

Digital Junction Box DBU



Operating manual - Translation of the original - (keep for future use)



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EXAMPLE TYPE PLATE

| | |
|---------------------------|------------|
| Typ: | DBU |
| S/N: | 2305162012 |
| Max: | 3000 kg |
| Division: | 1 kg |
| BOSCHE Wägetechnik | |

The type plate is located in the centre of the cable box cover.

Foreword

These operating instructions provide you with detailed information about the Digital Junction Box DBU.

These instructions contain safety instructions to guarantee safe use of the volume and weight measurement system.

The manufacturer strives to improve their products on an ongoing basis. They reserve the right to carry out any and all modifications and improvements that they consider to be necessary. However, this means that there is no obligation to carry out retrospective modifications in this connection.



Danger

Before using the Digital Junction Box, you must have read and understood the operating instructions and the safety regulations that they contain.



Note

Errors and omissions in the documentation reserved. If necessary, please inform the Bosche GmbH & Co. KG of any errors in the documentation. We would also be grateful for any suggestions for improvements that you may have.

The manufacturer's contact data is listed on the reverse of the title page. If you have any queries or problems, please contact the manufacturer without delay.



Note

If you have any questions for Bosche GmbH & Co. KG, please have the serial number to hand.

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1 Safety

This chapter warns against possible risks when handling the Digital Junction Box. The information for detection of risks contained in this chapter is intended to allow the safe and correct operation.



It is important to read and adhere to this operating manual and particularly this chapter prior to operating this Digital Junction Box.

1.1 For your safety

1.1.1 General

In addition to safety information, the operating manual includes:

- A general product description
- Information about installation and connection of the Digital Junction Box
- Instructions to operate the Digital Junction Box
- Maintenance and care instructions
- Troubleshooting and remedy instructions
- Technical data

Always keep this operating manual and additional documents for your personnel at hand in the direct vicinity of the Digital Junction Box.

1.1.2 Safety symbols in this manual

The following symbols are used on all important positions in this manual. Particularly observe these notes and treat very careful.



Danger

This note indicates danger of injuries and/or danger to life, if specific behaviour rules are not observed.

When this symbol appears in the operating manual, please take all required safety measures.



Attention

This note warns against damage to assets as well as financial disadvantages and responsibility under criminal law (e.g. loss of the warranty, cases of third party risks, etc.).



Note

Important notes and information about an efficient, economic and environmental friendly handling are specified here.

1.2 Intended use

The Digital Junction Box converts the analogue output signals of the connected load cells into a digital weight value..

Any further use is considered as not in accordance with the intended use. The manufacturer does not assume any liability for resulting damage.

The intended use also includes:

- Observance of all notes, information, instructions contained in the documentation as well as in all supplied manuals issued by the manufacturer.
- Adherence of the maintenance and service conditions and intervals prescribed by the manufacturer and
- Observance of the technical data.

Adhere to the attendant accident prevention regulations as well as other generally approved technical safety rules.

1.3 Liability and warranty

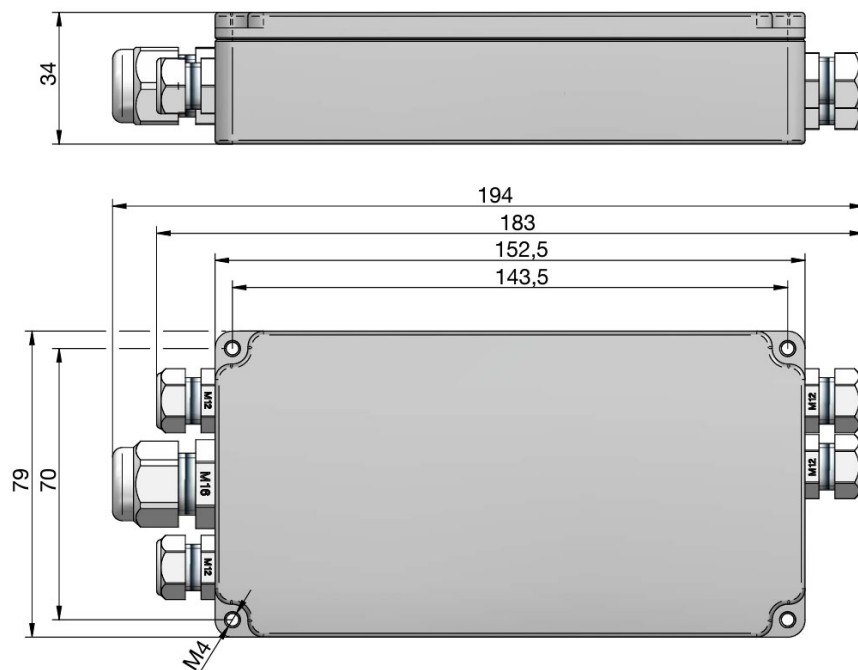
The BOSCHE company offers a restricted warranty for components, which became faulty due to strain or material faults. The warranty starts with the date of delivery. The BOSCHE company retains the right to repair or replace components. Repair work executed during the warranty period will not extend the period of warranty. The warranty becomes null and void:

- In the event of incorrect use / use other than the intended use or incorrect installation
- Incorrect electric connection
- Use of an incorrect or non-licensed analogue / digital converter
- Non-observance of the specifications in the operating manual
- Conversion, modification or opening of the Digital Junction Box.
- Unintentional or mechanical damage and damage caused by media, liquids, natural wear.

