

## DC-DC Converter

## FUK3

Version 02.1 09.03.2011

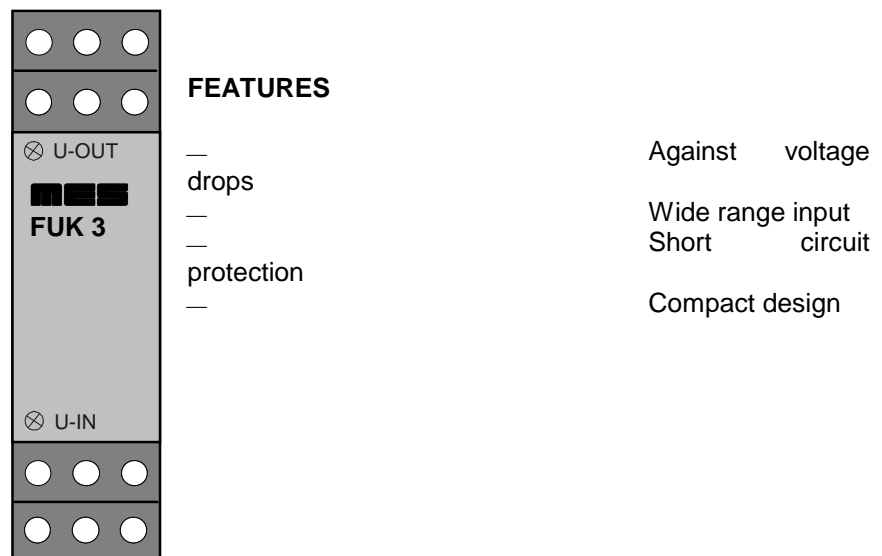


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### 1.0 SCOPE OF APPLICATION

The FUK3 is used for short-period supply for battery powered devices in 24 V installations, e.g. SPC CPU's or controllers. It bridges brief voltage dips (NOT power failures!), for instance when starting up diesel power packs and supplies the necessary power for the connected controls for a brief period. A 12 V version is also available.

A model with adjustable output voltage (18 to 26 V) is also available upon request.

## 2.0 METHOD OF WORKING

The PLC and the in- / output modules will be supplied by the stabilised FUK2 voltage. If p.e. the diesel engine will be started or a big DC consumer will be switched on, a voltage drop occurs. This undervoltage backup will take over the power supply when the input voltage drops below 24 V and will supply 24 V to the output. The UP-25 can maintain this operating status for up to 90 seconds at approx. 40 watt output and a minimum input voltage of 10 V.

Voltage increase will be not compensated. Output voltage will be stabilised to 24VDC if input voltage is < 24VDV. If input voltage is >24VDC, output voltage is corresponding to input voltage. (minus 0.6V diode voltage).

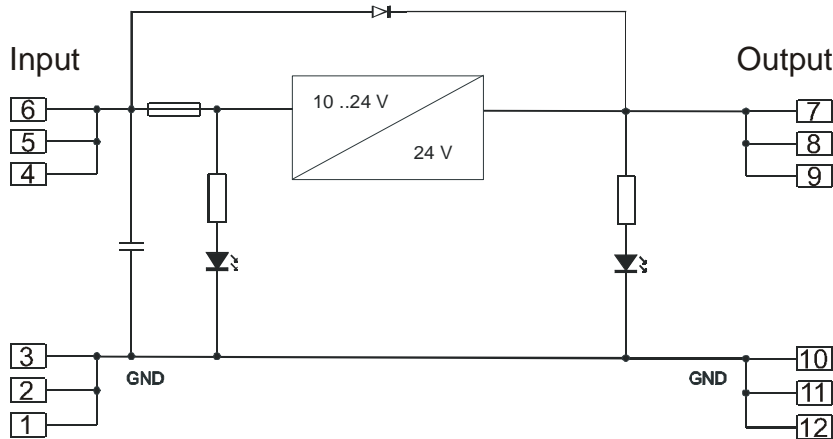
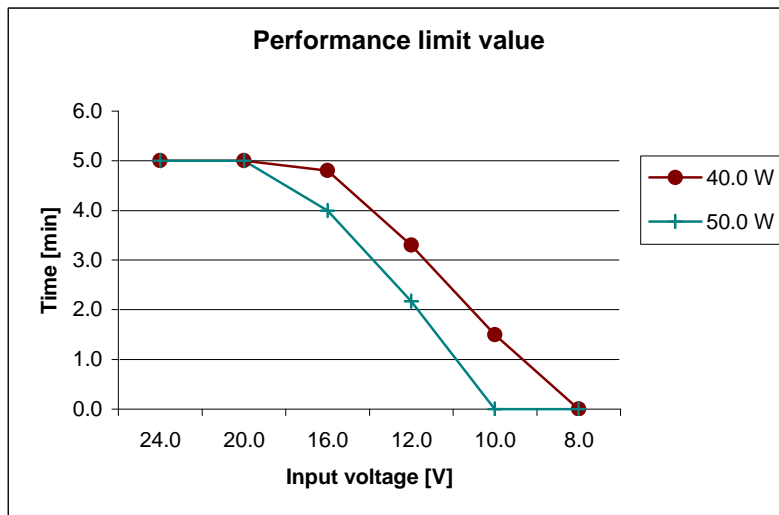


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## 2.1 PERFORMANCE LIMITS

The FUK3 is designed for a maximum current of 2A in continuous operation and is internally safeguarded by a self-reset control. The output voltage slowly declines at higher output currents (approx. 20 V at 2 A).



