

DBL1903-14

Charging Computer

Intelligent charger for lead acid / AGM / VRLA / Lithium-Ion batteries



Abbildung ähnlich / device similar to figure



DBL1903-14 - derivative table

Type	Input voltage	Typ. output voltage (configurable)*			Output current**	Cat. No.
		Charge Pb / LiFe	LTC*** Pb / LiFe	FSV****		
DBL1903-14	100-240 VAC	14,4 / 14,0 V	14,4 / 14,0 V	14,0 V	120 A / 100 A	107241/x/yyy
DBL1903-14	100-240 VAC	14,4 / 14,0 V	14,4 / 14,0 V	14,0 V	120 A	107244/x/yyy
DBL1603-14	100-240 VAC	14,4 / 14,0 V	14,4 / 14,0 V	14,0 V	105 A / 90 A	107242/x/yyy
DBL1303-14	100-240 VAC	14,4 / 14,0 V	14,4 / 14,0 V	14,0 V	90 A / 80 A	107243/x/yyy

* Charging voltages can be customized on request. The actual charging voltage depends on the prevailing operating state.

** See functional description "current limiting"

*** Long term charge

**** Power supply mode

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Mit den Angaben im Katalog und in den Datenblättern werden Produkte beschrieben, nicht Eigenschaften zugesichert. Belastung mit „Grenzwerten“ (einfache Kombination) ist zulässig ohne bleibende Schäden der Produkte. Betrieb der Geräte mit Grenzwertbelastung für längere Zeit kann die Zuverlässigkeit beeinträchtigen. Grenzwerttoleranzen unterliegen üblichen Schwankungen. | Products are described by information contained in catalogs and data-sheets. It is not be considered as assured qualities. Stresses listed under „Maximum Rating“ (one at a time) may be applied to devices without resulting in permanent damage. The operation of the equipment for extended periods may affect device reliability. Limiting value tolerance are subject to usual fluctuation margins.

1 Input

Input voltage range AC	100 - 240 VAC	tolerance: 85 - 265 VAC
Input frequency	50 - 60 Hz	tolerance: 45 - 65 Hz
Inrush current	No inrush current	active regulated current limitation ($I_{inrush} < \text{current consumption at full load}$)
Current consumption at full load	< 15 A	-
Power factor	typ. 0,95	-
No-load power	< 7 W	On Standby (operating mode selection) With active load detection

2 Output

Output voltage	-	see DBL1903-14 - derivative table on page 1
Continuous output current	max. 120 A (@DBL1903) max. 105 A (@DBL1603) max. 90 A (@DBL1303)	Boost / Nom. typ. 1 min. / 4 min.
Output power	< 1900 W (@DBL1903) < 1600 W (@DBL1603) < 1300 W (@DBL1303)	automatic power regulation depending on input voltage, ambient temperature and load condition
Nominal output voltage U_{nom}	14,0 VDC	Reference value for tolerance specifications
Initial tolerance $N_{initial}$	$\pm 0,4\% U_{nom}$	-
Load regulation tolerance N_{load}	$+0,3\% / -0,4\% U_{nom}$	-
Overall tolerance $N_{overall}$ 0 - 20 Hz	$+0,7\% / -0,8\% U_{nom}$	$N_{overall} = N_{initial} + N_{load} + N_{line}$
Ripple & Noise N_{RN}	$< \pm 1,3\% U_{nom}$	< 350 mVpp
Overall toleranz $N_{overall}$ 0 - 20 MHz	$+2,0\% / -2,1\% U_{nom}$	$N_{overall} = N_{initial} + N_{load} + N_{RN}$
Operating modes	Charge Pb / Charge Pb LTC / Charge LiFe / Charge LiFe LTC / Power supply / PowerUp / Automatic cable compensation	Other modes on request. By default on delivery cable compensation is not active

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3 EMC (Electromagnetic compatibility)

RF-Emission	EN55011	group 1, class B
Harmonic current emissions	EN61000-3-2	-
Immunity	EN61000-6-2	Immunity standard for industrial environments (Charging cable < 15m; USB-cable < 3m; Ethernet-cable < 30m)

4 Environment

Operating temperature	-25 °C...+60 °C	automatic output power derating
Storage temperature	-40 °C...+85 °C	-
Humidity	max. 95%	no operation in presence of dewing allowed
Pollution degree	2	acc. to EN50178
Climatic category	3K3	acc. to EN60721
Degree of protection	IP54	EN60529

5 General data

Electrical safety	EN60335, UL60335-2-29, CAN/CSA C22.2 No. 107.2-01	-
Protective system	Class I	-
Isolation voltage	3000 VAC 500 VDC	Input / output Output / enclosure
Efficiency	typ. 92%	-
Enclosure	-	Metal (Aluminium), especially designed for car manufacturer and service stations. Mounting option via 6 screws size M6 at the side.
Dimensions (WxHxD)	ca. 295 x 145,5 x 340mm	see fig. 7.1
Weight	approx. 7,2 kg	without cables, without package

