

Features

- Universal input 85-265VAC
- High Efficiency Rating up to 93.5%
- 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 05 - 53VDC



Ideal Power's 43TAD65-P-USxy 65W Open Frame Chassis 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 the relevant Efficiency Regulations. These are primarily used in ITE, Audio & Video Industries and customised solutions are available upon request.

Part Number Structure

TAD/TED - 65 U S 12 C - □ □ □
 TUD/TDD

Series Name	Output Power (W)	Input Voltage (V AC)	Output Quantity	Output Voltage (V DC)	Protection Type	Connector Options	Peak Power Support Options	Conformal Coating Options
A: Open type	Universal 85 ~ 264	U:	S: Single	05: 5	C: CLASS I	□: JST M: Molex T: Terminal block	□: None P: Peak Power	□: None R: Conformal Coating
E: Enclosed type			7P5: 7.5	B: CLASS II				
U: U Chassis type				09: 9				
D: Din Rail type				12: 12				
				15: 15				
				24: 24				
				241: 24				
				28: 28				
				36: 36				
				48: 48				
				53: 53				

Models

Model Number	Input Range V AC	Output Voltage V DC	Output Current Natural Convection A	Max Output Power W	Max Peak Power W	Input Power @ No Load W	Efficiency %	Maximum Capacitor Load µF
43TAD65US05C-P 43TUD65US05C-P 43TED65US05C-P 43TDD65US05C-P	85 ~ 264	5	10	50	65	0.11	90	20000
43TAD65US7P5C-P 43TUD65US7P5C-P 43TED65US7P5C-P 43TDD65US7P5C-P	85 ~ 264	7.5	8.67	65	90	0.11	90	11560
43TAD65US09C-P 43TUD65US09C-P 43TED65US09C-P 43TDD65US09C-P	85 ~ 264	9	7.23	65	90	0.11	91	8033
43TAD65US12C-P 43TUD65US12C-P 43TED65US12C-P 43TDD65US12C-P	85 ~ 264	12	5.42	65	90	0.11	92.5	4520
43TAD65US15C-P 43TUD65US15C-P 43TED65US15C-P 43TDD65US15C-P	85 ~ 264	15	4.34	65	90	0.11	93.5	2900
43TAD65US18C-P 43TUD65US18C-P 43TED65US18C-P 43TDD65US18C-P	85 ~ 264	18	3.62	65	90	0.11	93.0	2015
43TAD65US24C-P 43TUD65US24C-P 43TED65US24C-P 43TDD65US24C-P	85 ~ 264	24	2.71	65	90	0.11	93.5	1130
43TAD65US241C-P 36TUD65US241C-P 43TED65US241C-P 43TDD65US241C-P	85 ~ 264	24	2.71	65	90	0.11	92	1130
43TAD65US28C-P 43TUD65US28C-P 43TED65US28C-P 43TDD65US28C-P	85 ~ 264	28	2.33	65	90	0.11	93.5	830
43TAD65US281C-P 43TUD65US281C-P 43TED65US281C-P 43TDD65US281C-P	85 ~ 264	28	2.33	65	90	0.11	91.5	830
43TAD65US36C-P 43TUD65US36C-P 43TED65US36C-P 43TDD65US36C-P	85 ~ 264	36	1.81	65	90	0.11	92.5	520
43TAD65US48C-P 43TUD65US48C-P 43TED65US48C-P 43TDD65US48C-P	85 ~ 264	48	1.36	65	90	0.11	93	285
43TAD65US53C-P 43TUD65US53C-P 43TED65US53C-P 43TDD65US53C-P	85 ~ 264	53	1.24	65	90	0.11	92.5	235

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			1.6	A
	240VAC and Full Load			0.9	
No load input power	230VAC		0.11		W
Leakage current	264VAC		75		μA
Start up time				1000	ms
Rise time			200		ms
Hold up time	115VAC and Full Load		16		ms
Input inrush current	230VAC		60		A
Input protection	Internal fuse in line and neutral			T3.15A/250VAC	

