

**Unregulated
 Case style: DIP 14**

**COMMERCIAL
 DC/DC Converters**

**1 Watt / 2 Watt
 Series: MD14**

Electrical specifications:

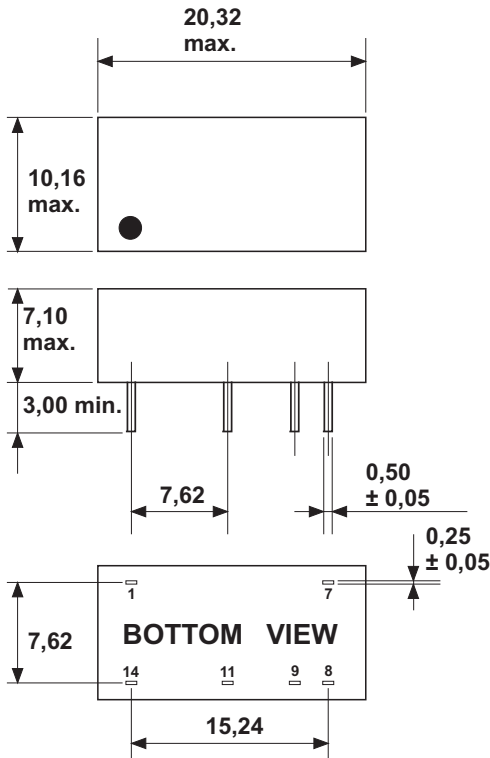
Input voltage range: +/- 10%
 Output voltage accuracy: +/- 5%
 Line Voltage regulation: +/- 1,2% / 1% of Vin max.
 Load Voltage regulation: 5V output type 15% max.
 (10% to 100% full load)
 Output Ripple & Noise: 1W: 50mVp-p
 2W: 150mVp-p

Efficiency: min. 70%
 Short circuit protection: 1.0 second
 Operating temperature: -40°C to +85°C
 Isolation voltage: min. 1000V DC
 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	MD14-0512D	+/-12V	+/- 41mA	+/- 83mA
MD14-0512		12V	83mA			MD14-0515D	+/-15V	+/- 33mA			+/- 66mA	
MD14-0515		15V	66mA			MD14-1205D	12V	+/- 5V			+/-100mA	+/-200mA
MD14-1205	5V	200mA	MD14-1215D	+/-15V	+/- 33mA	+/- 66mA		MD14-1505D	15V	+/- 5V	+/-100mA	+/-200mA
MD14-1212	12V	83mA	MD14-1512D	+/-12V	+/- 41mA	+/- 83mA		MD14-1515D		+/-15V	+/- 33mA	+/- 66mA
MD14-1215	15V	66mA	MD14-2405D	24V	+/- 5V	+/-100mA	+/-200mA	MD14-2412D		+/-12V	+/- 41mA	+/- 83mA
MD14-1505	5V	200mA	MD14-2415D		+/-15V	+/- 33mA	+/- 66mA	MD14-2415D	+/-15V	+/- 33mA	+/- 66mA	
MD14-1512	12V	83mA	MD14-2412D		+/-12V	+/- 41mA	+/- 83mA	MD14-2415D	+/-15V	+/- 33mA	+/- 66mA	
MD14-1515	15V	66mA	MD14-2415D		+/-15V	+/- 33mA	+/- 66mA					



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.

Unregulated
 Case style: DIP 14

COMMERCIAL DC/DC Converters

1 Watt / 2 Watt
 Series:
 MD14-xxyy(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%.

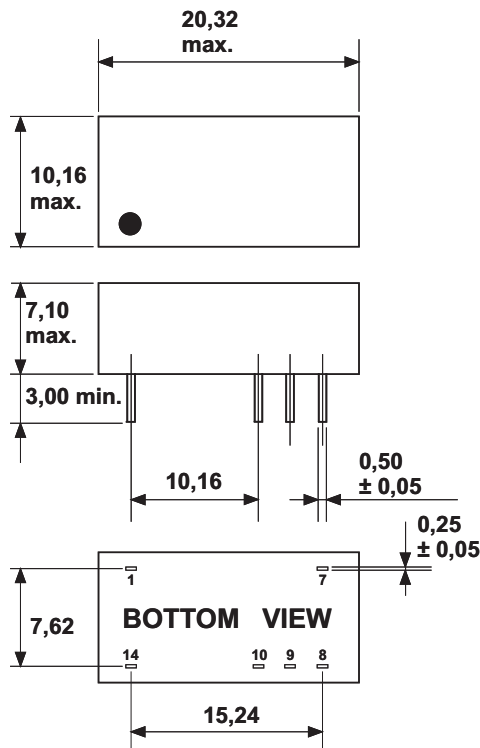
Output Ripple & Noise: 100mVp-p
 Short circuit protection: 1.0 second
 Operating Temperature: -40°C to +85°C
 Isolation voltage: min. 3000V DC
 Optional Part-No. /H4: min. 4000V DC
 Case material: black plastic

** 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

Specification may be changed without notice
 please contact office for verification

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

Unregulated
 Case style: DIP 14

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

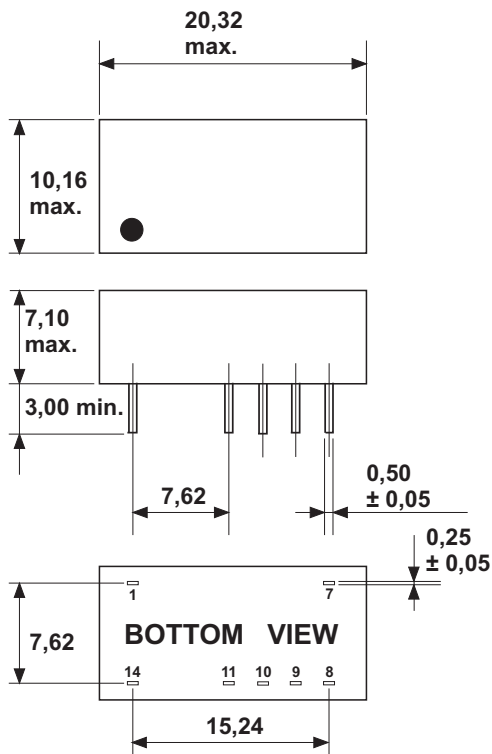
Isolation voltage I/O: min. 1000V DC
 Isolation voltage O/O: min: 500V DC

* /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

Specification may be changed without notice
 please contact office for verification

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