

RC310

Remote control for leak test equipment

Operating instructions
GA300306406_002_A5

Cat.-numbers
252 013 V01
252 014 V01



Imprint

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Content

1	Operating instructions	5
1.1	How to use this manual	5
1.2	Warning and danger symbols	5
1.3	Glossary	6
2	Important safety instructions	7
2.1	Intended use	7
2.2	User requirements	7
2.3	Restrictions of use	8
2.4	Hazards in the event of intended use	8
3	Description of the RC310	12
3.1	Use	12
3.2	Operating Elements	13
3.3	Back of the RC310	15
3.4	Supplied equipment	16
4	Installation	17
4.1	Connection to the leak detector	17
4.2	Connecting radio transmitter and leak detector	18
4.3	Contact area for remote control	19
4.4	Inputs and outputs	19
4.5	Wall plug-in power supply	22
5	Operating the remote control	24
5.1	Starting up the RC310	24
5.2	Touch display operation	25
5.3	Main menu for configuration	27
5.3.1	Buttons with basic functions	28
5.3.2	Connecting / disconnecting (RC310WL)	29
5.3.3	Setting the trigger level	30

Content

5.3.4	Scale: scaling of the leak-rate curve	31
5.3.5	Sound volume	33
5.3.6	Recorder	34
5.3.7	Info: device information	37
5.3.8	Miscellaneous	38
5.3.8.1	Energy-saving options (RC310WL)	39
5.3.8.2	Set Time and Date	40
5.4	Operating the leak detector	41
5.5	Paging-Function	44
6	Maintenance tasks	45
6.1	Spare parts	45
6.2	Maintenance	45
6.3	Cleaning	46
7	Transport and disposal	47
7.1	Transporting	47
7.2	Disposal	47
8	Technical Data	48
8.1	Weight / dimensions	48
8.2	Characteristics	48
8.3	Environmental Conditions	49
8.4	Mains power for wall plug-in power supply	49
8.5	Wireless permits of RC310WL	49
9	Ordering information	50
10	Declaration of conformity	50
	Sales and Service	53

Operating instructions

1 Operating instructions

1.1 How to use this manual

- Please read this manual before commissioning the RC310 remote control.
- Keep the manual so that you can use it any time.
- Enclose the operating manual if the device is ever passed on to third parties.
- We reserve the right to alter the design or any data given in this manual.
- The illustrations are not binding.

1.2 Warning and danger symbols



Danger

Specifications for the prevention of bodily injuries of all kinds.



Warning

Specifications for the prevention of bodily injuries of all kinds.



Caution

Specifications for handling or use. Failure to observe these can lead to faults or minor material damage.

Operating instructions

1.3 Glossary

Menu

The menu enables the operator of the RC310 remote control to program the remote control to reflect their personal preferences. The menu has a tree structure.

"As delivered" status

Status of the Remote control RC310 and its configuration as delivered by the manufacturer.

RC310

Remote control RC310C (non-wireless) or RC310WL (wireless).

If this manual talks about general functions that apply to both versions, it is called only RC310.

Important safety instructions

2 Important safety instructions

Notice: Before commissioning the RC310 remote control, carefully read all safety instructions and make sure that you have properly understood them.

2.1 Intended use

The RC310 remote control has been designed to operate the Phoenix L300i/PhoenixXL300/L200 leak detectors.

The former wired remote control (catalog no. 252 002) can be replaced by the RC310.

The RC310 remote control must only be used for the purpose and within the context outlined in this manual.

Use only Oerlikon Leybold Vacuum accessories.

2.2 User requirements



The RC310 remote control must only be connected and operated by properly trained staff.

- The user must be familiar with the function of the device; he or she may only connect and operate the device after having read and understood the operating instructions.
- The user should consult local, state, and national agencies regarding specific requirements and regulations for devices with wireless transmission capability.
- In case of more questions regarding safety, operation and/or maintenance, the user should contact our nearest representative.

Important safety instructions

2.3 Restrictions of use



Danger

Danger in explosive environments.
The RC310 remote control may only be used away from explosive environments.