Output Specifications

Parameter	Conditions	Min	Typ	Max	Unit
Output power				65	
Output peak power	Peak power	5Vout		65	W
		Others		90	
	Peak power time		5		s
	Peak power duty		20		%
	Average operation power (% of full load)		70		
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	5Vout		+0.7	%
		Others		+0.5	
	10% Load to 90% Load	5Vout		+0.6	
		Others		+0.4	
Voltage adjustability	Single output	53Vout		+10	
		Others		+10	
Minimum load			0		
Ripple and noise	Measured by 20MHz bandwidth				
	With a 1μF/25V 1206 X7R MLCC	5Vout, 7.5Vout, 9Vout		75	mVp-p
		12Vout, 15Vout, 18Vout		75	
	With a 1μF/50V 1206 X7R MLCC	24Vout, 28Vout, 36Vout		75	
		48Vout, 53Vout		100	
Temperature coefficient		-0.02		+0.02	
Transient response	Load step from 50 ~ 75% change at 2.5A/μs	Peak deviation		3	% Vout
		Recovery time		600	μs
Over voltage protection	% of Vout(nom); Latch mode	125		140	%
Overload protection	% of maximum lout rated; Hiccup mode			145	
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	2500			
Isolation resistance	500V DC		0.1			GΩ
Switching frequency	230VAC, Full load	5Vout		60		kHz
		7.5Vout		80		
		9Vout		70		
		Others		120		
Safety approvals	IEC/ EN/ UL 62368-1					UL:E193009 CB:UL(Demko)
Weight	43TAD					117g (4.13oz)
	43TUD					157g (5.54oz)
	43TED					172g (6.07oz)
	43TDD					193g (6.81oz)
MTBF	MIL-HDBK-217F Ta=25°C, Full load					1.494 x 10 ⁵ hrs

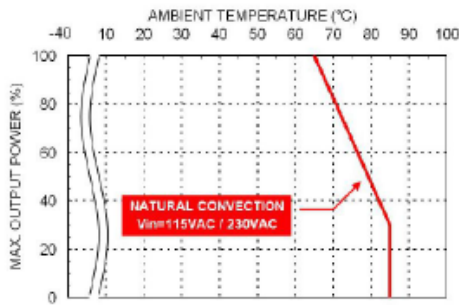
Environmental Specifications

Parameter	Conditions		Min	Typ	Max	Unit
Operating ambient temperature	Natural Convection	With derating	-40		+85	°C
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

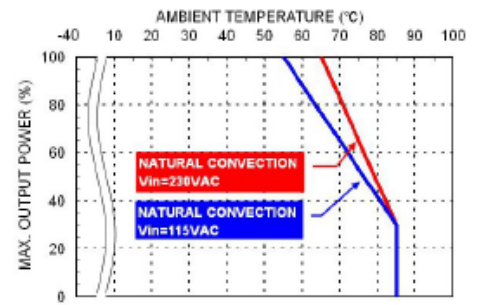
EMC Specifications

Parameter	Conditions		Level	
EMI	EN55032 and FCC Part 15 External components may be required for class I application.		Conducted	Class B
			Radiated	Class B
Harmonic currents	EN61000-3-2	Full Load		Class A
Voltage flicker	EN61000-3-3			
EMS	EN55024	and Complies with EN 61850-3		
ESD	EN61000-4-2			Perf. Criteria A
Radiated immunity	EN61000-4-3	20 V/m		Perf. Criteria A
Fast transient	EN61000-4-4	± 4kV		Perf. Criteria A
Surge	EN61000-4-5	DM ± 2kV and CM ± 4kV		Perf. Criteria A
Conducted immunity	EN61000-4-6	20 Vr.m.s		Perf. Criteria A
Power frequency magnetic field	EN61000-4-8	100 A/m		Perf. Criteria A
Dip and interruptions	EN61000-4-11			
Damped Oscillatory Wave	EN61000-4-18	DM ± 1kV and CM ± 2.5kV		Perf. Criteria A

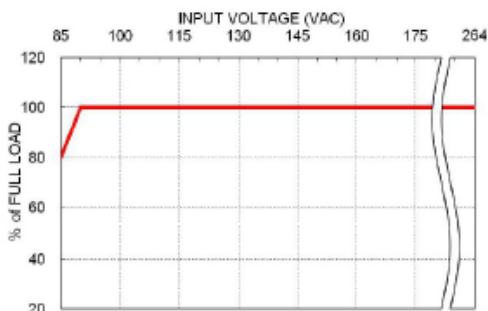
Characteristic Curve



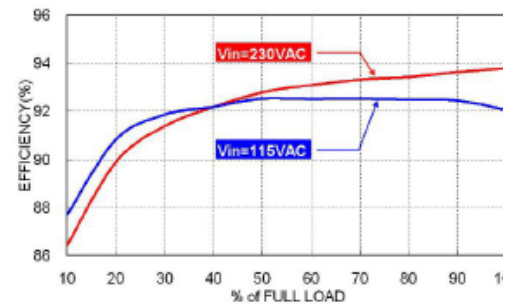
43TAD65 & 43TUD65 Derating Curve vs. Ambient Temperature