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6 Installation and Safety Instructions

Cooling	Natural convection	Temperature monitoring (Automatic electronic power reduction at too high temperatures due to insufficient or missing cooling)
Mounting position	any	Fold out the appliance feet on a solid surface when the appliance is in the horizontal operating position.
Connection input	IEC/EN 60320, C20	-
Connection output	-	Welding cable connector (plug [-] / socket [+]) for wire cross section at least 16qmm (@DBL1303 & DBL1603) respectively 25qmm (@DBL1903) and typ. total length \leq 15m.
USB connection	-	For connection to the USB ports, use USB cables with foil and braided shielding with a total length < 3m.
Ethernet connection	-	For connection to the Ethernet port, use a shielded Ethernet cable category CAT5e or higher with shielded network connector with a total length < 30m.
Transient over voltage protection	Varistor (6,5 kA / 220 J)	-
Reverse polarity protection output	-	In case of wrong polarity the charging process is interrupted

The general installation and safety instructions for charging computers can be found at www.deutronic.com

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7 Dimensions

All dimensions are given in millimeters and have a general tolerance according to DIN ISO 2768 - m. The integrated output cables (included in delivery) are not shown in this drawing.

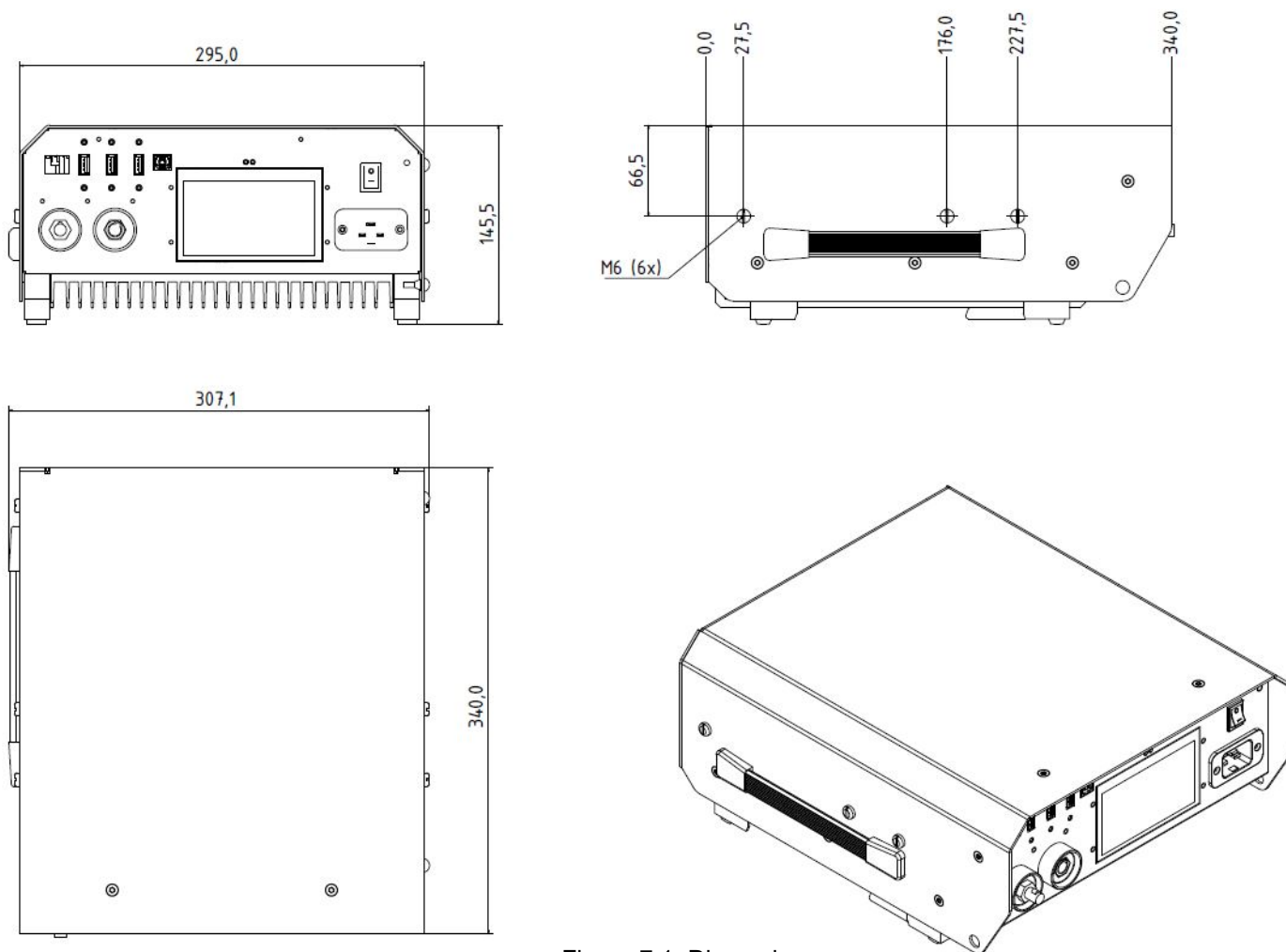


Figure 7.1: Dimensions