2.4 Hazards in the event of intended use



Danger

Possible interference with pacemakers.
The performance of pacemakers may be affected by the magnets on the back of the RC310 remote control. Observe the distances indicated by the pacemaker manufacturer.

When handling the remote control RC310:



Danger

Possible liquid crystal hazard.
If the display has broken, prevent liquid crystals from entering people's mouths or eyes. Use soap and water to wash hands, feet or clothes that have come into contact with liquid crystals.



Danger

Possible radiation hazard.
When the device is operated, a minimum distance of 7 cm between the remote control and people must be observed, with the exception of hands and wrists. Operation at a shorter distance than indicated above is not allowed. The RC310 remote control complies with part 15 of the FCC regulations⁽¹⁾.

⁽¹⁾ FCC: Federal Communications Commission, approval authority for communication devices (USA)

Important safety instructions

When handling the rechargeable battery and power supply:



Warning

Possible short circuit hazard.
In case of a short-circuit the battery might ignite, explode, leak battery fluid, or become overheated and cause burns.
Do not short-circuit the battery of the RC310WL remote control.



Warning

Possible explosion hazard.
The battery of the RC310WL remote control can explode if it is extreme overheated.
Do not set fire to the battery as it might explode.

Notice: Charging the battery at higher temperatures (> 40° C) decreases its service life.



Caution

Possible risk of damage.
The electronics of the RC310WL remote control may be damaged by an incorrect supply voltage.
Only use the accompanying wall plug-in power supply.

Environmental conditions of the remote control:

See also: 8 [Technical Data](#)



Caution

Possible risk of damage.
The RC310 remote control may be damaged in the open through moisture, strong insolation, or intense dust.
Only use the device inside buildings.

Important safety instructions



Caution

Possible risk of destruction.

Aggressive substances may damage the RC310 remote control beyond repair.

Avoid contact between the RC310 and bases, acids, and solvents, and do not expose it to extreme climatic conditions.



Caution

Possible risk of destruction.

The RC310 remote control may be damaged beyond repair by penetrating liquid.

Do not switch on the RC310 remote control if liquid has penetrated the unit.

Contact the Oerlikon Leybold Vacuum Service Department.

Storage and transportation of the remote control:



Caution

Possible risk of damage.

The RC310 remote control may be damaged by being stored in unfavourable conditions (too damp, too hot, too cold, too high above sea level) for months or years (see Technical specifications chapter 8).

If the RC310 remote control has been stored under such conditions, leave it switched off and contact the Oerlikon Leybold Vacuum Service Department.



Caution

Possible risk of damage.

The RC310 remote control may be damaged by improper transport.

Always transport the RC310 remote control in its original packaging.

Important safety instructions

Cleaning the remote control:

Notice: Clean the plastic housing of the RC310 remote control, the front foil and the display using a soft cloth, moistened with some water or soap suds. Do not use any solvents!

Operating the remote control:

Notice: The performance and reliability of the RC310 remote control can only be guaranteed if it is operated under the specified conditions of use (see Technical specifications chapter 8).

Notice: Any changes made to the RC310 remote control by the user may result in a violation of statutory provisions or may affect the EMC properties and safety of the product. Oerlikon Leybold Vacuum does not accept any liability for the consequences of such changes.

Description of the RC310

3 Description of the RC310

3.1 Use

The RC310WL and RC310C remote control has been designed to operate the Phoenix L300i/PhoenixXL300/L200 leak detectors.

The RC310 remote control is accommodated in a robust housing the shape of which enables ergonomic working. Magnets on the underside of the unit enable it to be attached to horizontal or vertical metal surfaces.

The wireless version RC310WL enables remote operation up to a distance of over 100 m, depending on the reception conditions. The integrated rechargeable battery enables over 8 hours of operation, depending on the battery level.

The RC310C version enables remote operation of the leak detector in question up to a distance of 28 meters using a connection cable.

The leak rates can be displayed in digits or in a curve on the 3.5" colour display.

Measured values of up to several hours of recording can be stored in an internal memory. The data storage interval is adjustable. The data can easily be downloaded to a USB stick via the integrated USB interface to save it.

