

Regulated  
 Case Style: SIP 7

# INDUSTRIAL DC/DC Converters

1 Watt / 2 Watt  
 Series: FS7R

**Electrical specifications:**

Input voltage range: - 5% / +10%  
 Output voltage accuracy: +/- 5%  
 Line regulation of Vin: +/- 0,5%  
 Load regulation: +/- 1%  
 (10% to 100% full load)  
 Efficiency: up to 75%  
 Insulation test voltage: 2000V DC  
 Output Ripple & Noise: typ. 50mVp-p

Short circuit protection: Continuous  
 Operating temperature: -40°C to +95°C  
 Ambient temperature: -40°C to +71°C  
 2 Watt Version: -40°C to +60°C  
 derating above Ta +60°C: 2% / °C  
 Switching frequency: 50kHz  
 Optional: Part-Nr. /H: 3kV DC \*\*  
 Part-Nr. /5: 0,5W output power  
 Part-Nr. /7: 0,75W output power  
 Part-Nr. /9 \*\*\*: -55°C to +85°C  
 \*\*\* max. 0,5W output power Ambient temperature

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

Single Output			1 Watt	2 Watt
Part - No.	Input Voltage	Output Voltage	Output current	Output current
FS7R-0503,3	5V	3,3	303mA	
FS7R-0505		5	200mA	400mA
FS7R-0512		12	83mA	166mA
FS7R-0515		15	67mA	133mA
FS7R-1203,3	12V	3,3	303mA	
FS7R-1205		5	200mA	400mA
FS7R-1212		12	83mA	166mA
FS7R-1215		15	67mA	133mA
FS7R-1503,3	15V	3,3	303mA	
FS7R-1505		5	200mA	400mA
FS7R-1512		12	83mA	166mA
FS7R-1515		15	67mA	133mA
FS7R-2403,3	24V	3,3	303mA	
FS7R-2405		5	200mA	400mA
FS7R-2412		12	83mA	166mA
FS7R-2415		15	67mA	133mA

PIN CONNECTION		
PIN	SINGLE	SINGLE B*
1	VCC	VCC
2	GND	GND
3	NP	NP
4	-Vout	NP
5	NP	-Vout
6	+Vout	NP
7	NP	+Vout

\* For other pinning add "B" to the end of partnumber: FS7R-0505B 1W

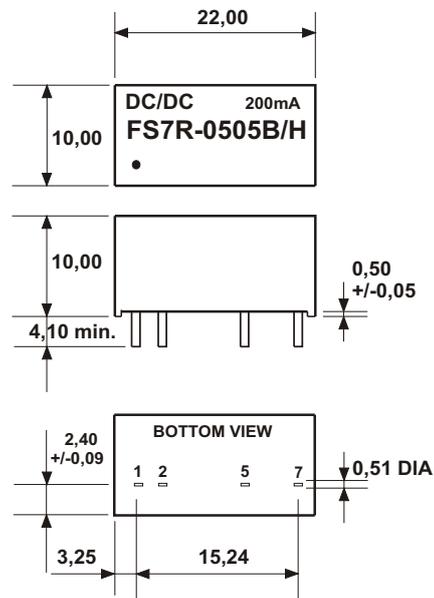
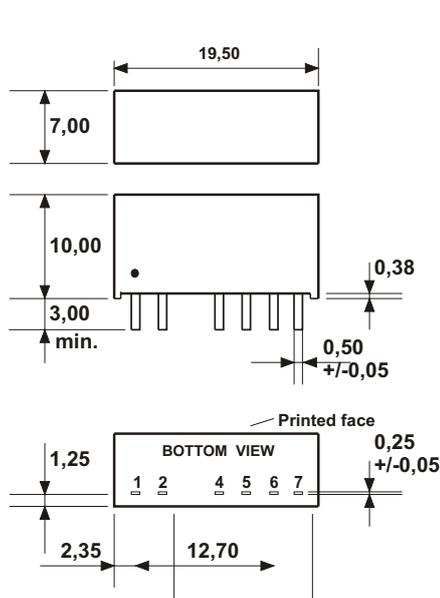
ALL DIMENSIONS IN MM  
 MILLIMETERS +/- 0,25mm  
 All pins on a 2,54mm pitch  
 NC = No connection; NP = No pin  
 Note: Dot denotes pin 1

Input capacitor 4,7µF - 10µF is a must.

