

Stand: 07/14

Unregulated  
Case Style: SIP 7

## INDUSTRIAL DC/DC Converters SHORT CIRCUIT PROOF

1 Watt / 2 Watt  
Series: FS7U

### Electrical specifications:

Input voltage range: +/- 10%  
Output voltage accuracy: +/- 5% @ 50% Load  
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.  
Output Ripple & Noise 1W: 150mVp-p // 2W: 200mVp-p  
Operating temperature: -40°C to +95°C  
Ambient temperature: -40°C to +71°C  
L - Version: Ambient 0°C to +71°C

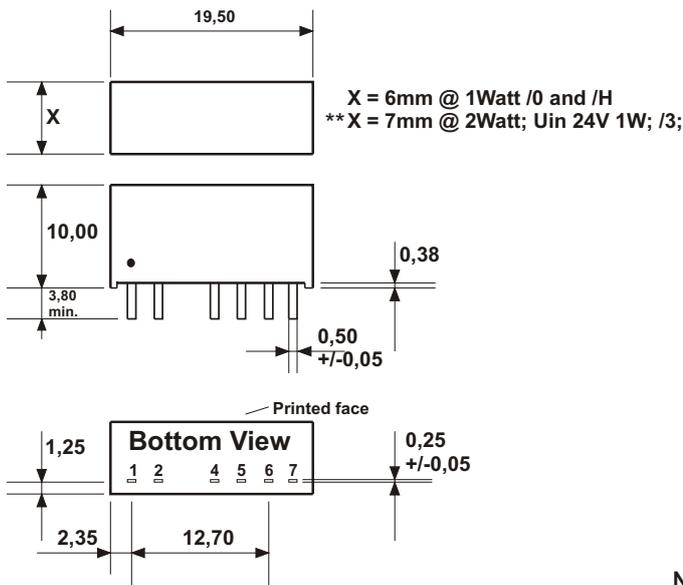
Efficiency: up to 80%  
Short circuit protection: continuous  
Insulation test voltage: 2000V DC  
Optional:  
Part-Nr. /0 no short circuit protection  
Part-Nr. /H Insulation voltage optional 3000V DC  
\*\*Part-Nr. /3: Test voltage optional 3000V AC rms  
Part-Nr. /8: asymmetrically load  
Part-Nr. /2: 0,25W output power  
Part-Nr. /5: 0,5W output power  
Part-Nr. /9: Ambient temperature -40°C to +85°C

CAUTION: NO INPUT POLARITY CHANGE ALLOWED!

| Single Output |               |                | 1 Watt         | 2 Watt**       | Dual Output |               |                | 1 Watt         | 2 Watt**       |
|---------------|---------------|----------------|----------------|----------------|-------------|---------------|----------------|----------------|----------------|
| Part - No.    | Input Voltage | Output Voltage | Output current | Output current | Part - No.  | Input Voltage | Output Voltage | Output current | Output current |
| FS7U-0505     | 5V            | 5V             | 200mA          | 400mA          | FS7U-0505D  | 5V            | +/- 5V         | +/-100mA       | +/-200mA       |
| FS7U-0512     |               | 12V            | 83mA           | 166mA          | FS7U-0512D  |               | +/-12V         | +/- 41mA       | +/- 83mA       |
| FS7U-0515     |               | 15V            | 66mA           | 132mA          | FS7U-0515D* |               | +/-15V         | +/- 33mA       | +/- 66mA       |
| FS7U-1205     | 12V           | 5V             | 200mA          | 400mA          | FS7U-1205D  | 12V           | +/- 5V         | +/-100mA       | +/-200mA       |
| FS7U-1212     |               | 12V            | 83mA           | 166mA          | FS7U-1212D  |               | +/-12V         | +/- 41mA       | +/- 83mA       |
| FS7U-1215     |               | 15V            | 66mA           | 132mA          | FS7U-1215D  |               | +/-15V         | +/- 33mA       | +/- 66mA       |
| FS7U-1505     | 15V           | 5V             | 200mA          | 400mA          | FS7U-1505D  | 15V           | +/- 5V         | +/-100mA       | +/-200mA       |
| FS7U-1512     |               | 12V            | 83mA           | 166mA          | FS7U-1512D  |               | +/-12V         | +/- 41mA       | +/- 83mA       |
| FS7U-1515     |               | 15V            | 66mA           | 132mA          | FS7U-1515D  |               | +/-15V         | +/- 33mA       | +/- 66mA       |
| FS7U-2405     | 24V**         | 5V             | 200mA          | 400mA          | FS7U-2405D  | 24V**         | +/- 5V         | +/-100mA       | +/-200mA       |
| FS7U-2412     |               | 12V            | 83mA           | 166mA          | FS7U-2412D  |               | +/-12V         | +/- 41mA       | +/- 83mA       |
| FS7U-2415     |               | 15V            | 66mA           | 132mA          | FS7U-2415D  |               | +/-15V         | +/- 33mA       | +/- 66mA       |
| FS7U-2424     |               | 24V            | 41mA           | 82mA           |             |               |                |                |                |

