

Features

- 4:1 Wide Input Range
- Operating Temperature Range: -40~85°C
- Approved to UKCA, CE, RoHS & REACH
- Approved to IEC/UL/EN62368-1
- Efficiency up to 86%
- EMC Class A
- Single & Dual 15W Output Models



Ideal Power's 43DFEC15-xyW 15W Series Din Rail DC/DC Converters are certified to UKCA, CE, RoHS, REACH & IEC/UL/EN 62368-1 Standards and comply with the relevant Efficiency Regulations. These are primarily used in ITE, Video & Audio Industries and customised solutions are available upon request.

Part Number Structure

UFEC15	-	48	S	05	W	-	P
Series Name		Input Voltage (VDC)	Output Quantity	Output Voltage (VDC)	Input Range		Remote Control Options
		24: 9.5 ~ 36 48: 18 ~ 75	S: Single	3P3: 3.3 05: 5 5P1: 5.1 12: 12 15: 15	4 : 1		□: NC P: Positive logic N: Negative logic
			D: Dual	05: +5 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
43DFEC15-24S3P3W	9.5 ~ 36	3.3	4500	52	84	14700
43DFEC15-24S05W	9.5 ~ 36	5	3000	67	85	7200
43DFEC15-24S5P1W	9.5 ~ 36	5.1	3000	67	85	7200
43DFEC15-24S12W	9.5 ~ 36	12	1250	26	85	1250
43DFEC15-24S15W	9.5 ~ 36	15	1000	26	85	800
43DFEC15-24D05W	9.5 ~ 36	±5	±1500	57	85	±3600
43DFEC15-24D12W	9.5 ~ 36	±12	±625	35	86	±625
43DFEC15-24D15W	9.5 ~ 36	±15	±500	35	86	±400
43DFEC15-48S3P3W	18 ~ 75	3.3	4500	37	84	14700
43DFEC15-48S05W	18 ~ 75	5	3000	38	86	7200
43DFEC15-48S5P1W	18 ~ 75	5.1	3000	38	86	7200
43DFEC15-48S12W	18 ~ 75	12	1250	18	85	1250
43DFEC15-48S15W	18 ~ 75	15	1000	18	85	800
43DFEC15-48D05W	18 ~ 75	±5	±1500	37	86	±3600
43DFEC15-48D12W	18 ~ 75	±12	±625	20	86	±625
DFEC15-48D15W	18 ~ 75	±15	±500	20	86	±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	--	A		
			4				
Inrush current		--	15	--	A		
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		Power up	--	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			
		Input current of Ctrl pin	-0.5	0.5	mA		
		Remote off input current		2.5	mA		

Output Specifications

Parameter	Conditions		Min	Typ	Max	Unit
Voltage accuracy	3.3Vout		-2.0	--	+2.0	%
	Others		-1.2	--	-1.2	
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		-2.0	--	+2.0	%
	Others		-1.5	--	+1.5	
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			mVp-p
		Dual	12Vout, 15Vout			
Temperature coefficient			-0.02	--	+0.02	%/°C
	25% Load step change		--	250	--	
Over voltage protection	Zener diode clamp	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

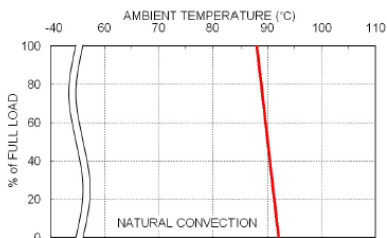
Parameter	Conditions		Min	Typ	Max	Unit
Isolation voltage	1 minute	Input to Output	1600	--	--	V DC
		Input (Output) to Chassis	1600	--	--	
Isolation resistance	500V DC		1	--	--	GΩ
Isolation capacitance			--	--	4000	pF
Switching frequency			360	400	440	kHz
Safety approvals	IEC/ EN/ UL 62368-1					UL:E193009 CB:UL(Demko)
Chassis material						Aluminum
Weight						147.5g (5.20oz)
MTBF	MIL-HDBK-217F, Full load					1.681 x 10 ⁶ hrs

