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Installation Instructions

Pallet scales

KERN UID-M / UID-DM

Version 1.0

2019-08

GB



UID-IA-e-1910



KERN UID

Version 1.0 2019-08

Installation instructions Pallet scales

Contents

1	Technical data	3
2	Appliance overview	5
3	Basic Information (General)	6
3.1	Documentation	6
3.2	Proper use.....	6
3.3	Improper Use	6
3.4	Warranty	6
3.5	Monitoring of Test Resources.....	7
4	Basic Safety Precautions	7
4.1	Pay attention to the instructions in the Operation Manual	7
4.2	Personnel training	7
5	Transport and storage	7
5.1	Testing upon acceptance	7
5.2	Packaging / return transport	7
6	Unpacking, Setup and Commissioning	8
6.1	Installation Site, Location of Use.....	8
6.3	Unpacking and placing	9
7	Operation	11
7.1	Operation limits	11
7.2	Load/unload weighing system	12
8	Servicing, maintenance, disposal	13
8.1	Daily check.....	13
8.2	Cleaning	13
8.3	Servicing, maintenance	13
8.4	Disposal.....	13
8.5	Instant help	14
9	Service documentation	15
9.1	Check and adjustment of the corner load.....	15
10	Preload / Deadload settings	17

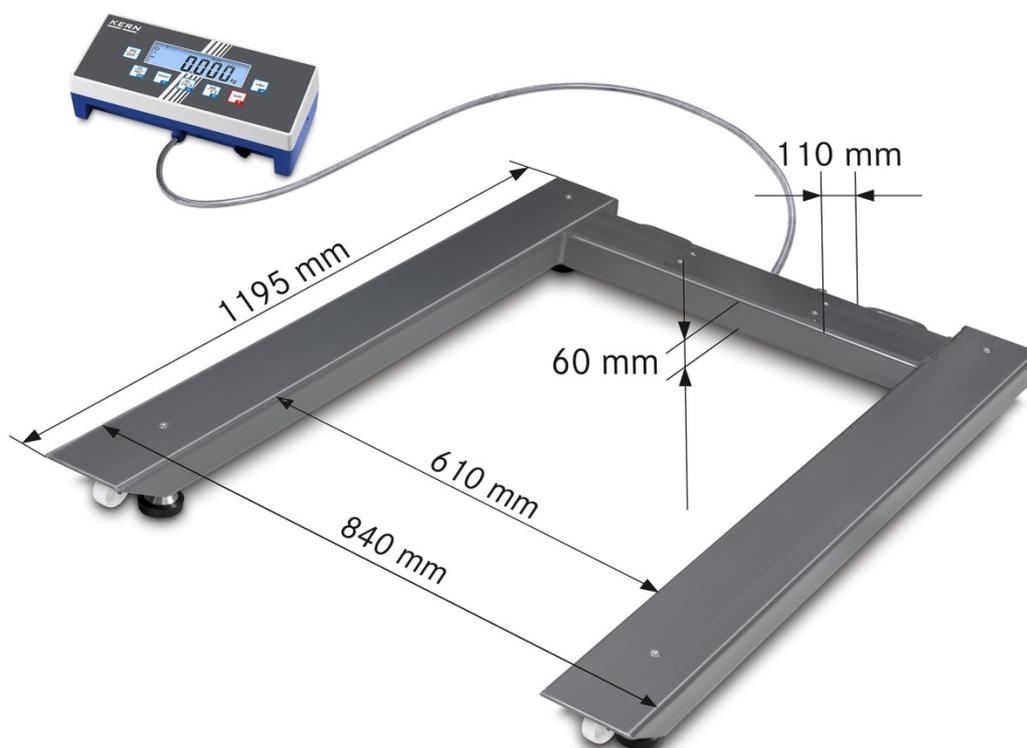
1 Technical data

KERN	UID 600K-1M	UID 600K-1DM
Item no./ Type	TUID 600K-1M-A	TUID 600K-1DM-A
Readability (d)	200 g	100 g / 200 g
Weighing range (max)	600 kg	300 kg / 600 kg
Verification value (e)	200 g	100 g / 200 g
Minimum load (Min)	4 kg	4 kg
Material weighing platform	Steel, powder-coated	Steel, powder-coated
Weighing surface (square)	1195 x 840 mm	1195 x 840 mm
Cable length	5 m	5 m
Net weight approx.	51 kg	51 kg

