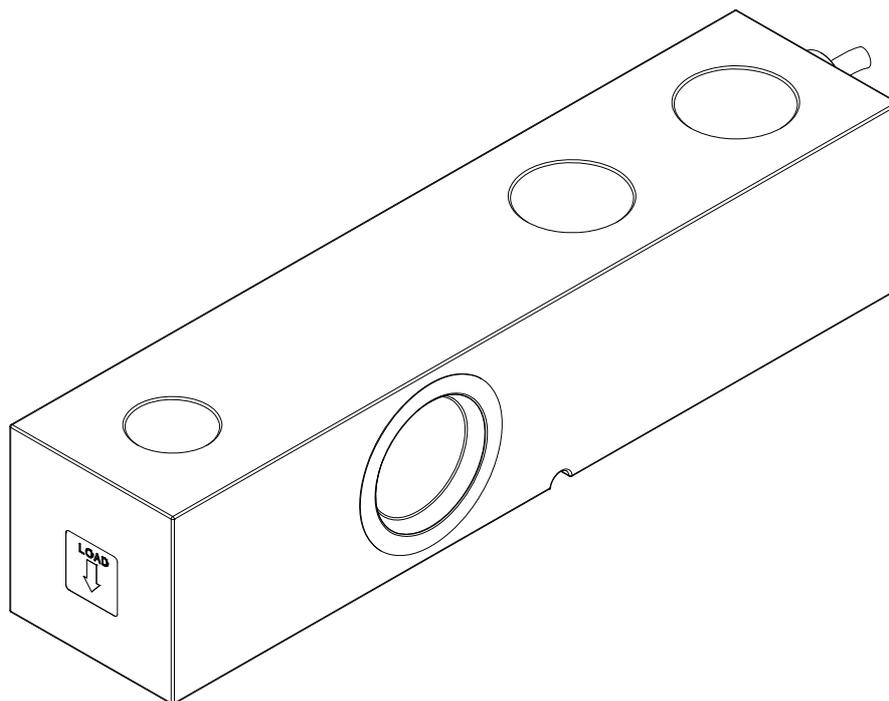


Shear beam load cell K30S / K30N



Operating and Installation Manual

- Translation of the original -

(keep for future use)



Bosche GmbH & Co. KG

Reselager Rieden 3
D-49401 Damme

Phone +49 5491 999 689 0
Fax +49 5491 999 689 9
Email info@bosche.eu
Web www.bosche.eu

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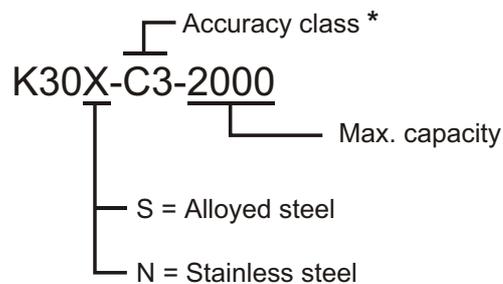
Type plate

The following data is engraved/ lasered on the side of the shear bar body:

BOSCHE

Type K30N-C3-2000
Capacity 2000 kg
Sensitivity 3.0010 mV/V
S/N: XXXXXXXX

The respective type information means:



* C3 - according to OIML R60

G3 - complies with class C3 according to OIML R60
(not certified)

Foreword

These operating and installation manual provide you with detailed information about the Shear beam load cell K30S / K30N. It will instruct you on installation, connection and use.

These instructions contain safety instructions to guarantee safe use.

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. There is no obligation to retrofit already delivered load cells afterward.



Danger

Before using the Shear beam load cell K30S / K30N, 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 load cell. The information for detection of risks contained in this chapter is intended to allow a safe and correct operation.



It is important to read and adhere to this operating manual and particularly this chapter prior to operating this device.

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 load cell
- Instructions to operate the load cell
- Maintenance and care instructions
- Troubleshooting and remedy instructions
- Technical data

Always keep this operating and installation manual and additional documents for your personnel at hand in the direct vicinity of the load cell.

Always adhere to all information, notes, instructions and explanations contained in this manual! Avoid accidents caused by incorrect operations! Also adhere strictly to the valid legal regulations in addition to the safety instructions specified in this manual.

Prior to commissioning/start-up read the safety information/instructions and familiarise yourself with dangerous areas.

The load cell is constructed according to the current state of art and the valid safety regulations. However, there are risks in the event of incorrect operation or non-observance of the safety regulations:

- Danger to limb and life of operators, third persons and animals staying in the vicinity of the load cell.
- Danger to the load cell and other assets of the owner/user
- Danger to the efficient operation of the shear beam load cell K30S / K30N.

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 carefully.



Electricity

This notice indicates a risk of injury and/or danger to life in connection with live components if certain behavioral rules are not followed. If you see this symbol in the documentation, please take all necessary safety precautions.



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.).



Danger

This note indicates the 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.



Note

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

1.2 Intended use

The shear beam load cell K30S / K30N is designed for installation in industrial scales (mechanical engineering, agriculture or similar application).

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 manuals supplied by the manufacturer.
- Adherence of the maintenance and service conditions and intervals prescribed by the manufacturer and
- Observance of technical data.

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

1.3 Reasonably foreseeable misuse

Ensure that the shear beam load cell K30S / K30N is used exclusively in the prescribed load direction. Otherwise, measurement results may be distorted, and the load cell's lifespan may be affected. Avoid lateral forces as well as bending and torsional moments.

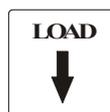
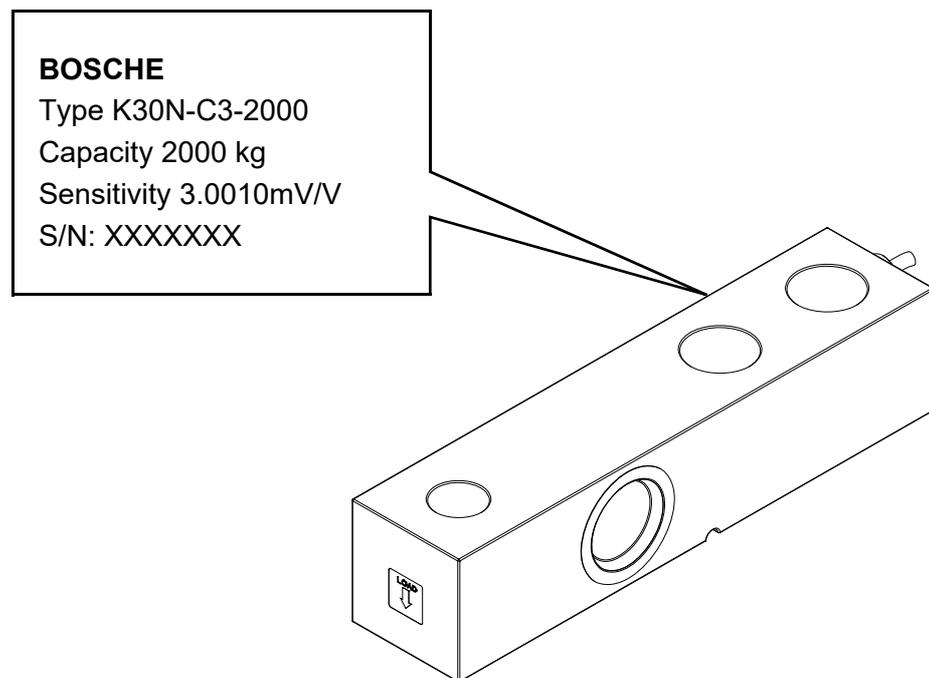
The shear beam load cell K30S / K30N is **NOT** suitable for:

- Installation in explosive environments (except for the corresponding ATEX versions)
- Safety-critical applications
- Suspended loads

1.4 Type and Information Labels on the shear beam load cell K30S / K30N

The shear beam load cell K30S / K30N is equipped with type and information labels. Ensure that all labels remain in a readable condition.