Example relating to the diagram:

At 40 W output power and an input voltage of 10 V the UP-25 is able to maintain the power supply for up to 1.5 minutes.

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For power failures we recommend the additional use of the UKP-01 to bridge short power failure periods. For trouble-free operation the UP-25 always requires a minimum voltage of approx. 10 V and an adequate power supply ( 6 A at approx. 10 V) when a 40 watt consumer is connected.

### 3.0 FUNCTION AND COMMISIONING

The FUK3 must be connected according to the connection diagram (fig.4).

After voltage connecting, the load on the output side is undelayed supplied with voltage. In- and output voltage is not galvanically separated.

There is an LED at both the input and output terminals. They indicate that an input voltage is supplied to the input and that power is available at the output.

### 4.0 CONNECTION DIAGRAM

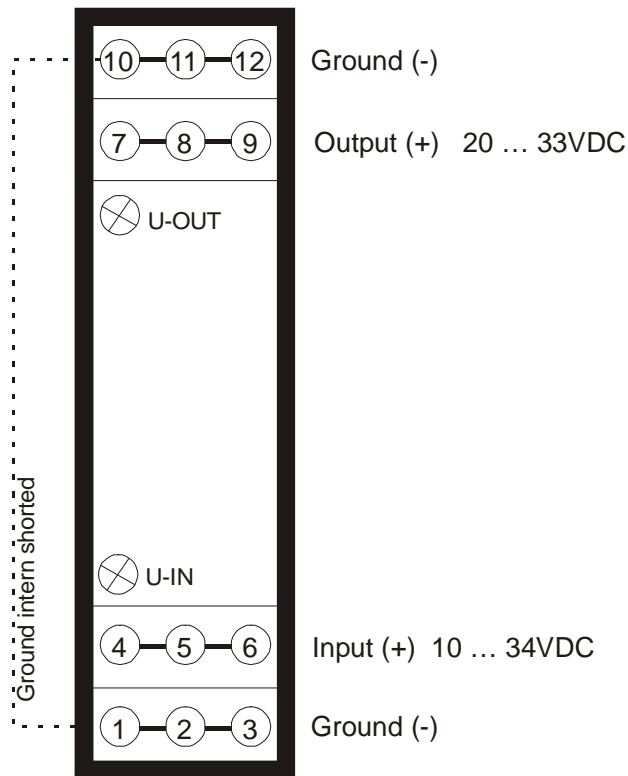


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### 5.0 DIMENSIONS

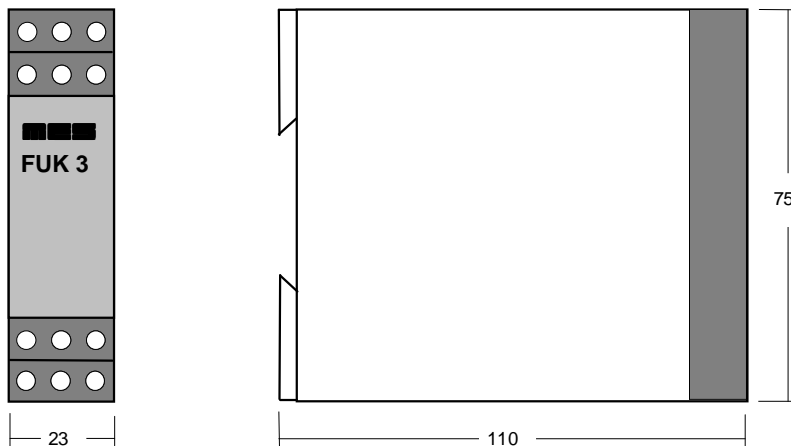


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## 6.0 TECHNICAL DATA

Input voltage	24 – 34 VDC Normal operation 10 – 24 VDC Backup operation / 1,6A for 90sec. ; 2,0A for 60sec.
Input fuse protection	B6A or C6A
Output voltage	U-In <24VDC - U-Out 24VDC U-In >24VDC - U-Out = U-In
Output current	max. 2A
Power consumption	1VA
Storage temperature range	-25 ... +71 °C
Case	Makrolon 8020 grey / VDE 0100 / VBG4
Dimension	B23 x H75 x T110 mm
Fixing	standard clip rail according to DIN 50022
Degree of protection	IP 20
Weight	180g
Weight	any
Regulations	VDE 0160 / EN50178, VDE 0435 Teil 303, VDE 0110, IEC 255-6

*Subject to technical modifications*



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