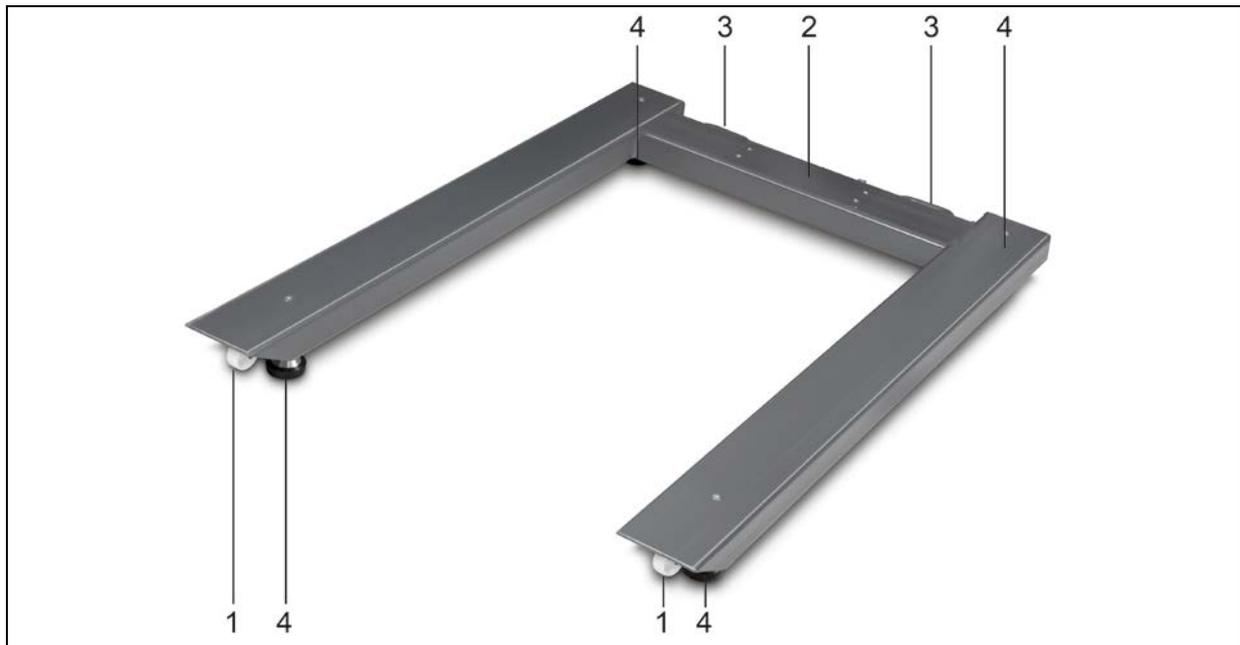
KERN	UID 1500K-1M	UID 1500K-1DM
Item no./ Type	TUID 1500K-1M-A	TUID 1500K-1DM-A
Readability (d)	500 g	200 g / 500 g
Weighing range (max)	1500 kg	600 kg / 1500 kg
Verification value (e)	500 g	200 g / 500 g
Minimum load (Min)	10 kg	4 kg / 10 kg
Material weighing platform	Steel, powder-coated	Steel, powder-coated
Weighing surface (square)	1195 x 840 mm	1195 x 840 mm
Cable length	5 m	5 m
Net weight approx.	51 kg	51 kg

KERN	UID 3000K-0M	UID 3000K-0DM
Item no./ Type	TUID 3000K-0M-A	TUID 3000K-0DM-A
Readability (d)	1 kg	0.5 kg / 1 kg
Weighing range (max)	3000 kg	1500 kg / 3000 kg
Verification value (e)	1 kg	0.5 kg / 1 kg
Minimum load (Min)	20 kg	10 kg / 20 kg
Material weighing platform	Steel, powder-coated	Steel, powder-coated
Weighing surface (square)	1195 x 840 mm	1195 x 840 mm
Cable length	5 m	5 m
Net weight approx.	51 kg	51 kg

Dimensions:



2 Appliance overview



1 Rollers for convenient transportation

2 Cover of connection box

3 Grab handles for convenient transportation

4 Weighing cell feet and weighing cells

3 Basic Information (General)

3.1 Documentation

These installation instructions contain all data necessary for placing and commissioning the U-weighing bridges KERN UID.

In combination with a display unit, described below as weighing system, for operation configuration, please refer to the operating instructions of the display unit.

3.2 Proper use

The KERN UID has been designed for weighing euro-pallets and containers with the dimensions of euro-pallets. It is provided for being used as "Non-automatic weighing scale". As soon as a stable weighing value is reached, the weighing value can be read.