The following data is engraved on the load cell by the manufacturer.



(1) Prescribed load direction

If the load direction is correct, the load cell output signal shows a positive value.



Hinweis

Always refer to the serial number of your load cell when making inquiries, orders, or service requests. This facilitates communication with the manufacturer and helps prevent processing errors.

1.5 Obligations of the owner/user

The owner/user obligates himself to only instruct people to work on the shear beam load cell K30S / K30N, who:

- are familiar with the basic rules concerning safety and accident prevention and are trained in the operation of the shear beam load cell K30S / K30N. Even if the specified nominal load in the destruction range is a multiple of the full-scale value, the relevant accident prevention regulations of the professional associations must be strictly observed.
- have read and understood the operating and installation manual, the safety chapter as well as the warning notes.



Danger

The operator bears the ultimate responsibility for safety. This responsibility cannot be delegated.

1.6 Obligations of the operator

All people instructed to operate the shear beam load cell obligate themselves:

- to always ensure the safety of other people and that appropriate safety measures (e.g. fall protection, overload protection, etc.) are in place.
- to read the operating manual, the safety chapter and the warning notes and
- to only operate the shear beam load cell K30S / K30N when they are familiarised with its functions.

The operating personnel must devote their full attention to working with the shear beam load cell K30S / K30N.



Danger

It is about the safety of yourself, your colleagues, and any bystanders near the shear beam load cell K30S / K30N.

1.7 Description of the dangers

1.7.1 Danger of injury

- Before cleaning and maintenance work, the load cell must always be disconnected from the evaluation electronics and protected from overload.
- Do not change the contacts.
- Do not continue operating the shear beam load cell K30S / K30N if it is damaged or experiencing a malfunction.
- Do not operate the load cells in explosive environments (except for the corresponding ATEX versions).

1.7.2 Danger of damage

Ensure that the shear beam load cell K30S / K30N is used exclusively in the prescribed load direction. Otherwise, measurement results may be distorted, and the load cell's lifespan may be affected. Avoid lateral forces as well as bending and torsional moments.

The shear beam load cell K30S / K30N is **NOT** suitable for:

- Safety-critical applications
- Suspended loads

1.8 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
- Non-observance of the specifications in the operating manual
- Use outside the applications described
- Conversion, modification or opening of the shear beam load cell
- Unintentional or mechanical damage and damage caused by media, liquids, natural wear.
- Improper mounting or electrical installation
- Overloading the measuring unit.



Prohibition of unauthorised conversions and modifications!

The load cells must not be modified in terms of design or safety without our express consent. Any modification excludes liability on our part for any resulting damage.

2 Description

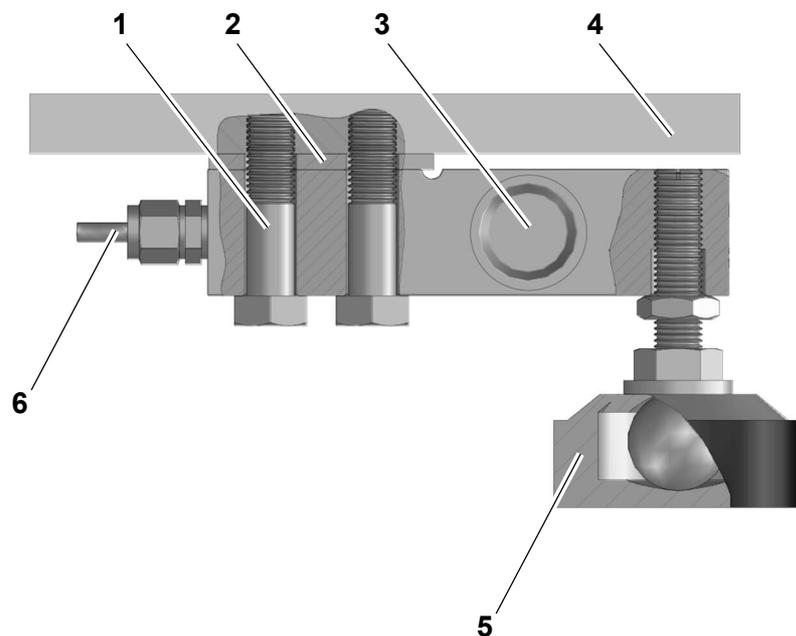
2.1 General

The shear beam load cell K30S / K30N is used as a sensor in industrial scales (e.g. platform scales, floor scales, silo scales) to determine the weight of placed products.

The shear beam load cell K30S is made of alloyed steel, nickel-plated.

The shear beam load K30N cell is made of stainless steel.

2.2 Construction



The construction consists of the following components:

- (1) Fixing screws / washers (if necessary)
- (2) Shim
- (3) Load cell
- (4) Mounting plate
- (5) Accessories (load foot)
- (6) Connecting cable



Note

See chapter 7.6 for possible accessories.



Attention

Observe the permissible screw tightening torques, use washer(s) if necessary.

2.3 Functionality

The shear beam load cells K30S / K30N are designed for installation in industrial scales and are used for the precise weighing of the product loaded onto the scale.

The load cells have a rated output of 3 mV/V.

Example:

Under nominal load and a supply voltage of 10 V, the output signal is:

$$10 \text{ V} \times \frac{3 \text{ mV}}{\text{V}} = 30 \text{ mV}$$

At 1/2 of the nominal load, the output signal is 15 mV.

The shear beam load cell K30S / K30N only functions with suitable evaluation electronics.



Note

Using a load cell testing device (load cell tester, available from Bosche), you can check whether the load cell is measuring correctly.

3 Installation, connection

3.1 Control

When the shear beam load cell K30S / K30N is delivered, check the packaging, the load cell and possible accessories for visible damage.

3.2 Packaging and disposal

Keep all parts of the original packaging for a possible return.



Note

Only use the original packaging if the load cell is returned.
Prior to the transport, disconnect/fasten all loose/moving parts of the device.
Secure the parts against slipping/damage.

Be sure to follow any instructions and notices attached to the packaging (if available).

3.2.1 Installation of the shear beam load cell



Attention

Failure to comply with the installation regulations is considered improper use of the load cell.

3.2.2 Dimensions

For the dimensions / space requirements of the K30S / K30N shear beam load cell, refer to chapter 7.1 'Mechanical data'.