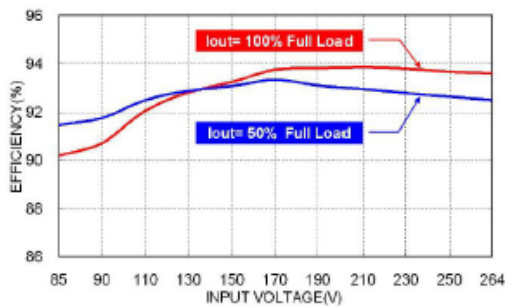
43TED65 & 43TDD65 Derating Curve vs. Ambient Temperature



Derating Curve vs. Input Voltage



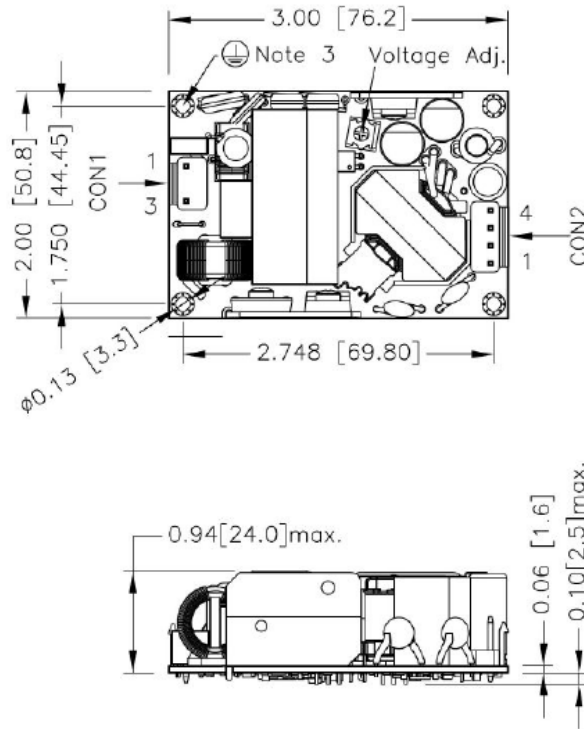
43T□D65US24C Efficiency VS Output Load



43T□D65US24C Efficiency VS Input Voltage

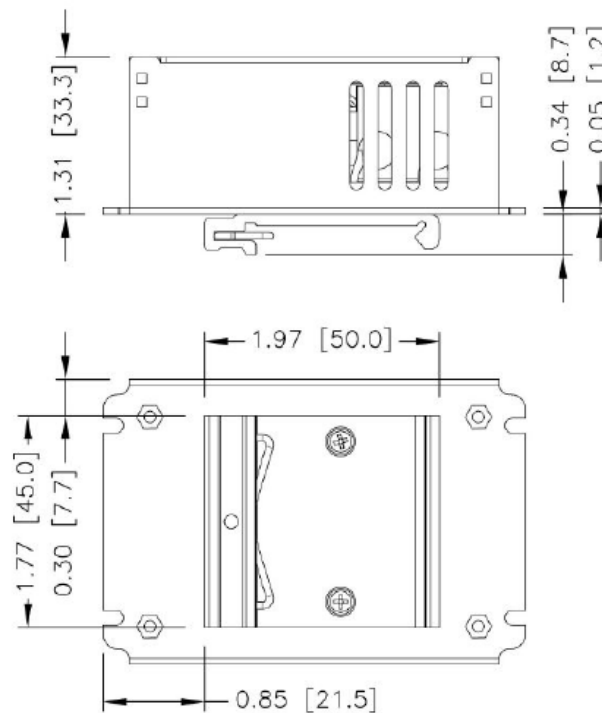
Mechanical Drawing

43TAD Open Type



FRONT VIEW

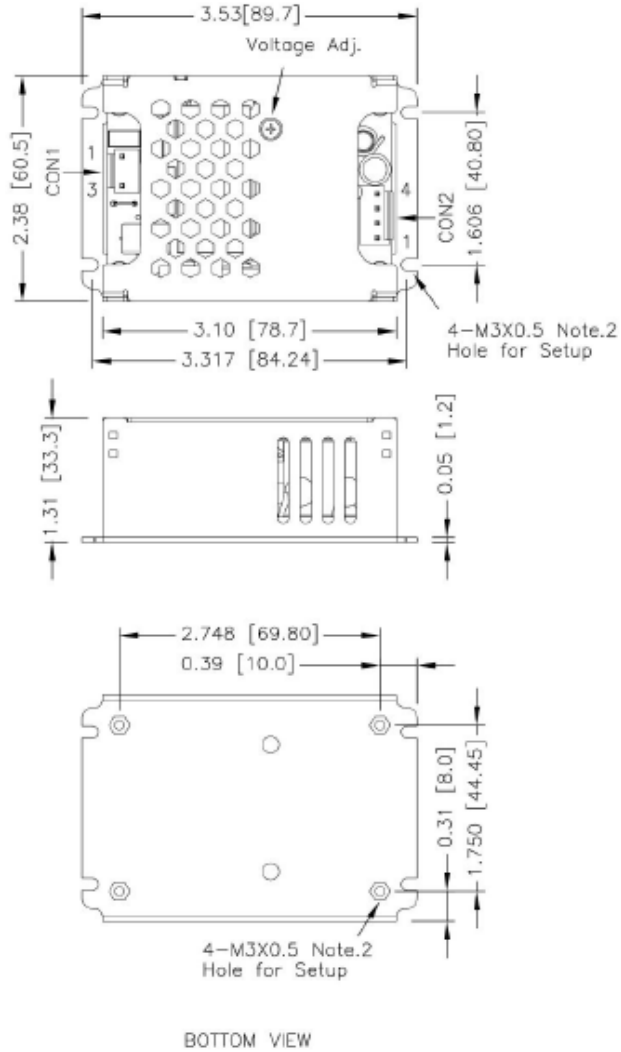
