

UFEC15W SERIES

DC / DC Single & Dual Output: 15 Watts



Option- Heatsink

Features

- 4:1 wide Input range: 9~36V & 18~75V
- High quality Panel mount assembly
- Single & Dual outputs
- High efficiency up to 87%
- Regulated output & Short circuit protection
- 1600V isolation
- High operating temperature up to +85°C
- Zero load operation
- Designed to EN60950, UL1950
- EMC Compliant
- Input In-rush current limit circuit
- Transient protection
- Optional DIN Rail mounting - "DR" to model
- Optional Heatsink - "H" to model

Specifications:

Input Voltage	24VDC (9.5 ~ 36) 48VDC (18 ~ 75)
Input Filter	Pi type
Input Surge Voltage.	24V: 50VDC. 48V: 100VDC (100ms)
Input Fuse	24V 6A , 48V 4A (fast acting)
Input Reflected Ripple	10mA p-p
Start Up time	100ms typ, constant resistive load
Start-up Voltage	24V 9.5 vdc 48V: 18vdc
Shutdown Voltage	24V 7.5vdc 48V: 15vdc
Remote ON/OFF (Positive logic) (Negative logic) (Option)	DC-DC ON Open or $3.0V < V_r < 12V$ DC-DC OFF Short or $0V < V_r < 1.2V$ DC-DC ON Short or $0V < V_r < 1.2V$ DC-DC OFF Open or $3.0V < V_r < 12V$ Input current of remote control pin: .5mA Remote off state input current: 2.5mA
Output power	15 watts
Voltage Accuracy	$\pm 1.0\%$ ($\pm 1.5\%$ 3.3Vo)
Minim Load	Zero
Line Regulation	Single $\pm 0.2\%$ Dual $\pm 0.5\%$
Load Regulation	Single $\pm 0.5\%$, Dual $\pm 1\%$ (0% -100% load)
Cross Regulation	$\pm 5\%$ Asymmetrical load: 25-100% load)
Ripple & noise	See table. 20MHZ bandwidth
Temp. Coefficient	$\pm 0.02\%$ / °C
Transient Response	250uS (25% load step change)
Over Voltage Protection	3.3V: 3.9V 5.0V: 6.2V 12V: 15V 15V: 18V

Overload Protection	Typically 150% of load
Short Circuit protection	Continuous hiccup mode
Efficiency	Model dependant 86 ~ 87%
Isolation	1600VDC
Isolation Cap.	4000pF
Case Grounding	Connect case to -Vin with decoupling Y cap.
Switching Freq.	Standard 400KHz
Safety	Designed to meet EN60950-1, UL60950-1
Case Material	Aluminium
Dimensions	102 x 58 x 19mm
Weight	89g
MTBF	9.200×10^6 Hrs
Operating Temp	-40°C to +76°C (without derating) -40°C to +85°C (with derating)
Case Temp	+100°C maximum case temperature
Thermal shock	MIL-STD-810F
Vibration	10-55Hz, 10G, 30min along X, Y,Z
Humidity	5-95% RH
EMC	EN55022 Class B
ESD	EN61000-4-2 $\pm 8KV$
Radiated Immunity	EN61000-4-3
Fast Transients	EN61000-4-4 $\pm 2KV$
Surge	EN61000-4-5 $\pm 0.5KV$
Conducted Immunity	EN61000-4-6 10V r.m.s.

