

Features

- Universal input 85~264VAC or 120~370VDC
- Operating Temperature Range: -40~105°
- Open Frame Power Supply (PSU)
- Approved to cURus, UKCA, CE, FCC, CB
- Safety standards to IEC/EN/UL 62368-1, IEC/ EN/ UL 62368-1
- Efficiency up to 93.5%
- EMC EN60601-1-2, EN55011, EN55032 & FCC Class B Certified
- Single Output 5-53V DC



Ideal Power's 43MxD65USxy 65W Series DC/DC Converters are certified to cURus, UKCA, CE, FCC, CB, RoHS, REACH & IEC/EN/ANSI/AAMI ES 60601-1, IEC/EN/UL 62368-1 Standards and comply with Efficiency Regulations. These are primarily used in ITE, Video & Audio, Medical Industries and customised solutions are available upon request.

Models

Model Number	Input Range	Output Voltage	Output Current Natural Convection	Max. Output Power	Input Power No Load	Efficiency	Maximum Capacitor Load
	VAC	VDC	A	W	W	%	µF
43MXD65US05C	85 ~ 264	5	10	50	0.11	90	20000
43MXD65US7P5C	85 ~ 264	7.5	8.67	65	0.11	90	11560
43MXD65US09C	85 ~ 264	9	7.23	65	0.11	91	8033
43MXD65US12C	85 ~ 264	12	5.42	65	0.11	92.5	4520
43MXD65US15C	85 ~ 264	15	4.34	65	0.11	93.5	2900
43MXD65US18C	85 ~ 264	18	3.62	65	0.11	93	2015
43MXD65US24C	85 ~ 264	24	2.71	65	0.11	93.5	1130
43MXD65US241C	85 ~ 264	24	2.71	65	0.11	92	1130
43MXD65US28C	85 ~ 264	28	2.33	65	0.11	93.5	830
43MXD65US281C	85 ~ 264	28	2.33	65	0.11	91.5	830
43MXD65US36C	85 ~ 264	36	1.81	65	0.11	92.5	520
43MXD65US48C	85 ~ 264	48	1.36	65	0.11	93	285
43MXD65US53C	85 ~ 264	53	1.24	65	0.11	92.5	235

NOTE* Please use **43MAD** for Open Type, **43MUD** for U Chassis Type, **43MED** for Enclosed Type and **43MDD** for Din Rail Type

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	A
No load input power	230VAC	--	0.11	--	Watts
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		--		65	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	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 10μF/25V 1206 X7R MLCC	5Vout, 7.5Vout, 9Vout	--	75	--	mVp-p
		12Vout, 15Vout, 18Vout	--	75	--	
		24Vout, 28Vout, 36Vout	--	75	--	
		48Vout, 53Vout	--	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	125	--	140	%	
Overload protection	% of Iout rated; Hiccup mode	--	145	--	%	
Short circuit protection					Continuous, automatic recovery	

General Specifications

Parameter	Conditions		Min	Typ	Max	Unit
Isolation voltage	1 minute (2MOPP insulation)	Input to Output	4000	--	--	VAC
		Input (Output) to F.G.	2500	--	--	
Isolation resistance	500VDC		0.1	--	--	GΩ
Switching frequency	230VAC	5Vout	--	60	--	kHz
		7.5Vout	--	80	--	
		9Vout	--	70	--	
		Others	--	120	--	
Safety approvals	IEC/ EN/ ANSI/AAMI ES 60601-1					UL:E360199
	IEC/ EN/ UL 62368-1					UL:E193009 CB:UL(Demko)
Weight	43MAD					117g (4.13oz)
	43MUD					157g (5.54oz)
	43MED					172g (6.07oz)
	43MDD					193g (6.81oz)
MTBF	MIL-HDBK-217F, Full load					1.257 x 10 ⁶ hrs

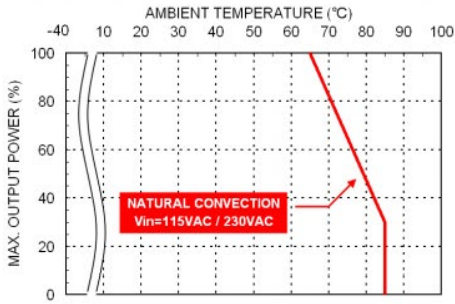
Environmental Specifications

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

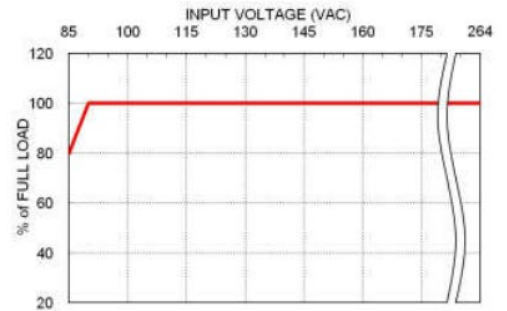
EMC Specifications

Parameter	Conditions		Level		
EMI	EN55011, EN55032, EN60601-1-2 and FCC Part 18 / 15			Conducted	Class B
				Radiated	Class B
External components may be required for class I application.					
Harmonic currents	EN61000-3-2	Full Load	Class A		
Voltage flicker	EN61000-3-3				
EMS	EN55024 and EN60601-1-2				
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	30A/m	Perf. Criteria A		
Dip and interruptions	EN61000-4-11				

