

Unregulated
Case style: DIP 14

COMMERCIAL DC/DC Converters

1 Watt / 2 Watt
Series: MD14

Electrical specifications:

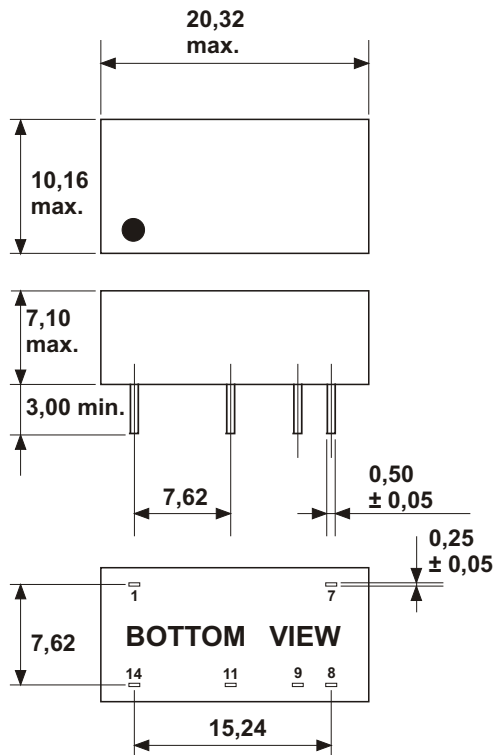
Input voltage range: +/- 10%
optional: +/- 20% (Part-No. ../X)
Output voltage accuracy: +/- 5%
Line Voltage regulation: +/- 1,2% / 1% of Vin max.
Load Voltage regulation: 5V output type 15% max.
9V ~ 24V output types 10% max.
Output Ripple & Noise: 1W: 50mVp-p
2W: 150mVp-p

Efficiency: min. 70%
Short circuit protection: 1.0 second
Operating temperature: -40°C to +85°C
Isolation voltage: min. 1000V DC
Optional Part-No. /H: min. 2000V DC for 1Watt Series
Case material: black plastic

** Note: Measured @25°C with the condition
of Vin = nominal and full load

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

Part - No. Single Output	Input Voltage	Output Voltage	1 Watt		Part - No. Dual Output	Input Voltage	Output Voltage	1 Watt		2 Watt	
			Output Current	Output Current				Output Current	Output Current		
MD14-0505	5V	5V	200mA		MD14-0505D	5V	+/- 5V	+/-100mA	+/-200mA		
MD14-0512		12V	83mA		MD14-0512D		+/-12V	+/- 41mA	+/- 83mA		
MD14-0515		15V	66mA		MD14-0515D		+/-15V	+/- 33mA	+/- 66mA		
MD14-1205	12V	5V	200mA		MD14-1205D	12V	+/- 5V	+/-100mA	+/-200mA		
MD14-1212		12V	83mA		MD14-1212D		+/-12V	+/- 41mA	+/- 83mA		
MD14-1215		15V	66mA		MD14-1215D		+/-15V	+/- 33mA	+/- 66mA		
MD14-1505	15V	5V	200mA		MD14-1505D	15V	+/- 5V	+/-100mA	+/-200mA		
MD14-1512		12V	83mA		MD14-1512D		+/-12V	+/- 41mA	+/- 83mA		
MD14-1515		15V	66mA		MD14-1515D		+/-15V	+/- 33mA	+/- 66mA		
MD14-2405	24V	5V	200mA		MD14-2405D	24V	+/- 5V	+/-100mA	+/-200mA		
MD14-2412		12V	83mA		MD14-2412D		+/-12V	+/- 41mA	+/- 83mA		
MD14-2415		15V	66mA		MD14-2415D		+/-15V	+/- 33mA	+/- 66mA		
MD14-2424		24V	41mA								



Any other input & output voltages available

PIN CONNECTION:			
PIN	SINGLE	SINGLE A	DUAL
1	- IN	+ IN	- IN
7	NC	+ Vout	NC
8	- Vout	- Vout	COM
9	+ Vout	NC	+ Vout
11	NC	NC	- Vout
14	+ IN	- IN	+ IN

Add "A" to the end of Partnumber.
For example MD14-0505A 1Watt.

ALL DIMENSIONS IN MM
Tolerance +/- 0.25mm
All pins on a 2,54mm pitch.
NC = No connection; NP = No pin

Note: Input and output capacitor
4,7µF - 10µF recommended.
Dot denotes pin 1

Specification may be changed without notice
please contact office for verification

We can offer EMC - Filter
according to EN55011/22 Class B.