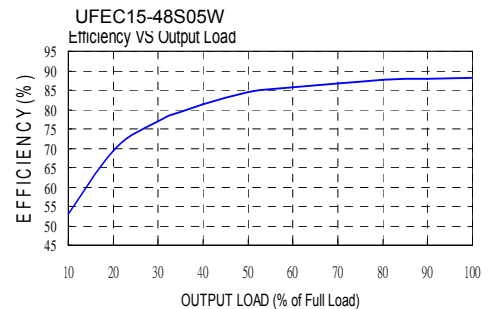
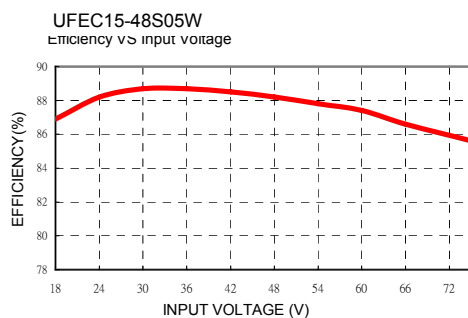
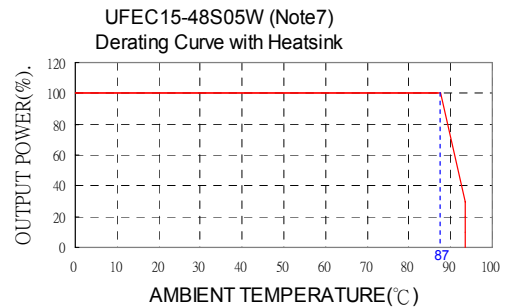
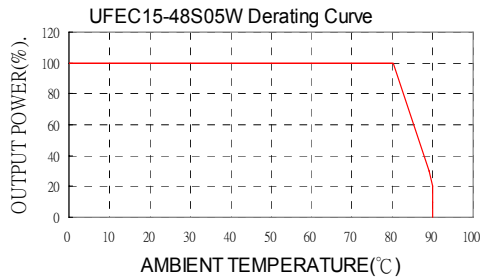
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Model Number	Input Range	Output Voltage	Output Current		Output (4) Ripple & Noise	Input Current		Eff (4) (%)	Capacitor (5) Load max
			Min. load	Full load		No Load (3)	Full Load (2)		
UFEC15-24S3P3W	9.5 – 36 VDC	3.3 VDC	0mA	450mA	50mVp-p	51mA	764mA	85	14700µF
UFEC15-24S05W	9.5– 36 VDC	5 VDC	0mA	3000mA	50mVp-p	66mA	762mA	86	7200µF
UFEC15-24S5P1W	9.5 – 36 VDC	5.1 VDC	0mA	3000mA	50mVp-p	66mA	777mA	86	7200µF
UFEC15-24S12W	9.5– 36 VDC	12 VDC	0mA	1250mA	75mVp-p	25mA	762mA	86	1250µF
UFEC15-24S15W	9.5– 36 VDC	15 VDC	0mA	1000mA	75mVp-p	26mA	762mA	86	800µF
UFEC15-24D05W	9.5– 36 VDC	± 5 VDC	0mA	± 1500mA	75mVp-p	56mA	762mA	86	± 3600µF
UFEC15-24D12W	9.5– 36 VDC	± 12 VDC	0mA	± 625mA	75mVp-p	33mA	753mA	87	± 625µF
UFEC15-24D15W	9.5– 36 VDC	± 15 VDC	0mA	± 500mA	75mVp-p	34mA	753mA	87	± 400µF
UFEC15-48S3P3W	18 – 75 VDC	3.3 VDC	0mA	4500mA	50mVp-p	36mA	382mA	85	14700µF
UFEC15-48S05W	18 – 75 VDC	5 VDC	0mA	3000mA	50mVp-p	36mA	377mA	87	7200µF
UFEC15-48S5P1W	18 – 75 VDC	5.1 VDC	0mA	3000mA	50mVp-p	36mA	384mA	87	7200µF
UFEC15-48S12W	18 – 75 VDC	12 VDC	0mA	1250mA	75mVp-p	17mA	381mA	86	1250µF
UFEC15-48S15W	18 – 75 VDC	15 VDC	0mA	1000mA	75mVp-p	17mA	381mA	86	800µF
UFEC15-48D05W	18 – 75 VDC	± 5 VDC	0mA	± 1500mA	75mVp-p	36mA	377mA	87	± 3600µF
UFEC15-48D12W	18 – 75 VDC	± 12 VDC	0mA	± 625mA	75mVp-p	19mA	377mA	87	± 625µF
UFEC15-48D15W	18 – 75 VDC	± 15 VDC	0mA	± 500mA	75mVp-p	19mA	377mA	87	± 400µF