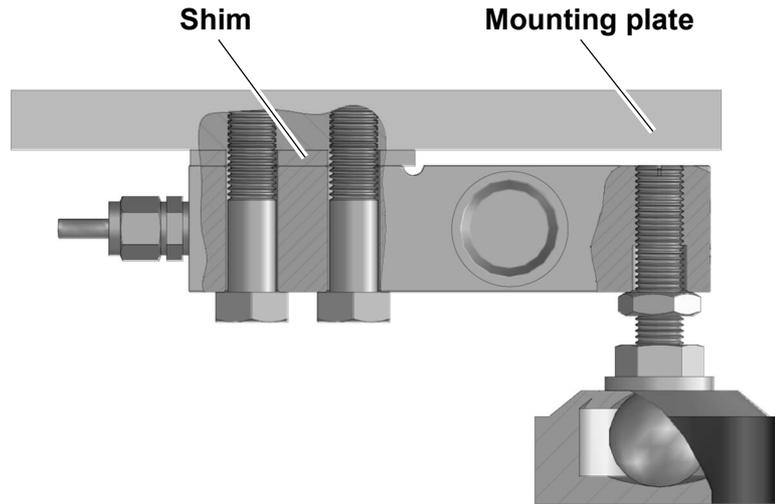
3.3 Connection



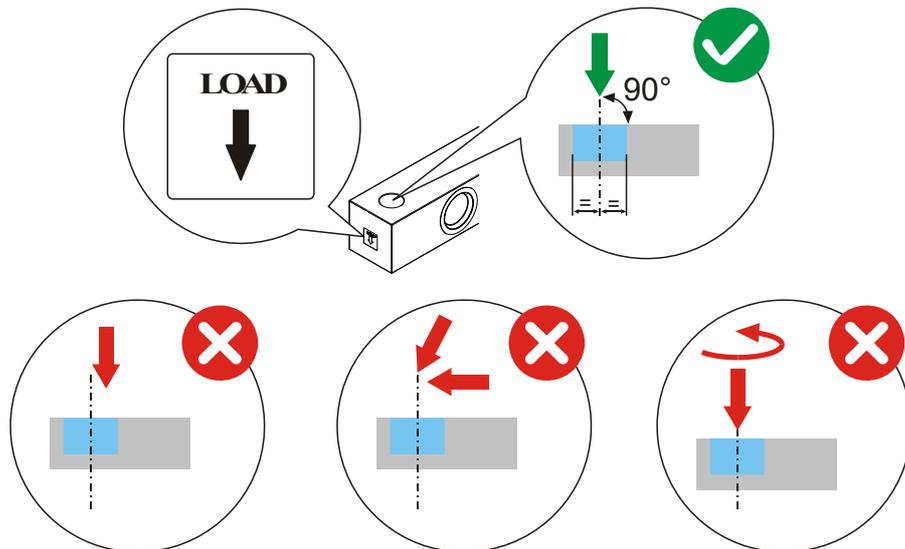
Attention

A missing shim and insufficient mounting plate thickness (the mounting plate must be rigid) cause errors when using load cells!

The load cell's connection cable must be installed in a way that any condensation or moisture does not move toward the load cell, but can drip off freely. It must also be ensured that no moisture can enter the open end of the cable.



The illustration below schematically represents the correct central load introduction. Below it, examples of incorrect loading conditions are shown, which must be strictly avoided.





Attention

Ensure that the shear beam load cell K30S / K30N is used exclusively in the prescribed load direction (see arrow on the load application face of the load cell). Otherwise, measurement results may be distorted, and the load cell's lifespan may be affected. Avoid lateral forces as well as bending and torsional moments.



Note

For the operating instructions of the evaluation electronics, please refer to the separate documentation of the evaluation electronics.

The following points must be observed during installation:



Attention

Never overload the load cell, even temporarily, as this can lead to permanent damage.

- The support surfaces of the load cells must be coplanar (aligned in one plane) and sufficiently rigid. To compensate for parallelism deviations of the support surfaces, suitable mounting accessories must be used (see chapter 7.6).



Attention

Observe the permissible screw tightening torques and use washer(s) if necessary.

Thread	Tightening torques in Nm
M12 - 8.8 (2500 kg nominal load)	85
M18 - 8.8 (5000 kg nominal load)	289
M24 - 8.8 (10000 kg nominal load)	710

- The mounting surface must be horizontal, flat, and clean. Dust, dirt, and other foreign objects must not accumulate, as they can restrict the load cell's movement and distort measurement results.
- Position the load cells using a spirit level. Ensure that the specified load direction is followed during installation.
- Protect the load cells from chemicals that could damage the steel of the load cell body or the cable.
- Do not shorten the load cell cable, as its length is considered during calibration.
- Install load buffers and shims if necessary (see Chapter 7.6).
- Do not lift or pull the load cell by the cable.
- Avoid impact loads (e.g., dropping, hard shocks).
- Welding or lightning currents can damage the load cell, so perform all necessary welding work on the equipment before installing the load cells.

- If the load cells are used permanently in an aggressive environment, they should be equipped with additional mechanical protection (e.g., a metal cover).
- Avoid force shunts, meaning all supply and discharge lines (such as hoses, pipes, and cables) should be as flexible as possible and coupled to the measuring object.
- Connect load cells in parallel in the junction box according to the wiring diagram (solder the connections). Do not shorten the load cell cables; instead, coil any excess length and connect the prepared end. Route the load cell wiring separately from high-voltage cables (e.g., motor supply lines) to avoid interference.
- If necessary, seal the cable entry points of the junction box with a suitable sealing compound to prevent moisture ingress. Keep the junction box closed to protect the internal components.

Temperature effects

Significant temperature fluctuations can cause measurement deviations.

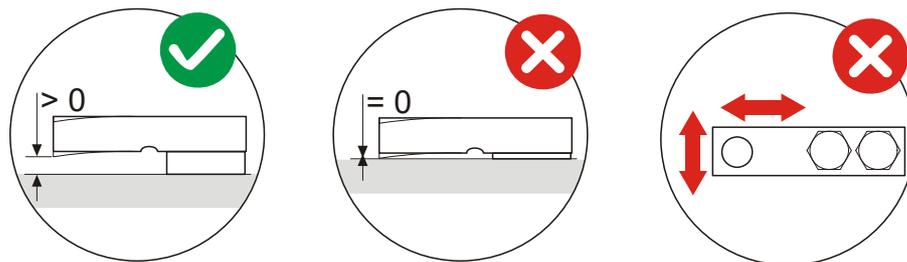
Solution: Protect the load cell from wind, sunlight, and/or heat radiation using protective covers, plates, or enclosures.

3.4 Connection

3.4.1 Mechanical connections

Mounting surfaces must be smooth, flat, and as parallel as possible to the body of the shear beam load cell.

The load cell should be installed in a way that allows it to bend freely without mechanical interference. Avoid force shunts, ensuring that no external mechanical influences affect the measurement..



Attention

Observe the permissible screw tightening torques and use washer(s) if necessary.

3.4.2 Welding connections

It is strongly recommended not to perform welding when load cells are already installed. If welding is unavoidable, position the ground clamp of the welding device as close as possible to the intended welding point. This prevents electric current from passing through the load cell housing, which could cause damage.

3.4.3 Electrical connections



Note

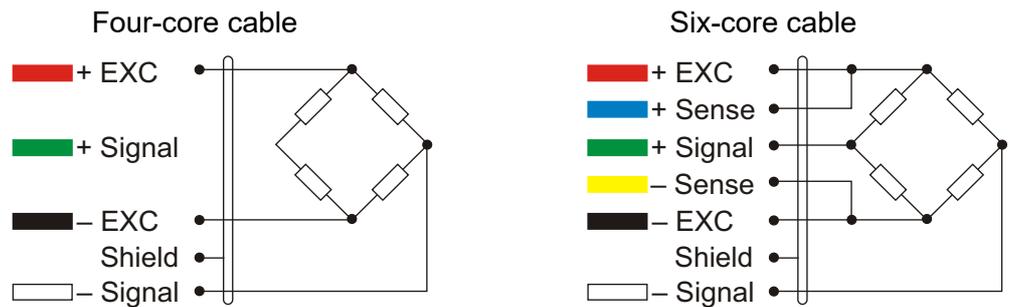
Each load cell comes with a precisely matched cable, and its length has already been considered in the factory calibration.

