

## Features

- Universal input 85-264V AC
- High Efficiency Rating up to 90.5%
- Operating ambient temperature range: -40°C to +85°C
- Approved to UKCA, CE, CB, cURus, FCC, RoHS & REACH
- EN/IEC/UL 62368-1 Safety Approved
- Dual & Triple Models



Ideal Power's 43TxD65-Uzxy 65W 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

43TxD65 - U □ □ □ □ □ C - XX YY- □ □ □

Series Name	Input Voltage (V AC)	Output Quantity	Output Voltage 1 (V DC)	Output Voltage 2 (V DC)	Output Voltage 3 (V DC)	Output Voltage 3 (V DC)	Protection Type	Vo2 Voltage Code	Vo3 Voltage Code	Connector Options	Application Options	Conformal Coating Options
			Vo1	Vo2	Vo3 (Triple only)							
<b>A:</b> Open type	<b>U:</b> Universal	<b>D:</b> Dual	<b>3:</b> 5	<b>1:</b> 2.5	<b>M:</b> Minus	<b>1:</b> 2.5	□: CLASS I			□: JST	□: None	□: None
<b>E:</b> Enclosed type	85 ~ 264	<b>T:</b> Triple	<b>4:</b> 7.5	<b>2:</b> 3.3	□: Positive	<b>2:</b> 3.3	<b>D:</b> CLASS II			<b>M:</b> Molex	<b>C:</b> OVC III	<b>R:</b> Conformal Coating
<b>U:</b> U Chassis type			<b>5:</b> 9	<b>3:</b> 5		□: Positive	□: CLASS I			<b>T:</b> Terminal block		
<b>D:</b> Din Rail type			<b>6:</b> 12	<b>X:</b> refer to suffix		<b>4:</b> 7.5	(※NRND)					
			<b>7:</b> 15	<b>xx</b>		<b>5:</b> 9	<b>B:</b> CLASS II					
			<b>8:</b> 18			<b>6:</b> 12	(※NRND)					
			<b>9:</b> 24			<b>7:</b> 15						
			<b>0:</b> 28			<b>8:</b> 18						
						<b>9:</b> 24	<b>※NRND:</b>					
						<b>y:</b> refer to Suffix yy	Not recommend for new designs					

**Models**

Model Number	Output 1			Output 2			Output 3		Max Output Power W	Efficiency %	Maximum Capacitor Load µF
	Voltage V DC	Current (Normal) A	Current (MAX) A	Voltage V DC	Current (Normal) A	Current (MAX) A	Voltage V DC	Current (MAX) A			
43TAD65UD32C 43TUD65UD32C 43TED65UD32C 43TDD65UD32C	+5	6	10	+3.3	6	8	---	---	50	88.5	12000 / 3000
43TAD65UD63C 43TUD65UD63C 43TED65UD63C 43TDD65UD63C	+12	3	5.42	+5	6	8	---	---	65	90	2500 / 3000
43TAD65UD62C 43TUD65UD62C 43TED65UD62C 43TDD65UD62C	+12	3	5.42	+3.3	6	8	---	---	65	89.5	2500 / 3000
43TAD65UD73C 43TUD65UD73C 43TED65UD73C 43TDD65UD73C	+15	2.4	4.34	+5	6	8	---	---	65	90.5	1200 / 3000
43TAD65UD93C 43TUD65UD93C 43TED65UD93C 43TDD65UD93C	+24	1.5	2.71	+5	6	8	---	---	65	89	625 / 3000
43TAD65UD03C 43TUD65UD03C 43TED65UD03C 43TDD65UD03C	+28	1.25	2.33	+5	6	8	---	---	65	88	390 / 3000
43TAD65UT32M3C 43TUD65UT32M3C 43TED65UT32M3C 43TDD65UT32M3C	+5	6	10	+3.3	6	8	-5	0.6	50	88	12000 / 3000 / 500
43TAD65UT326C 43TUD65UT326C 43TED65UT326C 43TDD65UT326C	+5	6	10	+3.3	6	8	+12	0.6	50	88	12000 / 3000 / 500
43TAD65UT32M6C 43TUD65UT32M6C 43TED65UT32M6C 43TDD65UT32M6C	+5	6	10	+3.3	6	8	-12	0.6	50	88	12000 / 3000 / 500
43TAD65UT63M3C 43TUD65UT63M3C 43TED65UT63M3C 43TDD65UT63M3C	+12	3	5.42	+5	6	8	-5	0.6	65	89.5	2500 / 3000 / 500
43TAD65UT63M6C 43TUD65UT63M6C 43TED65UT63M6C 43TDD65UT63M6C	+12	3	5.42	+5	6	8	-12	0.6	65	89	2500 / 3000 / 500
43TAD65UT623C 43TUD65UT623C 43TED65UT623C 43TDD65UT623C	+12	3	5.42	+3.3	6	8	+5	0.6	65	89	2500 / 3000 / 500

