



Technical Data

On-Line UPS-system **proTECTO D 3300-10000**

proTECTO D is an On-line UPS-system in double conversion technology according to DIN EN 62040-3 (VFI-SS-111) with ratings from 3300 to 10000 VA. These UPS-systems of the latest generation are variable applicable, because they can be used as a tower or mounted as in a 19" Rack.

Another feature is the „Hot-Swap“. In difference to a normal UPS-system of this size, the batteries can be exchanged during the operation. Besides the **proTECTO D** systems have a SNMP-Slot as well as 2 serial interfaces (RS 232 and USB).

Including Shutdown-Software for Windows NT / 2000 / XP / 2003 / Vista, Novell and Linux system software.



The back-up time of the systems can be increased by connecting additional external battery modules.

model	proTECTO D	3300	4000	5000	6000	8000	10000
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rating							
rating in VA		3300	4000	5000	6000	8000	10000
rating in Watt		2300	2400	3500	4200	6400	8000

back-up time in minutes							
at 100% load		6	5	9	7	5	3
at 50% load		15	14	22	18	14	12

input						
nominal voltage	220 / 230 / 240 V AC					
accepted range	0 to 276 V AC					
voltage range without battery operation						
Maximum:	276 V AC					
Minimum:	164 V AC at 100 % load 84 V AC at 50 % load			184 V AC at 100 % load 138 V AC at 50 % load		
Switch back to mains operation at:	180 V AC			190 V AC		
nominal frequency	50 Hz / 60 Hz ± 5 Hz					
maximum current (nominal load, input voltage 164V and battery charge)	15 A	16 A	25 A	30 A	38 A	46 A



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input							
nominal current (nominal load, nominal voltage and battery charge)		11 A	12 A	18 A	22 A	29,5 A	36 A
power factor		≥ 0,98					
harmonic distortion		≤ 7%		≤ 5%		≤ 6%	
Hold-Up time (back-up time which can be realized without switching on the battery – no interruption of the output voltage occurs)		40 ms		≥ 35 ms			
output							
nominal voltage		wahlweise 220 / 230 / 240 V AC					
tolerance of output voltage – static		≤ 1,5 %					
tolerance of output voltage – dynamic (load impact from 0 to 100%)		≤ 5% über 20 ms					
waveform of the output voltage		sinus					
nominal frequency		50 Hz oder 60 Hz					
voltage distortion/ linear load		≤ 3%					
voltage distortion / non-linear load		< 6%					
crestfacor measured according to EN 50091-1 (peak current to RMS-current		≥ 3 : 1					
efficiency of the system AC / AC		90 %					
overload							
normal operation 100 % < load < 110%		switch over to bypass after 2 sec. blockage after 120 sec.					
normal operation 110 % < load < 150%		switch over to bypass after 2 sec. blockage after 4 sec.					
normal operation load > 150%		switch over to bypass immediately blockage after 1 sec.					
battery operation 100 % < load < 110%		blockage after 60 sec.					
battery operation 110 % < load < 150%		blockage after 4 sec.					
battery operation load > 150%		blockage after 0,5 sec.					
by - pass							
accepted voltage range		180 to 264 V AC					
accepted frequency range		selected frequency ± 5%					



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battery							
nominal voltage		108 V DC		192 V DC		240 V DC	
number of modules		9		16		20	
nominal capacity per module		7 Ah				9 Ah	
type		closed and maintenance-free					
life duration		5 years (depending on environmental conditions)					
recharge time		4 to 8 hours					
battery test		automatic each 40 hours					

display		
LED display for		normal operation output on inverter battery operation mains present input- / output- / battery voltage recharge current state of recharge of the battery internal temperature remaining back-up time output load operating status

operating elements		
switch		main switch
button		ON
button		Stand by
button		selection display
switch		commutation on by-pass

interfaces		
Sub-D 9 Pin		RS 232 interfaces and potential-free messages for battery operation and battery nearly discharged
USB		serial interface
Slot		slot for: SNMP card, 2. serial interface or J-Bus

connections		
input	IEC 16 A	terminals
output	IEC 16 A + 2 x IEC 10 A	terminals + 2 x IEC 10 A (Powershare)
DC connection	for battery extension	