The connection cable to the evaluation electronics is four-core, shielded as standard. An optional six-core connection cable is available.

The cable cross-section should be selected according to the required cable length (between the junction box and the evaluation electronics). When routing the connection cable, maintain a safe distance from high-voltage cables to avoid interference. Do not use additional intermediate terminals to ensure signal integrity.

Connect the cable shield and relieve the strain.
Do not twist the measuring cable at the cable gland!

The connection cable to the evaluation electronics is four-core, shielded as standard. An optional six-core connection cable is available.



Cable extensions

Use only shielded, low-capacitance measurement cables, ensuring a proper connection with minimal contact resistance.

Cable cuts

Do not shorten the load cell cable (four-core), as this directly affects the measurement accuracy, calibration, and electrical properties of the load cell.



Note

Shortening the cable alters the technical specifications of the load cell (four-core)!



Note

A 6-wire load cell does not achieve the specified accuracy if the sense wires are not used.

3.4.4 Parallel connection of multiple load cells

To connect multiple cells in parallel, a sealed junction box with a terminal board must be used if necessary. The extension connection cables of the load cells must be shielded, placed individually in cable ducts or pipes, and routed as far away as possible from the power cables.

If several load cells are connected in parallel, an overload of a single load cell cannot be detected via the output signal.



Attention

For legal-for-trade load cells, the cable must not be shortened. The cable lengths should be equal.



Note

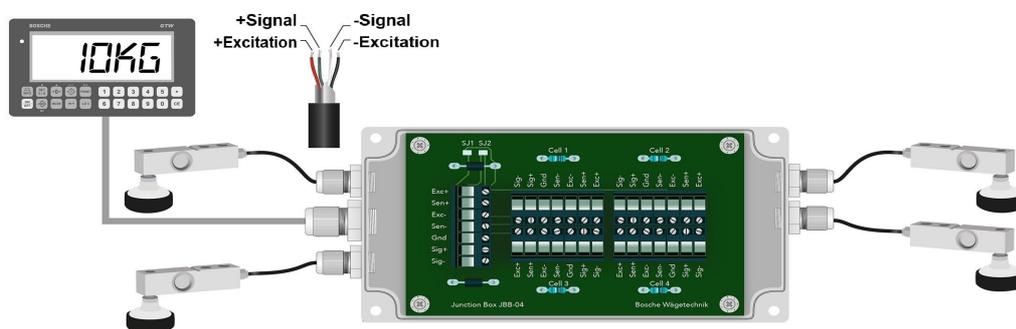
Special cable length available upon request.

For the protection of the load cell cables, sealed cable sheaths and connectors must be used.



Attention

Standard cables are not suitable for drag chain applications.



3.4.5 Wind / shocks / vibration

Suitable mounting accessories are available for all load cells (see Chapter 7.6). These help compensate for flatness deviations of the support surfaces.

The system designer must take additional measures to prevent lateral displacement and tipping hazards concerning the following aspects:

- Shocks and vibrations
- Wind pressure
- Seismic classification of the installation area
- Consistency of the support surface

3.4.6 Grounding Connection of the Weighed Structure

Step 1 Connect the upper mounting plate of each individual load cell to the corresponding lower plate of each load cell using a copper conductor of suitable cross-section.

Step 2 Then, either connect each individual plate to the grounding system (Method 1) or connect all lower plates together and connect one plate to the grounding system (Method 2).



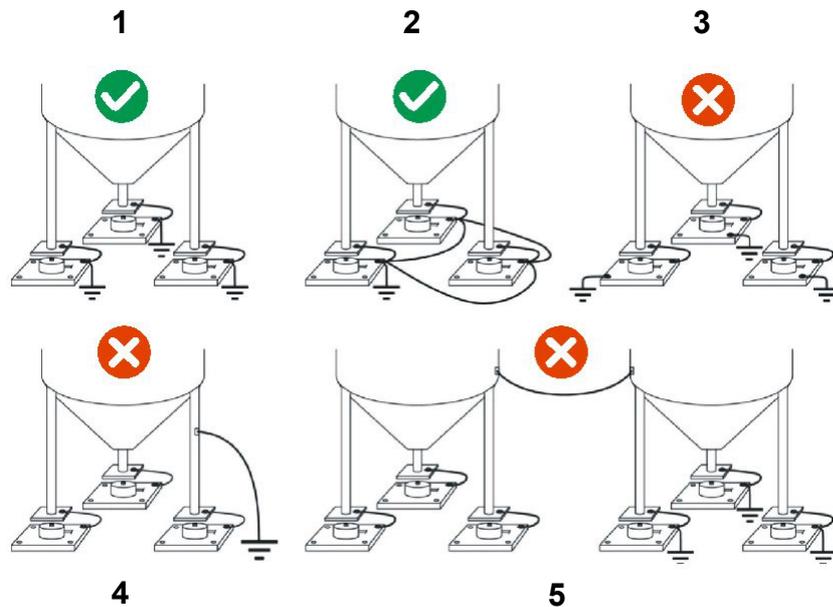
Attention

Only connection methods 1 and 2 are permitted.

The electrostatic charge that accumulates due to the friction of the product against hoses and the walls of the weighed container, is discharged to ground without passing through the load cells, preventing damage.

Without a proper grounding connection, the operation of the weighing system will not be affected; however, the possibility of damage to the load cells and the connected evaluation electronics cannot be ruled out. The continuity of the grounding system must not be ensured through metal parts of the weighed structure.

Connection methods:

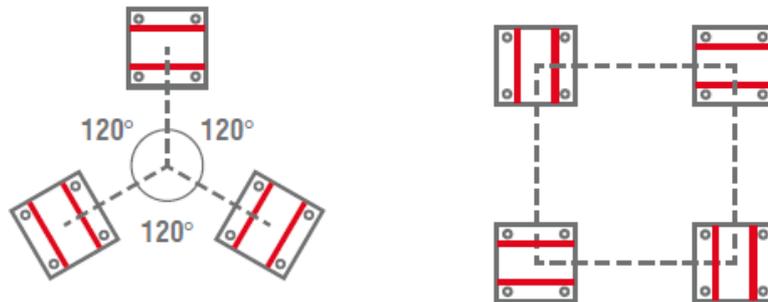


3.4.7 Measures against lateral displacement

**Attention**

Necessary measures must be taken to prevent lateral displacement and tipping, depending on impacts and vibrations, wind load, seismic classification, and ground conditions.

Alignment of Weighing Modules



4 Operation

4.1 General

The shear beam load cell K30S / K30N only functions with suitable evaluation electronics.



Note

For the operation description of the evaluation electronics, the separate documentation of the evaluation electronics must be observed.

4.2 Warm-up time

The minimum warm-up time for the shear beam load cell K30S / K30N before starting the measurement (calibration) is approximately 20 minutes.

4.3 Checking the load cells with a multimeter



Note

Using a load cell tester (available from Bosche Wägetechnik), check whether the load cell is measuring correctly.

Before using the shear beam load cell K30S / K30N, check whether it provides correct measurement values. Perform this check as described below using a digital multimeter. In this case, the load cell tester from Bosche was used.



