

# UFEC40W SERIES

DC / DC Single & Dual Output: 40 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
- Designed to EN60950, UL1950
- EMC Compliant
- In-rush current limit circuit & Transient protection
- LED Indicator, Voltage Trim
- Optional DIN Rail mounting - "DR" to model
- Optional Heatsink - "H" to model

## Specifications:

<b>Input Voltage</b>	<b>24VDC</b> ( 9.5 ~ 36 ) <b>48VDC</b> ( 18 ~ 75 )	<b>Overload Protection</b>	Typically 150% of load
<b>Input Filter</b>	Pi type	<b>Short Circuit protection</b>	Continuous hiccup mode
<b>Input Surge Voltage.</b>	24V: 50VDC. 48V: 100VDC ( 100ms )	<b>Efficiency</b>	Model dependant 86 ~ 87%
<b>Input Fuse</b>	24V 8A , 48V 4A ( fast acting )	<b>Isolation</b>	1600VDC
<b>Input Reflected Ripple</b>	15mA p-p	<b>Isolation Cap.</b>	4500pF
<b>Start Up time</b>	100ms typ, constant resistive load	<b>Case Grounding</b>	Connect case to -Vin with decoupling Y cap.
<b>Start-up Voltage</b>	24V 9.5vdc 48V: 18vdc	<b>Switching Freq.</b>	Standard 300KHz
<b>Shutdown Voltage</b>	24V 8vdc 48V: 16vdc	<b>Safety</b>	Designed to meet EN60950-1, UL60950-1
<b>Remote ON/OFF</b>	DC-DC ON Open or $3.0V < V_r < 12V$ DC-DC OFF Short or $0V < V_r < 1.2V$	<b>Case Material</b>	Aluminium
Positive logic standard		<b>Dimensions</b>	102 x 58 x 19mm
Negative logic-Option	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: 0.5mA Remote off state input current: 10mA	<b>Weight</b>	122g
<b>Output power</b>	40 watts	<b>MTBF</b>	1.511 x 10 <sup>5</sup> Hrs
<b>Voltage Accuracy</b>	±1.0% ( ±1.5% 3.3Vo )	<b>Operating Temp</b>	-40°C to +50°C ( without derating ) -40°C to +85°C ( with derating )
<b>Minim Load</b>	See table	<b>Case Temp</b>	+100°C maximum case temperature
<b>Output voltage trim</b>	±10% single outputs	<b>Thermal shock</b>	MIL-STD-810F
<b>Line Regulation</b>	Single ±0.5% Dual ±0.5%	<b>Vibration</b>	10-55Hz, 10G, 30min along X, Y,Z
<b>Load Regulation</b>	Single ±1% , Dual ±1% ( 0% -100% load )	<b>Humidity</b>	5-95% RH
<b>Cross Regulation</b>	±5% Asymmetrical load: 25-100% load )	<b>EMC</b>	EN55022 Class B
<b>Ripple &amp; noise</b>	See table. 20MHZ bandwidth	<b>ESD</b>	EN61000-4-2 ±8KV
<b>Temp. Coefficient</b>	±0.02% / °C	<b>Radiated Immunity</b>	EN61000-4-3
<b>Transient Response</b>	250uS ( 25% load step change )	<b>Fast Transients</b>	EN61000-4-4 ±2KV
<b>Over Voltage Protection</b>	3.3V: 3.9V 5.0V: 6.2V 12V: 15V 15V: 18V	<b>Surge</b>	EN61000-4-5 ±0.5KV
		<b>Conducted Immunity</b>	EN61000-4-6 10V r.m.s.

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Model Number	Input Range	Output Voltage	Output Current		Output <sup>(4)</sup> Ripple & Noise	Input Current		Eff <sup>(4)</sup> (%)	Capacitor <sup>(5)</sup> Load max
			Min. load	Full load		No load <sup>(3)</sup>	Full load <sup>(2)</sup>		
UFEC40-24S3P3W	9.5 – 36 VDC	3.3 VDC	0mA	10000mA	50mVp-p	81mA	1719mA	84	25750µF
UFEC40-24S05W	9.5 – 36 VDC	5 VDC	0mA	8000mA	50mVp-p	101mA	2058mA	85	13600µF
UFEC40-24S12W	9.5 – 36 VDC	12 VDC	50mA	3333mA	75mVp-p	53mA	2058mA	85	2360µF
UFEC40-24S15W	9.5 – 36 VDC	15 VDC	50mA	2666mA	75mVp-p	54mA	2058mA	85	1510µF
UFEC40-24D12W	9.5 – 36 VDC	± 12 VDC	±65 mA	± 1667mA	120mVp-p	63mA	2084mA	84	± 1200µF
UFEC40-24D15W	9.5 – 36 VDC	± 15 VDC	±50 mA	± 1333mA	150mVp-p	74mA	2084mA	84	± 750µF
UFEC40-48S3P3W	18 – 75 VDC	3.3 VDC	0mA	10000mA	50mVp-p	61mA	848mA	85	25750µF
UFEC40-48S05W	18 – 75 VDC	5 VDC	0mA	8000mA	50mVp-p	66mA	1004mA	87	13600µF
UFEC40-48S12W	18 – 75 VDC	12 VDC	50mA	3333mA	75mVp-p	32mA	1016mA	86	2360µF
UFEC40-48S15W	18 – 75 VDC	15 VDC	50mA	2666mA	75mVp-p	32mA	1016mA	86	1510µF
UFEC40-48D12W	18 – 75 VDC	± 12 VDC	±65 mA	± 1667mA	120mVp-p	32mA	1029mA	85	± 1200µF
UFEC40-48D15W	18 – 75 VDC	± 15 VDC	±60 mA	± 1333mA	150mVp-p	32mA	1029mA	85	± 750µF

- 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 negative logic ON/OFF control add the suffix-N (Ex:UFEC40-48S05W-N)
  - The output requires minimum loading on the output to maintain specified regulation. Operation in no-load condition will not damage these devices, however they may not meet all listed specification.
  - Single output installs a potentiometer to adjust the output voltage.
  - Load regulation for dual output: Min load to 100% load balanced on all outputs
  - Screw terminals – wire range from 14 AWG to 18 AWG



