Deutronic Elektronik GmbH
Deutronicstr. 5, 84166 Adlkofen, Germany

DBL1600-14
professionalCHARGER
for lithium-ion / lead-acid / AGM / gel / fleece batteries

professionalCHARGER - derivative table

Type	*Input voltage*	*Output voltage*		*Output current*		*Menu language*	*Firmware*	*Cat. No.*
		Pb	*Li*	*nom.*	*max.*			
professionalCHARGER	100-240VAC	14,4VDC	14,0VDC	90A	105A*	DE	v1.70	107052/x/050
professionalCHARGER	100-240VAC	14,4VDC	14,0VDC	90A	105A*	EN	v1.70	107052/x/051

* refer to description: current limiting

Order option:

../1/..: With accessories
5m USA-power cable (Art.140504)
5m/16qmm power cable (Art.140708)
../2/..: With accessories
5m Schuko-power cable (Art.140501)
5m/16qmm power cable (Art.140708)
../8/..: With accessories
5m UK-power cable (Art.140413)
5m/16qmm power cable (Art.140708)

Firmware Spezifikation:

Firmware	*Charging modes*	*Menu language*
v1.70	FSV, LADEN-Pb, LADEN-Li (LFP), Power-Up	Order option: DE or EN (see Cat. No.)

1. Input

Input Voltage	100 - 240 VAC wide range (tolerance: 85VAC-265VAC), 45-65Hz 130 - 350 VDC
Inrush current	30A bei 264VAC, independent from temperature Circuit breaker: 16A, time-lag fuse (e.g. characteristic B)
Input Current at nominal load	< 10 A (115V/230V)
Power factor	> 0,98
No-load power	typ. 10W with deactivated output
Input Fuse	F1 (2x 7A-8A T) / 250V (6,3x32mm)
Transient over voltage protection	Varistor (8kA / 151J)
Plug input	IEC/EN 60320, C14

2. Output

Output (Factory settings)	Connection of charger leads via welding cable connector (bayonet connector type); Output relay (load detection / reverse polarity protection); Output voltage monitored by OVP (Over Voltage Protection) and complete disable of output current if preset charging voltage limit is exceeded. Extensive functional description of the charger's features - see operating instructions.
Charge Mode (Factory settings)	When starting the DBL the predefined charging voltage is set (e.g. 14,4VDC / 28,8VDC). If charging current goes down the predefined limit (e.g. 2,5A) then the charging voltage is reduced to trickle charge (e.g. 13,2VDC / 26,4VDC). If additional current is required, the charger will again increase the charging voltage (to e.g. 14,4VDC / 28,8VDC).
Current limiting	Current limit is user selectable. According to the operation state the current limit is automatically adjusted during operation, depending on mains voltage (see output power curve on page 5), operating temperature, load characteristic etc. The maximum current limit value (see table on page 2) is provided for max. 1 minute continuously followed by a cooling period for approximately 4 minutes.
Plug output	Welding cable connector (plug [-] / socket [+]) for wire cross section 16/25qmm

3. Regulation accuracy U_{out}

Tolerance	+/-2% over all
Load regulation	
static (10-90%)	<0,5% typ. 0,05 %
dynamic (10-90%)	< 5% 100Hz
Recovery time	<1ms
Temperature drift	-25°C ... +50°C: < 1% typ. 0,5%; @0-40°C: typ. 0,4%
Voltage ripple	<50mVpp

Switching spike	<300mVpp

4. EMC (Electromagnetic Compatibility)

Emission

RFI emission	EN55011 Group 1 Class B (with signal lamp / interface connection[*1]: Class A)
Current harmonics	EN61000-3-2
Immunity	EN61000-6-2

5. General Data

Ambient temperature operating	-25°C...+60°C (automatic output power derating –see cooling)
Storage temperature	- 40°C ~ 85°C
Cooling	Convection cooling and internal fan (fan regulation and monitoring is microprocessor controlled). Automatic power reduction at high temperatures in conditions of inadequate convectional cooling. Fan failure forces alarm signal as well as reduction of output power to emergency level. Sealed housing. No air interchange with polluted air from outside.
Humidity	95% no operation in presence of dewing, coated PCB by varnish
Vibration acc. to IEC 68-2-6	10 Hz – 150 Hz, 0,15mm or 2g, 90 min. under resonance
Shock acc. IEC 68-2-27	30g for 18 ms in 3 directions
Pollution degree acc. to EN50178	2
Climatic category acc. to EN60721	3K3
Degree of protection acc. to EN60529	IP54
Safety/Protective system	UL1236 EN60335 EN61010 Protection Class I
Isolation voltage	Input/output: 3kV each unit; output/chassis: 500VDC
MTBF	> 400 000 IEC 1709 (SN 29 500)
Efficiency	typ. 90%
Case	Metal, especially designed for car manufacture and service stations. Mounting option via 6 screws size M6 at the side.
Dimensions (DxWxH)	Standard-Version 340 x 295 x 146,5mm