Attention

The load cell tester must be properly connected to the load cell before starting the inspection. The inspector must be trained in the use of the load cell tester.

4.3.1 Test of load cell input (Quick access) via resistance measurement

- Turn off the load cell tester.
- Disconnect the cells from the instrument and check whether the junction box shows any signs of moisture, which may indicate condensation or water ingress. If this is the case, the system must be repaired or replaced if necessary.
- Measure the resistance between the positive signal wire and the negative signal wire. The measured value should be similar to the output resistance specified in the load cell datasheet.
- Measure the resistance between the positive excitation wire and the negative excitation wire. The measured value should be similar to the input resistance specified in the load cell datasheet.
- Check whether the insulation resistance between the shield and any other conductor of the load cell, as well as between any other conductor of the load cell and the load cell housing, is greater than 5 M Ω at a 50V DC test voltage.

4.3.2 Voltage measurement on load cells

- Turn on the load cell tester.
- Remove the load cell to be tested from under the container or lift the container support.
- Check the supply voltage at the power cables of the load cell connected to the instrument (or extension). Ensure that a voltage of 5 VDC \pm 3% is present.
- Measure the load cell's response signal between the positive signal wire and the negative signal wire by connecting them directly to the measuring device. Verify that the measured value is between 0 and \pm 0.5 mV.
- Apply a load to the load cell and check whether the signal increases.

**Note**

If none of the specified values are achieved, please contact the Technical Customer Service of BOSCHE Weighing Systems.

4.4 Dimensioning the load cell nominal load

For safety reasons, it is recommended to use load cells at a maximum of 70-80% of their rated capacity for dead load (static), assuming that the load is evenly distributed across the entire weighing system.

Depending on how the load is handled, it may be necessary to further reduce the percentage of the load in relation to the nominal load (e.g., when moved using a forklift, overhead crane, etc.).

For payload applications, the installer is responsible for calculating shear force, acceleration, frequency, and other relevant factors.



Attention

Ensure that changing loads are only max. 35% and pulsating loads are only max. 30% of the nominal load in order to avoid material fatigue.

4.5 Functional testing of a load cell

QR code for video "Load Cell Functional Test"



5 Troubleshooting

5.1 In case of malfunction

In the event of a malfunction, the shear beam load cell K30S / K30N does not function, or an error message appears on the evaluation electronics.

**Note**

For error messages of the evaluation electronics and troubleshooting/error correction of the evaluation electronics, refer to the documentation for the evaluation electronics.

After replacing the load cell(s), follow the installation and connection requirements (see Chapter 3 "Installation, Connection").

5.2 Troubleshooting information

If uncertain or incorrect measurement values occur, the following points should be considered.

**Note**

Each of these points can have a significant impact on the measurement result.

- Check if the scale is free and not obstructed by unwanted force shunts (caused by pipes, cables, etc.).
- Check if the verify external conditions, such as contamination or heat radiation, that might affect measurements.
- Check if the proper installation of the load cells and the load introduction point, confirming their correct functionality.
- Check for moisture inside the junction boxes and check if the cables are damaged or incorrectly connected.
- Perform a corner test by applying weight directly over each individual load cell to identify a faulty load cell or narrow down the cause of the issue.
- If possible, desolder each load cell from the junction box and use a multimeter to check the correct input and output resistance and and to zero signal (and if possible also to signal).

5.3 Contacting customer service

Bosche GmbH & Co. KG
Reselager Rieden 3
49401 Damme

Phone +49 (0)5491 9996890
Fax +49 (0)5491 9996899
E-mail info@bosche.eu

5.4 Information needed when contacting customer service

Operating company	Information
Name of your company	
Name of a contact	
Contactdata <div style="text-align: right;"> Phone Fax E-mail </div>	

Product	Information
Model name	
Serial number	
Date of purchase	
Name and location of supplier	



Note

Fill in the tables that are shown when you receive the shear beam load cell K30S / K30N so you can easily refer back to them at any time

Always return defective load cells with a clear and detailed error description.

Information about the problem:

Examples of necessary information that supports troubleshooting:

- Has the load cell worked since being supplied?
- Has the load cell been in contact with water?
- Has there been fire damage?
- Has there been a thunderstorm before/during the fault?



Note

Please include the entire prior history of the load cell.

6 Maintenance, care, disposal

6.1 Cleaning

**Attention**

Do not use aggressive cleaning agents.

- Regularly remove contaminants from the load cells, mounting components, and freely moving parts of the scale.
- Remove dust and other dirt from the load cell using a damp cloth.
- Dust deposits can also be blown off with low-pressure compressed air.
- Rub all the surfaces with a dry cloth.

**Note**

Observe the cleaning instructions for protection class IP 65.

6.2 Maintenance, servicing

The shear beam load cell K30S / K30N requires minimal maintenance. However, contaminants on the load cells and accessories should be regularly removed as described in chapter 6.1.

The shear beam load cell K30S / K30N may only be serviced by trained and authorized service technicians.

If maintenance or welding work is required after installing the shear beam load cell K30S / K30N, it is essential to disconnect the connections from the evaluation electronics beforehand.

**Achtung**

To avoid overloading the load cells, they should either be removed for the duration of maintenance or modification work or be protected from overload by effective mechanical measures.

Maintenance schedule**Note**

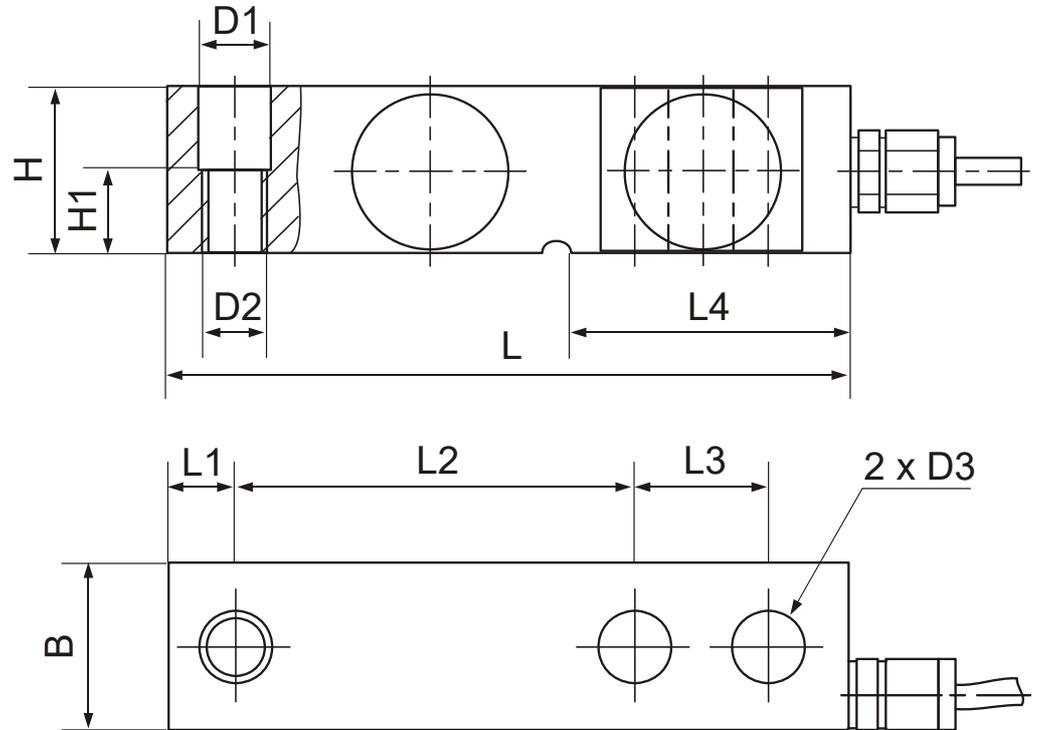
The inspection interval for load cell accuracy (for legal-for-trade load cells) can be determined by the customer's internal quality assurance.

