Technical Datasheet

MULTIGUARD

S2

DC-Ups series

Charging unit 120W

Output voltage 12V (13,6V) ï 24V (27,2V)

Intelligent battery protection

Multi alarm output with variable delay

Technical Data	S2-12120	S2-24120
Input voltage	190 ï 264V AC, 48-63Hz	
Output voltage	13,6VDC	27,2VDC
Output current	8,8A	4,4A
Max. Contiual Load	60% of output current with batteries(18Ah) in circuit	
Efficiency	85% minimum at maximum load	
Peak inrush current	< 20A within 10ms	
Operating temperature	-10°C to +35°C	
Storage temperature	-40°C to +85°C	
Load regulation	0.5% for 0 to 100% load change	
Line regulation	0.2% for specified input voltage variation at 50% output power	
Switch frequency	40-50 kHz at maximum load	
Output ripple	100mVp-p maximum at maximum load	
Output current limit	100% to 130% of max value.	
Output voltage limit	16V + - 6%	33V + - 6%
MTBF	Min. 100.000h at 25°C.	
Safety standard	EN 60950	
Safety class	I (With earth protection)	
Emission standards	EN50081-1	
Immunity standards	EN50082-1	
Harmonic emission	EN61000-3-2 , class A	
Power Factor Correction	**Yes**	
Battery surveillance	Automatic battery test every 24 hour (replacement notice after 3 years)	
Dimensions Weight	354X395X116mm 6,3KG (without battery)	
Mounting method	Wall Mount Cabinet	
IP class	IP20	
Terminals	Terminal Blocks (Rating 20A)	
Battery connection	2X1.50sqmm RD/BK WIRE	
Max. Battery Capacity	2x12V 20Ah (18Ah)	

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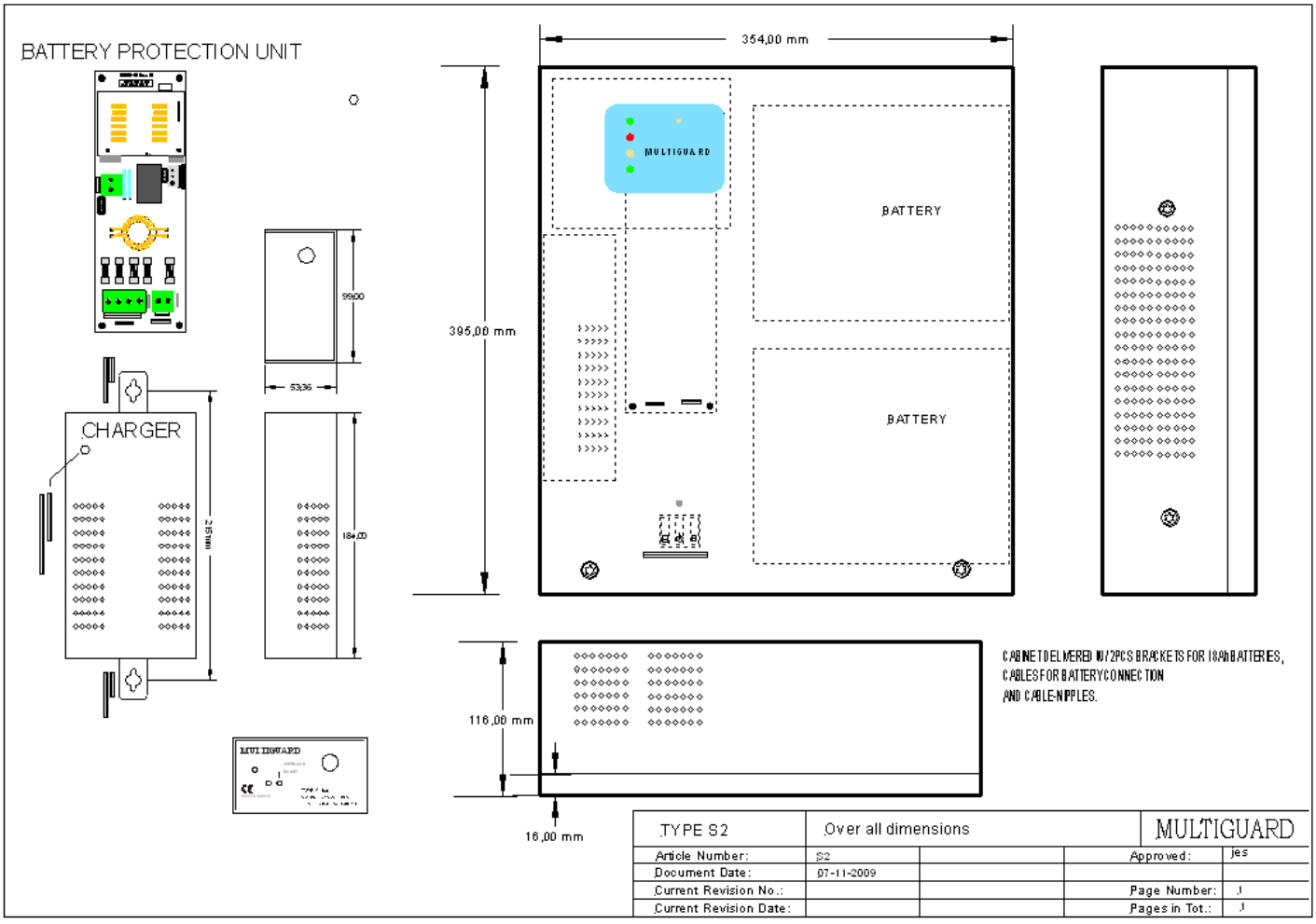
Battery Protection unit