3.3 Improper Use

Do not leave permanent load on the weighing bridge. This may damage the measuring system.

Impacts and overloading exceeding the stated maximum load (max) of the weighing system, minus a possibly existing tare load, must be strictly avoided. The weighing system could be damaged.

Never operate in an explosive environment. The serial version is not explosion protected.

Changes to the weighing system's design are not permitted. This may lead to incorrect weighing results, safety-related faults and destruction of the weighing system.

The weighing system may only be operated in accordance with the described default settings. Other areas of use must be released by KERN in writing.

3.4 Warranty

Warranty claims shall be voided in case

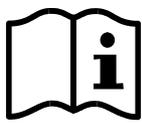
- Our conditions in the operation manual are ignored
- The appliance is used outside the described uses
- Structural changes of the device
- Mechanical damage and damage caused by media, liquids
- Natural wear and tear
- The appliance is improperly set up or incorrectly electrically connected
- Overload of the measuring system

3.5 Monitoring of Test Resources

In the framework of quality assurance the measuring-related properties of the weighing system and, if applicable, the testing weight, must be checked regularly. The responsible user must define a suitable interval as well as type and scope of this test. Information is available on KERN's home page (www.kern-sohn.com) with regard to the monitoring of weighing system test substances and the test weights required for this. In KERN's accredited DKD calibration laboratory test weights and weighing systems may be calibrated (return to the national standard) fast and at moderate cost.

4 Basic Safety Precautions

4.1 Pay attention to the instructions in the Operation Manual



Carefully read this operation manual before setup and commissioning, even if you are already familiar with KERN balances.

4.2 Personnel training

The appliance may only be operated and maintained by trained personnel. The installation of a display unit must only be carried out by a well acquainted specialist with the workings of weighing balances.

5 Transport and storage

5.1 Testing upon acceptance

When receiving the appliance, please check packaging immediately, and the appliance itself when unpacking for possible visible damage.

5.2 Packaging / return transport



- ⇒ Keep all parts of the original packaging for a possibly required return.
- ⇒ Only use original packaging for returning.
- ⇒ Prior to dispatch disconnect all cables and remove loose/mobile parts.
- ⇒ Reattach possibly supplied transport securing devices.
- ⇒ Secure all parts against shifting and damage.

6 Unpacking, Setup and Commissioning

6.1 Installation Site, Location of Use

The U-weighing bridges are designed in a way that reliable weighing results are achieved in common conditions of use.

You will work accurately and fast, if you select the right location for your weighing system.

Therefore, observe the following for the installation site:

- Place the weighing system on a firm, level surface.
The foundation at the installation place must be able to carry the weight of the weighing system as well as the weight of the maximum charge.
- Avoid extreme heat as well as temperature fluctuation caused by installing next to a radiator or in the direct sunlight.
- Protect the weighing system against direct draughts due to open windows and doors.
- Avoid jarring during weighing.
- Protect the weighing system against high humidity, vapors and dust.
- Do not expose the device to extreme dampness for longer periods of time.
Non-permitted condensation (condensation of air humidity on the appliance) may occur if a cold appliance is taken to a considerably warmer environment. In this case, acclimatize the disconnected appliance for ca. 2 hours at room temperature.
- Avoid static charge of goods to be weighed or weighing container.
- Do not lean the weighing system at the wall.
- Do not move the weighing system when under load.
- Keep away chemicals (such as liquids or gasses), which could attack and damage the weighing system inside or from outside.
- Keep IP protection of the device.

Major display deviations (incorrect weighing results) may be experienced should electromagnetic fields (e.g. due to mobile phones or radio equipment), static electricity accumulations or instable power supply occur. Change location or remove source of interference.

6.3 Unpacking and placing



CAUTION
Danger for the back!

The weighing system is relatively heavy. Always use a suitable lifting device to lift it out of the packaging or to transport it to the required installation site.

Unpacking:

- ⇒ Remove the outer packaging.
- ⇒ Lift the weighing system off the packaging material, see caution note.
- ⇒ Secure the weighing system that it cannot fall down when it is lifted.
- ⇒ Ensure that the contents of package is complete.

