

# HNE75W Series

## ISOLATED 75W REGULATED SINGLE OUTPUT DC/DC CONVERTERS

### FEATURES

- High power density
- High efficiency up to 89%
- Industry-Standard 1/8-brick pinout
- Cost efficient design
- Adjustable output voltage ( $\pm 5\%$ )
- Input undervoltage lockout
- Output over voltage and over current protection
- Over temperature protection
- Remote On/Off negative logic and positive logic
- Remote Sense
- Monotonic startup
- RoHS compliance
- Basic Insulation
- Meets the conducted emission limits of EN55022 Class B
- UL60950 recognized in US and Canada
- All materials meet UL94 V-0 flammability rating



Order Code	Input Voltage(Vdc)	Output Voltage(Vdc)	Input Current(A)		Output Current(A)		%Eff. (Typ)	Cap. Load max.(uF)
			NO Load	FULL Load	MIN.	MAX.		
HNE75W-24S33	9-36	3.3	0.13	3.84	0	15	87	10000
HNE75W-24S05	9-36	5	0.15	3.58	0	15	87	10000
HNE75W-24S12	9-36	12	0.05	3.63	0	6.3	86	4700
HNE75W-24S15	9-36	15	0.05	3.58	0	5.1	87	2200
HNE75W-24S24	9-36	24	0.05	3.57	0	3.1	87	2200
HNE75W-24S28	9-36	28	0.05	3.52	0	4.2	88	2200
HNE75W-24S48	9-36	48	0.06	3.66	0	1.65	86	2200
HNE75W-48S33	18-75	3.3	0.08	1.17	0	15	88	10000
HNE75W-48S05	18-75	5	0.08	1.75	0	15	89	10000
HNE75W-48S12	18-75	12	0.06	1.77	0	6.3	88	4700
HNE75W-48S15	18-75	15	0.06	1.77	0	5.1	88	2200
HNE75W-48S24	18-75	24	0.06	1.77	0	3.1	88	2200
HNE75W-48S28	18-75	28	0.06	1.78	0	4.2	89	2200
HNE75W-48S48	18-75	48	0.05	1.80	0	1.65	87	2200

**NOTE:1.Nominal Input Voltage 24 or 48 VDC**

**NOTE:2.No 'W' Mean as the 2:1 Input Voltage 9-18,18-36,36-75VDC.Nominal Input Voltage 12,24 or 48 VDC**

**NOTE:3.The Output Terminal of 48Vout Models Required a Minimum Capacitor 47uF to Maintain Specified Regulation.**

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INPUT CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage range	24V input types(4:1)	9	24	36	Vdc
	48V input types(4:1)	18	48	75	
Under voltage lock out	Turn on threshold 9V minimum input types		8.8		Vdc
	Turn off threshold 9V minimum input types		8		
	Turn on threshold 18V minimum input types		17		
	Turn off threshold 18V minimum input types		16		
Input Surge Voltage(100ms max)	36V maximum input types			50	Vdc
	75V maximum input types			100	
Input Filter					LC Type
Positive Logic Remote on/off Control					See Note

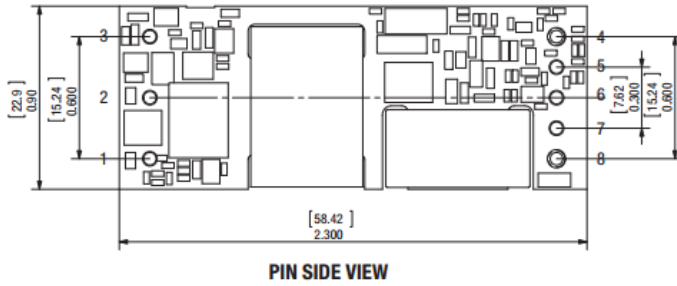
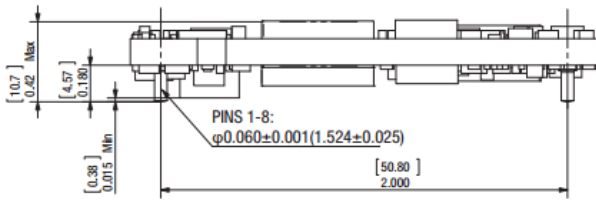
OUTPUT CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power	3.3V output types			50	W
	All other output types			75	
Voltage Accuracy				±1.5	%
Line Regulation	Low line to high line			±0.5	%
Load Regulation	10% total load to 100% total load			±1	%
Temperature Coefficient				±0.03	%
Start-up Time			50		mS
Output Current Limit				110%~140% Nominal Output	
Short Circuit Protection				Continuous	
Over Voltage Protection				115%~140% Nominal Output	
External Trim Adj.Range	Single output models only			±10	%
Ripple and Noise	20MHz BW	3.3V&5V		75	mVp-p
		All other output types		1%	Vo,nom
Transient Response	25% Step Load Change	Error band		±5%	Vo,nom
		Recovery Time		500	uS