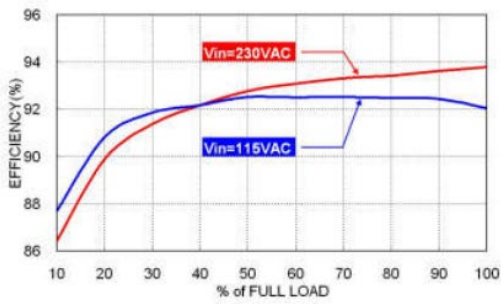
Characteristic Curve



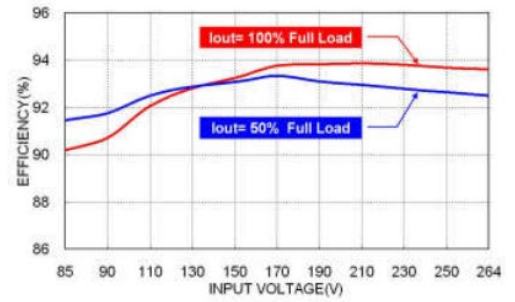
Derating Curve vs. Ambient Temperature



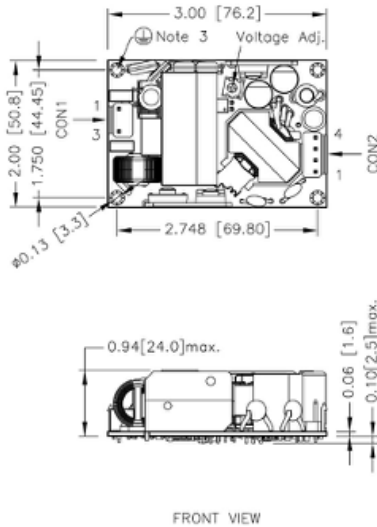
Derating Curve vs. Input Voltage



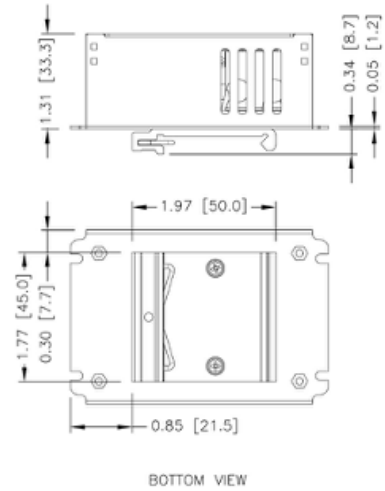
Efficiency vs. Output Load
43MxD65US24C



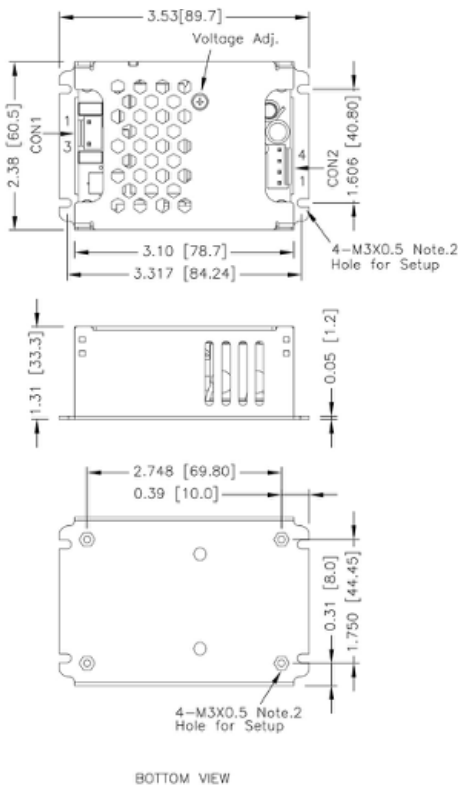
Efficiency vs. Input Voltage
43MxD65US24C

Mechanical Drawing
43MAD Open type


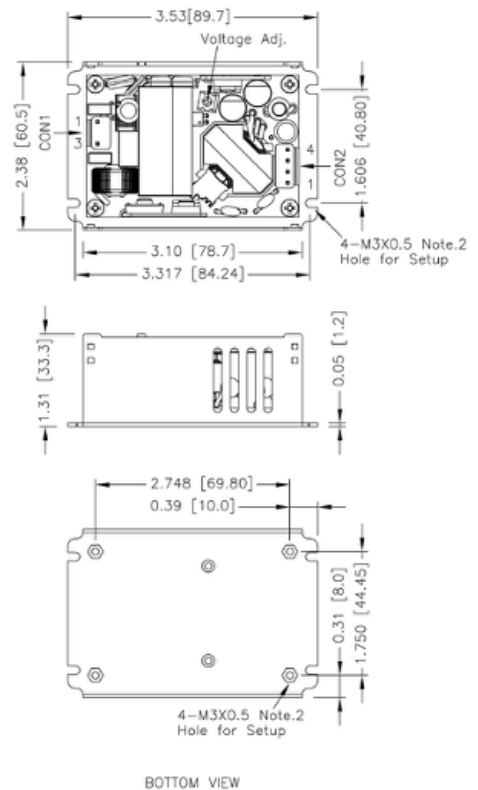
- All dimensions in inch [mm]
 Tolerance : $x.xx \pm 0.02$ [$x.x \pm 0.5$] $x.xxx \pm 0.010$ [$x.xx \pm 0.25$]
- The screw locked torque: MAX 5.0kgf-cm/0.49N-m
- The screws holes can be considered as PE connection for CLASS I application.

43MDD Din Rail type


- All dimensions in inch [mm]
 Tolerance : $x.xx \pm 0.02$ [$x.x \pm 0.5$] $x.xxx \pm 0.010$ [$x.xx \pm 0.25$]

43MED Enclosed type


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

43MUD U Chassis type


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

Connector Connections
CON1 – Input Connector

Pin Number	AC Input	DC Input 43MxD65USXXC, 43MxD65USXXD
Pin 1	Line	DC+
Pin 3	Neutral	DC-

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

 Mates with
Screw locked torque
MAX 2Kgf.cm/0.2N.m
Wire dimension range
26 ~ 16AWG