

Stand: 07/14

# MEDICAL - INDUSTRIAL DC/DC Converters

**1 - 2 Watt  
 Series:  
 MED-FS12U**

**Unregulated  
 Case Style: SIP 12**

**EN/UL/CSA 60601-1 & 2**

**REINFORCED INSULATION  
 single / dual output**

**Electrical specifications:**

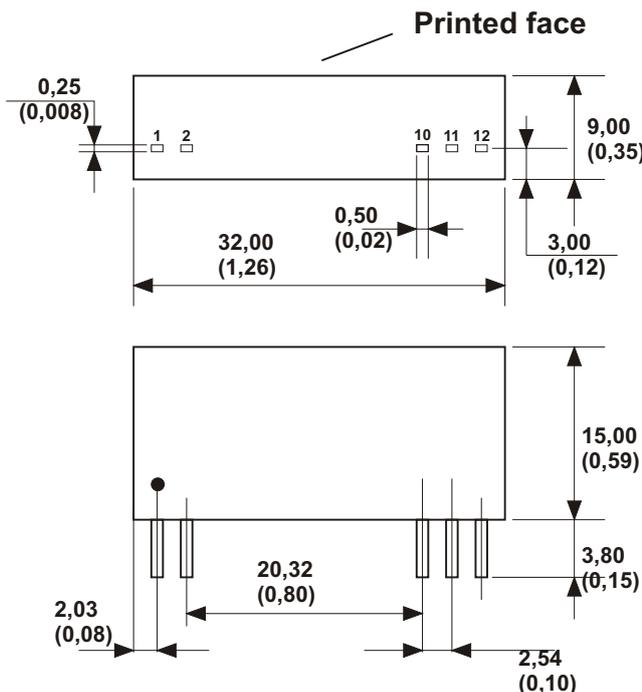
Input voltage range: +/-10%  
 Output voltage accuracy: +/- 2% (Vin=nominal & full load)  
 +/- 5% (2W series)  
 Line Vin/Vout: +/- 1% / +/- 1%  
 Output voltage change: 3,3V, 5V output types 15% max.  
 (10% to 100% full load) 2W 5V input series 15% max.  
 9V ~ 24V output types 10% max.  
 Operating temperature: -40°C to +95°C  
 Ambient temperature: -40°C to +71°C

Ripple: typ. 150mVp-p  
 Temperature coefficient: +/-0,02% / °C  
 Insulation test voltage: 4kV AC rms \*  
 Efficiency: up to 80%  
 Short circuit protection: continuous  
 Inrush overload: max. 30%  
 couple capacitance: ~10pF  
 creepage distance: 15mm min.

\* type test time 1 min.  
 part test time 1 sec.

**CAUTION: NO INPUT POLARITY CHANGE ALLOWED!**

Part No.: SINGLE	Input voltage	Output voltage	1 Watt		2 Watt		Part No.: DUAL	Input voltage	Output voltage	1 Watt		2 Watt	
			Output current	Output current	Output current	Output current							
MED-FS12U-0505 MED-FS12U-0512 MED-FS12U-0515	5V DC	5V DC 12V 15V	200mA 83mA 66mA	400mA 166mA 133mA	MED-FS12U-0505D MED-FS12U-0512D MED-FS12U-0515D	5V DC	± 5V DC ±12V ±15V	±100mA ± 42mA ± 33mA	±200mA ± 83mA ± 67mA				
MED-FS12U-1205 MED-FS12U-1212 MED-FS12U-1215	12V DC	5V DC 12V 15V	200mA 83mA 66mA	400mA 166mA 133mA	MED-FS12U-1205D MED-FS12U-1212D MED-FS12U-1215D	12V DC	± 5V DC ±12V ±15V	±100mA ± 42mA ± 33mA	±200mA ± 83mA ± 67mA				
MED-FS12U-1505 MED-FS12U-1512 MED-FS12U-1515	15V DC	5V DC 12V 15V	200mA 83mA 66mA	400mA 166mA 133mA	MED-FS12U-1505D MED-FS12U-1512D MED-FS12U-1515D	15V DC	± 5V DC ±12V ±15V	±100mA ± 42mA ± 33mA	±200mA ± 83mA ± 67mA				
MED-FS12U-2405 MED-FS12U-2412 MED-FS12U-2415	24V DC	5V DC 12V 15V	200mA 83mA 66mA	400mA 166mA 133mA	MED-FS12U-2405D MED-FS12U-2412D MED-FS12U-2415D	24V DC	± 5V DC ±12V ±15V	±100mA ± 42mA ± 33mA	±200mA ± 83mA ± 67mA				