An internal trigger can be set to provide a warning if the limit leak rates are exceeded. An optical warning is shown on the display and an acoustic warning signal with variable pitch proportionally to the leak rate is sounded on the integrated loudspeaker or the connected headphones.

Description of the RC310

3.2 Operating Elements

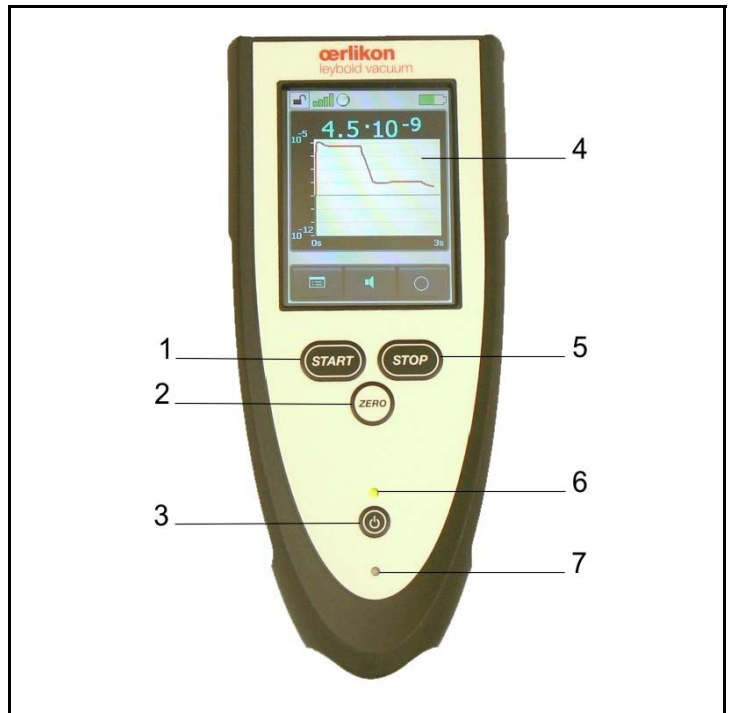


Fig. 1 Remote control RC310

Pos.	Description
1	START button
2	ZERO button
3	POWER button
4	Touch Display
5	STOP button
6	Operating LED
7	Charge LED

Description of the RC310

POWER button

RC310WL: Power switch. After pressing and briefly holding the switch, the operating LED lights up as confirmation and flashes when the remote control is ready for use.

Switch off by pressing and holding the button for more than 2 seconds.

RC310C: The remote control turns on when the cable is plugged in.

Pressing the Power button turns the display of the remote control on and off.

START button

Starts the leak test of the leak detector (see 5.4).

(See the Technical Manual of the leak detector, and observe the menu option "Control location").

STOP button

Ends leak testing (see 5.4).

ZERO button

Activates the ZERO function (see 5.4).

Touch Display

Shows measurements displayed numerically or as a curve, indicates statuses and offers operating interfaces.

Operating LED

Flashes during normal operation.

Charging LED (RC310WL)

Lights up while the battery is being charged.

Description of the RC310

3.3 Back of the RC310



Fig. 2 Back of the RC310 remote control

Pos. Description

1 Magnets for attaching the Remote control to metal surfaces.

2 M3 threaded bushings to attach holders

Risk of damage.

**Use screws that reach
max. 6 mm into the housing.**

3 Sound outlet aperture for the integrated loudspeaker.

4 Eye for attaching carrying devices
(e.g. wrist band, to be ordered separately).



Description of the RC310

3.4 Supplied equipment

Cat.-No. 252 014V01	Remote control RC310WL, wireless
Supplied equipment:	Remote control RC310WL
	Connection cable, 4 m
	Wall plug-in power supply (for integrated battery)
	Radio transmitter
	Connection cable for radio transmitter
	Operating instructions

Cat.-No. 252 013V01	Remote control RC310C, non-wireless
Supplied equipment:	Remote control RC310
	Connection cable, 4 m
	Operating instructions

Cat.-No. 252 015V01	Radio transmitter (for operating a second leak detector)
Supplied equipment:	Radio transmitter
	Connection cable
	Installation instructions

4 Installation

4.1 Connection to the leak detector

RC310WL (wireless)

The RC310WL remote control is connected to the leak detector by means of a wireless data connection.

