



User Manual

Weighing Indicator Agris XK4



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1 Introduction

Thank you for choosing this XK4 weighing display. You have just purchased a robust appliance for everyday use.

Please read this manual carefully before putting the weighing display to use.

As in common parlance, the word 'load' is used instead of 'mass' in this user manual.

2 Scope of delivery

The Weighing Display XK4 consists of:

- The weighing indicator itself with a mounting bracket and the connection cable with a 7-pin Plug for load cells
- Brackets for wall and table mounting
- Power adapter
- This user manual

3 Intended use

The display can be connected to most of the common load cells, weighing platforms or other weighing devices.

The weighing indicator XK4 is intended to be used in dry locations. The protection class is IP63.

The XK4 isn't officially calibratable and therefore not authorized to determine weights for legal transactions.

4 Security

4.1 Safety Instructions for the Buyer



Important!

Make sure that each person who works for the first time with the XK4 Weighing indicator, has read and understood this manual.

4.2 Safety instructions for the operator



DANGER!

The XK4 Weighing indicator may only be operated by persons who are familiar with the operation of the device.



PRECAUTION!

Keep the work area clean! Dirty or cluttered work areas increase the risk of accidents.



ATTENTION!

Repairs and other technical interventions on the device may only be performed by qualified personnel. There is a danger of electric shock.

4.3 Residual Hazards

Residual risks to persons and property may arise during operation of the device that cannot be fully prevented by design or technical safety measures.



WARNING!

The Weighing indicator XK4 must not be operated in explosive environments.

5 Technical specifications

Size (W/H/D)	280mm / 160mm / 100mm for table mounting 280mm / 150mm / 145mm for wall mounting
Weight:	1.685kg
Operating temperature:	-10 to +40 °C
Maximum load:	adjustable
Resolution:	adjustable
Unit:	choice of kg or lb
Power supply:	85 to 245V AC, 50 / 60Hz
Battery:	internal
Battery power:	DC 6V, 4Ah
Battery runtime:	~ 24h (4 load cells without energy saving mode)
Battery charging time:	about 24h
Battery class:	III, n=3000
Input sensitivity:	$\geq 1.5\mu\text{V/e}$
Weighing frequency:	10x per second
Power supply load cells:	+5V DC
Number of load cells:	1 to 6 load cells with 350 Ohms in parallel operation

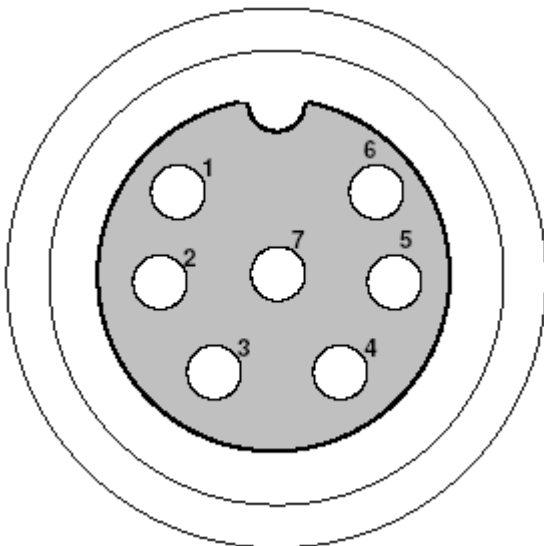
6 Getting started

6.1 Connecting the load cells

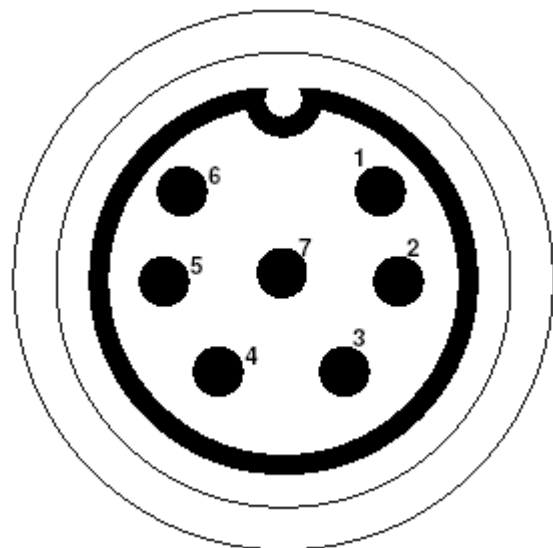
Our scale sets are supplied with a connection cable that fits the weighing indicator. In this case, connect the 7-pin connector from the load cells to the connector on the back of the weighing indicator.

