



DC UPS modules



Power supply with ultracapacitor back-up

General information:

The RDCuSV C series DC back-up module has an ultracapacitor as an energy storage device inside the enclosure. This capacitor is charged during normal operation by an external regulated DC power supply unit. If the DC supply is interrupted the energy of the ultracapacitors is released in a controlled manner. The load is fed from the back-up module until it has been completely discharged. The back-up time is dependent upon the state of charge of the capacitor and the load current.

| Type | RDCUSV 3C1 | RDCUSV 5C5 | RDCUSV 10C10 | RDCUSV 20C8 |
|------------------------------------|---|---|----------------------|--|
| Nominal input voltage | DC 24V + 10% | DC 24V + 12.5% | | DC 24V + 10% |
| Min. charging voltage | DC 23.7V | DC 23.9V | | DC 23.4V |
| Rated input current | 3A | 5A | 10A | 20A |
| max. switch-on current | - | 35A / 2ms | | - |
| Output voltage in back-up mode | DC 23.0V ± 2% | DC 23.2V ± 2% | | - |
| Output current | DC 3A | DC 5A | DC 10A | DC 20A |
| Limiting current monitoring | - | DC 5.3A ± 0.1A | DC 10.3A ± 0.1A | - |
| Switch-off if limit exceeded | - | after 1.5sec. | | - |
| current limitation | - | 1,05 ... 12 x I _N nominal | | - |
| Efficiency | - | > 90% | | - |
| Energy content | 1kJ | 5kJ | 10kJ | 8kJ |
| Back-up time | dependent upon load | | | |
| Protection class | IP20 | | | |
| Storage temperature | -20 ... +60°C | -40 ... +60°C | | - |
| Operating temperature | -20 ... +60°C | -40 ... +60°C | | - |
| Input fuse | 4AT (internal) | 15A (internal) | | 25A (internal) |
| Output fuse | 3.15AT (external) | 15A (internal), 10AT (external) | | 25A (internal), 20AT (external) |
| Capacitor circuit fuse | - | 25A (internal) | | 30A (internal) |
| LED display: | Operation IV o.k. U _c > | green LED lights up if system voltage available green LED lights up if external supply available green LED lights up if energy in capacitor > 80% | | |
| LED display: | green LED goes out if: energy in capacitor 30% LED blinks slowly (0.8Hz): during charging, until 80% of capacitor energy reached LED blinks rapidly (3.2 Hz): if capacitor discharged | Error | red LED lights up if | - overvoltage on internal capacitor - over- or undervoltage on IV terminal - overcurrent on output |
| Relay outputs | potential-free relay contact, NO 30VDC / 0.5A | potential-free relay contact, NO 30VDC / 0.5A grid/ /mains, NO 30VDC / 0.5A U _c /V _{cap} </>, NO 30VDC / 0.5A error, changeover 30VDC / 0.5A | | |
| USB communication | - | for parameterisation and for operation with shutdown software for PC | | |
| shutdown terminal (emergency stop) | - | abort of UPS operation, potential-free switching input switching level: DC 24V (DC 6-45V) | | |
| Standards and regulations | EN 50178 / EN 60950 | | | |
| Connection, input/output | plug-in terminals, 2,5mm ² | plug-in terminals, 2,5mm ² | | plug-in terminals, 4mm ² |
| Connection, C extension | plug-in terminals, 2,5mm ² | - | - | plug-in terminals, 4mm ² |
| Connection, signalling terminals | - | plug-in terminals, 2,5mm ² | | plug-in terminals, 1,5mm ² |
| Article no. | 0246-000003C1 | 0246-000005C5 | 0246-00010C10 | 0246-000020C8 |
| Dimensions (H/B/T) | 95 x 60 x 125mm | 165 x 130 x 145mm | 165 x 114 x 145mm | 192 x 84 x 192mm |
| Weight | 0.55kg | 2.1kg | 2.8kg | 2.2kg |

Short-term delivery | Subject to technical modifications | Date 22.11.2011