Connect the leak detector to the radio transmitter for this purpose (see 4.2).

The RC310WL remote control is shipped set-up for connection with the supplied radio transmitter. This way, the connection is immediately established upon turning the unit on.

Alternatively, it can also be connected by means of the enclosed cable, similar to connecting the RC310C (non-wireless) remote control. In this case only one connection cable must be used with the RC310WL, not more.

RC310C (non-wireless)

The RC310C (non-wireless) remote control is connected to the leak detector by connecting the enclosed connection cable to the RJ 25 socket (see Fig. 5).

**Notice: The leak detector should have at least following software version:
PhoeniXL300 V2.4**

Installation

4.2 Connecting radio transmitter and leak detector

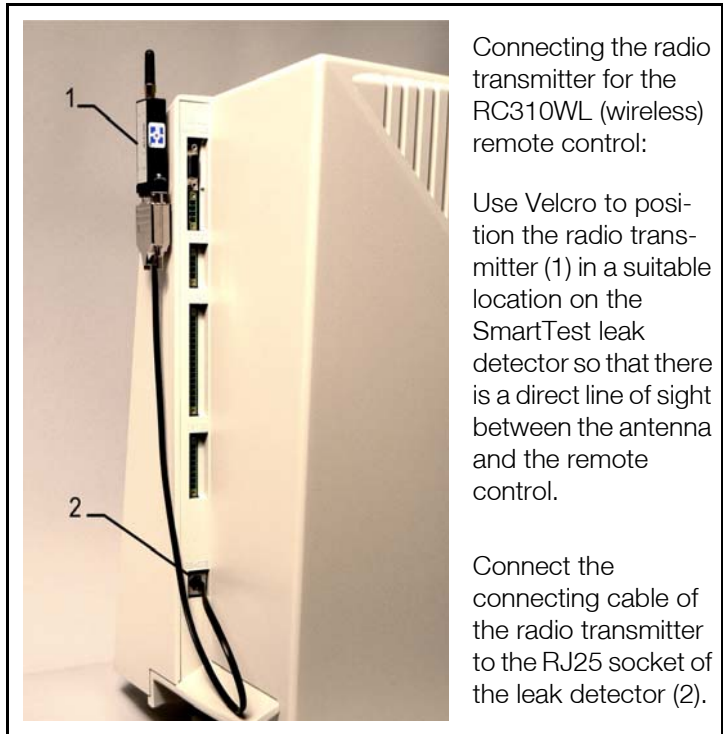


Fig. 3 Connecting radio transmitter and leak detector (RC310WL)

Notice: To extend the wireless operating range an extension cable also can be used to position the radio transmitter away from the leak detector, if reception is poor (e.g. at the ceiling of the room).

Notice: The operating range of the radio transmitter will be affected by metal objects in its near, avoid installing the antenna near such objects.

4.3 Contact area for remote control



Fig. 4 Contact area for RC310

4.4 Inputs and outputs

The inputs and outputs of the RC310 remote control have covers to prevent large dirt particles and moisture from penetrating.

Notice: The IP42 safety class can only be guaranteed if the covers are closed.

RJ25 socket

The RJ25 socket is located at the underside of the RC310 remote control and closed with a protective plug when delivered.

Installation



Fig. 5 RJ25 socket on the bottom of the remote control

Notice: Leave the protective plug in the socket when the cable is not connected.

Notice: We recommend only inserting and removing the RJ25 plug as often as is necessary for operation.

Connections on the side

Notice: Fold the protective strip upwards before connecting a plug.
(Not to be seen at the picture.)