Environmental Specifications

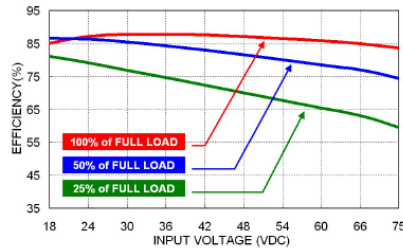
Parameter	Conditions		Min	Typ	Max	Unit
Operating ambient temperature	Without derating		-40		+85	°C
	With derating		+85		+93	
Storage temperature range			-40		+105	°C
Thermal Shock						MIL-STD-810F
Vibration						IEC60068-2-6
Relative humidity						5% to 95% RH

EMC Specifications

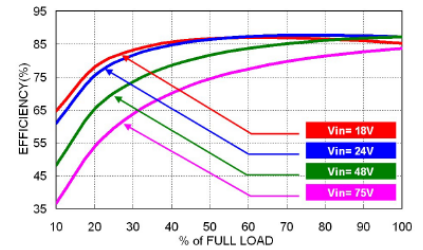
Parameter	Conditions		Level
EMI	EN55032		Class B
EMS	EN55024		
ESD	EN61000-4-2	Air \pm 8kV and Contact \pm 6kV	Perf. Criteria A
Radiated immunity	EN61000-4-3	10V/m	Perf. Criteria A
Fast transient	EN61000-4-4	\pm 2kV	Perf. Criteria A
Surge	EN61000-4-5	\pm 0.5kV	Perf. Criteria A
Conducted immunity	EN61000-4-6	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


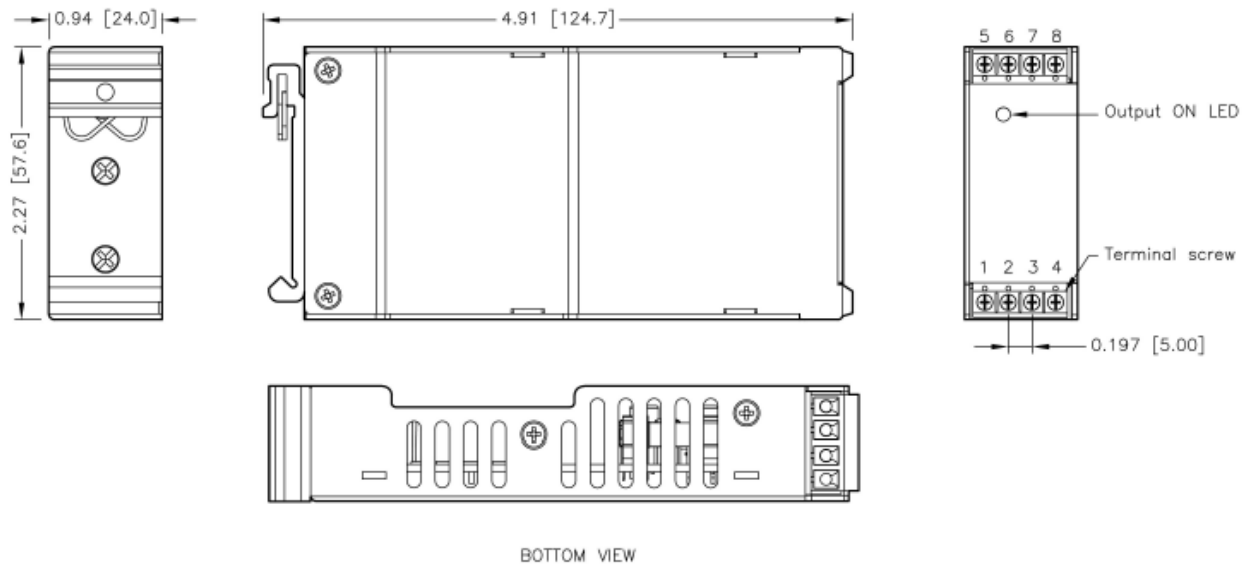
43DFEC15-48S05W Derating Curve



43DFEC15-48S05W Efficiency vs. Input Voltage



43DFEC15-48S05W Efficiency vs. Output Load

Mechanical Drawing

Terminal Connection

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