

Features

- Universal input 85-265VAC
- High Efficiency Rating up to 92%
- Operating ambient temperature range: -40°C to +85°C
- Approved to UKCA, CE, CB, cURs, FCC, RoHS & REACH
- EN/IEC/UL 62368-1 Safety Approved
- Output Voltage 12 - 48V DC



Ideal Power's 43TxD100-Uxy 100W AC/DC Power Supply Module Series are certified to cURus, UKCA, CE, FCC, CB, RoHS, REACH & EN 62368-1/IEC 62368-1/UL 62368-1 Standards and comply with Efficiency Regulations. These are primarily used in ITE, Audio & Video Industries and customised solutions are available upon request.

Part Number Structure

TxD100 - U S 12 B - □ □ □

Series Name	Input Voltage (V AC)	Output Quantity	Output Voltage (V DC)	Protection Type	Connector Options	Application Options	Conformal Coating Options
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A: Open type	85 ~ 264	S: Single	12: 12	□ : CLASS I	□ : JST	□: None	□: None
U: U Chassis type			15: 15	B: CLASS II	M: Molex	C: OVC III	R: Conformal Coating
E: Enclosed type			18: 18		T: Terminal Block		
D: Din Rail type			24: 24				
			28: 28				
			36: 36				
			48: 48				

Models

Model Number	Input Range	Output Voltage	Output Current Natural Convection	Input Power @ No Load	Efficiency	Maximum Capacitor Load
	V AC	V DC	A	W	%	µF
43TAD100US12B 43TUD100US12B 43TED100US12B 43TDD100US12B	85 ~ 264	12	.34	0.3	91	6950
43TAD100US15B 43TUD100US15B 43TED100US15B 43TDD100US15B	85 ~ 264	15	6.67	0.3	92	4450
43TAD100US24B 43TUD100US24B 43TED100US24B 43TDD100US24B	85 ~ 264	24	4.17	0.3	92	1750
43TAD100US28B 43TUD100US28B 43TED100US28B 43TDD100US28B	85 ~ 264	28	3.58	0.3	92	1280
43TAD100US36B 43TUD100US36B 43TED100US36B 43TDD100US36B	85 ~ 264	36	2.78	0.3	91	770
43TAD100US48B 43TUD100US48B 43TED100US48B 43TDD100US48B	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	100VAC and Full Load	--	--	1.15	A
	240VAC and Full Load	--	--	0.55	
No load input power	230VAC	--	--	0.3	W
Leakage current	264VAC	--	--	300	µA
Power factor		0.95	--	--	
Start up time		--	--	1500	ms
Rise time		--	20	--	ms
Hold up time	115VAC and Full Load	22	--	--	ms
Input inrush current	230VAC	--	--	100	A
Input protection	Internal fuse	T4.0A/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		120		mVp-p
	With a 10µF/25V 1206 X7R MLCC 12Vout 15Vout		150		
	With a 1µF/50V 1206 X7R MLCC 24Vout 28Vout 36Vout		160		
			180		
	With a 0.1µF/100V 1206 X7R MLCC 48Vout		190		
			340		
Temperature coefficient		-0.02		+0.02	%/°C
Transient response	Load step from 50 ~ 75% change at 2.5A/µs			3	% Vout
Over voltage protection	% of Vout(nom); Latch mode	115		135	%
Overload 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	3000		V AC
		Input (Output) to F.G	1500		
Isolation resistance	500V DC	0.1			GΩ
Switching frequency	230VAC, Full load		60		kHz
Safety approvals	IEC/ EN/ UL 62368-1				UL:E193009 CB:UL(Demko)
Weight	43TAD				156g (5.50oz)
	43TED				210g (7.41oz)
	43TDD				232g (8.18oz)
	43TUD				194g (6.84oz)
MTBF	MIL-HDBK-217F Ta=25°C, Full load				1.145 x 10 ⁵ hrs

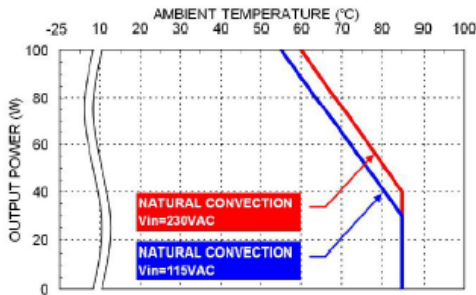
Environmental Specifications

Parameter	Conditions	Min	Typ	Max
Operating ambient temperature	Natural convection and Full load (with derating)			
	-40°C start up : 80% Load, max. @ Vin > 100VAC	-40		+85 °C
	-40°C start up : 100% Load, max. @ Vin > 200VAC			
Storage temperature range		-40		+85 °C
Over temperature protection	Internal thermistor; Hiccup mode		125	
Operating altitude				5000 m
Shock				IEC60068-2-27
Vibration				IEC60068-2-6
Relative humidity	Non-condensing			5% to 95% RH