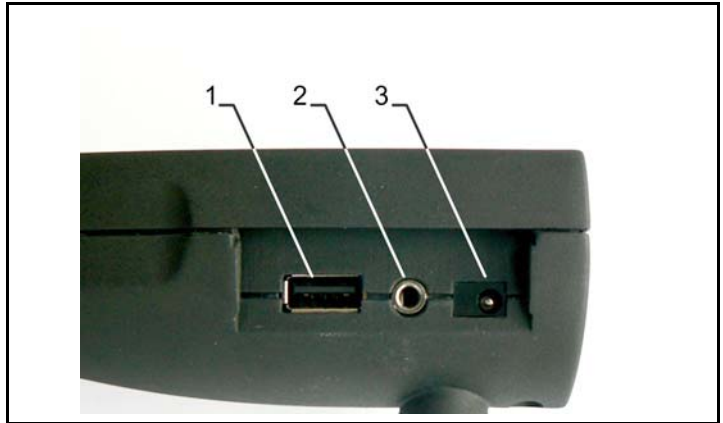


Fig. 6 Connections on the side (without cover)

Pos. Description

- 1 USB connection
Insert the USB stick (FAT formatted) to record data.
- 2 3.5 mm jack for stereo headphones
Standard stereo headphones with a 3.5 mm jack plug and $>2 \times 32$ Ohm impedance can be connected to the jack.
If the headphones are inserted, the volume of the integrated loudspeaker is automatically lowered.
- 3 Charging socket for the enclosed power supply.

Installation

4.5 Wall plug-in power supply



Danger

Possible risk of voltage hazard.

Do not open the external power supply of the RC310WL remote control. This might result in electric shock and/or injuries.



Danger

Risk due to incorrect power supply unit.

Using an external power supply which has not been approved by the manufacturer of the remote control may result in electric shock, damage and/or injuries.

Only use the power supply which was enclosed with the RC310WL remote control.



Fig. 7 Wall plug-in power supply of the RC310WL

Connect the plug of the power supply with the socket of the RC310WL to charge the integrated battery. (see Fig. 6, Pos. 3).

The RC310WL is always switched on while the power supply cable is connected and the battery is being charged, the Charging LED is lit.

Installation

Short pressing of the „POWER“ button reduces the backlight intensity, pressing it for a time longer than about 10 s performs a reset of the remote control.

The LED switches off as soon as the battery has fully charged.

The battery can be charged during operation.

You can use the enclosed power supply all over the world; adapt it with the interchangeable blades to the national design (Europe, North America, Japan, UK, China, Australia, see also [8.4](#)).

Operating the remote control

5 Operating the remote control

5.1 Starting up the RC310

After starting up, a start screen with a „Welcome“ message is shown on the touch display.

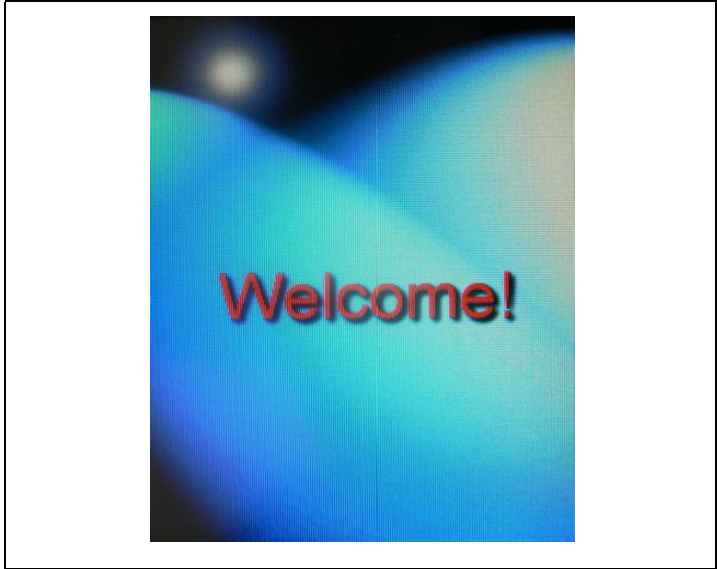


Fig. 8 Touch-Display of the RC310

The RC310WL wireless remote control searches for a receiver (radio transmitter) of a leak detector after starting up to connect with it.

If no devices with which a connection is possible were found in the area, a message „no data connection“ is displayed

The establishing of a data connection is described in chapter [5.3.2](#)

If a data connection with a leak detector is established the RC310WL shows the measuring screen on the display (see [Fig. 10](#)).

