

Operating Manual

BROSA Demonstrator

English translation of German original operating manual

Version: 01/2024

Notes

Contents

1	General information	4
1.1	Safety instructions – Explanation of symbols:.....	4
2	Description of the BROSA demonstrator	5
2.1	Structure and functionality	5
2.2	Label (nameplate).....	6
3	Instructions on safe handling of BROSA demonstrators	6
3.1	Handling.....	7
3.2	Commissioning	7
3.2.1	General information	7
3.3	Operation and maintenance.....	8
3.3.1	Operation	8
3.3.2	Maintenance	8
3.4	Disposal.....	9

1 General information

Read the operating instructions and the product-specific documents carefully before commissioning the demonstrator.

Make sure that the demonstrator is fully suitable for the applications in question.

Improper use or any use other than intended may result in malfunction of the demonstrator or undesirable effects in your application. For this reason, installation, electrical connection, commissioning and maintenance of the demonstrator may only be carried out by trained personnel authorized by the plant operator.

We also expressly point out that any liability is excluded if instructions in this documentation are disregarded.

The specified properties apply exclusively in the unchanged delivery condition. Applicable standards and guidelines must be observed, especially when recoating.

Current certificates can be downloaded from the BROSA AG website.

Only the German version of this operating manual represents the original document.

1.1 Safety instructions – Explanation of symbols:



WARNING! This symbol indicates dangers that can lead to personal injury and property damage!

2 Description of the BROSA demonstrator

2.1 Structure and functionality

The BROSA demonstrator is used to simulate the output signal of a BROSA force-measurement sensor or BROSA pressure-measurement sensor.



Figure 1: Demonstrator

Using the potentiometer (adjustment knob), the desired sensor value can be set within the calibrated limits (0-100% or 0 to a defined maximum load; for more information, see the technical data sheet). You can find the amplifier data and the error behaviour in the product data sheet.

The additional, bus-specific parameters of a bus sensor (CANopen, PROFINET) can be found in the corresponding communication protocol.

2.2 Label (nameplate)

Each BROSA demonstrator is equipped with an indicator plate containing the respective information applicable for the given product.



Figure 3: Nameplate position

3 Instructions on safe handling of BROSA demonstrators




WARNING! Non-compliance with the following instructions can lead to damage to the demonstrator and/or impaired measurement results. The analysis of an erroneous measurement can result in personal injury or material damage.



WARNING! BROSA demonstrators may not be used for any other than the intended purpose (see Section 1.1). With improper use, dangers to life and limb of the user or third parties and/or impairment of the device in which the force-measurement sensor is implemented or other material assets can be caused.

3.1 Handling


 **WARNING!** BROSA demonstrators contain high-quality electronics! Make sure they are handled carefully.

- BROSA demonstrators are delivered in transport-safe packaging. We recommend that you remove the demonstrators from the package immediately prior to use.
- BROSA demonstrators must be secured against falling. Do not throw the demonstrators!
- Use as a tool (e.g., striking, slotting or lever tool) is not permitted; it can cause damage to the demonstrator and thus falsify the measurement results.

3.2 Commissioning

3.2.1 General information

- a) Establishment of electrical connection: The elements on the demonstrator for the electrical connection are to be connected to the power supply, the earth connection if necessary, and the evaluation system of the device. In doing so, observe the information given on the nameplate for plug or cable assignment.

 **WARNING!** An incorrect or incomplete electrical connection impairs or prevents the simulation of the measurement.

3.3 Operation and maintenance

3.3.1 Operation

BROSA demonstrators emit neither airborne acoustic noise nor non-ionising radiation.

Operation of BROSA demonstrators is permitted only within the parameters and properties given in the technical data sheets and on the nameplate. These are, among others:

- Measuring range to be simulated
- Permissible supply voltage
- Electrical protection class

Inductive or capacitive couplings to the connection cable(s) of the demonstrator can distort the measurement result and must be avoided. Some examples of these kinds of couplings can be caused e.g., by unfavourable cable routing (parallel power lines, frequency converters, transformers, motors, incorrect grounding/shielding and the like).

When performing electric welding in the vicinity of the demonstrator, all connections must be disconnected and isolated. It must be ensured that no welding current is flowing through the demonstrator.


3.3.2 Maintenance

BROSA demonstrators can operate without maintenance.

An inspection includes the following points:


- Visual inspection for damage to the demonstrator and wiring
- Function test/plausibility check

The causes of existing errors are to be identified and remedied. If the test indicates the demonstrator is not in suitable condition, it must be taken out of operation. If a malfunction or damage is detected on the demonstrator, it must be sent to the manufacturer's factory for diagnosis and, if necessary, repaired.

 **WARNING!** The demonstrator must only be repaired at the factory. Intervention (e.g., opening the device) done by parties other than the manufacturer means that the safe operation of the demonstrator can no longer be ensured and the warranty becomes void.

3.4 Disposal

If the end of the service life is reached, the demonstrator must be taken to an environmentally-friendly disposal facility.

 **WARNING!** BROSA demonstrators contain traces of environmentally hazardous substances. This is also true of the impurities created during use. Contamination of the environment by these substances is to be prevented.