	B-Version	355 x 385 x 143mm
Weight (without cables nor package)	Standard-Version	approx. 8,2 kg
	B-Version	approx. 8,5 kg

6. Interface

Interface (25-pol. SUB-D)[*1][*2] For various purposes (e.g. floating Relays, Remote ON/OFF etc.)

RS232 (9-pol. SUB-D)[*1][*2] For communication or firmware update (standard PC interface)

[*1] For connecting external equipment please use a shielded cable

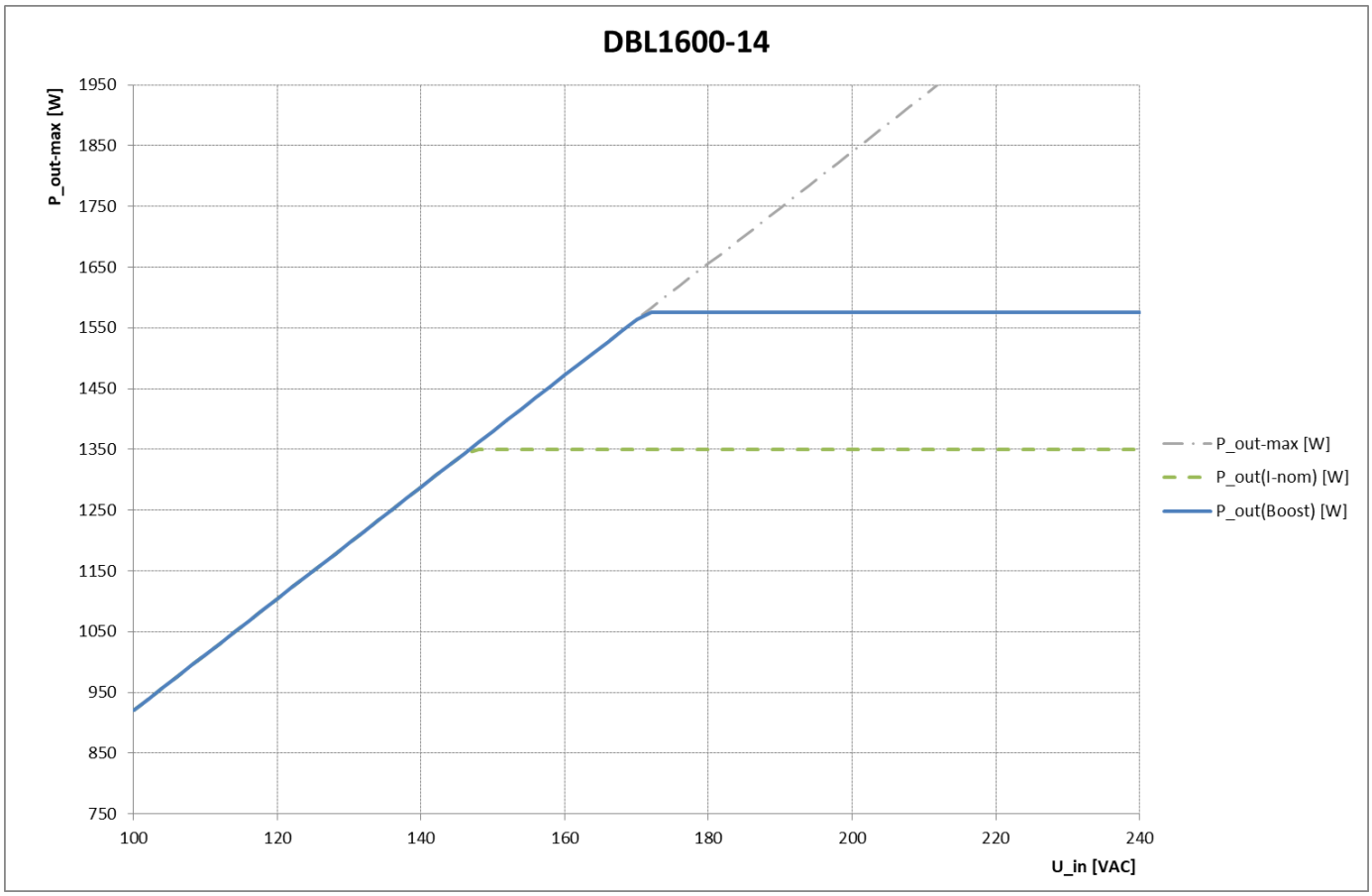
[*2] ATTENTION:
GND-Pins not galvanically isolated to the power output! When connecting the device with an external control a galvanic isolation must be provided!

