

Features

- 4:1 Wide Input Range
- Operating Temperature Range: -40~105°C
- Approved to UKCA, CE, RoHS & REACH
- Approved to IEC/UL/EN62368-1
- Efficiency upto 87%
- EMC Class A
- Single & Dual 15W Output Models



Ideal Power's 43UFEC15-xyW-EC 15W Enclosed Chassis Mount DC/DC Converter Series are certified to UKCA, CE, 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

UFEC15	-	48	S	05	W	-	P	R	EC
Series Name		Input Voltage (VDC)	Output Quantity	Output Voltage (VDC)	Input Range		Remote Control Options	Conformal Coating Options	Assembly Options
		24: 9.5 ~ 36 48: 18 ~ 75	S: Single	05: 5 09: 9 12: 12 15: 15 24: 24	4 : 1		<input type="checkbox"/> : NC P: Positive logic N: Negative logic	<input type="checkbox"/> : None R: Conformal coating	<input type="checkbox"/> : None EC: Enclosed Mounting type DR: Din Rail Mounting type ED: Enclosed & Din Rail Mounting type
			D: Dual	12: +12 15: +15					

Models

Model Number	Input Range V DC	Output Voltage V DC	Output current @Full Load A	Input Current @ No Load A	Efficiency %	Maximum Capacitor Load μF
43UFEC15-24S3P3W	9.5 ~ 36	3.3	4500	51	85	14700
43UFEC15-24S05W	9.5 ~ 36	5	3000	66	86	7200
43UFEC15-24S5P1W	9.5 ~ 36	5.1	3000	66	86	7200
43UFEC15-24S12W	9.5 ~ 36	12	1250	25	86	1250
43UFEC15-24S15W	9.5 ~ 36	15	1000	26	86	800
43UFEC15-24D05W	9.5 ~ 36	±5	±1500	56	86	±3600
43UFEC15-24D12W	9.5 ~ 36	±12	±625	33	87	±625
43UFEC15-24D15W	9.5 ~ 36	±15	±500	34	87	±400
43UFEC15-48S3P3W	18 ~ 75	3.3	4500	36	85	14700
43UFEC15-48S05W	18 ~ 75	5	3000	36	87	7200
43UFEC15-48S5P1W	18 ~ 75	5.1	3000	36	87	7200
43UFEC15-48S12W	18 ~ 75	12	1250	17	86	1250
43UFEC15-48S15W	18 ~ 75	15	1000	17	86	800
43UFEC15-48D05W	18 ~ 75	±5	±1500	36	87	±3600
43UFEC15-48D12W	18 ~ 75	±12	±625	19	87	±625
43UFEC15-48D15W	18 ~ 75	±15	±500	19	87	±400

Input Specifications

Parameter	Conditions	Min	Typ	Max	Unit
Operating input voltage range	24Vin(nom)	9.5	24	36	V DC
	48Vin(nom)	18	48	75	
Input fuse	slow blow	--	6	--	
			4		
Inrush current		--	15	--	
Start-up voltage	24Vin(nom)	--	--	9.5	V DC
	48Vin(nom)	--	--	18	
Shutdown voltage	24Vin(nom)	7	7.5	9	V DC
	48Vin(nom)	14.5	16	17.5	
Start-up time	Constant resistive load		100	--	ms
Input surge voltage	100ms, max	--	--	50	V DC
				100	
Remote ON/OFF	Referred to -Vin pin	Positive logic	DC-DC ON	Open or 3 ~ 12VDC	
			DC-DC OFF	Short or 0 ~ 1.2VDC	
		Negative logic	DC-DC ON	Short or 0 ~ 1.2VDC	
			DC-DC OFF	Open or 3 ~ 12VDC	
		0.5		0.5	mA
				2.5	mA

DC – DC

Output Specifications

Parameter	Conditions		Min	Typ	Max	Unit
Voltage accuracy	3.3Vout		-1.5		+1.5	%
	Others		-1.0		-1.0	
Line regulation	Low Line to High Line at Full Load	Single	-0.2		+0.2	%
		Dual	-0.5		-0.5	
Load regulation	No Load to Full Load	3.3Vout	-1.5		+1.5	%
		Others	-1.0		+1.0	
Cross regulation	Asymmetrical load 25%/100% FL	Dual	-5.0		+5.0	%
Ripple and noise	Measured by 20MHz bandwidth	Single	3.3Vout, 5Vout, 5.1Vout		50	mVp-p
			12Vout, 15Vout		75	
		Dual	All		75	
Temperature coefficient			-0.02		+0.02	%/°C
Transient response recovery time	25% Load step change			250		µs
Over voltage protection	3.3Vout			3.9		V DC
	5Vout, 5.1Vout			6.2		
	12Vout			15		
	15Vout			18		
Output indicator						Green LED
Overload protection	% of Iout rated			150		%
Short circuit protection						Continuous, automatic recovery

General Specifications

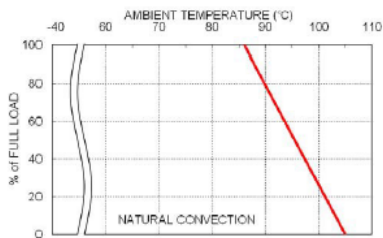
Parameter	Conditions		Min	Typ	Max	Unit
Isolation voltage	1 minute	Input to Output	1600			V DC
		Input (Output) to Chassis	1600			
Isolation resistance	500V DC		1			GΩ
Isolation capacitance					4000	pF
Switching frequency			360	400	440	kHz
Clearance/Creepage						mm
Safety approvals	IEC/ EN/ UL 62368-1					UL:E193009 CB:UL(Demko)
Chassis material						Aluminum
Conformal coating						Impregnating varnish
Weight						89g (3.13oz)
MTBF	MIL-HDBK-217F, Full load					2.544 x 10 ⁶ hrs