43TDD Din Rail Type



BOTTOM VIEW

Mechanical Drawing (continued)

43TED Enclosed Type

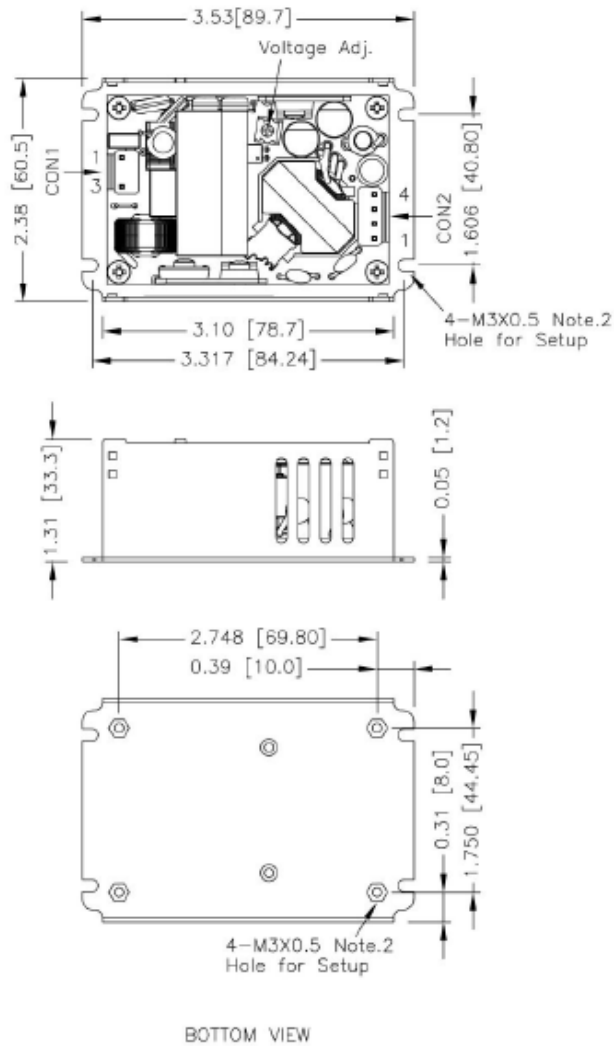


BOTTOM VIEW

AC - DC

Mechanical Drawing (continued)

43TUD U Chassis Type



CON1-Input Connector

Pin Number	AC Input	DC Input 43T□D65USXXC, 43T□D65USXXD
Pin 1	Line	DC+
Pin 3	Neutral	DC-

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