Signals 3 high power LED´s for operating state indication / alarming

LCD display Big sized graphic display

3-key operator panel Menu navigation as well as configuration / parameterisation of operation mode and individual device parameters (among others output voltage, current limits, security parameters, start / stop behaviour, short circuit reaction etc.)
Extensive functional description see operating instructions

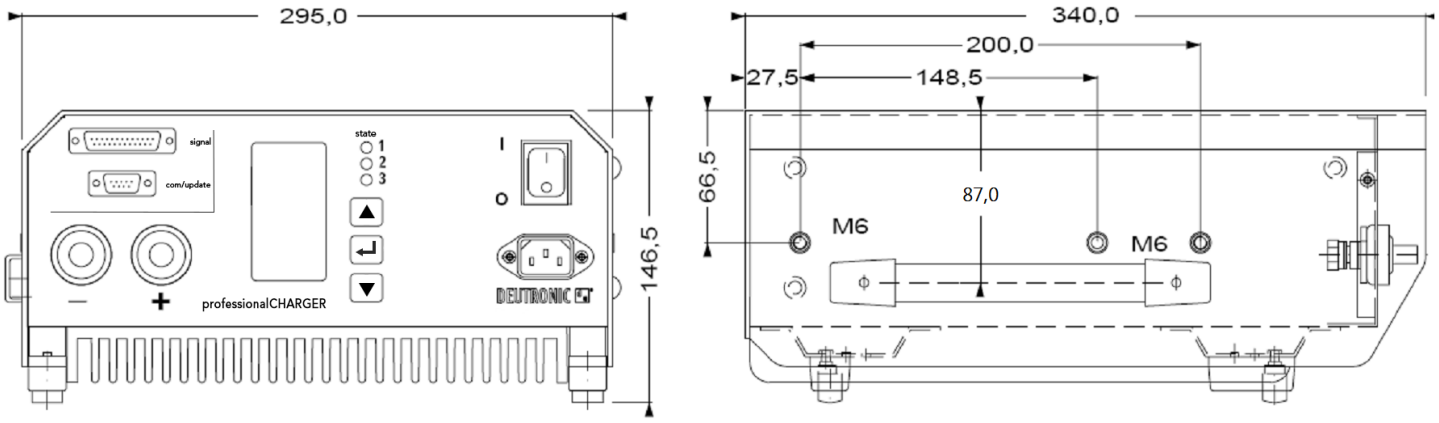
7. Output Power Curve



Note:
To reach full output power, it is possible to connect the device across two phases in case of low supply voltage (f.e. USA 120VAC). Protective earth connection has to be properly bonded in any case.

8. Dimensions

Standard case version:
Display, main on/off switch, interface and connector on the front



9. Optional accessories for DBL charger series

- Wall mount
- Transport cart
- Charging cables (3 and 5 meters)
- Mains cable (3 and 5 meters)
- DBL-SIG (Signal lamp)

You can find additional accessories at https://www.deutronic.com/wp-content/uploads/2025/12/Charging-Technology-Accessories.pdf

(For DBL series chargers with max. output current >100A we recommend using charging cables with a diameter of at least 25mm2).

10. Important (safety-) notes

Generally it is recommended to use by Deutronic released equipment, only. Because only in this way an appropriate technical suitability and an adequate dimensioning can be ensured for professional use.

Equipment and accessories have to be selected and installed in accordance with the requirements and under attention of the existing safety guidelines.

Note: Mains cables / charging cables must be used in completely unrolled condition only, to ensure a sufficient cooling! Moreover pay attention of a safety interlocksystem at the respective device to ensure the operational safety and to avoid damages. If worn, the cables must be replaced immediately!