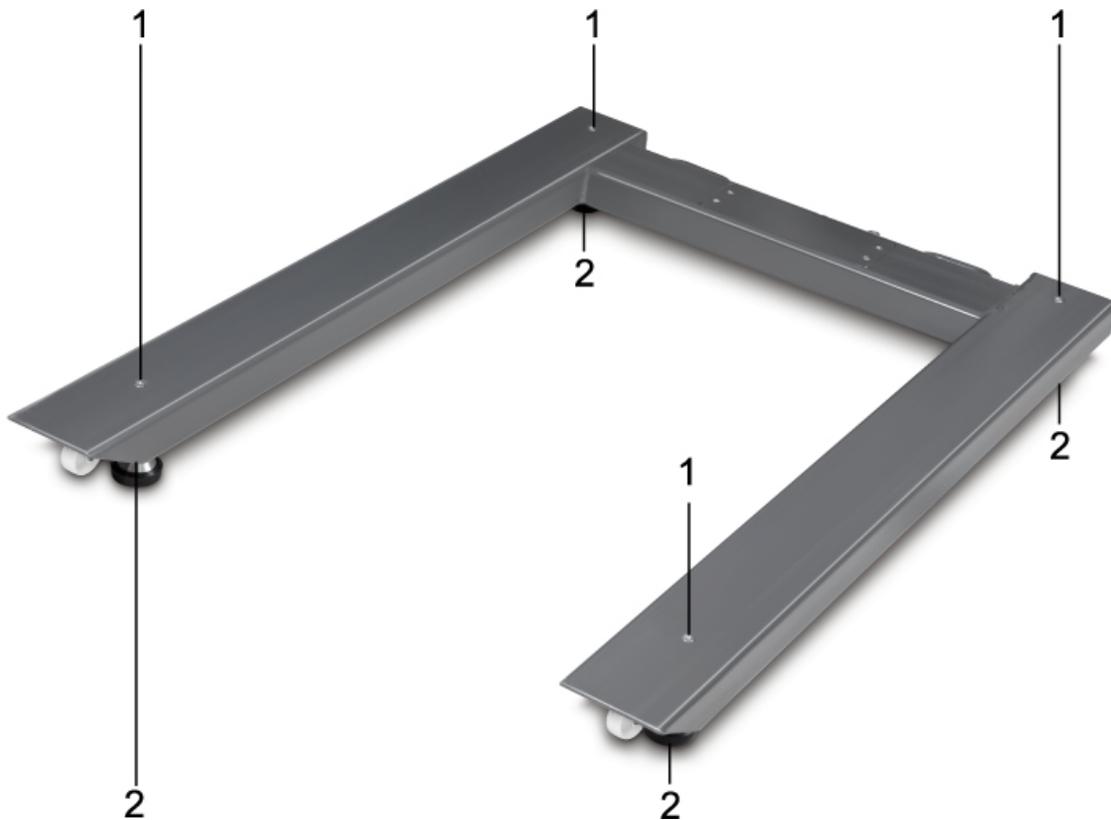
Scope of delivery:

- U-weighing bridge with assembled connection cable
- 4 weighing cell feet
- Operating manual

Placing:

Make sure that the surface of the installation place is even, especially in the area of the weighing cell feet. Small height differences may be corrected by adjustment of the weighing cell feet.

- ⇒ Prior to the final placing, install the four weighing cell feet. For transportation lift-off the handle and move it on the conveyor rollers.
- ⇒ Place the weighing system on the installation site and check if it is in an even position and all four feet are in contact with the floor. Remove the cover screw and turn the adjustment screw on the four weighing cells to make the required settings.



- ① Position of cover screw
- ② Position of weighing cell

- ⇒ Ensure that the connecting cable is not damaged or squeezed during lifting and placing.