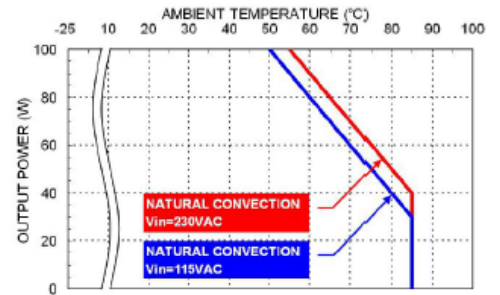
EMC Specifications

Parameter	Conditions	Level
EMI	EN55032 and FCC Part 15	Conducted
		Radiated
		Class B Class A
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 ± 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 10A/m	Perf. Criteria A
Dip and interruptions	EN61000-4-11	

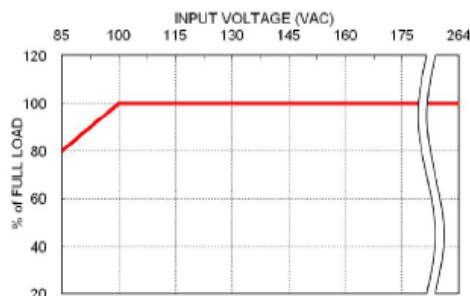
Characteristic Curve



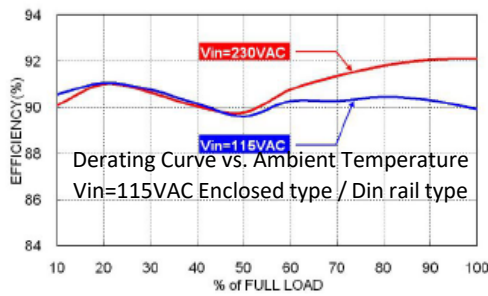
43TED100 & 43TDD100 Derating Curve vs. Ambient Temperature



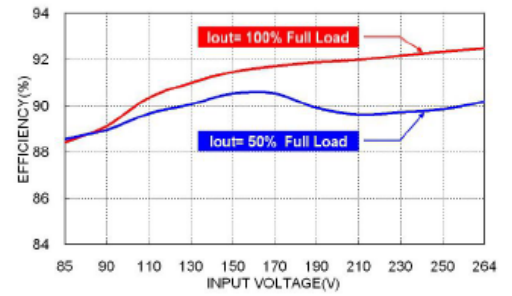
43TAD100 & 43TUD100 Derating Curve vs. Ambient Temperature



TxD100 Derating Curve vs. Input Voltage



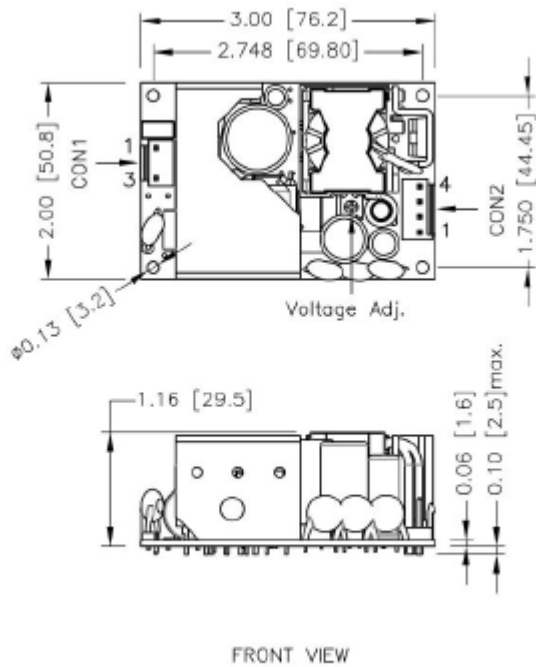
43TxD100US24B Efficiency vs. Output Load



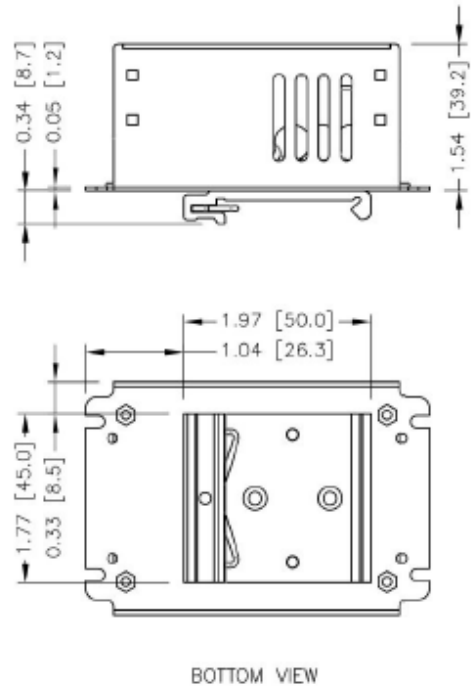
43TxD100US24B Efficiency vs. Input Voltage