To connect to other weighing scales, you can use the connection diagram provided in the following table.

Front view - female connector
(load cells)



Front view - male connector
(indicator)



No	Description	Function
1	EX -	Power supply -
2	EX +	Power supply +
3	Sig -	Signal -
4	Sig +	Signal +
5	NC	Not connected
6	NC	Not connected
7	NC	Not connected


6.2 Connecting the power supply

Connect the small round plug of the power cord into the socket provided on the back of the display and plug the power adapter into the power outlet.

The display can also be used with the built-in battery. Charge the battery completely before the first use.

7 Weighing


7.1 Turning on the weighing indicator

Press the [] button. The weighing display will now run a self-test. The display is ready for use when the weight readout appears.

In standard mode the display does not zero itself, but shows the actual load, based on the last used null position.

NOTE: Calibration parameter 3 allows you to configure if and up to what load the display automatically reverts to the zero position during start-up.




7.2 Zeroing

With the [] button the display's zero position is reset. Use this function before every weighing if the display isn't set to zero.

The (Zero) LED lights when the display is at zero.

NOTE: Calibration parameter 2 allows you to configure the range for manual zero setting.

7.3 Standard weighing procedure

- Ensure that the display is set to zero.
- Place the weighing object on the scale.
- Wait until the display shows a stable value or until the LED (  ) lights.
- Read the weighing result.

7.4 Weighing with Tare function

When you want to weigh an object in a container or package, the weight of the empty container can be automatically subtracted without changing the zero position, by using the tare function.

- Make sure the display is set to zero.
- Place the empty container on the scale.
- Wait until the display shows a stable value, or until the LED (▲●▲) lights.
- Press the [Tare] button. The display returns to zero and the LED (Net) lights.
- Now put the weighing object in the container.
- Wait until the display shows a stable value or until the LED (▲●▲) lights.
- Read the weighing result. This is the net weight of the object without the container.
- If you want to weigh several objects in the same container, place them on the scale one after the other. As long as the NET – LED lights, the previously measured tare will be subtracted and only the net weight will be displayed.
- To end the tare function, remove the load from the scale and press the [Tare] button again.

7.5 Weight summation

Use the summation function to perform several weighings and add up all loads.

- Make sure the display is set to zero.
- Place the first object on the scale.
- Wait until the display shows a stable value and the LED (▲●▲) lights.
- Read the weighing result.
- Briefly press the [Σ] button. The display will show the sum of the objects weighed so far, followed by the number of objects weighed (e.g.: n 0001). Now the display returns to the normal weighing mode. The LED (Σ) lights up as long as the sum and number of weighed objects are displayed.
- Remove the first load and place the next one on the scale.
- Briefly press the [Σ] button again. Now, the display shows updated total weight and object count, before returning to normal weighing mode.
- Repeat this procedure for all remaining objects.

ATTENTION: The summation function starts only when the load is at least 5 increments (Example: On a scale with 1 kg resolution, the summation function will start at a load of 5 kg.)

Displaying the sum

To display the sum of weighed loads, press and hold the [Σ] button until a beep sounds. When you release the button, the sum of the weights is displayed and the two LEDs (Fn) and (Σ) light.

While the sum is displayed, you can use the [\leftarrow] button to switch to the number of weighed objects. Press the [\leftarrow] button again to return to normal weighing mode. The sum remains stored, allowing you to add additional weighings.

Deleting the sum

- Press and hold the [Σ] button until a beep sounds. When you release the button the sum of the weights is displayed and the two LEDs (Fn) and (Σ) light (as above).
- Press the button [\rightarrow]. The display shows „CLEAR“.
- Press the [\leftarrow] button to confirm deletion. The sum and count are set to 0 and the display returns to normal weighing mode
- Press the [Fn] button to cancel the deletion.

7.6 Animal weighing mode

If you want to weigh restless animals or unstable loads, you can use the animal weighing mode. Follow these steps:

- Press the [**Fn**] key briefly to activate animal weighing mode. The display shows “ON” for a short time.
- Ensure the display is set to zero.
- Place the weighing object (e.g. an animal) on the scale.
- If the weight remains within the defined range (r) for the set time (t), the average weight over period is calculated, displayed and frozen on the screen until the weight goes out of range (r). The red dot above “Fn” lights up.