Technical Data	S2-12120	S2-24120
Input voltage Connect to **INPUT**-Terminal +/-	13,6VDC 8,8A	27,2VDC 4,4A
Output voltage Terminal Blocks -1,2/+1,2	2 x 13,6VDC 4,4A	2 x 27,2VDC4,4A
Output Fuses positive output **FS3,FS4** Output Fuses negative output **FS1,FS2**	2 x 8A 2 X 8A	2 x 5A 2 x 5A
Battery Fuse	10AT at 13,6VDC, **FS5**	8AT at 27,2VDC, **FS5**
Battery Protection	Relay min. voltage 10VDC	Relay min. voltage 20VDC
Battery input	Connect to **BATTERY** Terminal +/-	
Battery Connection Battery is connected to Load by RELAY, And will be disconnected when Battery Voltage is lower than	10VDC	20VDC
Load Connection	2x8A **+1,+2** 2X8A**-1,-2**	2x5A **+1,+2** 2X5A**-1,-2**
Alarm Relay Connection	ALARM RELAY(**NC/NO/C**)	
Operating temperature	-10°C to +40°C	
Storage temperature	-40°C to +85°C	



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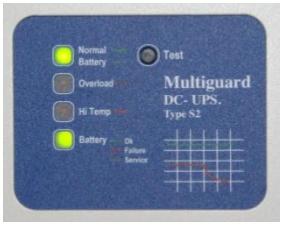

Controller board

The controller board is run by a microprocessor that handles all parameters from internal sensors, and sensors located on the battery- protection unit via the link cable.

Table bellow explains the input and output on the controller board.

Front display functions

O Test button	Push to test battery (this is done automatically every 24 hours). Holding test button in more than 10 sec will put the UPS in service mode (all alarms disable).
▢ Normal Battery	Continues green indicates 230Vac ok operation. Flashing green indicates 230Vac not present ups in backup mode
▢ Overload	Flashing red indicates maximum load has been reach in more than 20sec
▢ Hi Temp	Flashing red if temperature inside the UPS exceeded 55°C
▢ Battery	Green if battery OK. Red if battery failed test. Flashing red/green if battery is older than 3 years

Dip switch setting

1. On/Off	Sound signal on or off
2. On/Off	On 15 min delay on alarm relay if 230Vac power out. Off no delay
3. On/Off	On 30 min delay on alarm relay if 230Vac power out. Off no delay
4. On/Off	On 60 min delay on alarm relay if 230Vac power out. Off no delay

Sound signals in prioritized order (highest priority on top)

7 beeps break	Tamper (door is open)
6 beeps break	Power out UPS in backup mode
5 beeps break	Overload (maximum load has been reach in more than 20sec)
4 beeps break	High temp (temperature inside UPS exceeded 55°C)
3 beeps break	Battery failed last test
2 beeps break	Battery is older than 3 years