**Any other input & output voltages available  
 (for example 3,3V)**

PIN CONNECTION		
PIN	single	dual
1	+ IN	+ IN
2	- IN	- IN
9	NP	NP
10	+ Vout	+ Vout
11	NC	- Vout
12	- Vout	COM

**Input capacitor 6,8 - 10µF is a must.**

ALL DIMENSIONS IN MM (INCHES)  
 MILLIMETERS +/- 0,50mm  
 (INCHES +/- 0,02")  
 All pins on a 2,54mm pitch  
 Note: NC = No connection; NP = No pin  
 Dot denote pin 1

All specifications typical @ Ta +25°C  
 Nom. Vin & full load, unless otherwise specified!

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: SIP 12

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1 - 2 Watt  
 Series:  
 MED-FS12U

**EN/UL/CSA 60601-1 & 2**

**REINFORCED INSULATION  
 triple output**

**Electrical specifications:**

Input voltage range:	+/-10% U <sub>in</sub> =5V -5% +10%	Ripple:	typ. 150mVp-p
Output voltage accuracy:	+/- 2% (V <sub>in</sub> =nominal & full load) +/- 5% (2W Series)	Temperature coefficient:	+/-0,02% / °C
Line Vin/Vout:	+/- 1% / +/- 1%	Insulation test voltage:	4kV AC rms *
Output voltage change:	3,3V, 5V output types 15% max. 2W 5V input series 15% max. 9V ~ 24V output types 10% max.	Efficiency:	up to 80%
Operating temperature:	-40°C to +95°C	short circuit protection:	continuous
Ambient temperature:	-40°C to +71°C	Inrush overload:	max. 30%
		coupling capacitance:	~10pF
		creepage distance	15mm min.

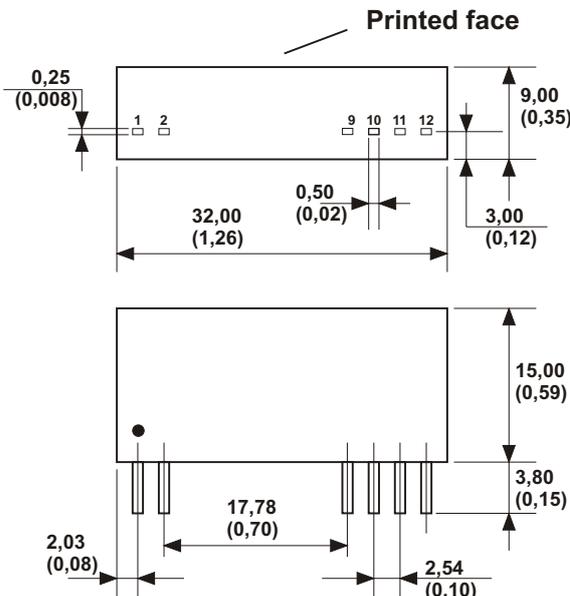
\* type test time 1 min.  
 part test time 1 sec.

**CAUTION: NO INPUT POLARITY CHANGE ALLOWED!**

Part No.: triple	Input voltage DC	Output voltage DC 1&2	Triple Output voltage DC 3	Output current 1&2	Output current 3
MED-FS12U-0505Dzz MED-FS12U-0512Dzz MED-FS12U-0515Dzz	5V	± 5V ±12V ±15V	zzV zzV zzV	± 75mA	150mA
MED-FS12U-1205Dzz MED-FS12U-1212Dzz MED-FS12U-1215Dzz	12V	± 5V ±12V ±15V	zzV zzV zzV	±125mA	150mA
MED-FS12U-1505Dzz MED-FS12U-1512Dzz MED-FS12U-1515Dzz	15V	± 5V ±12V ±15V	zzV zzV zzV	current partition on request	current partition on request
MED-FS12U-2405Dzz MED-FS12U-2412Dzz MED-FS12U-2415Dzz	24V	± 5V ±12V ±15V	zzV zzV zzV	current partition on request	current partition on request

Any voltage & current combination available.

Input capacitor 6,8 - 10µF is a must.



PIN CONNECTION	
PIN	triple
1	+ IN
2	- IN
9	+ Vout U3
10	+ Vout U1
11	- Vout U2
12	COM

ALL DIMENSIONS IN MM (INCHES)  
 MILLIMETERS +/- 0,50mm  
 (INCHES +/- 0,02")

All pins on a 2,54mm pitch  
 Note: NC = No connection; NP = No pin  
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All specifications typical @ T<sub>a</sub> +25°C  
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