Example: An animal is placed on the scale and the weight fluctuates. If the weight remains within a 20 kg range for 3 seconds, the average weight during these 3 seconds is calculated and displayed as the correct weight. Once the animal leaves the scale (weight out of range), the display automatically returns to showing the actual, fluctuating weight.

- The parameters r (range) and t (time) can be adjusted as required.
- To deactivate the animal weighing mode, press the [**Fn**] key briefly. The display shows “OFF” for a short time.

*CAUTION: The animal weighing mode works only if the [**Fn**] key is assigned to the function ANL.*

CAUTION: The animal weighing mode is activated only if the measured weight is above the minimal weight which is set in the parameter LO.

*CAUTION: If you press the [**Fn**] key too long, the parameter configuration menu will start instead of the animal weighing mode.*

8 Parameters

The weighing indicator XK4 provides several configurable parameters that influence the system's operation. Normally these parameters are factory pre-configured and should only be changed in special circumstances.

Take the following steps to start parameter configuration:

- To enter the parameter menu press and hold down the [Fn] key until a signal sounds
- Pressing the [←] button confirms the entry and returns to the next parameter. After the last parameter the parameter menu is closed and the display returns to weighing mode.
- The [↑] button allows you to select the desired parameter value.
- The [→] button allows you to switch between digits for multi-digit entries.
- The parameters are described in the following table.

Parameter	Description	Display	Comment
1	Function of the [Fn] button	Fn **	Lb = switch between kg and lb ANL = animal weighing mode function (standard) -- = no function
2	Power Save Mode	PS **	OFF = no power save mode (standard) oN = power save mode after 5 minutes without change in weight onP = turn off the display after 5 minutes without change in weight
3	Baudrate RS232 Interface	Br ****	600 1200 2400 (standard) 4800 9600
4	Communication mode	Co *	1 (standard) see chapter: RS232

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	RS232 interface		interface
5	Target weight range HI	H*****	Is the weight display higher than the value set here, then the (LED HI) lights. Default value: 75% of the rated load of the load cells (3000 in a display without weighing technology)
6	Target weight range LO	L*****	Is the weight display lower than the value set here, then the (LED LO) lights. Default value: 0
7	Range for animal weighing mode	r*****	standard: 20.0
8	Time for animal weighing mode	t *	standard: 3

9 Calibration

If the weighing indicator was purchased together with loadcells, it is already fully calibrated and tested.

Calibration is only required in the following cases:

- If the weighing indicator was purchased without load cells.
- If the scale is used in special constructions, e.g. when retrofitting mechanical scales.
- If it's not possible to use the scale in the prescribed mounting position.

9.1 Calibration procedure

ATTENTION: A calibration determines the accuracy of the scale.

A calibration cannot be undone!

To perform a calibration you need a reference load that is as close as possible to the nominal load. It should be at least 20% of the nominal load of the load cells.

Example: A scale with a nominal load of 4000 kg must be calibrated with at least 800 kg.

Take the following steps to start the calibration procedure:

To enter the calibration mode, remove the protective cover on the back and press the inner button until the display shows CAL.

- Pressing the button [←] confirms the entry and returns to the next parameter. After the last parameter the parameter menu is closed and the display returns into weighing mode
- Press the [↑] button, to select the desired value or setting within a parameter.
- The [→] button allows you to switch between digits for multi-digit entries
- All the steps of the calibration process are described in the following table. They must be performed in this order.

Step	Description	Display	Comment
1	Division	E **	01 02 05 10 20 50 Depending on the weighing scale
2	Amount of decimal places	dC ****	0 0.0 0.00 0.000 Depending on the weighing scale
3	Nominal load	F *****	Nominal load of the load cells
4	Zero position	noLoAd	Ensure no load is placed on the scale
5	Calibrating load	AdLoAd *****	Place the reference load on the scale and enter its exact weight.

9.2 Calibration parameters

ATTENTION: These parameters change the characteristics of the weighing indicator. Improper use can cause a distortion of weighing results.

Take the following steps to enter the calibration settings:

- To enter the parameter menu, remove the small cover on the back and press the inner button until the display shows CAL. Then press the [↑] key followed by the [←] key.
- Pressing the [←] key confirms the entry and returns to the next parameter. After the last parameter the menu closes automatically and the display returns to weighing mode.
- The [↑] key allows you to select the desired parameter value.
- The [→] button allows you to switch between digits when entering multi-digit values.