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protection	
protective systems	over voltage – short-circuit - overvoltage – low voltage heat – deep discharge protection of the batteries
surge voltage stability	IEC 801-5 6 KV 1.2 / 50 µsec; 3 KA 8/20 µsec; 300 Joule

norms	
safety	EN 62040-1-1; EEC regulation 73/23
EMV / RFI	EN 62040-2; EEC regulation 89/336
operation requirements	EN 62040 – 3 VFI-SS-111

environmental conditions	
environmental temperature	0 to 40 °C
noise level in 1m distance	< 40 dB (A) < 45 dB(A)

cabinet	
material	steel sheet / front plastics
colour	metallic grey
protective system	IP 205

dimensions			
dimensions (h x w x d) as tower-version	455 x 175 x 520 mm	455 x 175 x 660 mm	2 x 455 x 175 x 660 mm
dimensions (h x w x d) as rack-version	4 HE x 19" x 520 mm	4 HE x 19" x 660 mm	2 x 4 HE x 19" x 660 mm

weight						
weight in kg	38	40	58	60	119	120

delivery		
manual	Ja	
mains cable	Schuko – IEC 16A	-
connection cable	2 x IEC 10 – IEC 10	-
connection plug	IEC 16 A	-
cable ducts	-	2
communication cable	RS232 9-pin	
tool	for dismantling and turning of the LED display	
CD	PowerShield³ Shutdown Software	
handgrip-kit	-	1



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options

battery extension modul	Typ BB 108-7		Typ BB 192-7		Typ BB 240-9	
increase of the back-up time on	16 min	15 min	23 min	18 min		
dimensions (h x w x d) in mm	455 x 175 x 520		455 x 175 x 660			
weight in kg	30		50		90	

battery extension modul	Typ BC 108-14		Typ BC 192-12		Typ BC 240-9	
increase of the back-up time on	30 min	28 min	33 min	26 min		
dimensions (h x w x d) in mm	455 x 175 x 520		455 x 175 x 660			
weight in kg	50		70		90	

MultiSwitch	input: 2x 230V with 16 A each
programmable switch for redundant operation	output: 8x 230 V with 4 A each
dimensions (h x w x d) in mm	2HE x 19" x 360 mm
weight	5 kg

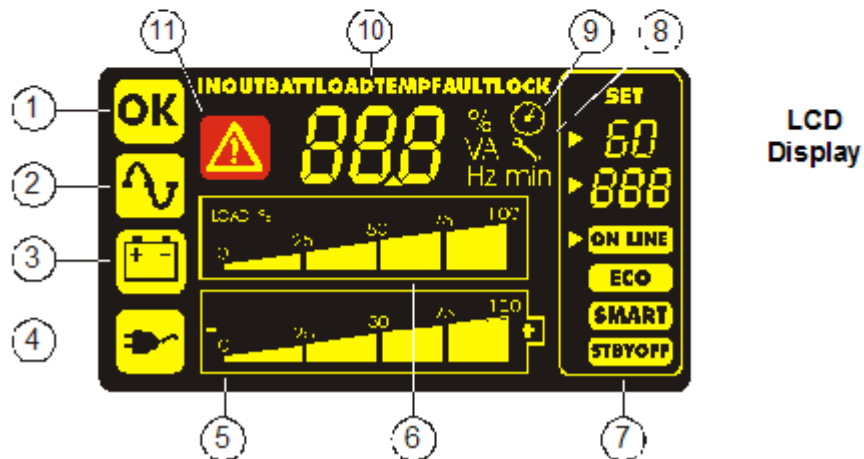
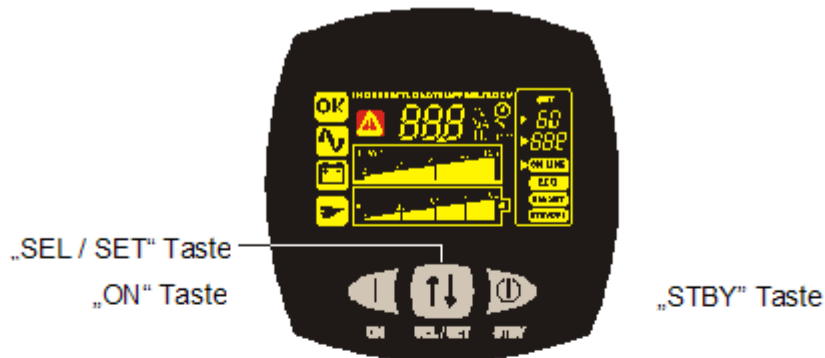
software	
network version of PowerShield2 Shutdown-Software for Windows NT/2000/XP/3000, Vista, Novell, UNIX and Linux system software	X



