



Applications

These converters are well suitable for battery operated equipment, measurement equipment, telecom, wireless network, Industry control system, everywhere where isolated, tightly regulated voltages and compact size are required.

Features

- Wide 2:1 Input Voltage Range
- Input / Output Isolation: 3000VDC
- Remote On/Off
- Output Short Circuit Protection
- Over Voltage Protection: Clamp Mode
- Operating Temperature Range: -40°C to +100°C
- Lead Free Design, RoHS Compliant
- Designed according to IEC/EN/UL 62368-1

Models and Ratings

Model Number	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Current (mA)		Input Current (mA) typ.		Efficiency (%) typ.	Capacitive Load (μF) max.
			Min. Load	Full Load	No Load	Full Load		
HUB12-12S0H3	9 - 18 12V nominal	3.3	20	3500	10	1318	77	4700
HUB12-12S1H3		5	0	2400	20	1282	82	3300
HUB12-12SMH3		7	0	2000	38	1400	83.1	1000
HUB12-12S2H3		12	10	1000	22	1220	86	680
HUB12-12S3H3		15	0	800	21	1235	85	330
HUB12-12D1H3		±5	0	±1200	19	1282	82	1000 / 1000
HUB12-12D2H3		±12	0	±500	27	1220	86	220 / 220
HUB12-12D3H3		±15	0	±400	31	1235	85	200 / 200
HUB12-24S0H3	18 - 36 24V nominal	3.3	20	3500	11	659	77	4700
HUB12-24S1H3		5	0	2400	10	641	82	3300
HUB12-24S2H3		12	10	1000	13	602	87	680
HUB12-24S3H3		15	0	800	12	610	86	330
HUB12-24D1H3		±5	0	±1200	10	633	83	1000 / 1000
HUB12-24D2H3		±12	±10	±500	15	602	87	147 / 147
HUB12-24D3H3		±15	0	±400	17	610	86	133 / 133

Models and Ratings

Model Number	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Current (mA)		Input Current (mA) typ.		Efficiency (%) typ.	Capacitive Load (μF) max.
			Min. Load	Full Load	No Load	Full Load		
HUB12-48S0H3	36 - 75 48V nominal	3.3	20	3500	3	325	78	3300
HUB12-48S1H3		5	0	2400	6	321	82	1680
HUB12-48S2H3		12	0	1000	7	301	87	220
HUB12-48S3H3		15	0	800	6	305	86	147
HUB12-48D1H3		±5	0	±1200	6	316	83	680 / 680
HUB12-48D2H3		±12	0	±500	8	301	87	68 / 68
HUB12-48D3H3		±15	0	±400	9	305	86	100 / 100

Input Specifications

Input voltage	See 'Models and Ratings' table	
	100ms max.	
Input surge voltage	12Vin models	25 VDC
	24Vin models	50 VDC
	48Vin models	100 VDC
Input filter	Pi type	
Input reflected ripple current	Nominal Vin and full load	130 mAp-p typ.
Remote ON/OFF	Converter On	Open circuit or 3.5 to 12 VDC
	Converter Off	Short circuit or 0 to 1.2 VDC
	Refer to 'Remote' and '-Vin' pin	
Off idle input current	Nominal Vin	3 mA max.
Remote pin input current	Nominal Vin	0.2 mA max.

Output Specifications

Output power	12 Watts max.	
Voltage accuracy	Nominal Vin and full load	±1% max.
Minimum load	See 'Models and Ratings' table	
Output voltage adjustability (Trim)	Single output models only	±10% max.
Line regulation	±0.5% max.	
Load regulation	25% to 100% load	±0.5% max.
Cross regulation	25% / 100% asym. load	±5% max.

Ripple and noise	20MHz bandwidth	100 mVp-p max.
Capacitive load		See 'Models and Ratings' table
Short circuit protection		Continuous, Automatic recovery
Overload protection	Nominal Vin	150% typ. of full load
	3.3V output	3.9V
Over voltage protection	5V output	6.2V
(Zener Diode Clamp)	12V output	15V
	15V output	18V
Transient recovery time	50% load step change	2000µs typ.
Transient response deviation	di/dt = 0.8 A/µs	±5% max.
Temperature coefficient	Full load	±0.02%/°C max.

General Specifications

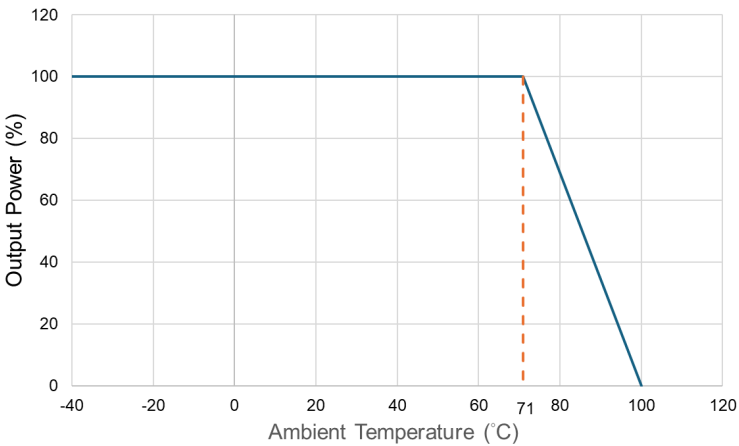
Efficiency	Nominal Vin and full load	See 'Models and Ratings' table
Start-up time	Nominal Vin and constant resistive load	550 ms typ.
Switching frequency		300 kHz typ.
Isolation voltage	Input to output, 60 s	3000 VDC min.
	Input/output to case, 60 s	1000 VDC min.
Isolation resistance	500 VDC	1000 MΩ min.
Isolation capacitance		500 pF typ.
Reliability, calculated MTBF	MIL-HDBK-217F@25°C, Ground Benign	1.96 × 10 ⁶ h
Operating ambient temperature	With derating	-40°C to +100°C
Maximum case temperature		+100°C max.
Storage temperature range		-55°C to +125°C
Relative humidity		95% RH max.
Cooling		Natural convection

