClassB Radiated ClassA
Harmonic currents	EN61000-3-2 Full Load	Class A and D
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 $\pm 2\text{kV}$	Perf. Criteria A
Surge	EN61000-4-5 DM $\pm 1\text{kV}$ and CM $\pm 2\text{kV}$	Perf. Criteria A
Conducted immunity	EN61000-4-6 20 Vr.m.s	Perf. Criteria A
Power frequency magnetic field	EN61000-4-8 10 A/m	Perf. Criteria A
Dip and interruptions	EN61000-4-11	

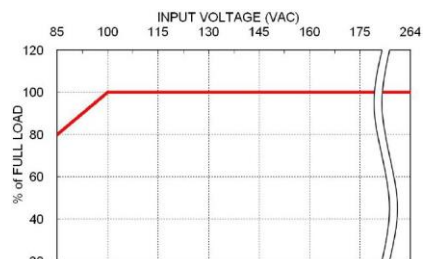
CHARACTERISTIC CURVE



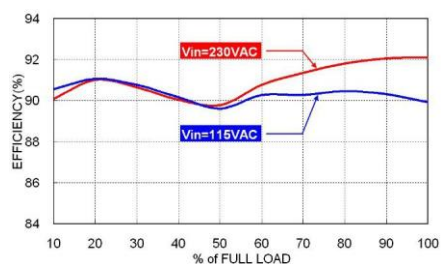
TED100 & TDD100 Derating Curve vs. Ambient Temperature



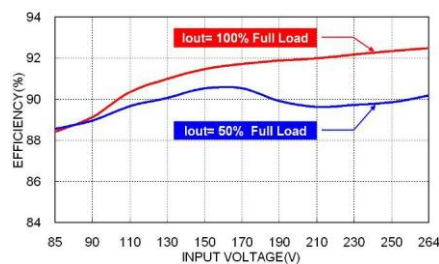
TAD100 & TUD100 Derating Curve vs. Ambient Temperature



TD100 Derating Curve vs. Input Voltage



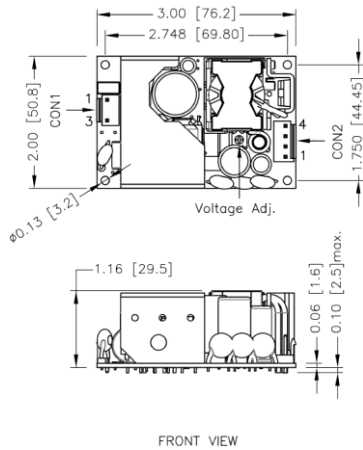
TD100US24B Efficiency vs. Output Load



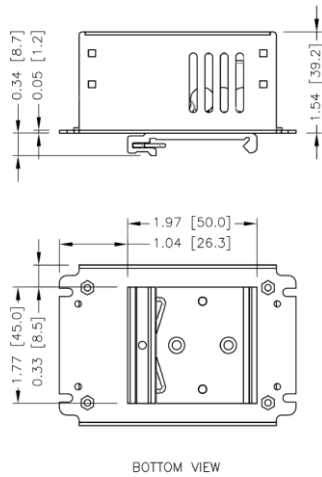
TD100US24B Efficiency vs. Input Voltage

MECHANICAL DRAWING

TAD Open type



TDD Din rail type



- 1. All dimensions in inch [mm]
- 2. Tolerance : x.xx±0.02 [x.x±0.5] x.xxx±0.01 [x.xx±0.25]
- 3. M3×0.5 screw locked torque MAX 5Kgf.cm/0.49N.m

CONNECTORS CONNECTIONS

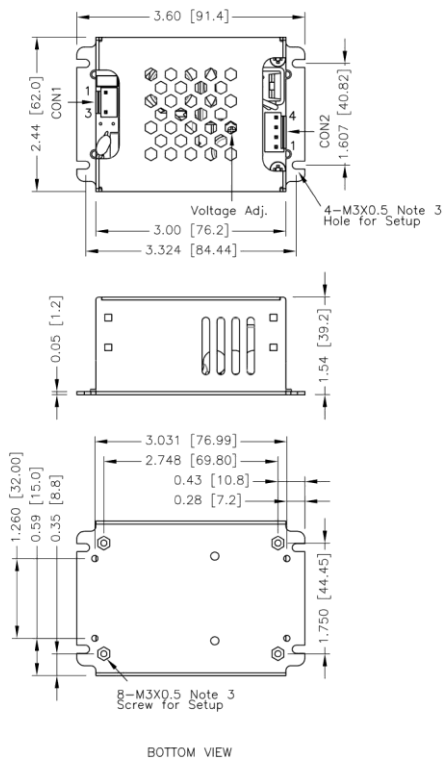
CON1 – Input Connector	
Pin 1	Line
Pin 3	Neutral

CON2 – Output Connector	
Pin 1,2	-Vout
Pin 3,4	+Vout

*Either one of four screws holes of Open / Chassis type can be considered as PE connection for CLASS I application.

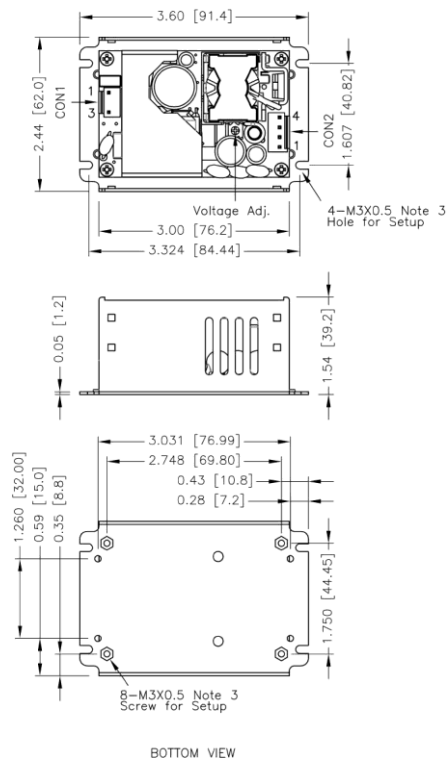
MECHANICAL DRAWING

TED Enclosed type



BOTTOM VIEW

TUD U chassis type



BOTTOM VIEW

1. All dimensions in inch [mm]
2. Tolerance : x.xx±0.02 [x.x±0.5] x.xxx±0.01 [x.xx±0.25]
3. M3x0.5 screw locked torque MAX 5Kgf.cm/0.49N.m

CONNECTORS CONNECTIONS

CON1 – Input Connector

Pin 1	Line
Pin 3	Neutral

CON2 – Output Connector

Pin 1,2	-Vout
Pin 3,4	+Vout

*Either one of four screws holes of Open / Chassis type can be considered as PE connection for CLASS I application.

CONNECTOR OPTIONS

Blank:

JST Type

Mates with housing
CON1: **VHR-3N**
CON2: **VHR-4N**

Crimp terminals
CON1: **SVH-21T-P1.1**
CON2: **SVH-21T-P1.1**



-M

Molex Type

Mates with housing
CON1: **09-50-8031**
CON2: **09-50-8041**

Crimp terminals
CON1: **SD-2478**
CON2: **SD-2478**



-T

Terminal Block

Screw locked torque
MAX 2Kgf.cm/0.2N.m

Wire dimension range
26 ~ 16AWG