Mechanical Drawing

43TAD Open Type - AC Input



43TDD 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

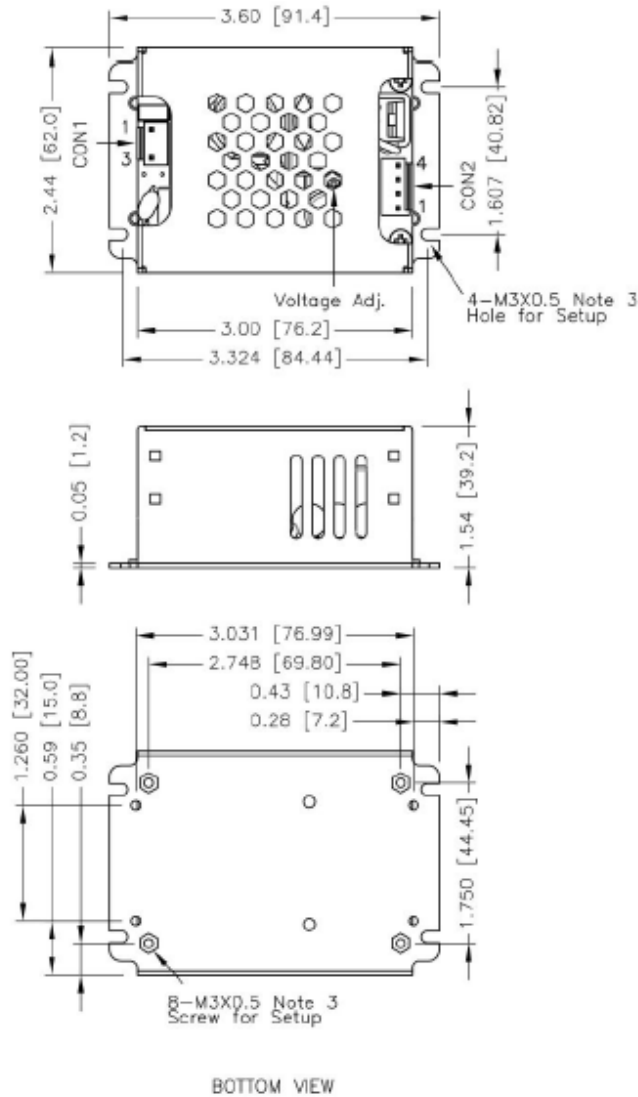
CON2 – Output Connector

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 (continued)

43TED Enclosed 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 2.5Kgf.cm/0.25N.m

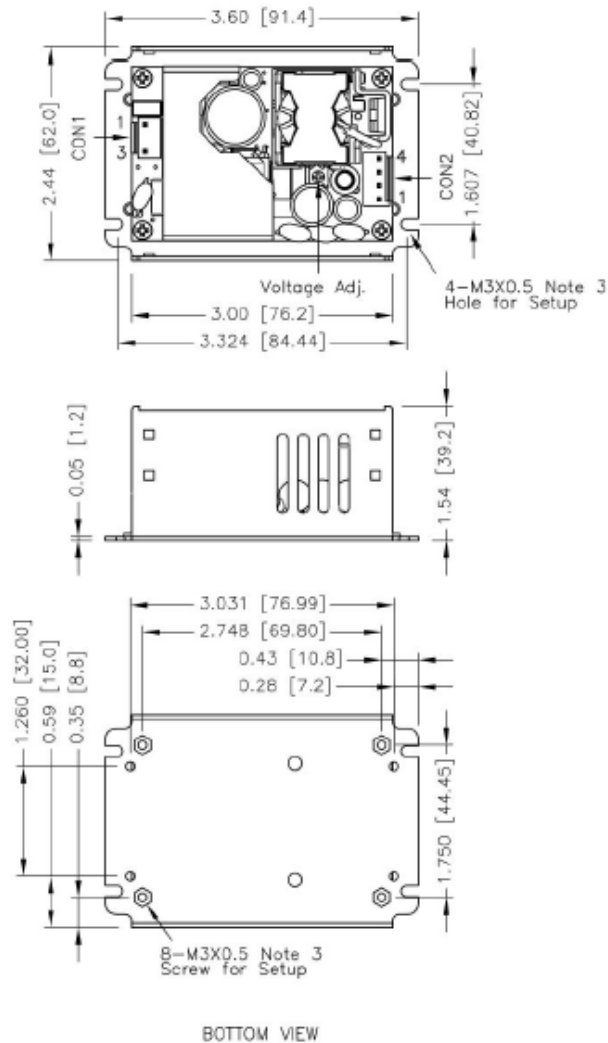
CONNECTORS CONNECTIONS

CON1 – Input Connector	
Pin 1	Line
Pin 3	Neutral

AC – DC

Mechanical Drawing (continued)

43TDD Din Rail Type



BOTTOM VIEW

- All dimensions in inch [mm]
 Tolerance : $x.xx \pm 0.02$ [$x.xx \pm 0.5$]
 $x.xxx \pm 0.01$ [$x.xx \pm 0.25$]
- The screw locked torque: MAX 5Kgf.cm/0.49N.m
- The CON2 locked torque: MAX 2.5Kgf.cm/0.25N.m

CON2 – Output Connector

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

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