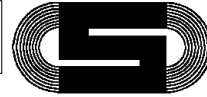
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display proTECTO D 3300 - 10000



- | | |
|-------------------------------|--------------------|
| ① normal operation | ⑩ measured value |
| ② mains operation | ⑪ stand-by / alarm |
| ③ battery operation | |
| ④ bypass operation | |
| ⑤ status of the load | |
| ⑥ display for state of charge | |
| ⑦ operation mode | |
| ⑧ request of maintenance | |
| ⑨ Timer | |



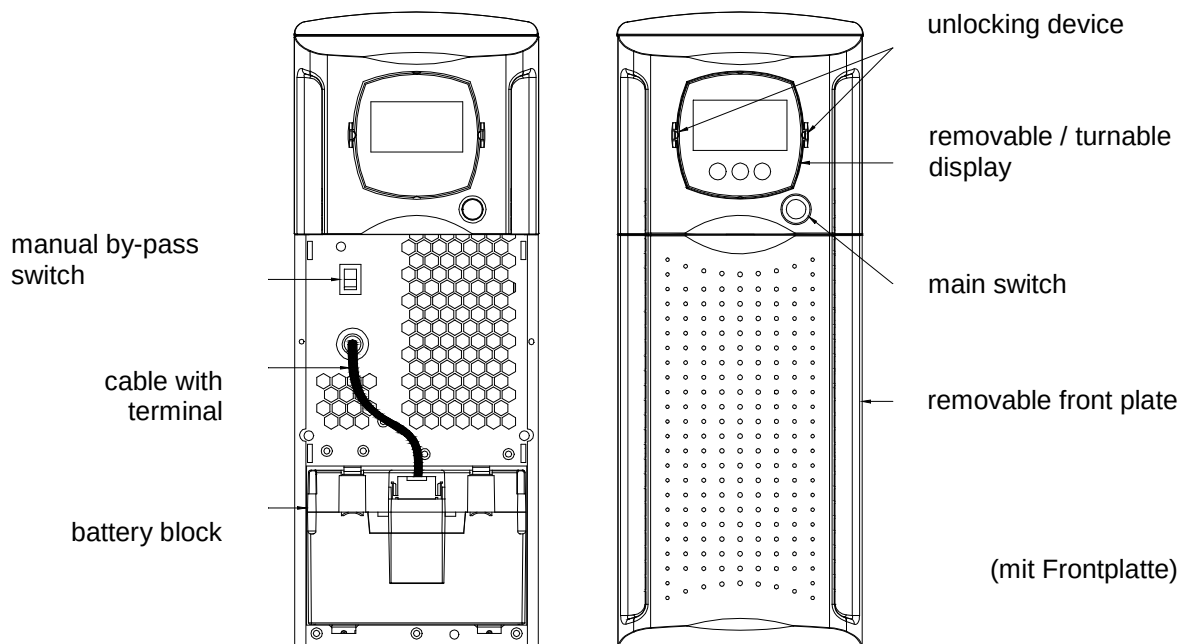
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On-Line USV-Anlage proTECTO D 3300-10000

proTECTO D 3300 und 4000

front view

((without frontplate))