**Any other output voltages available**

\*\* Part-Nr.: /H & 2 Watt Version

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.

Regulated  
 Case Style: SIP 7

# INDUSTRIAL DC/DC Converters SHORT CIRCUIT PROOF

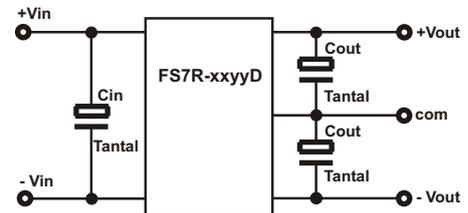
1 Watt  
 Series: FS7R

### Electrical specifications:

Input voltage range:	+/- 10%	Short circuit protection:	continuous
U <sub>in</sub> = 5V :	- 5% / +10%	Switching frequency:	40kHz
Output voltage accuracy:	+/- 5%	Insulation test voltage:	1000V DC
Line regulation of Vin:	+/- 0,5%	Output Ripple & Noise:	typ. 50mVp-p
Load regulation:	+/- 1%	Efficiency:	up to 75%
(10% to 100% full load)			
Operating temperature:	-40°C to +95°C		
Ambient temperature:	-40°C to +71°C		

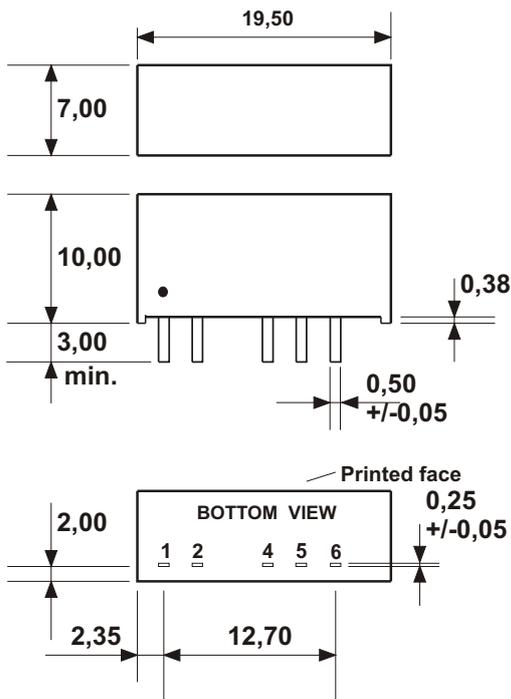
CAUTION NO INPUT POLARITY CHANGE ALLOWED!

Part - No.	Input Voltage	Output Voltage	Output current
FS7R-0505D FS7R-0512D FS7R-0515D	5V	+/- 5V +/- 12V +/- 15V	+/-100mA +/- 42mA +/- 33mA
FS7R-1205D FS7R-1212D FS7R-1215D	12V	+/- 5V +/- 12V +/- 15V	+/-100mA +/- 42mA +/- 33mA
FS7R-2405D FS7R-2412D FS7R-2415D	24V	+/- 5V +/- 12V +/- 15V	+/-100mA +/- 42mA +/- 33mA



Input Voltage	Capacitance	is a must
	Cin	Cout
5V	4,7 - 10µF	4,7µF/35V
24V	4,7µF/50V	10µF/35V

Any other output voltages available



PIN CONNECTION	
PIN	DUAL
1	VCC
2	GND
3	NP
4	-Vout
5	COM
6	+Vout
7	NP

ALL DIMENSIONS IN MM  
 MILLIMETERS +/- 0,25mm  
 All pins on a 2,54mm pitch  
 NC = No connection; NP = No pin  
 Note: Dot denotes pin 1

All specifications typical @ T<sub>a</sub> +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.