**Models (continued)**

43TAD65UT62M6C 43TUD65UT62M6C 43TED65UT62M6C 43TDD65UT62M6C	+12	3	5.42	+3.3	6	8	-12	0.6	65	88.5	2500 / 3000 / 500
43TAD65UT73M7C 43TUD65UT73M7C 43TED65UT73M7C 43TDD65UT73M7C	+15	2.4	4.34	+5	6	8	-15	0.6	65	89.5	1200 / 3000 / 500
43TAD65UT936C 43TUD65UT936C 43TED65UT936C 43TDD65UT936C	+24	1.5	2.71	+5	6	8	+12	0.6	65	88.5	625 / 3000 / 500
43TAD65UT93M6C 43TUD65UT93M6C 43TED65UT93M6C 43TDD65UT93M6C	+24	1.5	2.71	+5	6	8	-12	0.6	65	88.5	625 / 3000 / 500

**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	--	--	1.65	A
	240VAC and Full Load	--	--	0.95	A
No load input power	230VAC	--	0.15	--	W
Leakage current	264VAC	--	75	--	µA
Start up time		--	--	1000	ms
Rise time		--	20	--	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	Pout 1+Pout 2+Pout 3	Vout 1	5V	--	50	W	
			Others	--	65		
Initial set voltage accuracy	230VAC and Full Load	Vout 1		-1.0	--	+1.0	
			Vout 2, Vout 3		-2.0	--	+2.0
Line regulation	Low Line to High Line at Full Load			-0.2	--	+0.2	
Load regulation	No Load to Full Load	Vout 1		-0.5	--	+0.5	
			Vout 3		-0.7	--	+0.7
	0.1W Load to Full Load	Vout 2		-1.5	--	+1.5	
					-0.7	--	+0.7
Cross regulation				-1.5	--	+1.5	
Voltage adjustability	Single output	Vout 1		-10	--	+10	
Minimum load	43T□D65UD□□			--	0	--	
	43T□D65UT□□□; Vout 3 is full load	Vout 1, Vout 2		--	0.5	--	
Ripple and noise	Measured by 20MHz bandwidth						
	With a 10μF/25V 1206 X7R MLCC	Vout 1	5V	--	100	--	
			12V	--	120	--	
			15V	--	150	--	
			24V	--	240	--	
	With a 1μF/50V 1206 X7R MLCC	Vout 1	28V	--	280	--	
			ALL	--	100	--	
			5V	--	100	--	
12V			--	120	--		
With a 10μF/25V 1206 X7R MLCC	Vout 2			--	100	--	
	Vout 3			5V	--	100	--
				12V	--	120	--
				15V	--	150	--
Temperature coefficient				-0.02	--	+0.02	%/°C
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	Vout 1		125	--	140	%
Overload protection	% of maximum Iout rated; Hiccup mode	Pout 1+Pout 2		--	145	--	%
Short Circuit Protection	Continuous, automatic recovery						

**General Specifications**

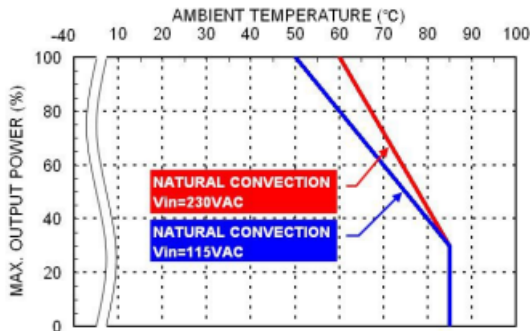
Parameter	Conditions		Min	Typ	Max	Unit
Isolation voltage	1 minute (Reinforced insulation)	Input to Output	3000	--	--	V AC
		Input (Output) to F.G	2500	--	--	
Isolation resistance	500V DC		0.1	--	--	GΩ
Switching frequency	230VAC, Full load	Vout 1	5V	--	60	--
			Others	--	115	--
		Vout 2		--	750	--
		Vout 3		--	510	--
Safety approvals	IEC/ EN/ UL 62368-1				UL:E193009 CB:UL(Demko)	
Weight	43TAD					155g (5.47oz)
	43TUD					203g (7.16oz)
	43TED					221g (6.07oz)
	43TDD					243g (6.81oz)
MTBF	MIL-HDBK-217F Ta=25°C, Full load					1.059 x 10 <sup>5</sup> hrs