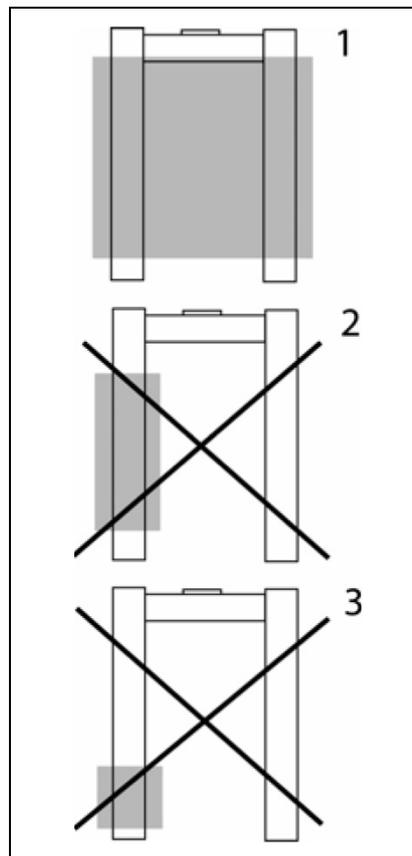
7 Operation

Information about

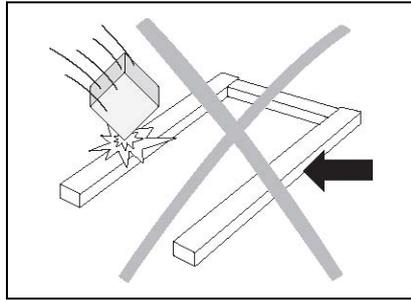
- **Mains connection**
Power is supplied via the connecting cable of the display unit.
- **Initial Commissioning**
- **Connection of peripheral devices**
- **Adjustment, linearization and verification**
Only the complete balance is verifiable, i.e. U-weighing bridge in conjunction with a suitable display unit.

and the correct operation you will find in the operating instructions included in the scope of delivery of the display unit.

7.1 Operation limits



The U-weighing bridge is designed for an even distributed load



- Avoid falling load, shock loads and impacts from the side.
- The forks of the fork lift truck may not touch the pallet or the balance during the weighing process.
- Do not move the balance at any moment, when it is loaded.

7.2 Load/unload weighing system

- ⇒ Place the load on the scales using a pallet lifting truck, a crane or a forklift truck. Ensure that the load is not swinging when it is placed onto the scales.
- ⇒ Lift the load first vertically at least 10 cm above the scales before it is removed or newly placed.

8 Servicing, maintenance, disposal



Before any maintenance, cleaning and repair work disconnect the appliance from the operating voltage.

8.1 Daily check

- ⇒ Ensure that all four feet are in contact with the floor.
- ⇒ Ensure that the connecting cable to the display unit and the network connection cable of the display unit are not damaged.
- ⇒ Ensure that the balance is free from dirt, especially under the edges of the balance.

8.2 Cleaning

- ! Remove regularly corrosive substances.
- ! Keep IP protection.
- ! Do not point any water or steam jet at the weighing cells.

U-weighing bridge, steel, powder-coated

- ⇒ Clean the weighing system with a soft cloth soaked with a mild cleaning agent. Ensure that no liquid penetrates into the device. Polish with a dry soft cloth.

8.3 Servicing, maintenance

- ⇒ The appliance may only be opened by trained service technicians who are authorized by KERN.
- ⇒ Ensure that the weighing system is regularly calibrated, see chap. Testing instruments monitoring.

8.4 Disposal

- ⇒ Disposal of packaging and appliance must be carried out by operator according to valid national or regional law of the location where the appliance is used.

8.5 Instant help

In case of an error in the program process, briefly turn off the balance and disconnect from power supply. The weighing process must then be restarted from the beginning.

Help:

Fault

The displayed weight is permanently changing

Possible cause

- Draught/air movement
- Sites with vibration.
- Weighing bridge has contact with other objects.
- Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)

The weighing result is obviously incorrect

- No zero display with unloaded balance
- Adjustment is no longer correct.
- Great fluctuations in temperature.
- The balance is on an uneven surface.
- Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)

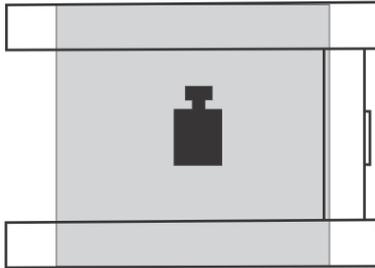
Should other error messages occur, switch balance off and then on again. If the error message remains, inform manufacturer.

9 Service documentation

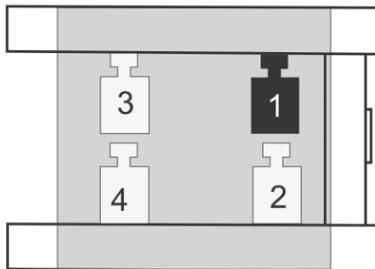


- This chapter is only intended for a balance specialist!
- The weighing bridges are carried out in DMS sensor technology, at every corner a DMS weighing cell is installed.
- The analogue-digital transformation occurs in the display unit. Also all the balance and country-specific data are stored there.

9.1 Check and adjustment of the corner load



0.00 kg



Check of the corner load

- Place the pallet
- Place the test weights in the centre of the pallet and tare.
- The balance displays -0-.
- Place the test weights one after the other at all four corners, observing the sequence 1, 2, 3, 4.
- Now the deviations are displayed with sign, write down the values. If there are deviations out of the tolerances (see chap. 9.1), an adjustment will be necessary.

