

ELOback²

> Rear Warning System



- > MORE SAFETY THANKS TO REAR ULTRASONIC SENSORS
- > IDEAL FOR THE OUTDOOR AND INDOOR USE
- > EASY FITTING AND COMMISSIONING
- > EXPANDABLE THANKS TO MODULAR DESIGN

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MORE SAFETY IN INTRALOGISTICS

A high handling turnover rate is not only the result of modern fork-lifts. Equally important are well-trained staff and good organization in the flow of goods. The occupational safety is increasingly gaining importance, since even under the best conditions, a forklift in operation is a considerable source of dangers.

Driver assistance systems such as the **ELOback²** help to reduce risks and prevent accidents. Especially the rear vehicle area can quickly become a danger zone during maneuvering operation.

With a warning field adapted to the spatial requirements, the **ELOback²** reliably recognizes outlines and obstacles in indoor and outdoor use.



> The new ELOback² Sensor

The ultrasonic sensor that was especially designed for the **ELOback²** recognizes movable and immovable obstacles with high reliability and accuracy.

Objects are recognized up to 4 meters in the remote sensing area. By means of the close-up detection range, the **ELOback²** sensor can additionally recognize obstacles within a range of up to 1.5 meters. This ensures a good detection, even during maneuvering.

The setting of the range and the detection width can be made by the optional PC configuration software. Remote detection range and close-up detection range can thereby be adjusted separately.

The **ELOback²** sensor has a detection range of 120°.



> The driver's display

The second core of the **ELOback²** is the driver's display. It includes all the acoustic and visual warning signals and serves the operation of the system.

Due to the simplicity and clarity of the opto-acoustic signalisation, the **ELOback²** is extremely user friendly and ergonomic.

The displays are controlled depending on the situation and appear in the colors green, yellow, red or blue. The built-in button is used to bypass the stop signal (optional).

The driver's display also serves as a central evaluation unit. Therefore the **ELOback²** consists of only 2 components which makes the installation quick and easy.



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SCOPE OF DELIVERY

- > **ELOback²** ultrasonic sensor module
- > Operating and display unit (driver's display)
- > Fitting brackets and screws, connection cable and plug set
- > Optional: Windows-based PC software, incl. configuration cable
- > Optional: Lifting height sensor
- > Optional: Second sensor module

LOOKING AHEAD WITH THE ELOback²

FUNKTIONALITÄT

In the forward drive the **ELOback²** system is in "standby mode". During reversing the object detection is switched on ("active" state).

When an obstacle is detected in the detection area a warning is issued to the driver. Typically this occurs upon detection in the remote area by means of a visual display and a speed reduction ("advance warning" state).

An additional acoustic alarm signal occurs when an obstacle is detected in the close-up detection range of the vehicle. In addition a deceleration of the vehicle until standstill is initiated ("warning" state). If desired, of course also functionality without speed reduction is available.

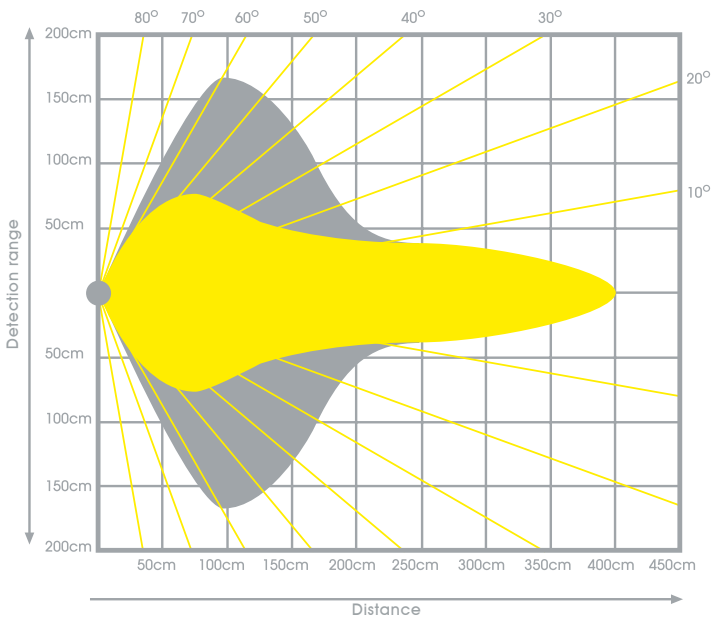
If the vehicle has been decelerated to a standstill by the **ELOback²** driving can be resumed after acknowledgment of the warning state. This is done by pressing the reset button on the driver's display.

Optionally the **ELOback²** can be equipped with an additional ultrasonic module and a lift height sensor. This makes it possible to create a significantly wider detection area or to monitor and reduce driving with a raised load.

