

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*** | FSV**** | | |
| DBL1903-14 | 100-240 VAC | 14,4 / 14,0 V | 14,4 / 14,0 V | 14,0 V | 120 A | 107241/x/yyyy |

* 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 | - |
| Output power | < 1500 W (@ $U_{in}=100V$ AC) < 1900 W (@ $U_{in}=240V$ AC) | 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 $N_{initial}$ | $\pm 0,5\% U_{nom}$ | - |
| Load regulation tolerance N_{load} | $\pm 0,7\% U_{nom}$ | - |
| Ripple & Noise N_{RN} | $\pm 2,6\% U_{nom}$ | < 380 mVpp |
| Overall toleranz $N_{overall}$ 0 - 20 MHz | $\pm 3,8\% U_{nom}$ | - |
| 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 activ |

3 EMC (Electromagnetic compatibility)

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

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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 | IP20, IP32 (internal electronics) | 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 | | see fig. 7.1 |
| Weight | approx. 7,2 kg | without cables and nor 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 |
| Connection Input | IEC/EN 60320, C14 | - |
| Connection output | | Welding cable connector (plug [-] / socket [+]) for wire cross section 16/25qmm 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 / 190 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.

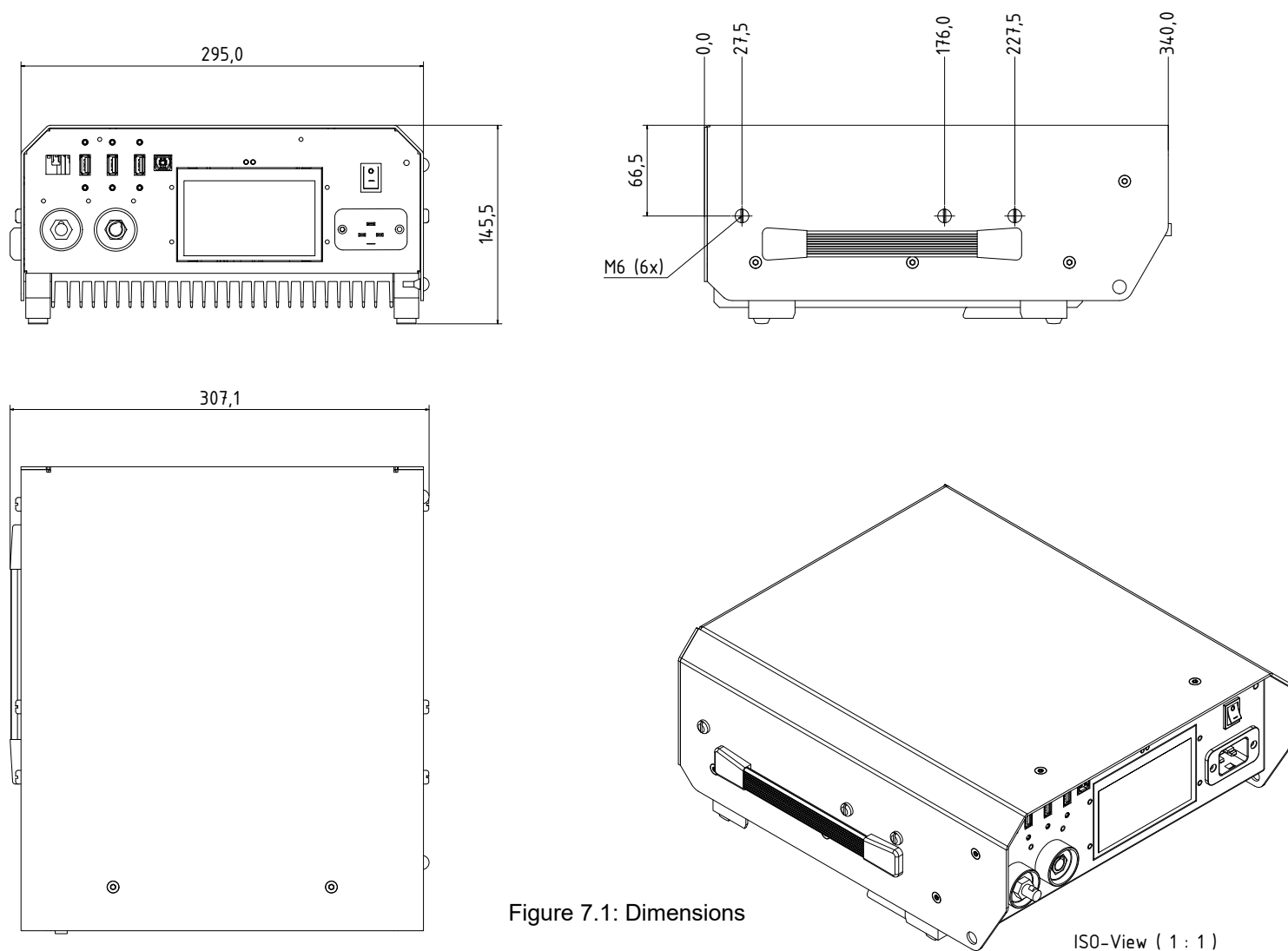


Figure 7.1: Dimensions

ISO-View (1 : 1)

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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 Accessorie-Adapter (on request): · Retrofit 25-pol. SUB-D (funktion e.g. pot. free Relay, Remote ON/OFF, Connection DBL-SIG Signalindicator, etc.) · USB-Signalindicator · IO-Link · Wireless-Adapter |
| 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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