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- The parameters are described in the following table.

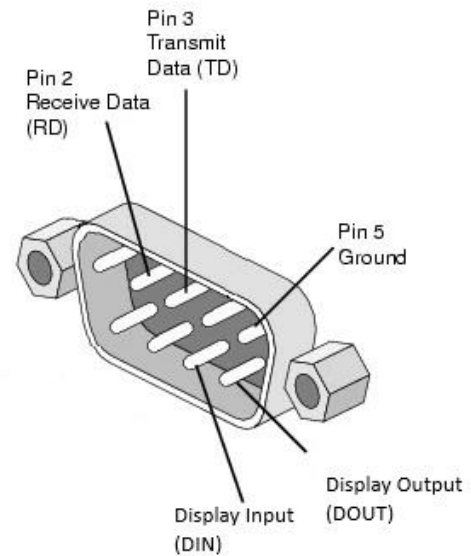
Parameter Nr	Description	Display	Comment
1	Zero point stabilisation	Zot **	0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 division units Standard setting: 2.0
2	Range for manual zero positioning	Nt ***	0 2 4 10 20 100 percent of nominal load can be zero positioned Standard setting: 100%
3	Range for automatic zero positioning	At	-- 0 2 4 10 20 100 percent of nominal load can be automatically zero positioned Standard setting: --
4	Responsiveness	FL ***	Stb: slow responsiveness Sen: fast responsiveness (standard)

10 RS232 Interface

The weighing indicator is equipped with a serial interface that can be used to connect an additional display, a printer, or to communicate with a PLC or a PC.

10.1 Connection pin-out

Pin	Description
1	RX
2	TX
3	GND
4	NC (not connected)
5	NC (not connected)
6	NC (not connected)
7	NC (not connected)
8	Input external display (DIN)
9	Output external display (DOUT)



10.2 Configuration

With the parameter 3, the baud rate is set. The other interface parameters of the RS232 interface can remain at their default settings.

The parameter 4, the operation mode of the interface is defined.

1: Automatic output of the net weight without unit, in reversed digit sequence, 8 digits

Example: 23,45 kg -> 54.3200
 -23,45 kg -> 54.320-

2: Automatic output of the gross weight without unit in reversed digit sequence, 8 digits

Example: 23,45 kg -> 54.3200
 -23,45 kg -> 54.320-

3: Automatic output of the net weight with unit, 14-characters

Example: 23,45 kg -> 0023.45 (kg) + HEX(0D) + HEX(0A)

4: Automatic output of the gross weight with unit, 14-characters

Example: 23,45 kg -> 0023.45 (kg) + HEX(0D) + HEX(0A)

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5: command mode, output on request

Gross weight request

command: HEX(02) + "A" + "HEX(03), answer: GW:0023.45 (kg)

Net weight request

command HEX(02) + "B" + "HEX(03): answer: NW:0013.45 (kg)

Tare weight request

command HEX(02) + "C" + "HEX(03): answer: TW:0010.00 (kg)

Trigger zero position

command HEX(02) + "D" + "HEX(03): answer: D

Trigger Tare function

command HEX(02) + "E" + "HEX(03): answer: E

6: Output of the weight when pressing the SUM function on the display.
Intended for direct printer connection.

11 Troubleshooting

The following error messages can appear on the display screen:

Display	Description	Solution
Err 01	Range for zero positioning has been exceeded	Reduce the load on the scale or increase calibration parameter 2.
Err 02	Load for this function is too low	Some functions are only available for loads of 5 increments onwards.
Err 03	Overloaded	Reduce the load on the scale.
Err 04	Unstable weight	The weight is not stable during calibration. The calibration procedure cannot be performed.
Err 05	Weight is too low	A higher load must be used for the calibration procedure. The calibration procedure can't be performed.
Err 06	Weight not stable	Some functions require the weight to be stable.

12 Disposal



Dispose of the device, or its components, in an environmentally friendly and properly sorted manner at the end of its service life (e.g., metal to metal scrap, plastic to plastic waste, etc.). Do not dispose of it as household waste!

Detailed information can be found in Directive 2012/19/EU

13 Imprint

All information, specifications and images are correct as of 2025 and subject to technical adjustments or changes in design.

Despite careful handling and review of the contents, no warranty is given for the information in this user manual. Any liability of the author is excluded.

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