6.3 Disposal

The shear beam load cell K30S / K30N, any accessories, and their packaging must be disposed of in accordance with the applicable national and regional regulations.

7 Technical data

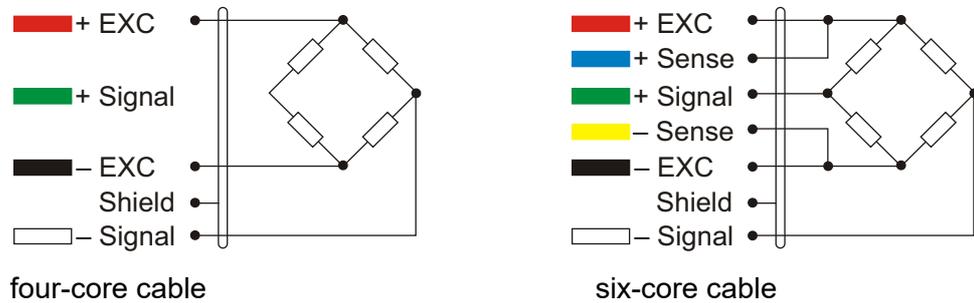
7.1 Mechanical data



Load [t]	L	L1	L2	L3	L4	H/B	H1	D1	D2	D3
0,5 bis 2	130	12,7	76,2	25,4	53,5	31,8	20	∅ 13,5	M12	∅ 13
3 - 5	171,5	19	95,3	38,1	72,5	38,1	26	∅ 20	M18 x 1,5	∅ 20
10	225,5	25,3	124	50,8	102	50,8	25,4	∅ 27	M24 x 2	∅ 27

Dimensions in mm

7.2 Connection data



Feature	Value/Unit
Recommended supply voltage U_{ref}	10 to 12 V DC
Max. supply voltage U_{max}	15 V DC
Input resistance R_{LC}	$400 \pm 10 \Omega$
Output resistance R_{out}	$352 \pm 3 \Omega$
Insulation resistance	$\geq 5000 M\Omega$

7.3 Measuring range / Legal-for-trade

Range	Remark	
	K30S	K30N
1 bis 5 t	verifiable	verifiable
0,5 t; 10 t	not verifiable	not verifiable

7.4 Ambient conditions

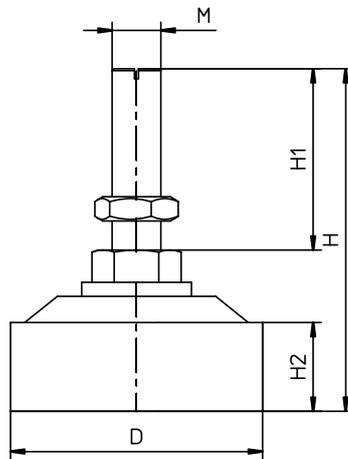
Feature	Value/Unit
Nominal temperature range B_T	- 10 to + 40 °C
Operating temperature range B_{tu}	- 30 to + 70 °C
Relative air humidity	max. 80 %, non-condensing
Protection class	IP 65

7.5 Metrological data of verifiable load cell

Feature	Value/Unit	
	K30S	K30N
Accuracy class according to OIML R60	C3	
Number of division values n_{LC}	3.000	
Nominal load E_{max}	1.000 bis 5.000 kg	
Error rate p_{LC}	0,7	
Minimum division value of the load cell v_{min}	0,010 % E_{max}	
Rated value of the relative minimum division value of the load cell $Y = E_{max} / v_{min}$	10.000	
Nominal value C_n	3 mV/V \pm 0,003	3 mV/V \pm 0,003
Minimum preload E_{min} / E_{max}	0 %	
Limit load E_{lim}	120 % E_{max}	150 % E_{max}
Breaking load E_d	150 % E_{max}	180 % E_{max}

7.6 Accessories

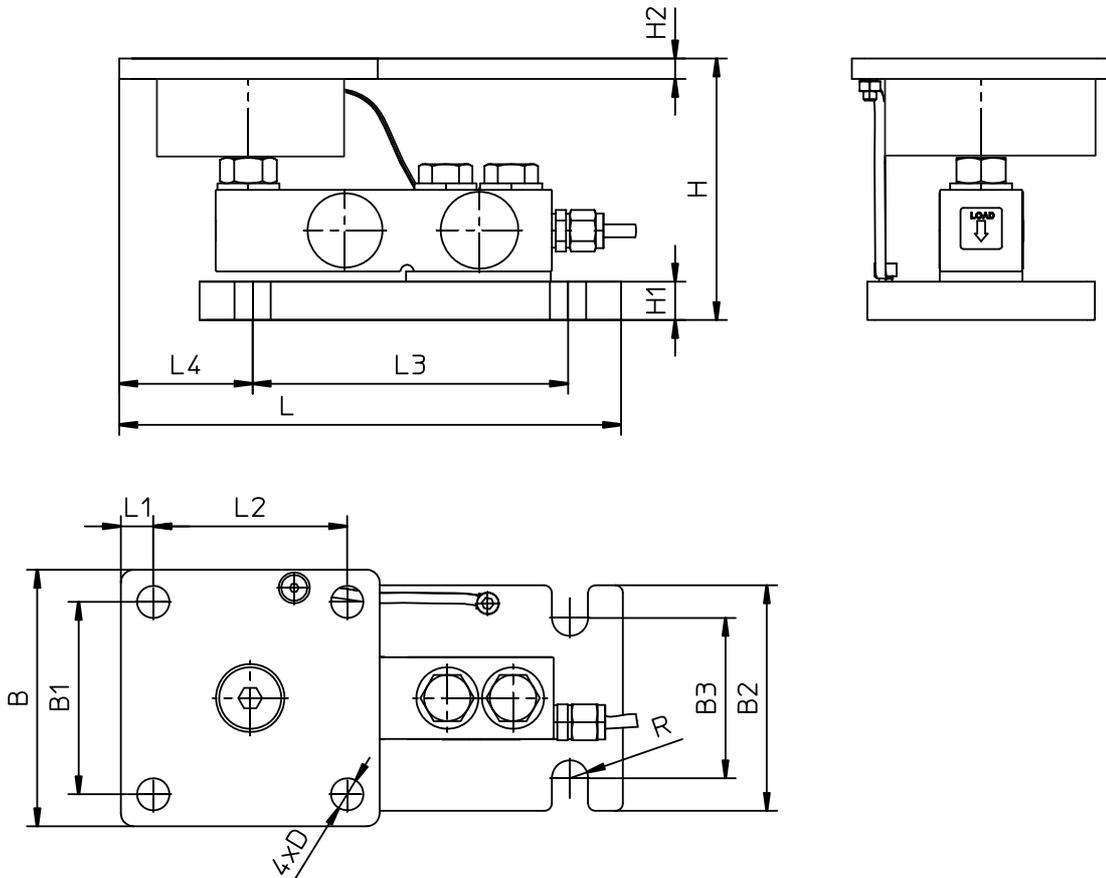
7.6.1 Load foot LF-K30



Type	M	H	H1	H2	D
LFK-K30-02500	M12 x 1,75	85	45		62
LF-K30-05000	M18 x 1,5	107	56		62
LF-K30-10000	M24 x 2	134	60		80