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 Case style: DIP 14

COMMERCIAL DC/DC Converters

1 Watt / 2 Watt
 Series:
 MD14-xyxy(D)B/H

Electrical specifications:

Input voltage range: +/- 10%
 Output voltage accuracy: +/- 5% **
 Line Voltage regulation: +/- 1,2% / 1% of Vin max.
 Load Voltage regulation: 5V output type 15% max.
 (10% to 100% full load) 9V ~ 24V output types 10% max.
 Efficiency: min. 70%.

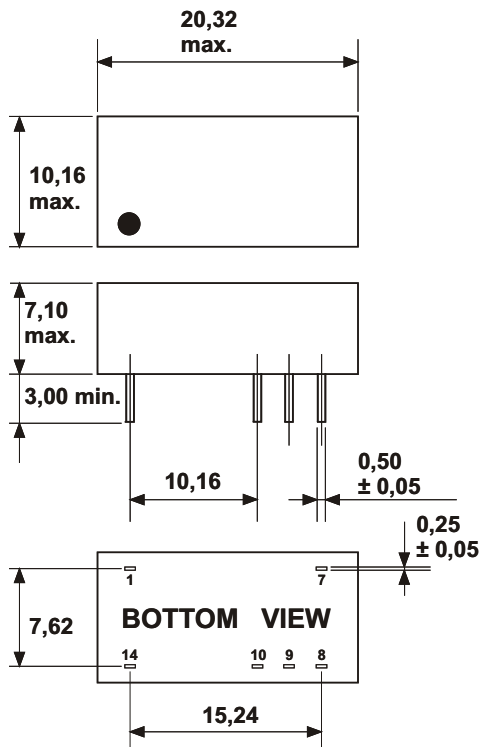
Output Ripple & Noise: 100mVp-p
 Short circuit protection: 1.0 second continuous
 optional Part-No. /S:
 Operating Temperature: -40°C to +85°C
 Isolation voltage: min. 3000V DC
 Optional Part-No. /H4: min. 4000V DC
 Case material: black plastic

** Note: Measured @25°C with the condition
 of Vin = nominal and full load

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

Part - No.		1 Watt	2 Watt	Part - No.		1 Watt	2 Watt		
Single Output	Input Voltage	Output Voltage	Output Current	Output Current	Dual Output	Input Voltage	Output Voltage	Output Current	Output Current
MD14-0505B/H	5V	5V	200mA	400mA	MD14-0505DB/H	5V	+/- 5V	+/-100mA	+/-200mA
MD14-0512B/H		12V	83mA	166mA	MD14-0512DB/H		+/-12V	+/- 42mA	+/- 83mA
MD14-0515B/H		15V	66mA	133mA	MD14-0515DB/H		+/-15V	+/- 33mA	+/- 66mA
MD14-1205B/H	12V	5V	200mA	400mA	MD14-1205DB/H	12V	+/- 5V	+/-100mA	+/-200mA
MD14-1212B/H		12V	83mA	166mA	MD14-1212DB/H		+/-12V	+/- 42mA	+/- 83mA
MD14-1215B/H		15V	66mA	133mA	MD14-1215DB/H		+/-15V	+/- 33mA	+/- 66mA
MD14-1505B/H	15V	5V	200mA	400mA	MD14-1505DB/H	15V	+/- 5V	+/-100mA	+/-200mA
MD14-1512B/H		12V	83mA	166mA	MD14-1512DB/H		+/-12V	+/- 42mA	+/- 83mA
MD14-1515B/H		15V	66mA	133mA	MD14-1515DB/H		+/-15V	+/- 33mA	+/- 66mA
MD14-2405B/H	24V	5V	200mA	400mA	MD14-2405DB/H	24V	+/- 5V	+/-100mA	+/-200mA
MD14-2412B/H		12V	83mA	166mA	MD14-2412DB/H		+/-12V	+/- 42mA	+/- 83mA
MD14-2415B/H		15V	66mA	133mA	MD14-2415DB/H		+/-15V	+/- 33mA	+/- 66mA

Any other input & output voltages available



PIN CONNECTION:		
PIN	SINGLE	DUAL
1	- IN	- IN
7	NC	NC
8	+ Vout	+ Vout
9	NP	GND
10	- Vout	- Vout
14	+ IN	+ IN

ALL DIMENSIONS IN MM
 Tolerance +/- 0.25mm
 All pins on a 2,54mm pitch.
 NC = No connection; NP = No pin

Note: Input and output capacitor
 4,7µF - 10µF recommended.
 Dot denotes pin 1

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COMMERCIAL DC/DC Converters ISOLATED OUTPUTS

1 Watt / 2 Watt
 Series: MD14

Electrical specifications:

Input voltage range: +/- 10%
 Optional Part-No.: /X +/- 20% *
 Output voltage accuracy: +/- 5% **
 Line Voltage regulation: +/- 1,2% / 1% of Vin max.
 Load Voltage regulation: 5V output type 15% max.
 (10% to 100% full load) 9V ~ 24V output types 10% max.