The **ELOback²** sensor also has displays that provide information at any time about the detection state of the sensor. The displays at the sensor and on the driver's display function according to the following principle:

- > **Green, Yellow and Red:** Distance LEDs (green for no obstacles, yellow for obstacles in the detection range and red for danger of collision)
- > **Blue:** Mast and/or fork position above the predefined lift height (optional)
- > **Blue on the sensor:** For diagnostic purposes

DETECTION AREA OF THE ELOback²



- Main detection range
- Close-up detection range

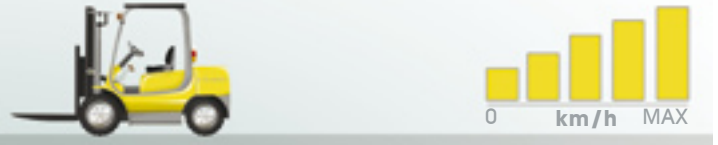
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EXAMPLES OF THE FUNCTION AND DISPLAY OF THE ELOback²

No detectable obstacles

- > Display: green light
- > No acoustic alarm
- > Maximum speed during forward and reverse driving



Obstacle in the detection range

- > Display: yellow light
- > No acoustic alarm
- > Reversing is reduced (optional)



Rise of collision

- > Display: red light
- > Acoustic Alarm is triggered
- > No reversing possible (optional)



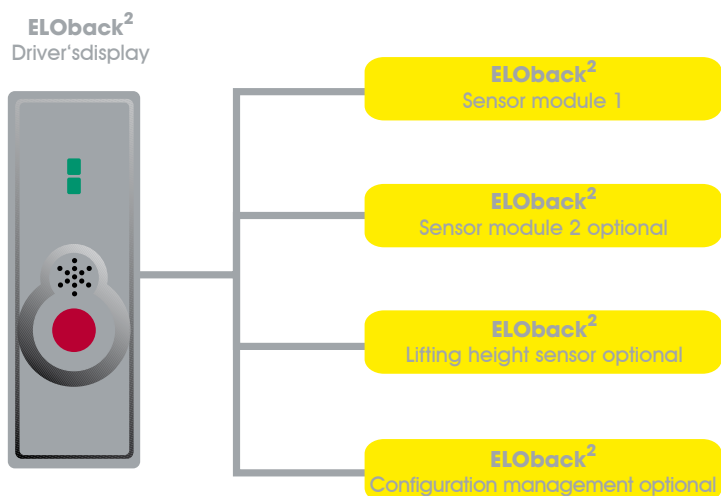
FITTING

The fitting and commissioning of the **ELOback²** is simple and can be carried out on-site using the fitting instructions supplied by an experienced technician. Of course, upon request ELOKON will provide a service technician for installation support.

The **ELOback²** is set individually to the operating requirements of the customer using a PC and the Windows-based software. Outputs for a speed reduction or deceleration of the vehicle in situations of danger are available.

EXPANDABLE THANKS TO MODULAR DESIGN

ELOback² Installation diagram



Due to its modular design the **ELOback²** rear warning system is expandable at any time.

Components such as the **lifting height sensor** can be added later without problems and without extensive modifications.

ELOback² Lifting height sensor

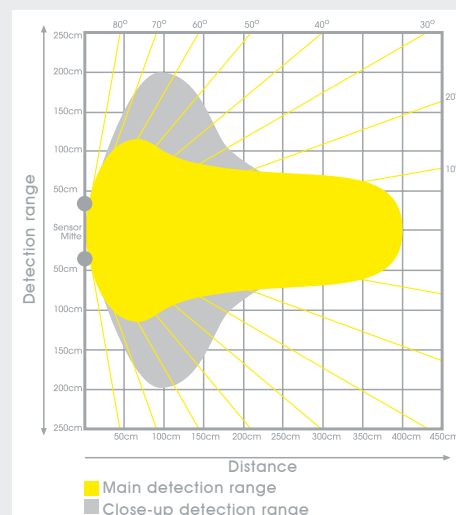
The **ELOback²** lifting height sensor recognizes a raised load and warns the driver. The driver's display shows a constantly lit blue display during dangerous situations. The **ELOback²** optionally reduces the speed during forward travel and reversing automatically.



ELOback² Sensor module extension

The **ELOback²** can be delivered with 2 sensor modules optionally. This enlarges the lateral detection range. This may be required by the operating conditions or dimensions of the forklift truck.

The two sensors are switched synchronously. The extension covers a lateral detection field of up to 4 meters width and provides even better protection in order picking zones. The two sensors are synchronously connected - the functionality of the driver's display is maintained.



TECHNICAL DATA

Supply voltage	12 ... 24 V DC (± 20%)	Product type	Driver assistance system
Power input	≤ 7 W	Display, protection type	IP 41
operating temperature range	-20° .. +50°C	Sensor, protection type	IP 65
Remote detection range (LxB)	approx. 400 cm x 150 cm approx. 400 cm x 240 cm (optional)	Display dimensions (LxBxH)	140mm x 40mm x 35mm (inkl. mounting bracket)
Close-up detection range (LxB)	approx. 200 cm x 340 cm approx. 200 cm x 400 cm (optional)	Sensor, dimensions (LxBxH)	130mm x 101mm x 115mm (inkl. mounting bracket)
Technology	Ultrasound, 40kHz		



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