



DC UPS

UNINTERRUPTIBLE POWER SUPPLY WITH DC OUTPUT VOLTAGE 300 VDC

- 300/400/600/800 W power uninterruptible power supply
- Provide uninterruptible working of computer and telecommunication equipment supplying from line ac voltage
- DC UPS is applicable in systems which already have equipment supplying from uninterruptible 24/36/48/110 V dc voltage sources
- Protection of batteries from under voltage
- Protection of devices from ac line disturbances and low line voltages



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Applications

DC UPS provides uninterruptible working of computer and telecommunication equipment normally supplying from 230 Vac line voltage, 300/400/600/800 W power.

Modern equipment, on their input, have rectification of line voltage, without line transformer. From the line voltage rectifier generates about 300 Vdc, which means that such devices could be supply with 300 Vdc (approximately) instead 230 Vac line voltage.

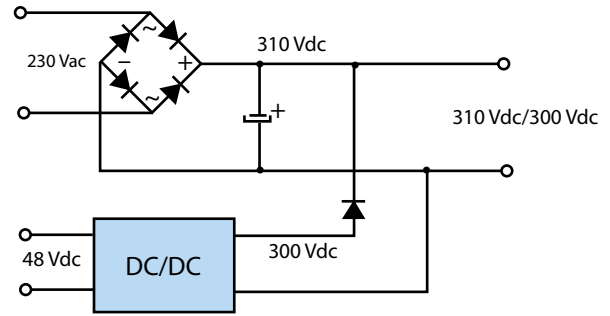
DC UPS use this possibility. On its output, when line voltage exists, DC UPS generates dc voltage (about 300 Vdc), made by rectification of 230 Vac line voltage. When line voltage is not present, dc output voltage is generated by converting reserve 48 Vdc input voltage (batteries). Reserve 48 Vdc is available in systems, which have uninterruptible dc power supply (for example, telecommunication companies, railroad companies, power distribution companies, etc.).

DC UPS-400 with built in charger (4.5 A/48 V) is marked DC UPS-400/P.

Switching from ac line supplying to reserve battery supplying and vice-versa, is going without time period of output voltage interrupt (that happens with classic off-line UPSs - at output of classic AC UPS exist interrupt in energy supply in period 5-15 ms, because of adding ac voltages, which are not synchronous). That can be accomplished because, on output of DC UPS, dc voltage generated from rectified ac line voltage and dc voltage generated from dc/dc converter are connected in parallel; their sum is output DC UPS voltage.

Signalization

- LED1 ● Batteries are low and disconnected ($V_{bat} < 44$ Vdc)
- LED2 ● Batteries are low ($V_{bat} < 46$ Vdc)
- LED3 ● Line ac voltage is incorrect (not exist or the line is to low), load supplying come from batteries energy
- LED4 ● Line is correct, load supplying come from line energy



DC UPS Block diagram

TECHNICAL DATA

| | |
|---|----------------------------------|
| Input voltage | 230 Vac (205 — 252 V) |
| Line voltage frequency | 48 — 64 Hz |
| Input dc voltage (batteries) | 48 Vdc |
| Optional | 24/36/110/220 Vdc |
| Output dc voltage | |
| working "on" line voltage | 310 — 340 Vdc |
| working "on" batteries | 300 Vdc |
| Load power | 300/400/600/800 W _{max} |
| Switch time from working on line to working on batteries (line < 205 V) | 0 ms |
| Protection of batteries from over discharge | <44 Vdc |
| Batteries charging time (48 V/38 Ah) | |
| DC UPS-400/P | <10 h |
| Number of output connections | |
| DC UPS-300 | 4 |
| DC UPS-400 | 5 |
| DC UPS-600/800 | 3 |
| EMC standard | Class B |
| Safety standard | EN 60950 |
| Dimension (H x W x L) | |
| DC UPS-300 | 57 x 237 x 335 mm |
| DC UPS-400/ 600/800 | 88 x 258 x 423 mm |
| Weight | |
| DC UPS-300 | 2 kg |
| DC UPS-400/600/800 | 5 kg |



DC UPS-300



DC UPS-400



DC UPS-600/800