L - Version 1W: lin (no load) ~ 14mA \*  
2W: lin (no load) ~ 22mA \*

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



| PIN CONNECTION |        |           |  |       |                                  |
|----------------|--------|-----------|--|-------|----------------------------------|
| PIN            | SINGLE | SINGLE A* | SINGLE /3*<br>SINGLE /H*<br>SINGLE /B* | DUAL  | DUAL /3*<br>DUAL /H*<br>DUAL /B* |
| 1              | VCC    | VCC       | VCC                                    | VCC   | VCC                              |
| 2              | GND    | GND       | GND                                    | GND   | GND                              |
| 3              | NP     | NP        | NP                                     | NP    | NP                               |
| 4              | NC     | -Vout     | NP                                     | -Vout | NP                               |
| 5              | -Vout  | NC        | -Vout                                  | COM   | -Vout                            |
| 6              | +Vout  | +Vout     | NP                                     | +Vout | COM                              |
| 7              | NP     | NP        | +Vout                                  | NP    | +Vout                            |

\* For other pinning add "A" or "/3" or "/H" to the end of Partnumber, for example: FS7U-0505A, FS7U-0505/3

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

Input capacitor 4,7µF - 10µF is a must.  
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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 Output voltage change:  
 (10% to 100%) +/- 10%  
 Efficiency: up to 80%  
 Output Ripple & Noise: 1W: 150mVp-p // 2W: 200mVp-p

Short circuit protection: continuous  
 Insulation test voltage: 2000V DC  
 Temperature: Operating temperature: -40°C to +95°C  
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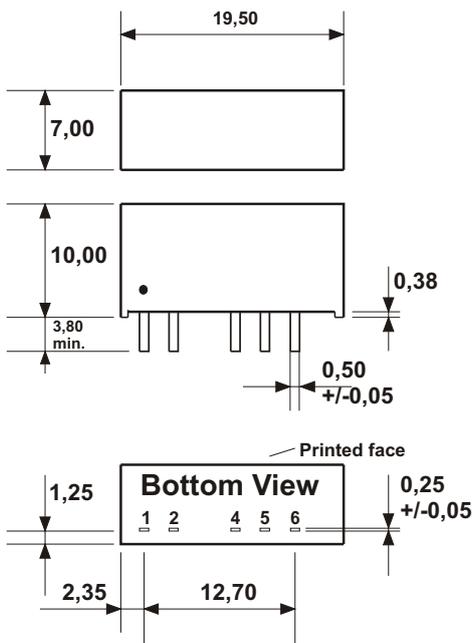
### 1 Watt

| DUAL Output Part - No. | Input Voltage | Output Voltage 1 | Output current 1 | Output Voltage 2 | Output current 2 |
|------------------------|---------------|------------------|------------------|------------------|------------------|
| FS7U-241505            | 24V           | +15V             | 50mA             | -5V              | 50mA             |

### 2 Watt

| DUAL Output Part - No. | Input Voltage | Output Voltage 1 | Output current 1 | Output Voltage 2 | Output current 2 |
|------------------------|---------------|------------------|------------------|------------------|------------------|
| FS7U-241505            | 24V           | +15V             | 100mA            | -5V              | 100mA            |

**!! Any other input & output voltages available !!**



| PIN CONNECTION |       |
|----------------|-------|
| PIN            | DUAL  |
| 1              | VCC   |
| 2              | GND   |
| 4              | -Vout |
| 5              | COM   |
| 6              | +Vout |

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 MILLIMETERS +/- 0,25mm  
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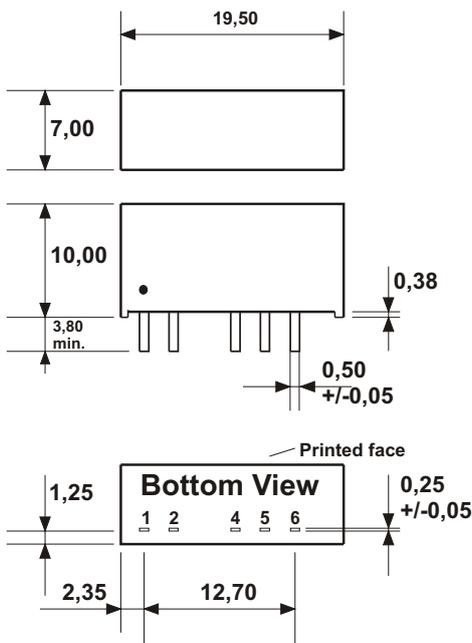
### 1 Watt

| DUAL Output Part - No. | Input Voltage | Output Voltage 1 | Output current 1 | Output Voltage 2 | Output current 2 |
|------------------------|---------------|------------------|------------------|------------------|------------------|
| FS7U-241505            | 24V           | +15V             | 50mA             | -5V              | 50mA             |

### 2 Watt

| DUAL Output Part - No. | Input Voltage | Output Voltage 1 | Output current 1 | Output Voltage 2 | Output current 2 |
|------------------------|---------------|------------------|------------------|------------------|------------------|
| FS7U-241505            | 24V           | +15V             | 100mA            | -5V              | 100mA            |

**!! Any other input & output voltages available !!**



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|----------------|-------|
| PIN            | DUAL  |
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