Operating the remote control

5.2 Touch display operation

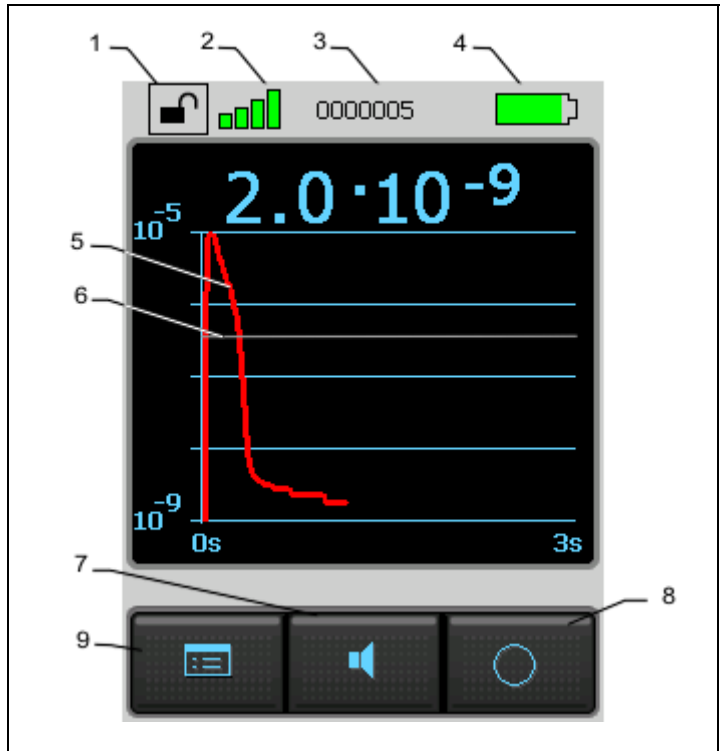


Fig. 9 Symbols and information on the display

Pos.	Description	Pos.	Description
1	Lock/unlock buttons	6	Trigger level
2	Wireless connection	7	Sound volume
3	Data set of the entry (current number)	8	Toggle display of measured values
4	Charging status display	9	Menu (access to the main menu)
5	Display of measured values		

Operating the remote control

Display functions

The touch display functions can be used by lightly touching the relevant symbol on the display with a finger or a blunt pen.

- "Lock buttons":
Touch and hold the symbol for more than 2 seconds to lock out the touch display and the hardware buttons START, STOP and ZERO operation.
The touch display then becomes dark.
Unlock: Touch and hold the symbol for more than 2 seconds.
- "Connection":
Shows whether the RC310WL is connected to the leak test device by a wireless link.
- "Data recording":
The number of the active data record is displayed.
- "Menu":
To access the main menu.
- "Sound volume":
Enables adjusting the volume of the loudspeaker in the leak detector or in the remote control.
- "Toggle display of measured values":
Enables to toggle between a large digital display of the values or a display of the progress over time (diagram).

Operating the remote control

5.3 Main menu for configuration

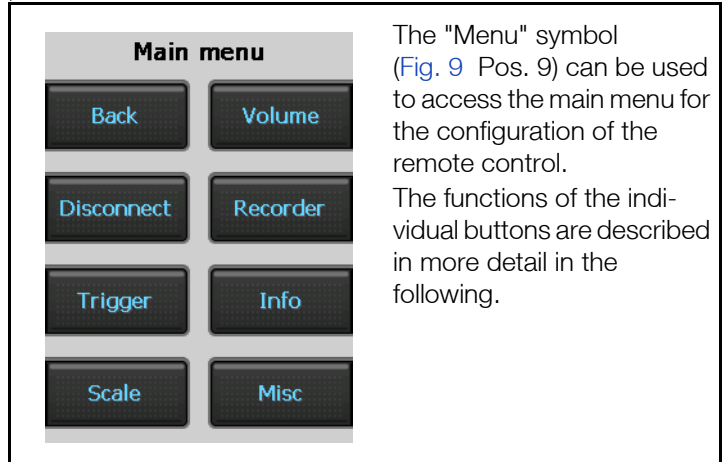


Fig. 10 Main menu on the touch display

Operating the remote control

5.3.1 Buttons with basic functions

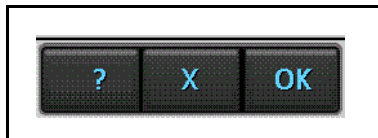


Fig. 11 Buttons with basic functions

If displayed, these buttons have the following functions:

"?"

opens a help window for the current display.