**Environmental Specifications**

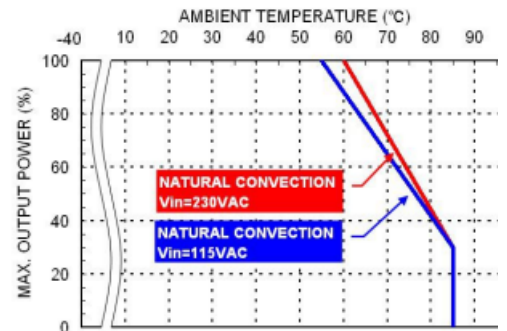
Parameter	Conditions		Min	Typ	Max	Unit
Operating ambient temperature	Natural Convection	With derating	-40	--	+85	°C
Storage temperature range			-40	--	+85	°C
Operating altitude					5000	m
Shock					IEC60068-2-27	
Vibration					IEC60068-2-6	
Relative humidity	Non-condensing				5% to 95% RH	

**EMC Specifications**

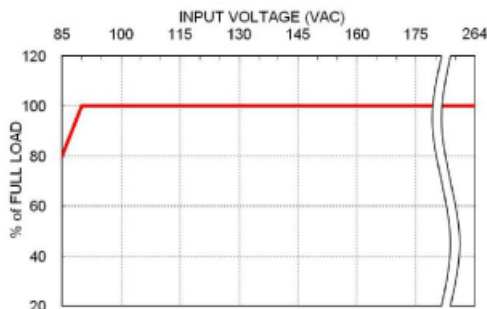
Parameter	Conditions		Level	
EMI	EN55032 and FCC Part 15 External components may be required for class I application.		Conducted	Class B
			Radiated	Class B
Harmonic currents	EN61000-3-2	Full Load		Class A
Voltage flicker	EN61000-3-3			
EMS	EN55024	and Complies with EN 61850-3		
ESD	EN61000-4-2			Perf. 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**


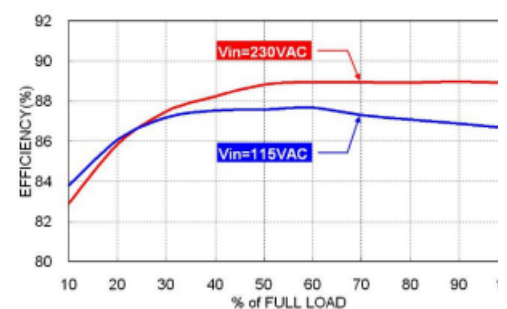
43T□D65UD Derating Curve vs. Ambient Temperature



43TDD65UT Derating Curve vs. Ambient Temperature



43T□65UT63M6B Derating Curve vs. Input Voltage



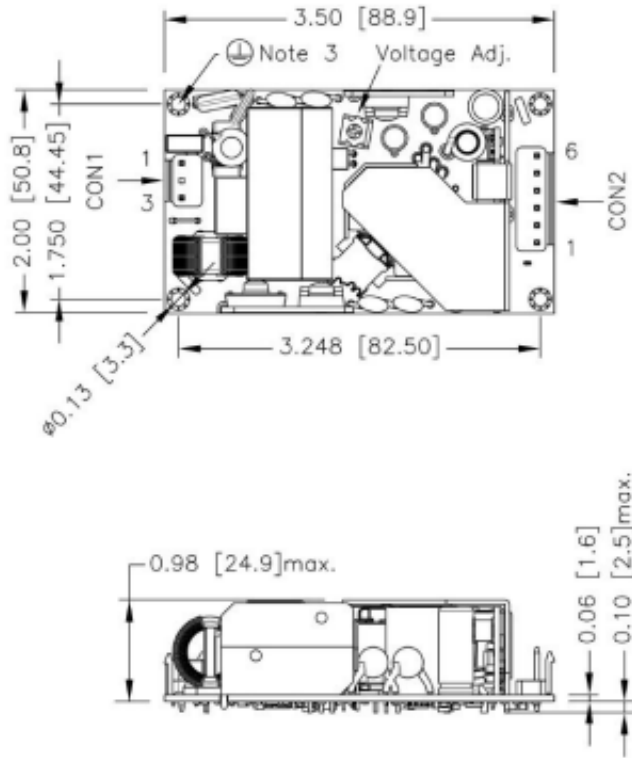
43T□D65UT63M6B Efficiency VS Output Load



