



Input

Input voltage	Unom. 230VAC, voltage range: 185 – 264 VAC max. permissible stress without destruction or loss of lifetime: 130% (299VAC) for <0,8sec. 125% (288VAC) for 0,8-2sec. 120% (276VAC) for 2- 30sec.
Galvanic isolation	primary side to earth 750 VAC and 1000 VDC permanently
Fuse / MCB	ext. 6AT (slow blow) / ext. 6A K- or D- characteristic
Frequency AC-input	47-63Hz
Power factor AC-input	0,65-0,75 capacitive
Crest factor (AC)-input	2,0-2,5
Turn on voltage	down to 90% Umin (167 VAC)
Switch-on time	typ. 2s
Hold-up time	Output voltage typical 15ms. Hold up of CPU >2.0s
Drop out recovery time	Max. 2s

Primary Inhibit

Inhibit input	Digital input, Unom. 230VAC
Galvanic isolation	Connected with AC - Input
Connector	1-wire
On / Off levels	Signal "0": pin floating; Signal "1": shorted with L (phase)
Function description	Signal "0": Charging voltage is normal. Signal "1": Charging voltage 0VDC
Response time	Stop: 150ms Start: 150ms

Control Input

Inhibit input	Digital input, Unom. 24VDC
Galvanic isolation	750 VAC and 1000 VDC permanently
Connector	2-wire
On / Off levels	Signal "0": 0-5VDC; Signal "1": 15-30VDC
Input impedance	9100Ω, input current max 25mA
Function description	Signal "0": Charging voltage is normal. Signal "1": Charging voltage 0VDC
Response time	Stop: 25ms Start: 25ms

PT-100

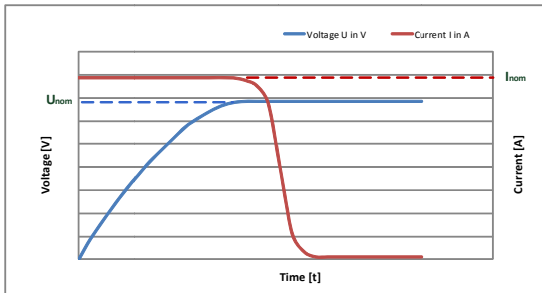
PT-100 input	Range: -40°C to + 80°C. Accuracy: +/- 1°C. Current < 3mA.
Galvanic isolation	750 VAC and 1000 VDC permanently
Connector	3-wire
Temperature error	If temperature of battery or capacitors not in the range -20°C to +50°C. For alarm purposes, the temperature measurement is averaged over 1 sec and with a hysteresis of 5°C.
Temperature sensor error	If wire broken or shorted.

Output

Charging voltage	nom. 300VDC max. 330VDC (corresponding to -34°C).
Voltage ripple	<0.5% (1,5V @ 300V output).
Max charging current	2,1A ± 2%,
Voltage / Current	Constant current/constant voltage charge system IU- characteristic
Galvanic isolation	Secondary side to primary side and secondary side to earth: 750 VAC and 1000 VDC permanently
Over voltage protection	electronically 335VDC. No effect on external over voltage
Feed – back protection	internal series diode at +output.
Polarity protection	in combination with an external main circuit breaker or a fuse, full polarity protection for the battery connection is possible

LED Signal
 Alarm output
 Galvanic isolation
 Alarm hold time

signalizations and indications according to table "alarm output functionality"
 Relay contacts (1noc / 1ncc), contact load 30V / 2A
 750 VAC and 1000 VDC permanently
 min. 1 sec – except after power up.



IU Characteristic

Alarm Function

Error	Alarm Contact	Green LED	Red LED	Charging continue	Alarm Off condition
No error present	No	On	Off	Yes	N/A
Input power off	Yes	n/a	n/a	n/a	Power On
Battery or capacitor voltage < 260V	Yes	On	On	Yes	Voltage > 264V
Temperature error	Yes	On	On	Yes	-20°C < t < +50°C
Temperature sensor error	Yes	On	On	Yes	-20°C < t < +50°C
Charger temperature too high (>100°C)	Yes	Off	On	No	Temperature lower (<70°C)
Battery or capacitor current < 100mA during test	Yes	On	On	Yes	Battery current > 150mA for 0.5s ⁽⁵⁾

General

Temperature coefficient
 Operating temperature
 Current derating
 Storage temperature
 Humidity
 Efficiency at full load
 Coating
 Expected lifetime

Output voltage and current typ. 0,02%/°C
 with free natural convection in all mounting angles:
 -40°C to +50°C ambient temperature
 +50°C to +70°C ambient temperature current derating down to 50% of output power with -2,5%/°C
 -40°C to +70°C
 95% without condensation
 >90%
 PCB is coated to protect against small metal chips and debris as well as against corrosions at high humidity
 20 years at +40°C continuous ambient temperature

EMC General

Marking
 Specific requirements

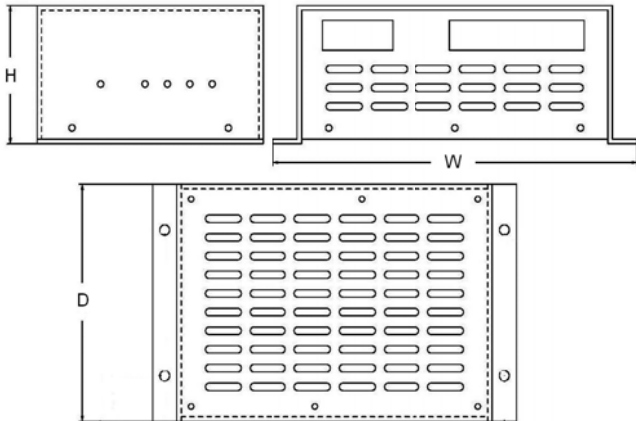
This product is CE marked.
 AC power input test levels:
 Surge acc. EN 61000-4-5, Level 3
 EN 61000-4-4, Level 3

Immunity tests

Test		Port type	
Burst	DS/EN 61000-4-4	All ports	4kV
ESD	DS/EN 61000-4-2	All ports	4kV contact
Surge	DS/EN 61000-4-5	AC power port DM AC power port CM DC power port DM DC power port CM Signal ports CM Shield to earth CM	2 Ω/18 μF 2.0 kV 12 Ω/9 μF 4.0 kV 2 Ω/18 μF 1.0 kV 12 Ω/9 μF 1.0 kV 42 Ω/0.5 μF 4.0 kV 2 Ω 2.0 kV
RF conducted	DS/EN 61000-4-6	All ports	0.15-80 MHz: 10Vrms
RF airborne	DS/EN 61000-4-3		27-1000 MHz: 10 V/m

Construction

Creepage distances	in/ground: 6,4mm
Air distances	in/ground: 5mm
EMC / CE	EN 61000-6-4, EN 61000-6-2
Shock	EN60068-2-27
Vibration	EN60068-2-6
Connection	Connectors with mechanical lock
Connector labeling	Screen printing on cabinet



Dimensions approx. mm:

H = 74

W = 204

D = 127