Physical Specifications

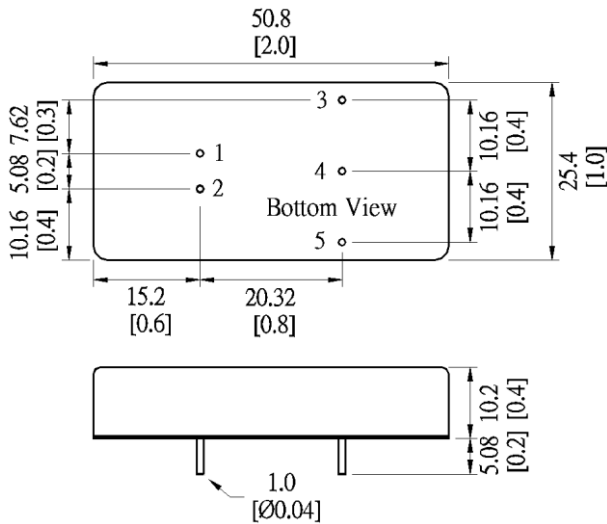
Case material	Nickel-coated copper
Base material	Nonconductive black plastic (UL 94 V-0)
Pin material	Copper alloy
Pin Foundation Plating	Nickel
Pin Surface Plating	Tin
Potting material	Silicone (UL 94 V-0)
Dimensions	2.0 × 1.0 × 0.4 inch 50.8 × 25.4 × 10.2 mm
Weight	30 g typ.

Characteristic Curves

Power Derating Curve



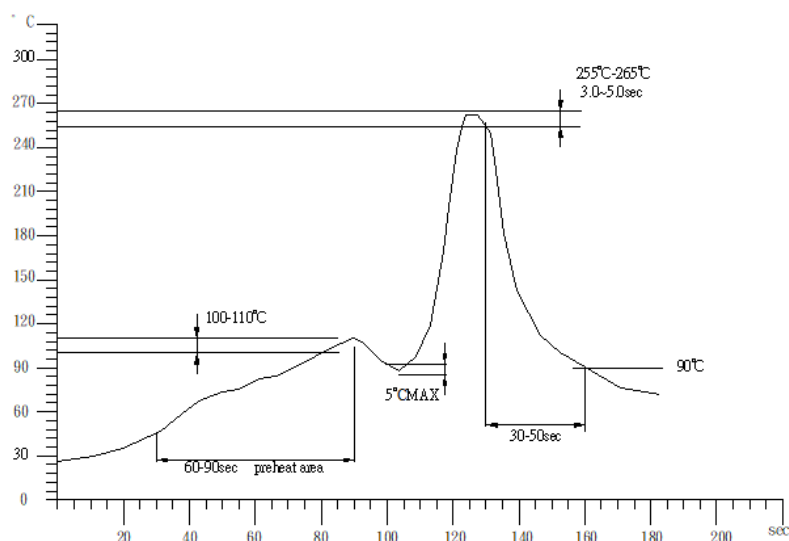
Mechanical



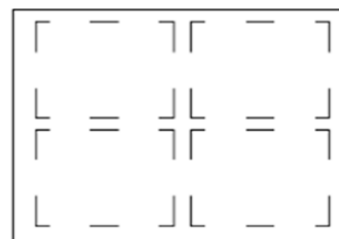
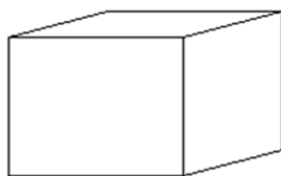
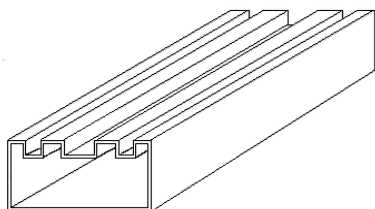
Pinout		
PIN	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	Trim	Common
5	-Vout	-Vout
6	Remote On/Off	Remote On/Off

Dimensions in mm [inch]
Tolerances: ±0.5 [±0.02]
Pin dimension tolerances: ±0.10 (±0.004)

Wave Soldering Temperature Curve



Carton Package



INNER CARTON: 388*158.5*115

EXPORT CARTON: 405*334*263

TUBE = 12PCS

INNER CARTON = 10 TUBE = 10*12 = 120PCS

EXPORT CARTON = 4 INNER CARTON = 4*120 = 480PCS

For More Information:

Americas-prodinfo@pulseelectronics.com | Europe-comms@pulseelectronics.com | Asia-prodinfo@pulseelectronics.com

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