Environmental Specifications

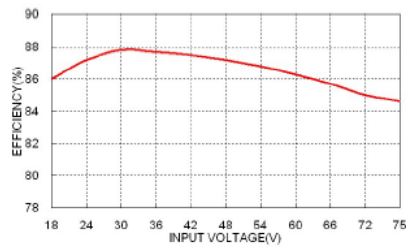
Parameter	Conditions		Min	Typ	Max	Unit
Operating ambient temperature	With derating		-40		+105	°C
Storage temperature range			-40		+105	°C
Thermal Shock						MIL-STD-810F
Vibration	□□S□□W -□					MIL-STD-810F
	□□S□□W -□EC					MIL-STD-810F
	□□S□□W -□DR					IEC60068-2-6
	□□S□□W -□ED					IEC60068-2-6
Relative humidity						5% to 95% RH

EMC Specifications

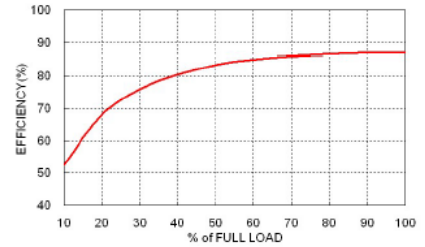
Parameter	Conditions		Level
EMI	EN55032		Class B
EMS	EN55024		
ESD	EN61000-4-2	Air \pm 8kV and Contact \pm 6kV	Perf. Criteria A
Radiated immunity	EN61000-4-3	10V/m	Perf. Criteria A
Fast transient	EN61000-4-4	\pm 2kV	Perf. Criteria A
Surge	EN61000-4-5	\pm 0.5kV	Perf. Criteria A
Conducted immunity	EN61000-4-6	10Vr.m.s	Perf. Criteria A
Power frequency magnetic field	EN61000-4-8	100A/m continuous; 1000A/m 1 second	Perf. Criteria A

Characteristic Curve


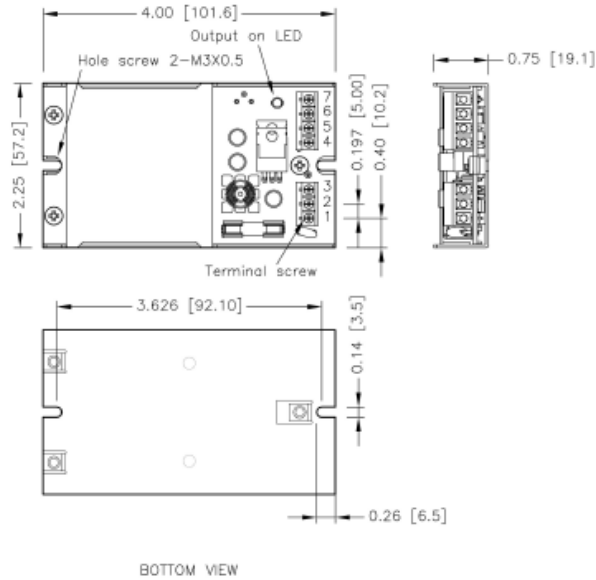
43UFEC15-48S05W Derating Curve



43UFEC15-48S05W Efficiency vs. Input Voltage



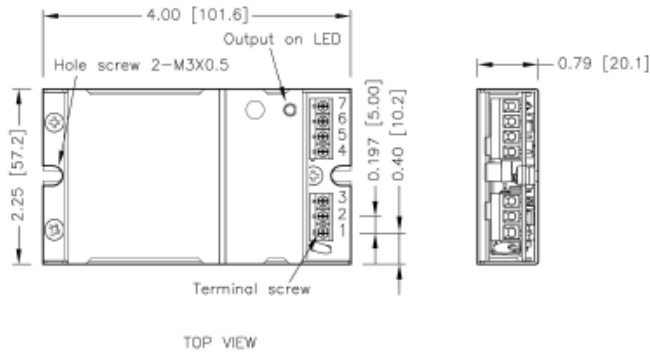
43UFEC15-48S05W Efficiency vs. Output Load

Mechanical Drawing
CHASSIS MOUNTING TYPE

Terminal Connection

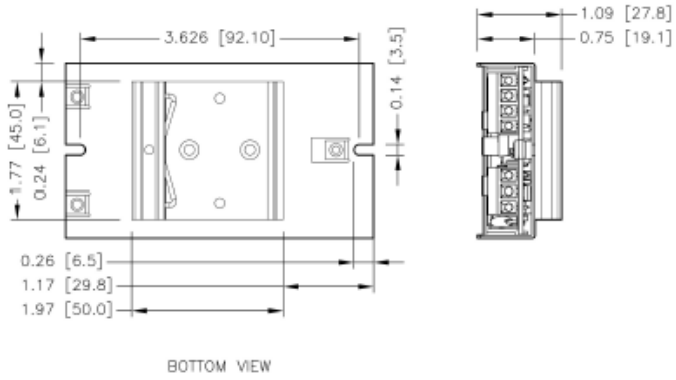
No.	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	Ctrl (Option)	Ctrl (Option)
4	NC	NC
5	-Vout	-Vout
6	+Vout	Common
7	NC	+Vout

Mechanical Drawing (Continued)

ENCLOSED MOUNTING TYPE



DIN RAIL MOUNTING TYPE



DC - DC