2 Technical Data

| | |
|------------------------------|---------------------------|
| Operating temperature | 0°C to + 40 °C |
| Relative air humidity | max. 80 %, non-condensing |
| Power supply (external) | USB-interface |
| Calibration | extern |
| Max. resolution | intern 1/1.000.000 |
| Housing | Aluminium |
| Dimensions (B x L x H) in mm | 194 x 79 x 34 |
| Weight | ca. 500 g |
| Protection class | IP 66 |
| Interface | USB |
| Number of load cells | up to 5 load cells |

2.1 Construction



Note

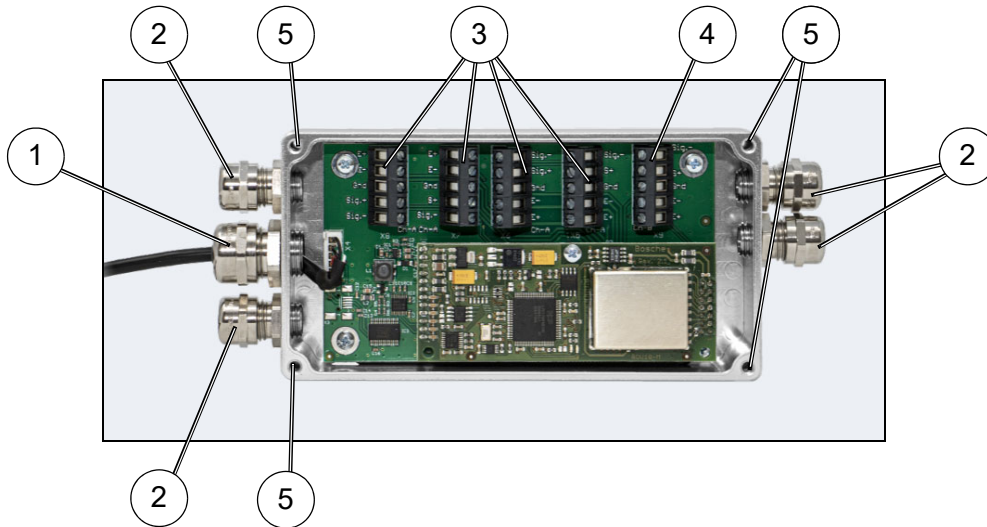
To close/open the junction box, you need a 3 mm allen key, the tightening torque is 2.5 Nm.



Note

You will need a 19 mm and a 24 mm open-end spanner for the cable glands.

2.2 Connections



| Pos. | Bezeichnung |
|------|------------------------------------|
| 1 | Cable gland (M16) |
| 2 | Cable glands (M12) |
| 3 | Load cell connection for channel A |
| 4 | Load cell connection for channel B |
| 5 | M4 threaded hole for the cover |

2.2.1 Load cell connections

1. E+ --> EXC + (Supply voltage cell)
2. E- --> EXC - (Supply voltage cell)
3. Gnd --> Ground
4. Sig+ --> Signal +
5. Sig - --> Signal -

3 Installation

**Note**

The digital cable box is supplied with power via the USB-interface!

3.1 Connecting the board

- Loosen the housing screws and place the cover aside.
- Now insert the cables of the scale as well as the data cable through the cable glands into the housing.
- Then screw the cable gland so that the cable will not release in light train from the gland.
- Now connect the individual wires to the board.

Load cell connections

1. E+ --> EXC + (Supply voltage cell)
2. E- --> EXC - (Supply voltage cell)
3. Gnd --> Ground
4. Sig+ --> Signal +
5. Sig - --> Signal

Bosche load cells have the following standard wire allocation:

| | | |
|-----------|-----|--------------------|
| EXC + | --> | red |
| EXC - | --> | black |
| Signal + | --> | green |
| Signal - | --> | white |
| Shielding | --> | purple/blue/yellow |

**Note**

If you are using load cells from other manufacturers, please refer to the cable assignment from the data sheets of the load cell.

3.2 Calibrating the scale with LPC commands

**Note**

Please refer to the separate operating instructions for the "Bosche LPC Scale" software.

4 Maintenance, care, disposal

4.1 Cleaning

**Attention**

Do not use aggressive cleaning agents.

- Before cleaning, please disconnect the unit from the operating voltage.
- Remove dust and other soiling with a moistened cloth.
- Wipe all surfaces with a dry, soft cloth after use.

**Note**

Please observe the cleaning instructions for protection class IP 66.

4.2 Disposal

Disposal of packaging and equipment must be carried out by the operator according to valid national or regional law of the user location.

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