Dimensions in mm

7.6.2 Weighing module K30-ME



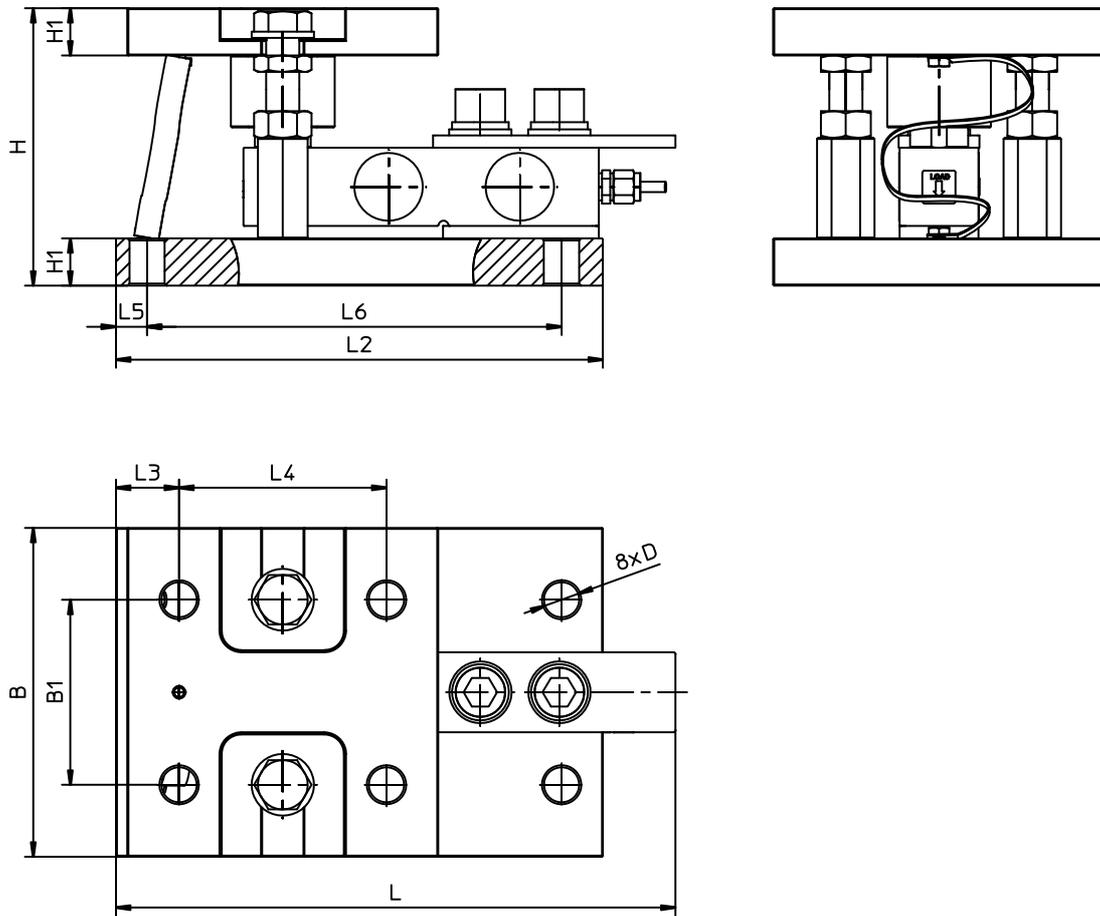
L	L1	L2	L3	L4	B	B1	B2	B3	R	H	H1	H2	D
194	12,5	75		18,9	100	75	88	62,5	7	102	15	8	

Dimensions in mm



Note
The weighing module is not lift-proof!

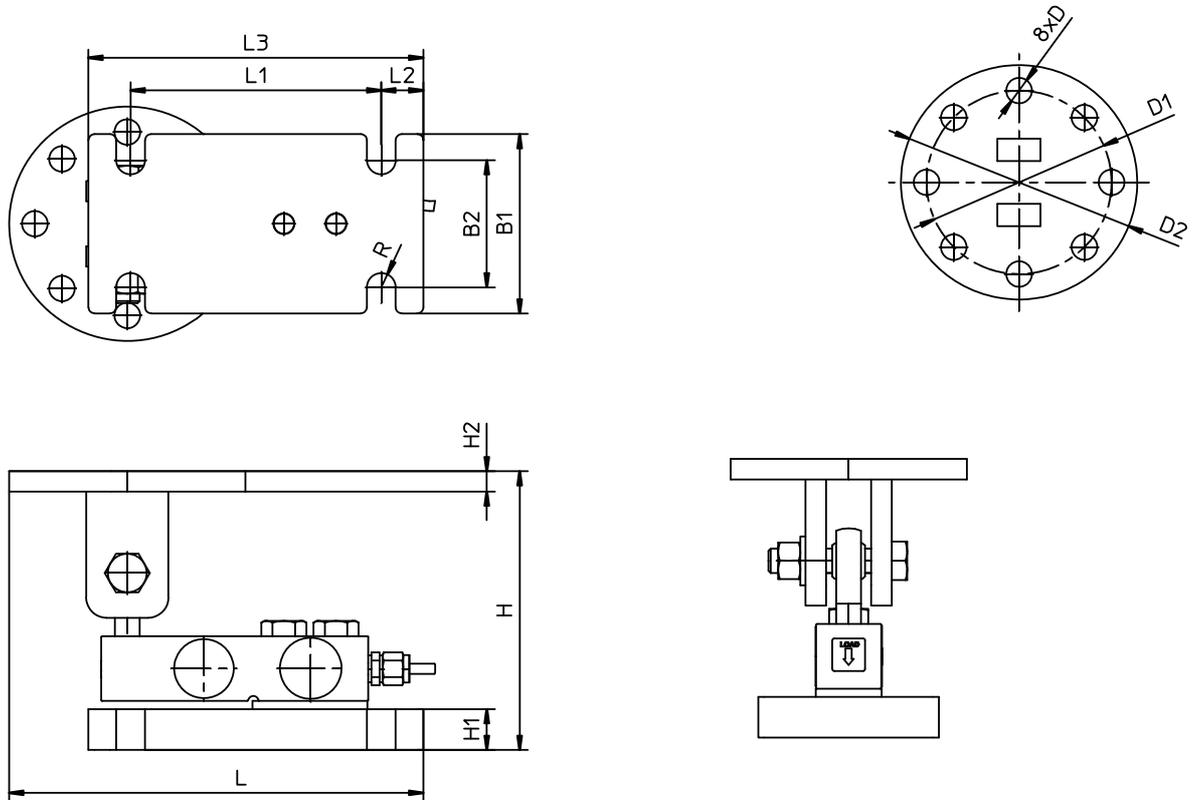
7.6.3 Weighing module K30-MA



Nominal load	L	L2	L3	L4	L5	L6	B	B1	H	H1	D
2.500 kg	212,3	175	18	80	15,2	140	100	70	106	18	13
5.000 kg	270	235	25	100	15	200	160	90	135	23	17
10.000 kg	345,2	310	30	150,4	30	250	180	110	186,3	28	26