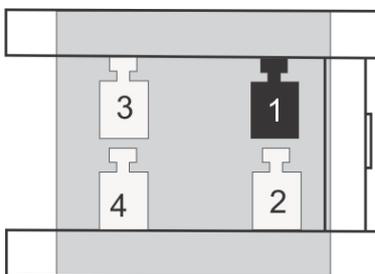
Adjustment of corner load

Preparation:

- For a better control of the modifications which occur during adjustment, select in the configuration menu the highest readability for control purposes.
- Open connection box

Adjustment rule:

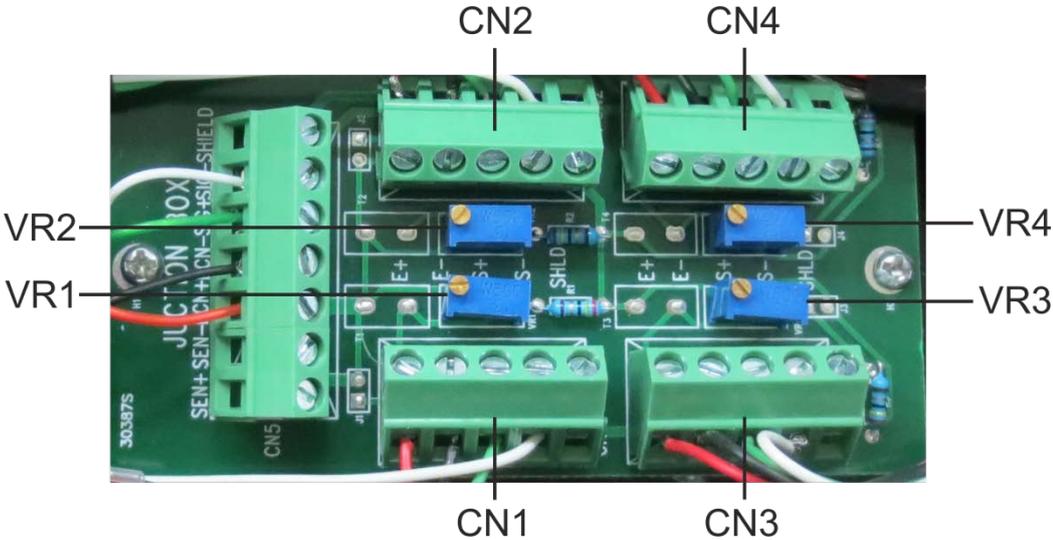
The corner (weighing cell) with the biggest negative deviation must be set to zero. Do not re-adjust this corner even after several adjustment sequences.



Adjustment on the analogue print



- ① Weighing cell 1
- ② Weighing cell 2
- ③ Weighing cell 3
- ④ Weighing cell 4



Adjustment of weighing cell CN1 takes place at potentiometer pair VR1.
Adjustment of weighing cell CN2 takes place at potentiometer pair VR2.
Adjustment of weighing cell CN3 takes place at potentiometer pair VR3.
Adjustment of weighing cell CN4 takes place at potentiometer pair VR4.
Increase the value turning to the right, reduce the value turning to the left.

10 Preload / Deadload settings

Platform type	Platform dimension (mm)	Load-cell Type	TC No.	Class	Max Preload	E _{max}	E _{min}	Y	Z	n _{LC}	Dead-load	T _{min}	T _{max}	Cable-length
					[kg]	[kg]	[kg]				[kg]			[m]
UID 600K-1M	840 x 1195	Keli SQB	TC6911 rev.2	C3	300	250	0	10000	3000	3000	38	-10	40	5
UID 600K-1DM	840 x 1195	Keli SQB	TC6911 rev.2	C3	300	250	0	10000	3000	3000	38	-10	40	5
UID 1500K-1M	840 x 1195	Keli SQB	TC6911 rev.2	C3	2300	1000	0	10000	3000	3000	38	-10	40	5
UID 1500K-1DM	840 x 1195	Keli SQB	TC6911 rev.2	C3	1310	750	0	10000	3000	3000	38	-10	40	5
UID 3000K-0M	840 x 1195	Keli SQB	TC6911 rev.2	C3	2660	1500	0	10000	3000	3000	38	-10	40	5
UID 3000K-0DM	840 x 1195	Keli SQB	TC6911 rev.2	C3	2660	1500	0	10000	3000	3000	38	-10	40	5