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8 Interfaces

Ethernet-Interface	max. 100 Mbit/s	Device control via ethernet possible, Power over ethernet
3x USB-Typ-A Host - Interface	FW-Update/Setting via USB-Stick possible	possible Accessory-Adapter (on request): <ul style="list-style-type: none"> · Retrofit 25-pol. SUB-D (function e.g. pot. free Relay, Remote ON/OFF, Connection DBL-SIG Signalindicator, etc.) · USB-Signalindicator · IO-Link (on request) · Wireless-Adapter (on request)
USB-Client - Interface	-	Service-Interface
Signalization	Power-LED (white / red) Status-LED (RGB-LED)	-
4,3" Touch-Display	Large size graphic display	Display of charging mode, current, voltage, device status, charging status, active adapters, menu structure.

9 Function description

Features	Load detection, reverse polarity, short circuit and over voltage protection (OVP), cable compensation
Output (Factory settings)	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)	For more details on the individual modes, such as LTC Pb, LTC, LiFe, refer to the corresponding operating instructions.
Current limiting	According to the operation state the current limit is automatically adjusted during operation.

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10 Characteristics

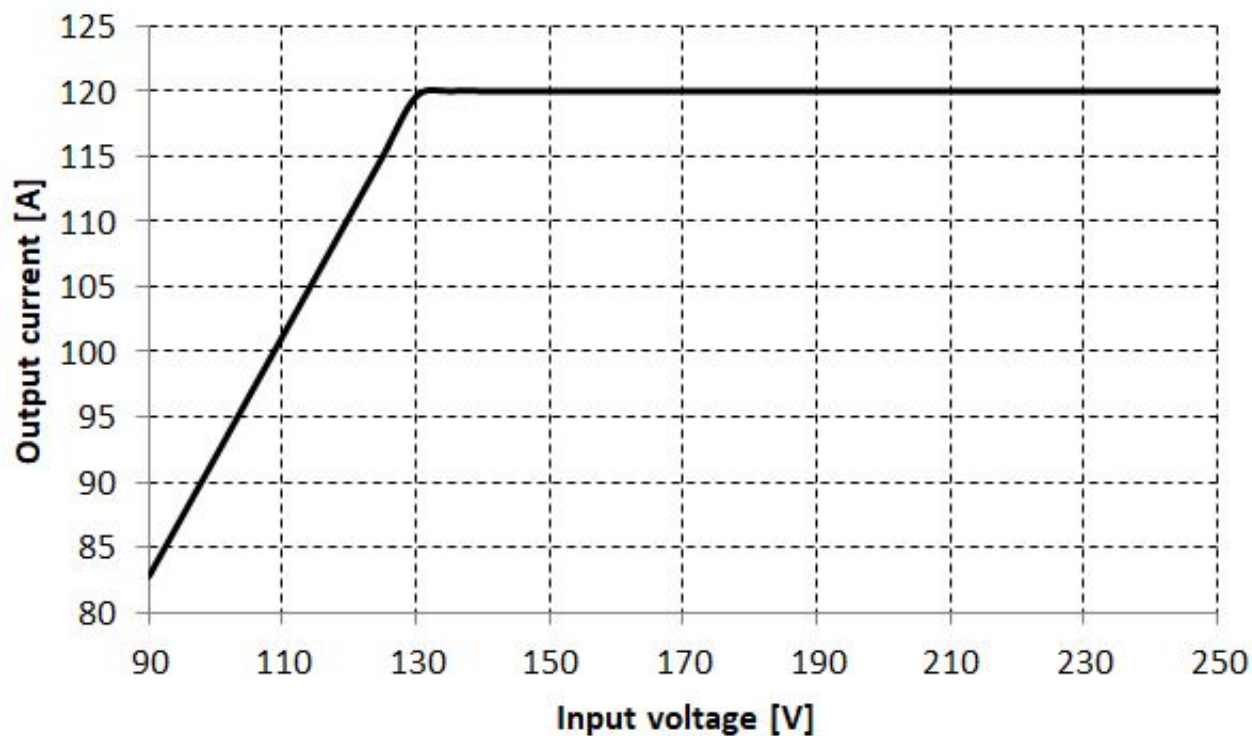


Figure 10.1: Max. output current depending on input voltage

Figure valid for all device variants, max. current depending on the order variant.

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