Ḣ HiTRON

PCB-MOUNT DC-DC CONVERTER ENCAPSULATED MODULES INDUSTRIAL GRADE 25 WATTS DUAL OUTPUT HDM25-D SERIES

FEATURES:

■ **DUAL OUTPUT**

■ **2:1 INPUT RANGE**

■ **25W ISOLATED OUTPUT**

■ **SIX-SIDED METAL SHIELD**

SPECIFICATION

INPUT SPECIFICATION

Input Range: 2:1 DC input range:
    4.5-9/9-18/18-36/36-72Vdc.
Input Voltage: Nominal 5/12/24/48Vdc.
Input Current: Various with input range and load.
Input Fuse: Use external fuse.
Input Filter: Pi-Network.
Input Reflect Ripple Current: 45mA typical.
Isolation Resistor: 1,000 Mega Ohms.
Isolation Voltage: 1,500Vdc.
EMI: Six-sided metal shielding.
Remote On/Off: TTL/CMOS-Compatible Input Control.
    Positive Logic version for Standard set up:
        ON(Enable)=Open(or 2.5-5.0Vdc above-Vin)
        OFF(Disable)=Short(or 0-0.8Vdc above-Vin)
    Negative Logic version option available by adding a
        "N"suffix to the end of Model #.
        Remark: Voltage refer to –Input(-Vin).

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Voltage Accuracy: Main O/P ±2.0 % typical.
Line Regulation: ± 0.06% typical.
Load Regulation: VO1 ±0.60 %, VO2 ±0.5% typical.
Noise & Ripple: 1.0% typical.
OVP: Built-in on main output VO1.
Adjustability: VO1 O/P may optionally be external
    trimmed ±3.0% with a fixed resistors or trim-pot.
Short Circuit Protection:
    Power fold back, and self-recovering.
Overload Protection (OLP):
    Fully protected against output overload and short circuit.
    OLP set at about 125-150% rating output wattage.
    Consult the factory for OLP setting.

GENERAL SPECIFICATION

Efficiency: 77-85% typical, various with input.
Switching Frequency: Fixed frequency 450K Hz.
Circuit Topology: 450K Hz. Forward Circuit.
Transient Response: Max. excursion 140mV,
    Recovery time <200 μSec. @ 25%
    step load change.
Case: Black coated copper with non-conductive
    metal base.
Power Density: 10.0 Watts. / Cubic inch.
MTBF: 1,000,000 hours to Mil. Std. 217, 25°C.

Operating Temperature: Industrial Grade -25°C to
    +85°C range. 0°C to+70°C @ full load without derating.
    From+70°C derating linearly to half load @+85°C.
    (Refer to the Derating Chart for commercial grade.)
Temperature: -40°C to +105°C for industrial grade.
Temperature Coefficient: ± 0.03% /°C.
Humidity: Up to 95%RH, Non-condensing.
Cooling: Convection cooling up to+70°C @full load.
    At least 100LFM moving air is recommended for
    full load >+71°Cin a confined area.
Industrial Grade for 12B/24B/48B input.
Commercial Grade only for 5B input.

NOTE: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.
    (2) Line Regulation measured from High to Low Lines at full load.
    (3) Load Regulation measured from Full Load to 1/2 Full Load at nominal input.
    (4) Correct fuse size by calculating the max. DC current drains at low Line input & Load and then adding 20-25% for the desired fuse size.

Due to requests in market and advances in technology, specifications subject to change without notice.
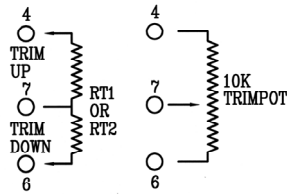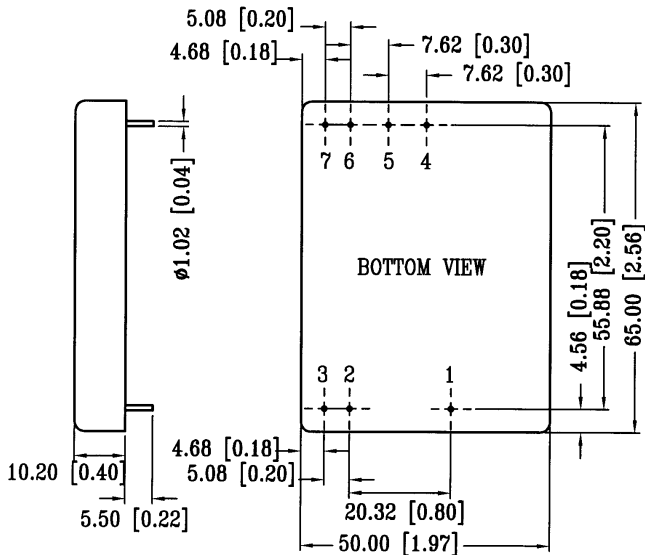
INPUT/OUTPUT & VOLTAGE/CURRENT RATINGS CHART
DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT		OUTPUT (Vdc)		OUTPUT (A)		CASE SIZE
		N.L. (mA)	F.L.	+VO1@★	-VO2 ‖	+VO1	-VO2	
HDM25-5B-D12	4.5- 9.0	150	5,020	+12.0V	-12.0V	0.84A	0.84A	DM2H
HDM25-5B-D15	4.5- 9.0	150	5,020	+15.0V	-15.0V	0.67A	0.67A	DM2H
HDM25-12B-D12	9.0-18.0	100	2,100	+12.0V	-12.0V	0.84A	0.84A	DM2H
HDM25-12B-D15	9.0-18.0	100	2,100	+15.0V	-15.0V	0.67A	0.67A	DM2H
HDM25-24B-D12	18.0-36.0	60	1,050	+12.0V	-12.0V	0.84A	0.84A	DM2H
HDM25-24B-D15	18.0-36.0	60	1,050	+15.0V	-15.0V	0.67A	0.67A	DM2H
HDM25-48B-D12	36.0-72.0	60	530	+12.0V	-12.0V	0.84A	0.84A	DM2H
HDM25-48B-D15	36.0-72.0	60	530	+15.0V	-15.0V	0.67A	0.67A	DM2H

Symbols: "★" OVP built-in.   "@" Adjustable.   " ‖ " Double Feedback.

MECHANICAL DIMENSIONS: MM [INCHES]   WEIGHT:85 g (3.0 Oz.)

BOTTOM VIEW

CASE SIZE: DM2H

PIN ASSIGNMENT

PIN NO.	DUAL
PIN# 1.	+INPUT
PIN# 2.	-INPUT
PIN# 3.	REMOTE ON/OFF
PIN# 4.	+VO1
PIN# 5.	DC-COM
PIN# 6.	-VO2
PIN# 7.	OUTPUT TRIM

DERATING CHART

COMMERCIAL GRADE

INDUSTRIAL GRADE