

Features

- ◆ Wide 4:1 input voltage range
- ◆ Remote On/Off control
- ◆ Operating temp. range -40°C to +85°C
- ◆ High efficiency up to 89%
- ◆ I/O isolation voltage 1500 Vdc
- ◆ Input under-voltage protection, output short-circuit, over-current, over-voltage protection
- ◆ EMC meet EN55022 Class B
- ◆ RoHS/CE/ISO multiple compliance
- ◆ Low noise & ripple
- ◆ 3-year product warranty



UB_D-10W series modules are high performance DC/DC converter. The product has advantages of wide input voltage range, small start current, good load characteristic, and low ripple. Ceramic chip capacitors and SMT are used in the series. The product has characteristics of long lifetime, high reliability. The series product makes an ideal solution in industrial control system, data transmission device, communication device, battery driver, industrial robots, remote control system, Analog/digital hybrid system, etc.

Selection Guide

Model No.	Eff. Typ.	Input Voltage	Output Voltage	Output Current	Max. Capacitive Load
UB2405D-10W	84 %	9~36 Vdc (24 Vdc nom.)	5 Vdc	2000 mA	2200 μ F
UB2409D-10W	85 %		9 Vdc	1111 mA	680 μ F
UB2412D-10W	87 %		12 Vdc	833 mA	470 μ F
UB2415D-10W	88 %		15 Vdc	667 mA	330 μ F
UB2424D-10W	88 %		24 Vdc	417 mA	100 μ F
UB4805D-10W	85 %	18~75 Vdc (48 Vdc nom.)	5 Vdc	2000 mA	2200 μ F
UB4809D-10W	86 %		9 Vdc	1111 mA	680 μ F
UB4812D-10W	88 %		12 Vdc	833 mA	470 μ F
UB4815D-10W	89 %		15 Vdc	667 mA	330 μ F
UB4824D-10W	89 %		24 Vdc	417 mA	100 μ F

UB_D-10W Series

10 Watt, wide input, isolated & regulated single output dc-dc converter



Input Specifications

Surge Voltage	24 Vin models	50 Vdc max. (1 sec max)
	48 Vin models	100 Vdc max. (1 sec max)
Start-up Voltage	24 Vin models	9 Vdc max.
	48 Vin models	18 Vdc max.
Under Voltage Lockout	24 Vin models	6.5 Vdc typ.
	48 Vin models	15.5 Vdc typ.
Remote Control	– Module On	REM pin 3.5-12 Vdc or open circuit
	– Module Off	REM pin 0-1.2 Vdc or low to GND
Input Filter		“LC” filter

Output Specifications

Voltage Set Accuracy		±1% typ.
Regulation	– Input variation Vin min. to Vin max.	0.5 % max.
	– Load variation 10-100%	1 % max.
Ripple and Noise	– DC-20MHz Bandwidth	200 mVp-p max.
Temperature Coefficient		±0.03 %/°C max.
Short Circuit Protection		Continuous (automatic recovery)
Output Current Limitation		110% - 190% of Iout max.
Overvoltage Protection		110% - 160% of Vout nom.
Transient Response	– Response Time	300 µs typ. (25% Load Step)
Output Filter		Internal Pi-Type

General Specifications

Isolation Voltage	– Input/Output (60 sec.)	1500 Vdc min.
Isolation Resistance	– Input/Output (500 Vdc)	1000 MΩ min.
Isolation Capacitance	– Input/Output (100kHz@0.1V)	1000 pF typ.
Switching Frequency		300 kHz typ.
Temperature Ranges	– Operating Temperature	-40 to +85 °C
	– Case Temperature	+105 °C max.
	– Storage Temperature	-50 to +130 °C
Power Derating	– High Temperature	Depending on model
Humidity		95 % max. (non condensing)
Reliability	– MIL-HDBK 217@25°C	3500 kHours min. (calculated MTBF)
Casing Material		Alumina alloy
Weight		12 g

EMC Specifications

EMI	– CE	EN55022: 2010 class B
	– RE	EN55022: 2010 class B
EMS	– ESD	EN61000-4-2 perf. Criterion B
	– RS	EN61000-4-3 perf. Criterion A

· All specifications are subject to change without notice

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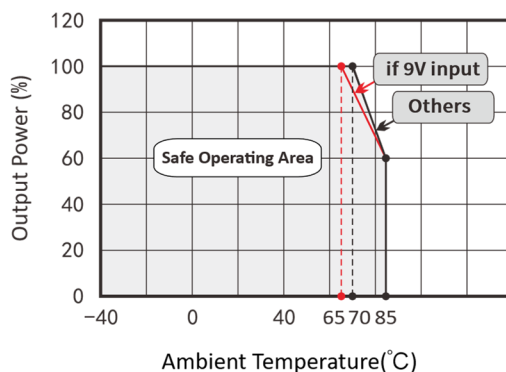
UB_D-10W Series

10 Watt, wide input, isolated & regulated single output dc-dc converter

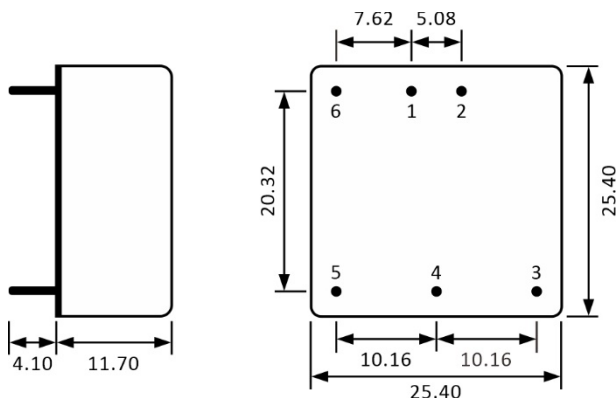


Characteristic Curves

Temperature Derating Curve



Outline Dimensions



Pin	Single
1	GND
2	Vin
3	+Vout
4	Trim
5	-Vout
6	no Pin

Dimensions in mm
Tolerances: 0.50
Pin pitch tolerances ± 0.25
Pin diameter $\Phi 1.0$

1. All data in addition to particular things, are $T_a = 25^\circ\text{C}$, humidity $< 75\%$, nominal input voltage and output measured at rated load;
2. Non-standard models with some of the following indicators may be different from the specific circumstances of the Secretary to direct contact with me;
3. In the use of this manual, if some of them do not quite understand terms please refer to our <<DC/DC Converter Application Guide>>;
4. The Company focused on technological improvements, product specifications and parameter updates without notice, to pay attention to the latest information on website.

All Delus Corporation's products are manufactured, assembled and tested utilizing ISO9001 quality systems.

For information regarding Delus Corporation and its products please see website: www.delus-power.com

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