Dimensions in mm

7.6.4 Weighing module with ball joint head



Note

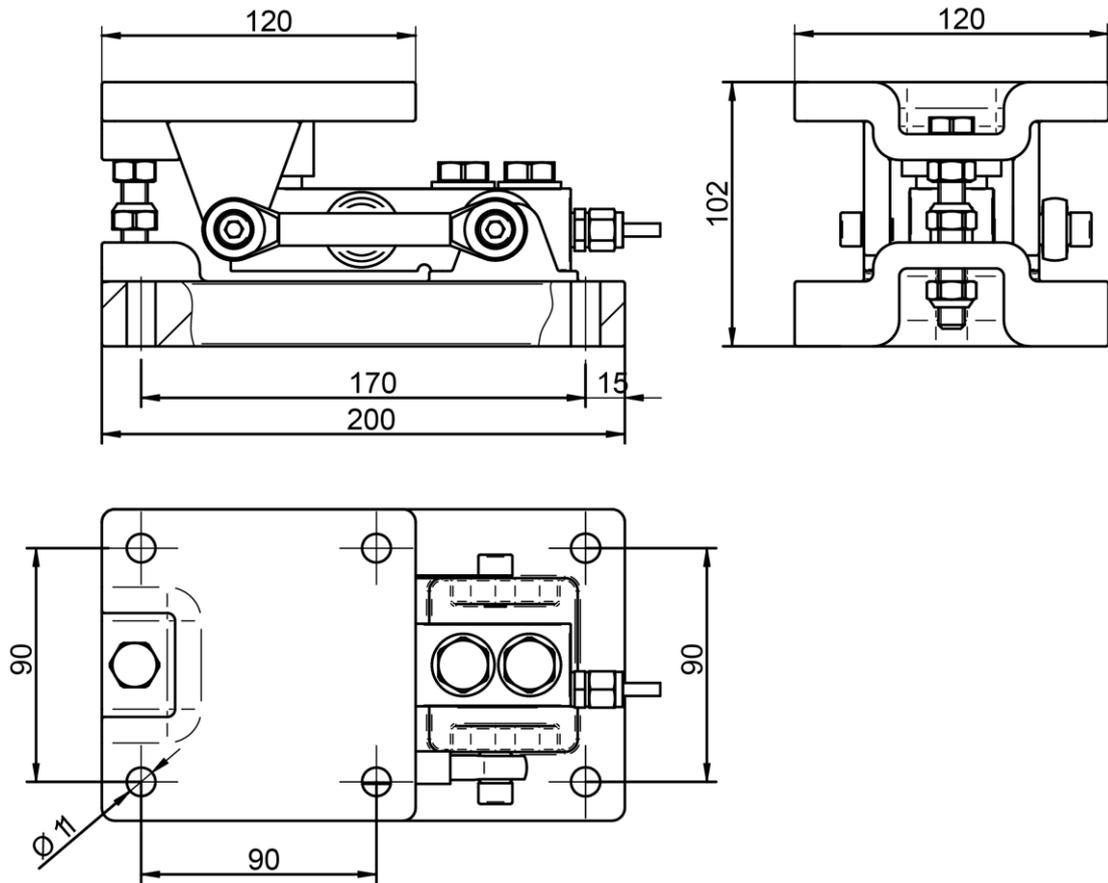
The illustration shows a design example of a weighing module with a ball joint head. The upper load introduction can be customized to accommodate various hole patterns according to customer specifications.

Typ SKSB-A	L	L1	L2	L3	B1	B2	R	H	H1	H2	D	D1	D2
500 - 2000	202	122	20,5	163	88	62,5	7	135±5	20	10	12,5	90±0,5	115
5000	255	150	25	205	190	140	9	173±5	30	10	17	115±0,5	150
10000	347	250	40	330	215	165	12,5	212±5	50	15	18,5	145±0,5	185

Dimensions in mm

7.6.5 Weighing module K30-MN (stainless steel) und K30-MG (cast iron)

The use of a stay rod helps to limit movements that can occur in platform scales or tanks. This is especially important in systems with agitators, where it ensures good stability and thus helps maintain measurement accuracy.



Dimensions in mm

8 Declaration of Conformity



Bosche GmbH & Co. KG
 Reselager Rieden 3
 D-49401 Damme
 Telefon: 0 54 91 / 999 689 - 0
 Telefax: 0 54 91 / 999 689 - 9
 E-Mail: info@bosche.eu
 Internet: www.bosche.eu

EU-Konformitätserklärung Declaration of conformity • Déclaration de conformité Conformiteitsverklaring • Declaración de conformidad	
Typ / Modell Type / Model • Modèle Model • Tipo / Modelo	Scherstab Wägezelle K30S / K30N für nicht selbsttätige, geeichte Waagen for non-automatic, calibrated scales pour balances non automatiques et étalonnées voor niet-automatische, gekalibreerde weegschalen para básculas no automáticas y calibrar
Seriennummer siehe Typenschild. For the serial number, see the nameplate. • Pour le numéro de série, voir la plaque signalétique. Voor het serienummer, zie het typeplaatje. • Para el número de serie, consulte la placa de identificación.	
Hersteller Manufacturer • Fabricant Fabrikant • Fabrikante	Bosche GmbH & Co. KG

Die alleinige Verantwortung für die Ausstellung trägt der Hersteller.

The sole responsibility for the issue carries the manufacturer. • La seule responsabilité de l'exposition porte le fabricant. • De verantwoordelijkheid voor de uitgifte draagt de fabrikant. • El único responsable de la publicación lleva el fabricante.

Der oben genannte Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union:

The above-mentioned object of the declaration complies with the relevant harmonization legislation of the Union • L'objet de la déclaration susmentionné est conforme à la législation d'harmonisation pertinente de l'Union • Het bovengenoemde voorwerp van de verklaring voldoet aan de relevante harmonisatiewetgeving van de Unie • El objeto de la declaración mencionado anteriormente cumple con la legislación de armonización pertinente de la Unión

2014/30/EU EMV-Richtlinie EMC Directive	EN IEC 61326-1:2021 EN IEC 61326-2-3:2021 EN IEC 61000-6-3:2021 EN IEC 61000-6-1:2019
2011/65/EU RoHS	EN IEC 63000:2018
gilt für: K30S 1000-5000 kg K30N 1000-5000 kg	EN 45501:1992 (§ 8.1+3.5.4) / OIML R60:2000/ WELMEC 2.4: 2001

Die notifizierte Stelle DELTA (0199) hat eine Baumusterprüfung durchgeführt und folgende Bescheinigung ausgestellt:

The notified body DELTA (0199) carried out a design type test and issued the certificate:
 L'organisme notifié DELTA (0199) effectue un test de type de construction et a publié le certificat suivant: • De aangemelde instantie DELTA (0199) uitgevoerd beproeving en legde de volgende verklaring: • El organismo notificado DELTA (0199) llevó a cabo un ensayo de modelo tipo y emitió el siguiente certificado:

DK0199-R60-12.24 (K30S)
DK0199-R60-12.23 (K30N)

Unterzeichnet für und im Namen von Bosche:

Damme, 15.02.2023


 Dipl. Ing. Jarmila Bosche PhD.
 Geschäftsführer • Managing Director
 Directeur général • Directeur • Director general

BOSCHE
WÄGETECHNIK

BOSCHE GmbH & Co. KG
Reselager Rieden 3
49401 Damme
Germany

Tel 05491 999 689 0
Fax 05491 999 689 9
www.bosche.eu
info@bosche.eu