



PCB-MOUNT DC-DC CONVERTER ENCAPSULATED MODULES INDUSTRIAL GRADE 10 WATTS SINGLE & DUAL OUTPUT HDM11-S & HDM11-D SERIES



FEATURES:

- VERY LOW PROFILE 7 MM HIGH
- SINGLE & DUAL OUTPUT
- WIDE 4:1 INPUT RANGE
- 10W ISOLATED OUTPUT
- SIX-SIDED METAL SHIELD

SPECIFICATION

INPUT SPECIFICATION

Input Range: Wide 4:1 DC input range.
See Ratings Chart.

Input Voltage: Nominal 12/24/48Vdc.

Input Current: Various with input range and load.
See Ratings Chart.

Input Fuse: Use external fuse.

Input Filter: Pi-Network.

Undervoltage Shutdown: 8Vdc.

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: Logic voltage refer to -Input(Vin).

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.

Output Current: See Ratings Chart.

Voltage Accuracy: Main O/P $\pm 2.0\%$ typical.

Line Regulation: Various with output voltages $\pm 0.5\%$ typ.

Load Regulation: Various with output voltages.
Single O/P ± 1.0 typical.
Dual O/P ± 2.0 typical.

Noise & Ripple: Typical 100mV for 3.3V/5.0V & 1.0%
for others peak to peak.

OVP: Built-in on main output.

Adjustability: Not available.

Overload Protection (OLP):
Fully protected against output overload and short circuit.
OLP set t about 120-150% of rating output load.
Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: 78% typical various with input.

Switching Frequency: Fixed frequency 450K Hz.

Circuit Topology: 450K Hz. Forward Circuit.

Transient Response: Peak deviation 200mV.
Recovery time $< 3\text{mS}$ for a 25% load change.

Case: Black coated aluminum with non-conductive
metal base.

Power Density: 17.2Watts. / Cubic inch.

MTBF: 1,000,000 hours. Mil. Std. 217, 25°C.

Operating Temperature: -25°C to +85°C range.
-10°C to +70°C @ full load without derating.
From +70°C, derating linearly to half load @ +85°C.
(Refer to Derating Chart).

Storage Temperature: -40°C to +105°C.

Humidity: Up to 95% RH, Non-condensing.

Temperature Coefficient: 0.02% /°C.

Cooling: Convection cooling up to 70°C @ full load.
At least 100LFM moving air is recommended for
full load $> +70^\circ\text{C}$ in a confined area.

Industrial Grade only.

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 (F-L) to Half-Load (H-L) 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.

INPUT/ OUTPUT & VOLTAGE/ CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT N.L. (mA) F.L.		OUTPUT★ VO1(Vdc)	OUTPUT VO1(A)	CASE SIZE
HDM11-12D-S03	9.0- 36.0	50	900	3.3V	2.50A	DM1A
HDM11-12D-S05	9.0- 36.0	50	1070	5.0V	2.00A	DM1A
HDM11-12D-S09	9.0- 36.0	50	1050	9.0V	1.10A	DM1A
HDM11-12D-S12	9.0- 36.0	50	1050	12.0V	0.83A	DM1A
HDM11-12D-S15	9.0- 36.0	50	1050	15.0V	0.67A	DM1A
HDM11-24D-S03	9.0- 36.0	50	450	3.3V	2.50A	DM1A
HDM11-24D-S05	9.0- 36.0	50	535	5.0V	2.00A	DM1A
HDM11-24D-S09	9.0- 36.0	50	525	9.0V	1.10A	DM1A
HDM11-24D-S12	9.0- 36.0	50	525	12.0V	0.83A	DM1A
HDM11-24D-S15	9.0- 36.0	50	525	15.0V	0.67A	DM1A
HDM11-48D-S03	18.0- 72.0	46	220	3.3V	2.50A	DM1A
HDM11-48D-S05	18.0- 72.0	46	260	5.0V	2.00A	DM1A
HDM11-48D-S09	18.0- 72.0	46	255	9.0V	1.10A	DM1A
HDM11-48D-S12	18.0- 72.0	46	255	12.0V	0.83A	DM1A
HDM11-48D-S15	18.0- 72.0	46	255	15.0V	0.67A	DM1A

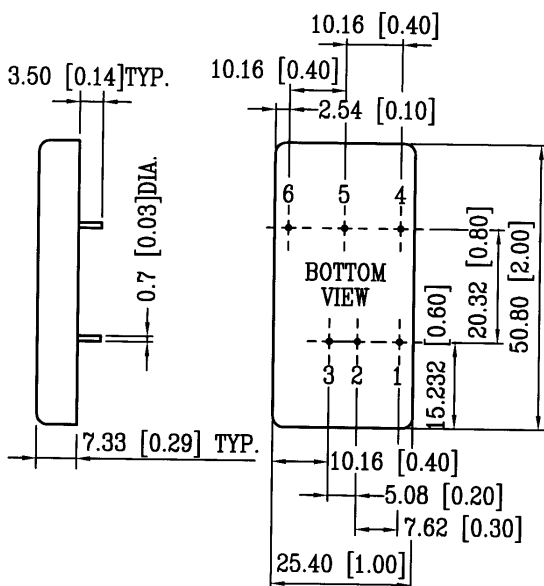
DUAL OUTPUT

MODEL NO.	INPUT Vdc	INPUT CURRENT N.L. (mA) F.L.		OUTPUT (Vdc) ★ +VO1★ -VO2		OUTPUT (A) +VO1 -VO2		CASE SIZE
HDM11-12D-D03	9.0- 36.0	50	910	+3.3V	-3.3V	1.25A	1.25A	DM1A
HDM11-12D-D05	9.0- 36.0	50	1070	+5.0V	-5.0V	1.00A	1.00A	DM1A
HDM11-12D-D12	9.0- 36.0	50	1070	+12.0V	-12.0V	0.42A	0.42A	DM1A
HDM11-12D-D15	9.0- 36.0	50	1040	+15.0V	-15.0V	0.33A	0.33A	DM1A
HDM11-24D-D03	9.0- 36.0	50	455	+3.3V	-3.3V	1.25A	1.25A	DM1A
HDM11-24D-D05	9.0- 36.0	50	535	+5.0V	-5.0V	1.00A	1.00A	DM1A
HDM11-24D-D12	9.0- 36.0	50	535	+12.0V	-12.0V	0.42A	0.42A	DM1A
HDM11-24D-D15	9.0- 36.0	50	520	+15.0V	-15.0V	0.33A	0.33A	DM1A
HDM11-48D-D03	18.0- 72.0	46	220	+3.3V	-3.3V	1.25A	1.25A	DM1A
HDM11-48D-D05	18.0- 72.0	46	260	+5.0V	-5.0V	1.00A	1.00A	DM1A
HDM11-48D-D12	18.0- 72.0	46	260	+12.0V	-12.0V	0.42A	0.42A	DM1A
HDM11-48D-D15	18.0- 72.0	46	255	+15.0V	-15.0V	0.33A	0.33A	DM1A

Symbols: "★" OVP built-in. "||" Double Feedback.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 20.0g (0.71 Oz.)



CASE SIZE: DM1A

PIN ASSIGNMENT

PIN NO.	SINGLE	DUAL
PIN# 1.	Remote ON/OFF	Remote ON/OFF
PIN# 2.	- INPUT/-Vin	- INPUT/-Vin
PIN# 3.	+ INPUT	+ INPUT
PIN# 4.	DC-COM	- VO2
PIN# 5.	NO PIN	DC-COM
PIN# 6.	VO1	+VO1

DERATING CHART

