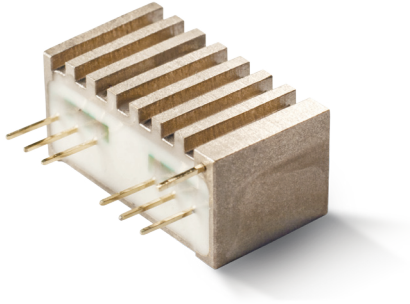


DC/DC Converters

MDN10



Features

- 3 year warranty
- Compact SIP-8 package
- Ultrawide input voltage ranges (4:1) and (2:1)
- Ambient operating temperature $-55...+105^{\circ}\text{C}$
- Remote on/off
- High efficiency
- 24 VDC (index “V” and “W”) input compliant with MIL-STD-704F
- Metal, plastic case

Description

MDN10 is a series of isolated DC/DC converters with output power 10 W and ultrawide input voltage ranges (4:1) and (2:1). These produced products are in a compact SIP-8 package (22,3×12,1×10 mm) with small footprint.

An excellent efficiency allows $-55...+105^{\circ}\text{C}$ operating temperature. These units are designed for using in industrial and special purpose applications and are optimized for operating in harsh environment.

Compliance

Designed to meet MIL-STD-810G

Designed to meet MIL-STD-461E

Designed to meet MIL-STD-704F

Ordering details

MDN i 10 – 1 V 05
① ② ③ ④ ⑤ ⑥

- ① - DC/DC converter MDN Family
- ② - Application index
 - i – from -40 to $+85^{\circ}\text{C}$; plastic case; 3 year warranty
 - m – from -55 to $+105^{\circ}\text{C}$; metal case; 5 year warranty
- ③ - Rated output power, W
- ④ - Quantity of output channels (1)
- ⑤ - Index of nominal input voltage
 - A – 12 VDC (9...18 VDC)
 - B – 12 VDC (9...36 VDC)
 - V – 24 VDC (18...36 VDC)
 - W – 24 VDC (18...75 VDC)
 - D – 48 VDC (36...75 VDC)
- ⑥ - Nominal output voltage, VDC (two signs)

DC/DC Converters

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Models

Model	Input voltage range	Output voltage/rated output current
MDNx10-1A3,3	9...18 VDC	3,3 VDC / 2 A
MDNx10-1A05	9...18 VDC	5 VDC / 2 A
MDNx10-1A09	9...18 VDC	9 VDC / 1,1 A
MDNx10-1A12	9...18 VDC	12 VDC / 0,83 A
MDNx10-1A15	9...18 VDC	15 VDC / 0,67 A
MDNx10-1B3,3	9...36 VDC	3,3 VDC / 2 A
MDNx10-1B05	9...36 VDC	5 VDC / 2 A
MDNx10-1B09	9...36 VDC	9 VDC / 1,1 A
MDNx10-1B12	9...36 VDC	12 VDC / 0,83 A
MDNx10-1B15	9...36 VDC	15 VDC / 0,67 A
MDNx10-1V3,3	18...36 VDC	3,3 VDC / 2 A
MDNx10-1V05	18...36 VDC	5 VDC / 2 A
MDNx10-1V09	18...36 VDC	9 VDC / 1,1 A
MDNx10-1V12	18...36 VDC	12 VDC / 0,83 A
MDNx10-1V15	18...36 VDC	15 VDC / 0,67 A
MDNx10-1W3,3	18...75 VDC	3,3 VDC / 2 A
MDNx10-1W05	18...75 VDC	5 VDC / 2 A
MDNx10-1W09	18...75 VDC	9 VDC / 1,1 A
MDNx10-1W12	18...75 VDC	12 VDC / 0,83 A
MDNx10-1W15	18...75 VDC	15 VDC / 0,67 A
MDNx10-1D3,3	36...75 VDC	3,3 VDC / 2 A
MDNx10-1D05	36...75 VDC	5 VDC / 2 A
MDNx10-1D09	36...75 VDC	9 VDC / 1,1 A
MDNx10-1D12	36...75 VDC	12 VDC / 0,83 A
MDNx10-1D15	36...75 VDC	15 VDC / 0,67 A

A product with special output voltage rating can be made by customized order.

