

UFED20W SERIES

DC / DC Single & Dual Output: 20 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
- In-rush current limit circuit & Transient protection
- LED Indicator, Voltage Trim
- Optional DIN Rail mounting - "DR" to model
- Optional Heatsink - "H" to model

Specifications:

Input Voltage	24VDC (9.5 ~ 36) 48VDC (18 ~ 75)	Overload Protection	Typically 150% of load
Input Filter	Pi type	Short Circuit protection	Continuous hiccup mode
Input Surge Voltage.	24V: 50VDC. 48V: 100VDC (100ms)	Efficiency	Model dependant 86 ~ 87%
Input Fuse	24V 6A , 48V 4A (fast acting)	Isolation	1600VDC
Input Reflected Ripple	10mA p-p	Isolation Cap.	4000pF
Start Up time	100ms typ, constant resistive load	Case Grounding	Connect case to -Vin with decoupling Y cap.
Start-up Voltage	24V 9.5 vdc 48V: 18vdc	Switching Freq.	Standard 400KHz
Shutdown Voltage	24V 7.5vdc 48V: 15vdc	Safety	Designed to meet EN60950-1, UL60950-1
Remote ON/OFF	DC-DC ON Open or $3.0V < V_r < 12V$ DC-DC OFF Short or $0V < V_r < 1.2V$	Case Material	Aluminium
Positive logic standard		Dimensions	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: 2.5mA	Weight	89g
Output power	20 watts	MTBF	6.588×10^6 Hrs
Voltage Accuracy	$\pm 1.0\%$ ($\pm 1.5\%$ 3.3Vo)	Operating Temp	-40°C to +66°C (without derating) -40°C to +850°C (with derating)
Minim Load	Zero	Case Temp	+100°C maximum case temperature
Output voltage trim	$\pm 10\%$ single outputs	Thermal shock	MIL-STD-810F
Line Regulation	Single $\pm 0.2\%$ Dual $\pm 0.5\%$	Vibration	10-55Hz, 10G, 30min along X, Y,Z
Load Regulation	Single $\pm 0.5\%$, Dual $\pm 1\%$ (0% -100% load)	Humidity	5-95% RH
Cross Regulation	$\pm 5\%$ Asymmetrical load: 25-100% load)	EMC	EN55022 Class B
Ripple & noise	See table. 20MHZ bandwidth	ESD	EN61000-4-2 $\pm 8KV$
Temp. Coefficient	$\pm 0.02\%$ / °C	Radiated Immunity	EN61000-4-3
Transient Response	250uS (25% load step change)	Fast Transients	EN61000-4-4 $\pm 2KV$
Over Voltage Protection	3.3V: 3.9V 5.0V: 6.2V 12V: 15V 15V: 18V	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⁾		
UFED20-24S3P3W	9.5 – 36 VDC	3.3 VDC	0mA	5500mA	60mVp-p	51mA	945mA	84	18000µF
UFED20-24S05W	9.5 – 36 VDC	5 VDC	0mA	4000mA	75mVp-p	66mA	1004mA	87	9600µF
UFED20-24S12W	9.5 – 36 VDC	12 VDC	0mA	1670mA	75mVp-p	25mA	1031mA	85	1650µF
UFED20-24S15W	9.5 – 36 VDC	15 VDC	0mA	1330mA	75mVp-p	26mA	1026mA	85	1050µF
UFED20-24D05W	9.5 – 36 VDC	±5 VDC	0mA	±2000mA	100mVp-p	58mA	1004mA	87	±4800µF
UFED20-24D12W	9.5 – 36 VDC	±12 VDC	0mA	±833mA	100mVp-p	33mA	1016mA	86	±825µF
UFED20-24D15W	9.5 – 36 VDC	±15 VDC	0mA	±667mA	100mVp-p	34mA	1017mA	86	±525µF
UFED20-48S3P3W	18 – 75 VDC	3.3 VDC	0mA	5500mA	60mVp-p	36mA	473mA	84	18000µF
UFED20-48S05W	18 – 75 VDC	5 VDC	0mA	4000mA	75mVp-p	36mA	502mA	87	9600µF
UFED20-48S12W	18 – 75 VDC	12 VDC	0mA	1670mA	75mVp-p	17mA	509mA	86	1650µF
UFED20-48S15W	18 – 75 VDC	15 VDC	0mA	1330mA	75mVp-p	17mA	507mA	86	1050µF
UFED20-48D05W	18 – 75 VDC	±5 VDC	0mA	±2000mA	100mVp-p	36mA	496mA	88	±4800µF
UFED20-48D12W	18 – 75 VDC	±12 VDC	0mA	±833mA	100mVp-p	19mA	502mA	87	±825µF
UFED20-48D15W	18 – 75 VDC	±15 VDC	0mA	±667mA	100mVp-p	19mA	502mA	87	±525µF

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:UFED20-48S05W-N)
- Single output installs a potentiometer to adjust the output voltage.
- Heat sink is optional and P/N : 7B-CMD9N
- Screw terminals – wire range from 14 AWG to 18 AWG