GENERAL CHARACTERISTICS	
Isolation Voltage	1500VDC min.
Isolation Resistance (500VDC)	10 <sup>8</sup> Ohms min.
Isolation Capacitance	1000pF typ.
Switching frequency	300KHz
Operation Ambient Temperature Range	-40°C ~100°C
Derating	See Derating Curve
Case Temperature	105°C max
Storage Temperature Range	-55°C to +125°C
Humidity	95%RH max. Non condensing

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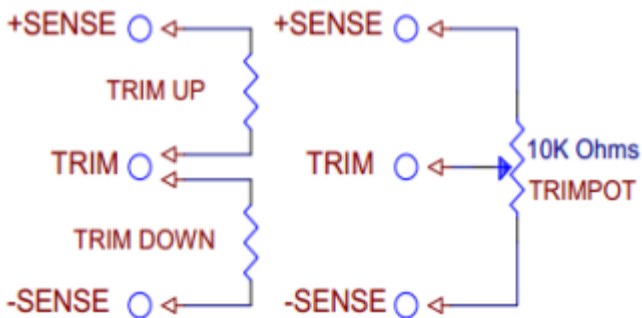
MTBF	MIL-STD-217F,GB,25°C,Full Load 600Khrs typ.
Dimensions	0.9 x 2.3 x 0.5 inches(22.9 x 58.42 x 12.7mm)
Case Material	Aluminum Baseplate with Plastic Case
Weight	70g

### MECHANICAL DIMENSIONS & PIN CONNECTION



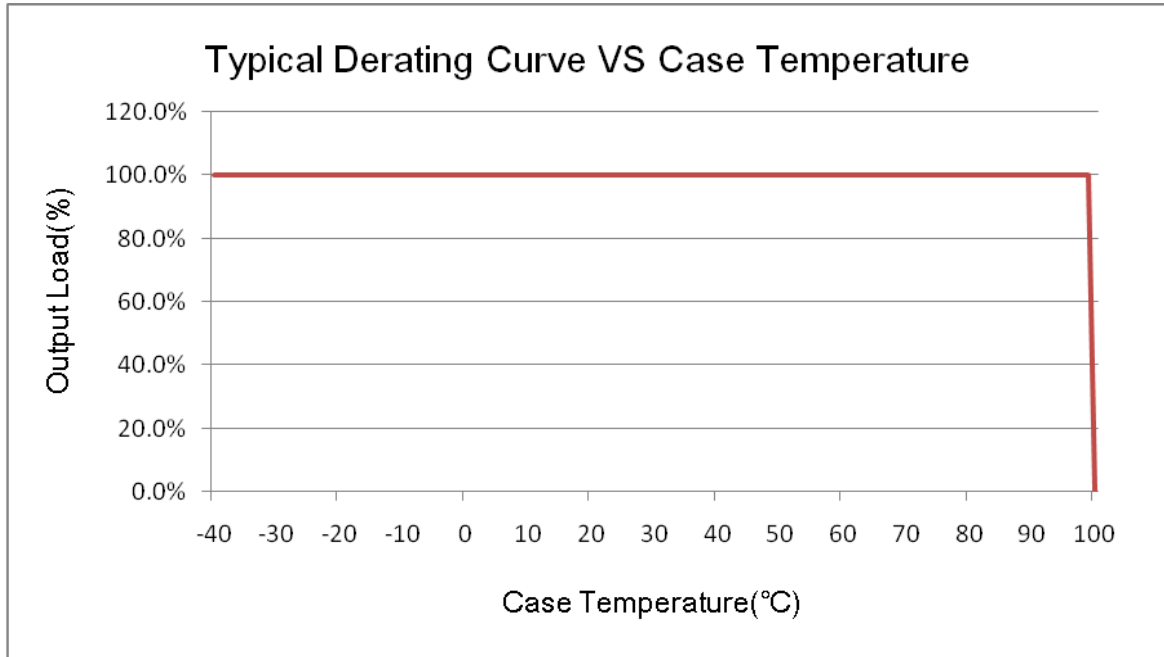
Pin	Function
1	+Vin
2	On/Off Control
3	-Vin
4	-Vout
5	Sense (-)
6	Trim
7	Sense (+)
8	+Vout

### EXTERNAL OUTPUT TRIM



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**Derating Curve**



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**ISOLATED 75W REGULATED SINGLE OUTPUT DC/DC CONVERTERS**

**NOT**

1. Measured From High Line to Low Line.
2. Measured From Full Load to min. Load.
3. Maximum case temperature under any operating condition should Not be exceeded 105°C.
4. The output ripple and noise is measured with 10uF tantalum and 1uF Ceramic capacitor across output.
5. All Specifications Typical at Nominal Line, Full Load, and 25°C Unless Otherwise Noted.
6. Positive Logic Remote on/off Control :

Logic Compatibility ..... CMOS or Open Collector TTL

Module ON .....>+3.5V to  $V_{i,max}$  VDC or Open Circuit

Module OFF .....<1.2VDC