communications-
interface USB

rear view

plug battery-
extension

fan

communications-
interface RS232

extension slot

input thermal protection

input IEC 16A

output IEC 10A

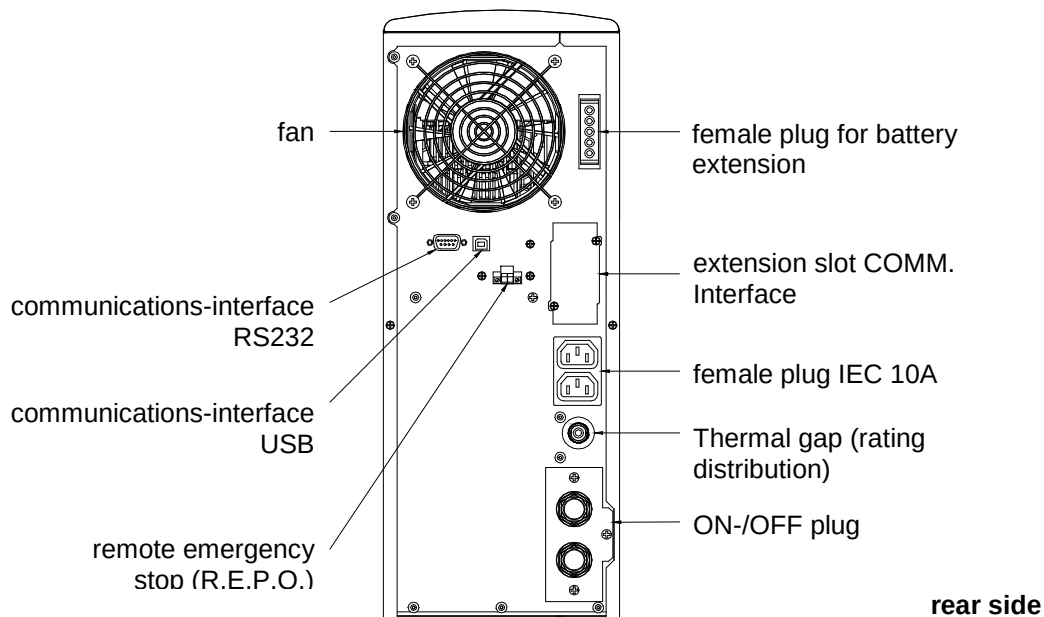
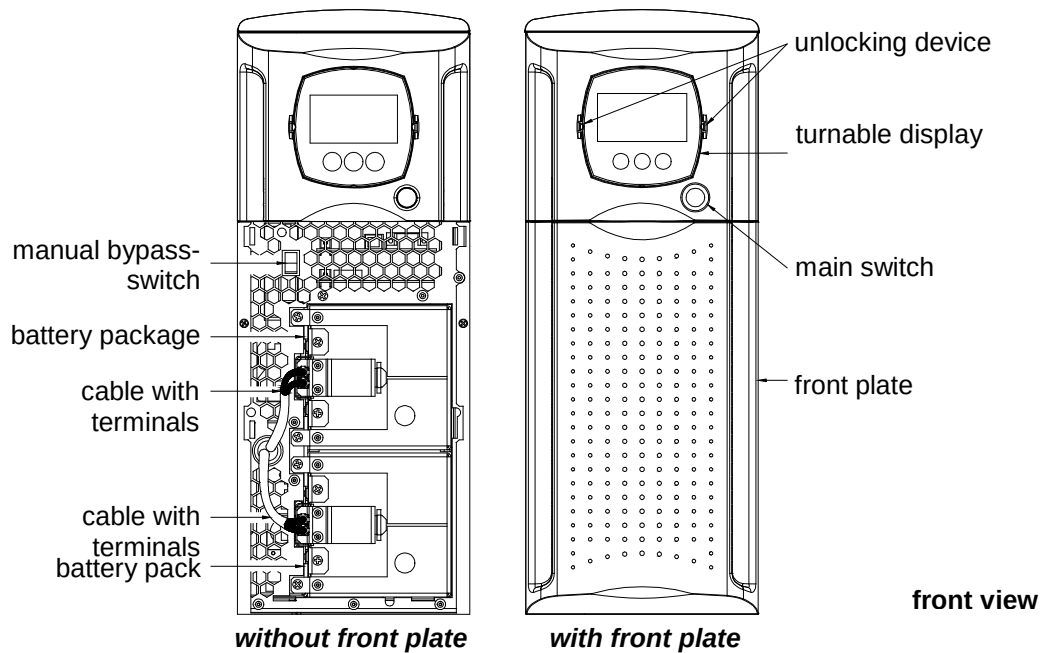
output IEC 16A