Efficiency: min. 60%
 Short circuit protection: 1.0 second
 Operating temperature: -40°C to +85°C
 Output Ripple & Noise: 1W: 100mVp-p
 2W: 150mVp-p

Isolation voltage I/O: min. 1000V DC
 Isolation voltage O/O: min: 500V DC

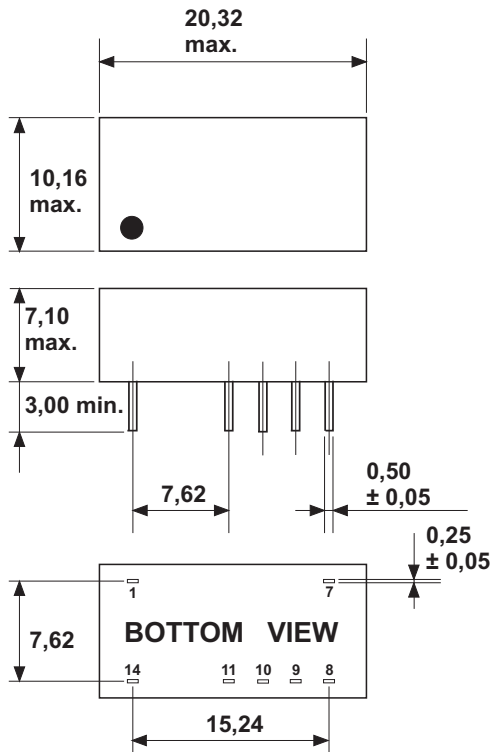
* /X: z.B. MD14-242618/X 2W

** Note: Measured @25°C with the condition
 of Vin = nominal and full load

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

Part - No. Dual Output	Input Voltage DC	Output Voltage DC	1 Watt		2 Watt	
			Output Current	Output Current	Output Current	Output Current
MD14-050505	5V	5V / 5V	100mA / 100mA	200mA / 200mA	200mA / 200mA	200mA / 200mA
MD14-051212		12V / 12V	41mA / 41mA	83mA / 83mA	83mA / 83mA	83mA / 83mA
MD14-051515		15V / 15V	33mA / 33mA	66mA / 66mA	66mA / 66mA	66mA / 66mA
MD14-120505	12V	5V / 5V	100mA / 100mA	200mA / 200mA	200mA / 200mA	200mA / 200mA
MD14-121212		12V / 12V	41mA / 41mA	83mA / 83mA	83mA / 83mA	83mA / 83mA
MD14-121515		15V / 15V	33mA / 33mA	66mA / 66mA	66mA / 66mA	66mA / 66mA
MD14-150505	15V	5V / 5V	100mA / 100mA	200mA / 200mA	200mA / 200mA	200mA / 200mA
MD14-151212		12V / 12V	41mA / 41mA	83mA / 83mA	83mA / 83mA	83mA / 83mA
MD14-151515		15V / 15V	33mA / 33mA	66mA / 66mA	66mA / 66mA	66mA / 66mA
MD14-240505	24V	5V / 5V	100mA / 100mA	200mA / 200mA	200mA / 200mA	200mA / 200mA
MD14-241212		12V / 12V	41mA / 41mA	83mA / 83mA	83mA / 83mA	83mA / 83mA
MD14-241515		15V / 15V	33mA / 33mA	66mA / 66mA	66mA / 66mA	66mA / 66mA

Any other input & output voltages available



PIN CONNECTION:	
PIN	DUAL
1	GND
7	NC
8	- Vout 2
9	+ Vout 2
10	- Vout 1
11	+ Vout 1
14	VCC

ALL DIMENSIONS IN MM
 Tolerance +/- 0.25mm
 All pins on a 2,54mm pitch.
 NC = No connection; NP = No pin

Note: Input and output capacitor
 4,7µF - 10µF recommended.
 Dot denotes pin 1

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