43T□D65UT63M6B Efficiency VS Input Voltage

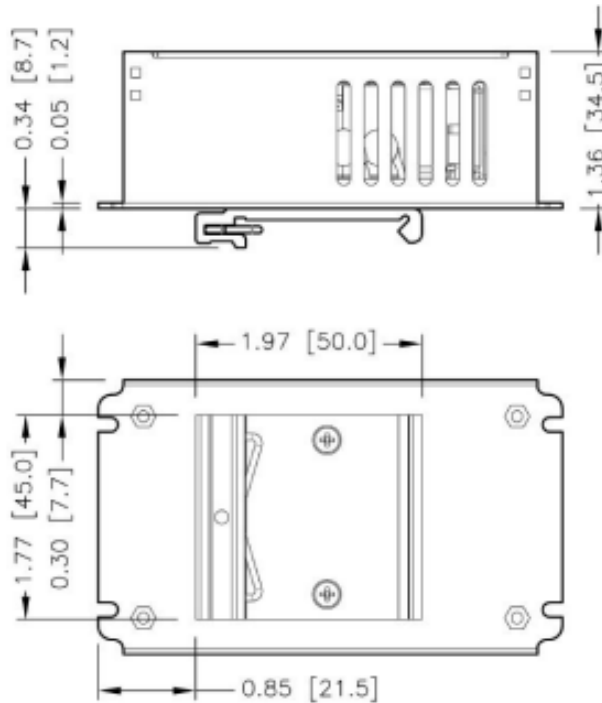
Mechanical Drawing

43TAD Open Type



FRONT VIEW

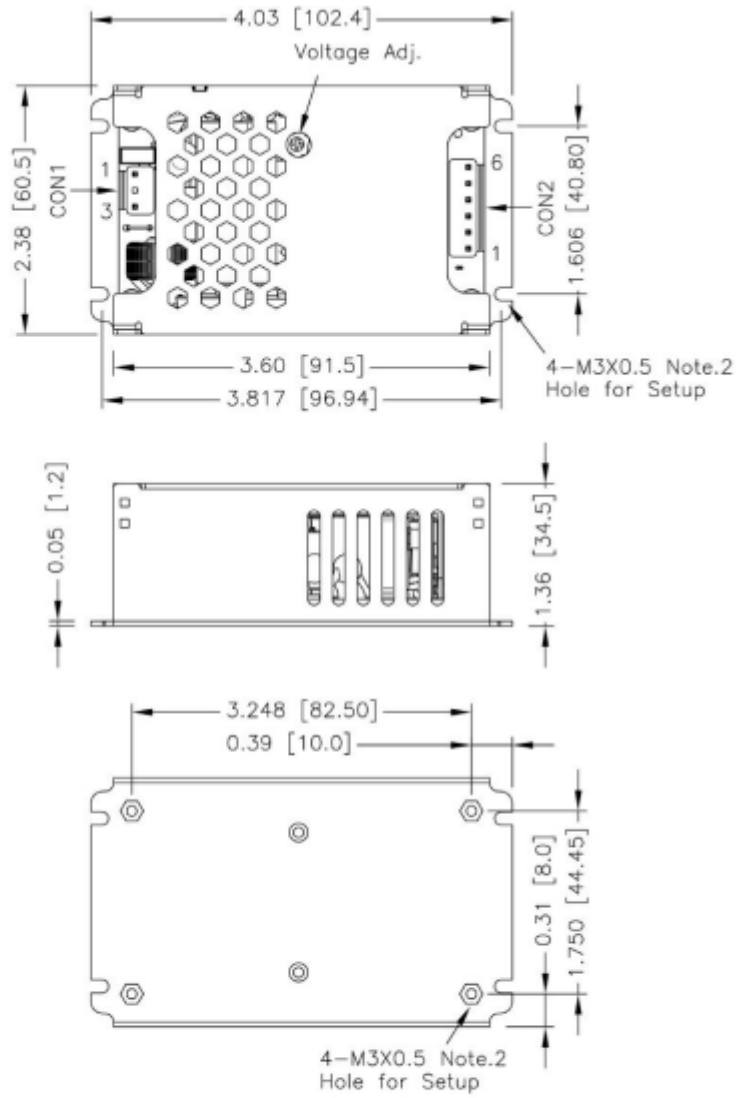
43TDD Din Rail Type



BOTTOM VIEW

**Mechanical Drawing (continued)**

43TED Enclosed Type



BOTTOM VIEW

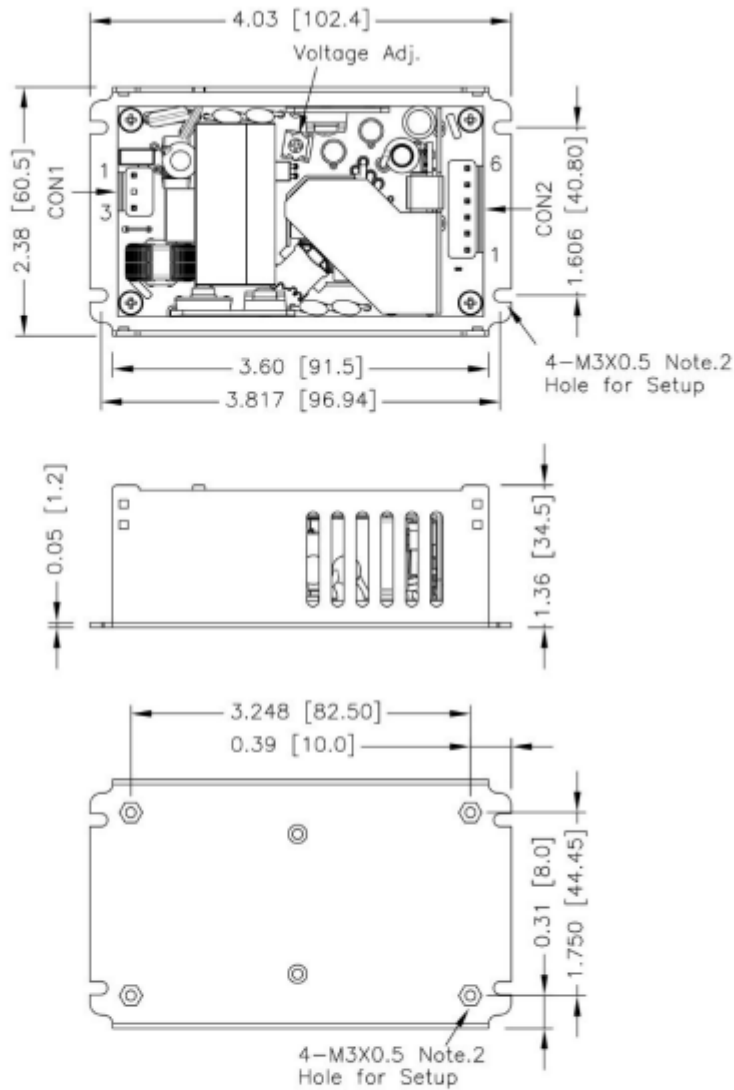
- 1.All dimensions in inch[mm]  
Tolerance:x.xx±0.02[x.x±0.5] x.xxx±0.010[x.xx±0.25]
- 2.The screw locked torque: MAX 5.0kgf-cm/0.49N-m

AC – DC



Mechanical Drawing (continued)

43TUD U Chassis Type



BOTTOM VIEW

1. All dimensions in inch[mm]  
Tolerance: x.xx±0.02[x.x±0.5] x.xxx±0.010[x.xx±0.25]
2. The screw locked torque: MAX 5.0kgf-cm/0.49N-m

**CON1-Input Connector**

Pin Number	AC Input	DC Input
		43T□D65UDXXC, 43T□D65UDXXD 43T□D65UTXXC, 43T□D65UTXXD
Pin 1	Line	DC+
Pin 3	Neutral	DC-

**CON2-Output Connector**

Pin 1	Vout3
Pin 2,3	Com
Pin 4,5	Vout2
Pin 6	Vout1

**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**