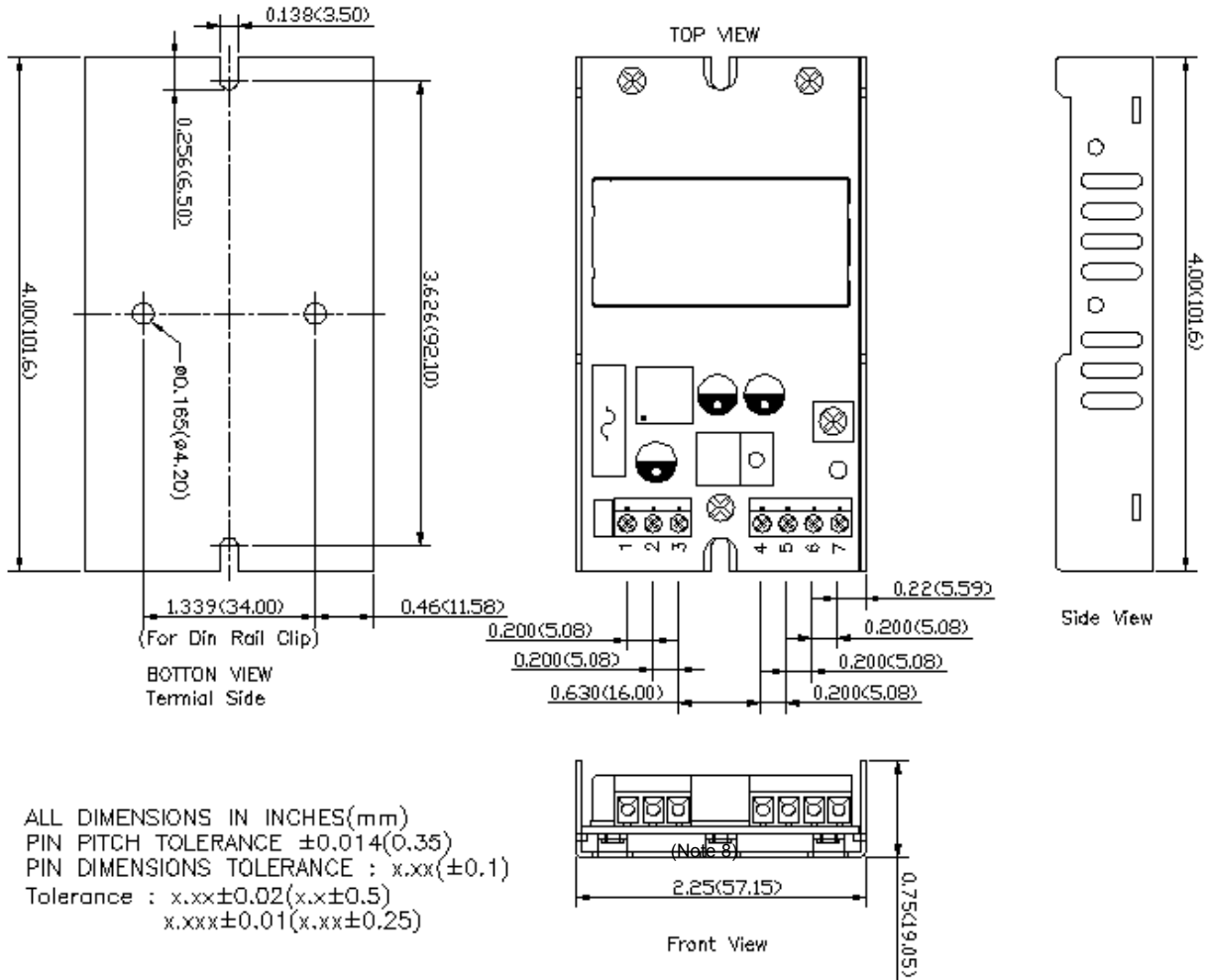
Notes:

- BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. MIL-HDBK-217F Notice2 @Ta=25 °C, Full load(Ground, Benign, controlled environment).
- Maximum value at nominal input voltage and full load.
- Typical value at nominal input voltage and no load.
- Typical value at nominal input voltage and full load.
- Test by minimum Vin and constant resistive load.
- The ON/OFF control pin voltage is referenced to -Vin.
To order Positive logic ON/OFF control add the suffix-P (Ex:UFEC15-48S05W-P)
To order negative logic ON/OFF control add the suffix-N (Ex:UFEC15-48S05W-N)
- Heat sink is optional and P/N : 7B-CMD9N
- Screw terminals – wire range from 14 AWG to 18 AWG



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OPTIONS	
Option	Suffix
Without Heat Sink(Standard)	
With Heat Sink	-HS
Din Rail Mounting Type	-DR
With Heat Sink and Din Rail Mounting Type	-HD
Positive logic Remote ON/OFF	-P
Negative logic Remote ON/OFF	-N

PIN CONNECTION		
PIN	SINGLE	DUAL
1	+INPUT	+INPUT
2	-INPUT	-INPUT
3	CTRL	CTRL
4	NC	NC
5	-OUTPUT	-OUTPUT
6	+OUTPUT	COMMON
7	NC	+OUTPUT

Fig A1: Using dual output models
For single 24v or 30V output