DC/DC Converters

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Specifications*

Input specifications	
Input voltage range / transient deviation (1 s)	A 9...18 VDC / 8,5...36 VDC B 9...36 VDC / 9...40 VDC V 18...36 VDC / 17...50 VDC W 18...75 VDC / 17...84 VDC D 36...75 VDC / 34...100 VDC
Output specifications	
Voltage set accuracy	max ±2%
Line and load regulation	max ±2%
Temperature regulation	max ±2%
Total regulation	max ±2,5%
Ripple and noise (p-p)	max 2% Uout. nom
Short circuit protection	none
Remote on/off	2...4 mA to "ON" ref. to "-IN" (2,4...5,5 VDC)
General specifications	
Case temperature	index "i" -40...+85°C index "m" -55...+105°C storage -60...+125°C
Typical efficiency	85% @ Uout.=5 VDC
Isolation voltage (in./out.)	1500 VDC
Isolation resistance @ 500 VDC	20 MOhm min
Environmental	designed to meet MIL-STD-810G
Humidity	98% / 35°C
Typical MTBF	2000 kHrs
Weight	max 15 g

It is important to note that the information herein is not full. More detailed information (specific requirements, basic connection circuits, rules of operations etc.) can be found on our web-site: eng.aedon.ru

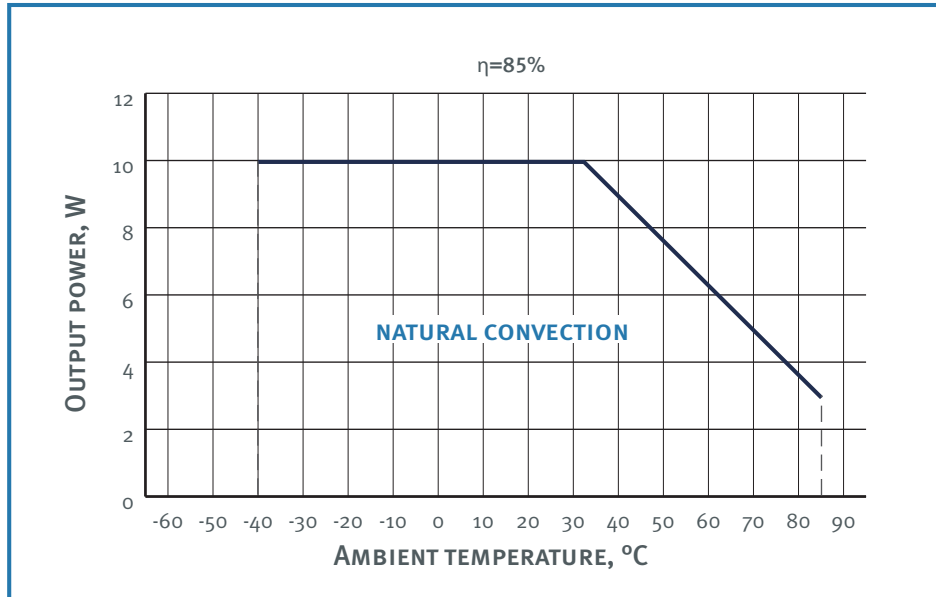
* All specifications valid at normal climatic conditions (ambient temp. +15...+35°C; relative humidity 45...80%; air pressure $8,6 \cdot 10^4 \dots 10,6 \cdot 10^4$ Pa), Uin. nom, Iout. nom, unless otherwise stated.

** Parameters are stated for the information purposes and could not be used at long term work, exciding maximum output current, at work outside of a range of operating temperatures.

DC/DC Converters

MDN10

Power derating VS ambient temperature MDN10



DC/DC Converters

MDN10

Pin out

Pin #	1	2	3	4	5	6	7	8	9
Function	-IN	+IN	ON	NO PIN	NO PIN	+OUT	-OUT	NOT USE	CASE

Cased design

