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24 V DC UPS FOR EXTERNAL BATTERY. 10 A

UB10.245
DC UPS 24V dc I/P 24V dc 10A & 12V dc 5A O/P 3.9-40Ah



- Requires just one 12 V dc battery
- Selectable buffer times
- Relay outputs for status
- Optimized charging of battery

PRODUCT DESCRIPTION

A DC-UPS system consists of a control unit, battery and power supply with suitable power for the application. In the event of a power outage, the battery is automatically switched in and supplies the connected loads. The control unit requires just (1) 12 V battery that then transforms the battery voltage up to 22.3 V dc. Two batteries do not need to be matched with one another and the output voltage does not follow the battery's discharge curve but is instead constant at 22.3 V. The battery capacity is utilized 100 % compared with two batteries connected in series, where one of the batteries is not fully charged. Two relay outputs indicate status; the module is ready (battery capacity >85 %) and the module is active (buffer mode). The control unit tests the battery's condition in cycles. When it is time to replace the battery, a relay output is activated (replace battery). At the front, optimized final charging voltage in relation to ambient temperature is selected. There are three available alternatives: 10°C, 25°C and 40°C. The buffer time can be set in different time ranges to save battery capacity. When choosing constant discharge, the output voltage will be active until the battery reaches deep discharge and the control unit then disconnects the battery. In the event of a battery fuse fault, the “ready” output is deactivated and a red LED lights on the control unit. The output is current-limited and turns itself off about 5 seconds after a short circuit to spare the battery and at the same time, avoid tripping the battery fuse. In the event of a short circuit in buffer mode, the module produces about 20 A, which helps trip any secondary fuses. Monitoring of the battery fuse and current limitation in the event of short circuits provides increased reliability and guarantees that the UPS will function after a short circuit. The input is galvanically isolated from the output side.

Battery holder for DIN rail



- Available for 7 and 24 Ah batteries
- Puls DIN rail bracket
- Wiring incl. 30 A fuse
- Heavy duty terminal blocks
- Quick and easy battery replacement

TECHNICAL DATA

INPUT DATA

Input voltage from the unit	24 V DC
Input voltage from the battery	12 V DC

Input voltage for battery connection	22.8 V DC
Input current during charging	1.2 A

OUTPUT DATA

Output voltage min	12 V DC
Output voltage max	24 V DC
Output current at 12 V dc	5 A
Output current at 24 V dc	10 A
Output voltage for battery operation	22.25
Output voltage normal operation	24 V DC
Output voltage at buffering	22.25 V DC
Output current for battery operation max	10 A (15 A @ 5 s)
Output current during operation max	15 A

EFFICIENCY / LIFETIME / MTBF

Efficiency	97.5 %
Life span	114 000 h @ 10 A, 40 °C
MTBF (IEC 61709)	788 000 h @ 10 A, 40 °C

DIMENSIONS

Width	49 mm
Height	124 mm
Depth	117 mm
Weight	0.65 kg

OTHER

Approvals	CB, CE, CSA, CSA US, EX, IECEx, UL
IP class	IP20
Charging the battery type	1.5 A
Material protection	Aluminium
Ripple max	20 mV pp
Voltage level for battery connection	22.3 V DC
Power drop from +60 °C to + 70 °C	5 W/°C
Temperature min without derating	-25 °C
Temperature max without derating	50 °C
Permitted battery sizes	3,9-40 Ah

Type Power Supply	DC-UPS

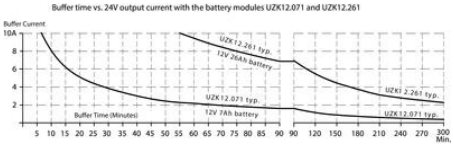


Fig. 24-2 **Front view**

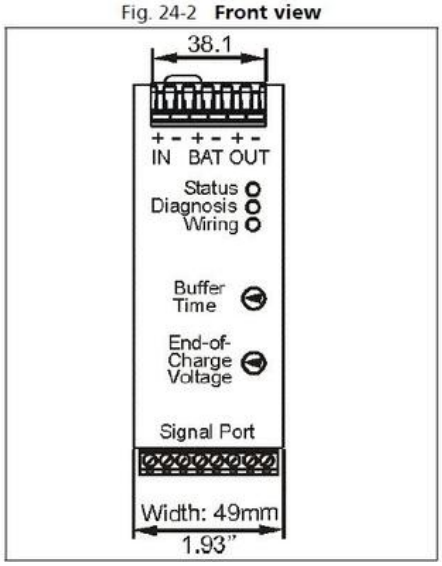
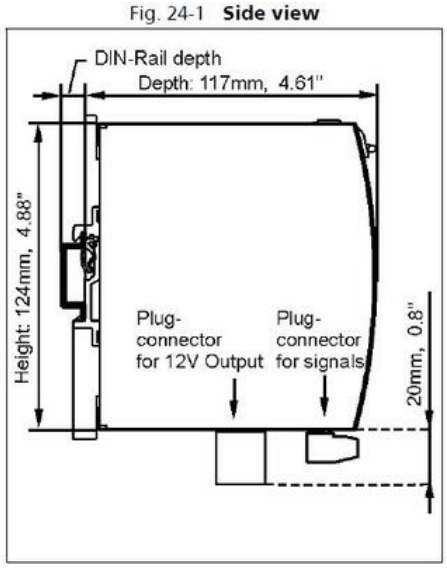
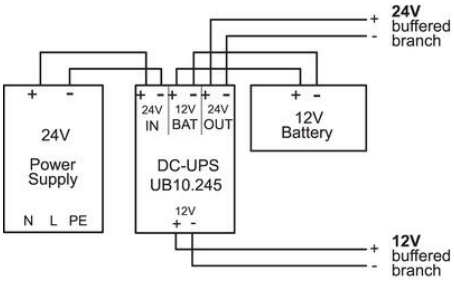
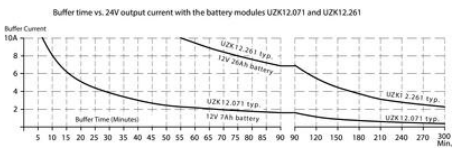


Fig. 24-1 **Side view**







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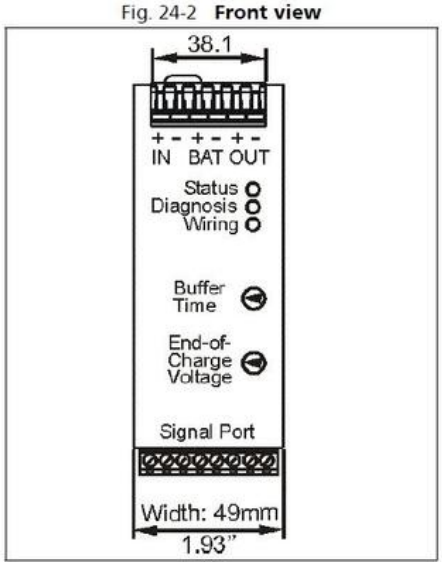

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