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proTECTO D 5000 und 6000

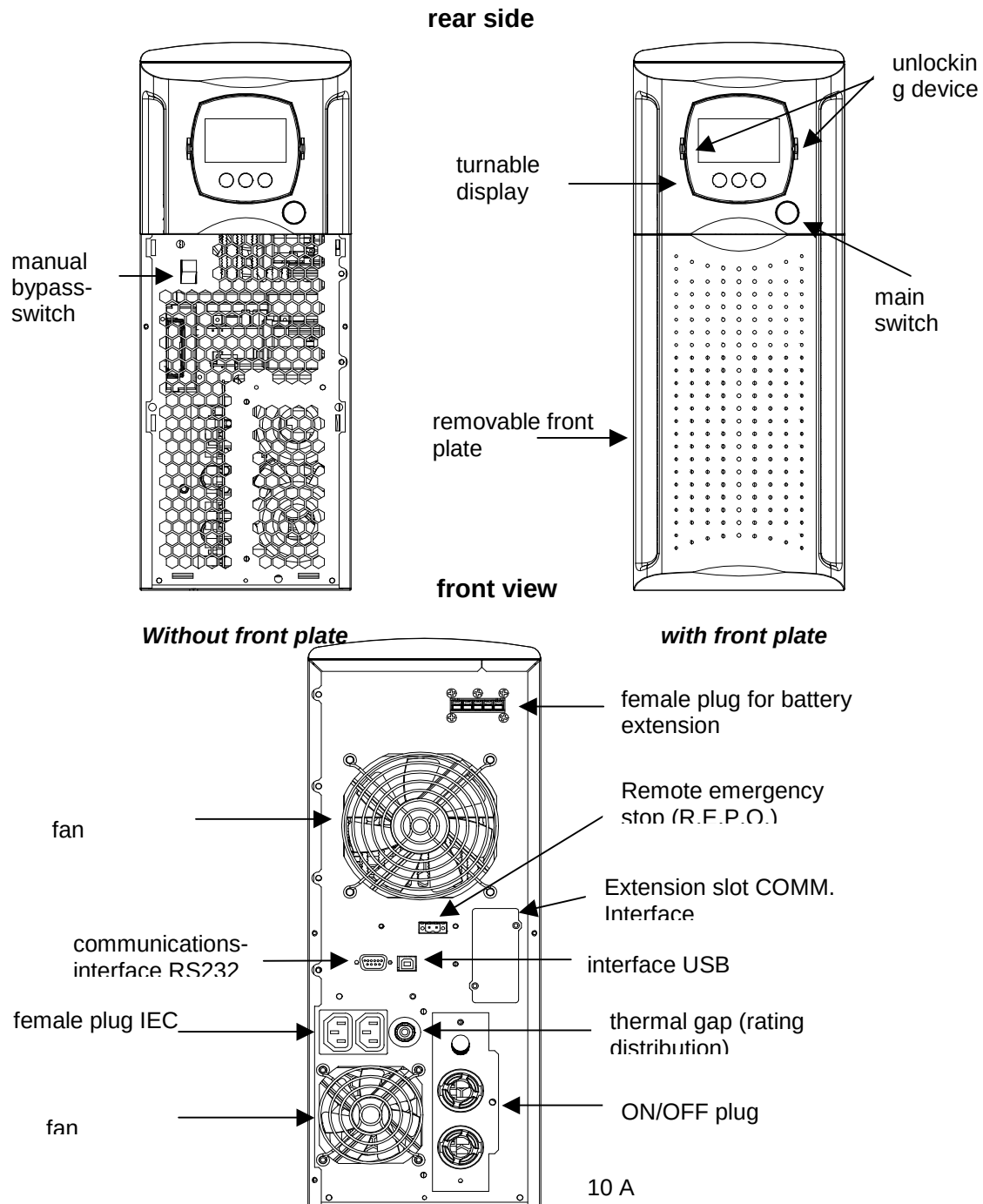




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proTECTO D 8000 und 10000





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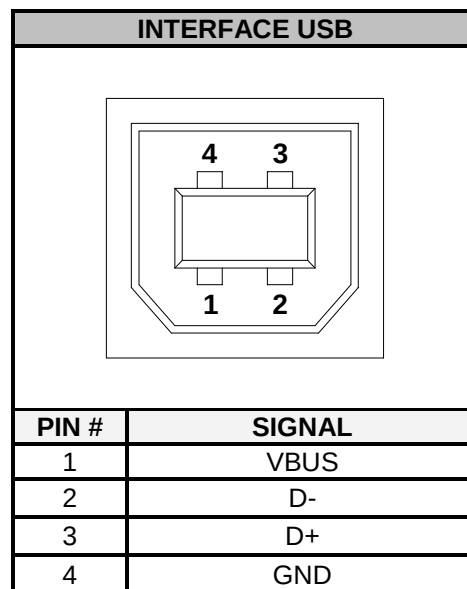
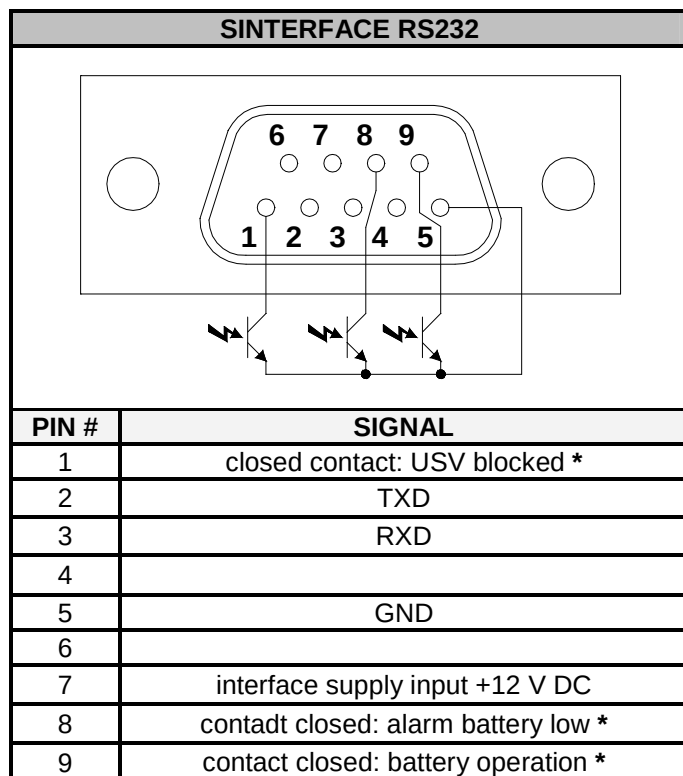
On-Line USV-Anlage proTECTO D 3300-10000

interfaces proTECTO D 3300 - 10000

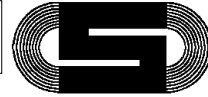
On the rear side of the UPS (see view *UPS*) the following communication interfaces are present:

- interface RS232
- interface USB
- extension slot for additional interface cards COMMUNICATION SLOT
-

Interfaces RS232 und USB



* optoisolated contact max. +30Vdc / 10mA



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communication slot

The UPS includes an extension slot for optional communication cards (see picture beside), which enables the unit to communicate by using the main communication standards.

Some examples:

- second interface RS232
- serial interface doubler
- Ethernet mains agent with TCP/IP, HTTP and SNMP journal
- interface RS232 + RS485 with JBUS / MODBUS journal