- Click on "?".
- Use the arrow keys to scroll through longer texts.
- Close the window with "OK".

"X"

closes the current page.

No changes made will be saved!

"OK"

closes the current page and saves the changed settings.

The remote control will now work with these settings.

Operating the remote control

5.3.2 Connecting / disconnecting (RC310WL)

The RC310WL remote control searches for a receiver (radio transmitter) of a leak detector after turning on or after pressing the "Connect" button.


If no connection is found in the area within 20 seconds, the search is aborted.

The button "Connect" is displayed in the main menu when there is no connection to a leak detector yet.

After establishing the connection, the function of the button changes to "Disconnect".

Close an existing connection with "Disconnect"; the main menu is displayed.

Connecting to a leak detector:




The screenshot shows a menu with two sections: "Connectable devices:" and "Other devices:". Under "Connectable devices:", one device is listed: "OLV_R06880",00A0962C9EBA. Under "Other devices:", two devices are listed: "COLC180",000D3AA16E78 and "HeikeJ105i",6C0E0D01C9FF. At the bottom of the screen are two buttons: "Connect" and "Cancel".

- Pressing the "Connect" button of the main menu starts the search.
- If devices with which a connection is possible were found in the area, they are displayed in the list "Connectable devices".
- Select the desired device and connect to it by pressing "Connect". The main menu opens automatically.
- Press "Cancel" to end the connection process and return to the main menu.

Fig. 12 Display of connectable devices for the connection

Operating the remote control

5.3.3 Setting the trigger level



The screenshot shows a menu titled "Trigger level:" with a numeric keypad below it. The display shows "2.4 · 10^-06". The digit "2" is highlighted in red. The keypad has buttons for digits 0-9, a decimal point, a left arrow, a right arrow, a question mark, an 'X' key, and an 'OK' key.

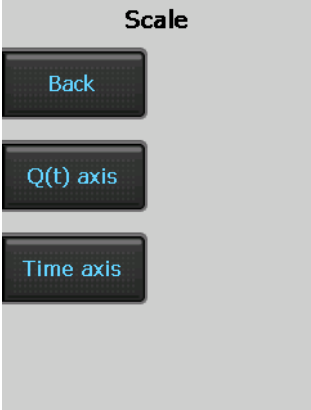
- The basic level and exponent of the trigger level of the remote control are set here.
- The individual input fields can be selected with "<" and ">".
- The selected field is marked red and can be changed.
- Use the numeric keypad to enter the desired digit.
- After entering a digit, the mark changes to the next field.
- Confirm the set level with "OK".

Fig. 13 Trigger level menu

Notice: The trigger level set here does **NOT** correspond to the trigger lever set on the leak detector but only applies to the acoustic alarm signal of the RC310 remote control.

Operating the remote control

5.3.4 Scale: scaling of the leak-rate curve




The image shows a menu titled "Scale" with three buttons: "Back", "Q(t) axis", and "Time axis".

Scaling options of the leak-rate curve and the bargraph:

- Q(t) axis: Opens a submenu with a choice between linear and logarithmic display of the measured values and the automatically scaling (see Fig. 15).
- Time axis: Opens a submenu for the scaling of the time axis (see Fig. 16).

Fig. 14 Scale menu



The image shows a submenu titled "Scale" with the following options:

- Linear or logarithmic: "Lin." (selected) and "Log."
- Decades: A dropdown menu showing "5" with up and down arrow buttons.
- Auto scale: "Off" and "On" (selected)
- Bottom row: "?", "X", and "OK" buttons.

Scaling options of the leak-rate curve and the bargraph:

- Lin / Log: Toggle between linear and logarithmic.
- For logarithmic scaling: Select number of decades between 1 and 15 (with the arrow keys).
- Automatic scaling: Can be turned on or off.
- Confirm the set level with "OK".

The selected values are displayed in the centre.

Fig. 15 Scale submenu

Operating the remote control

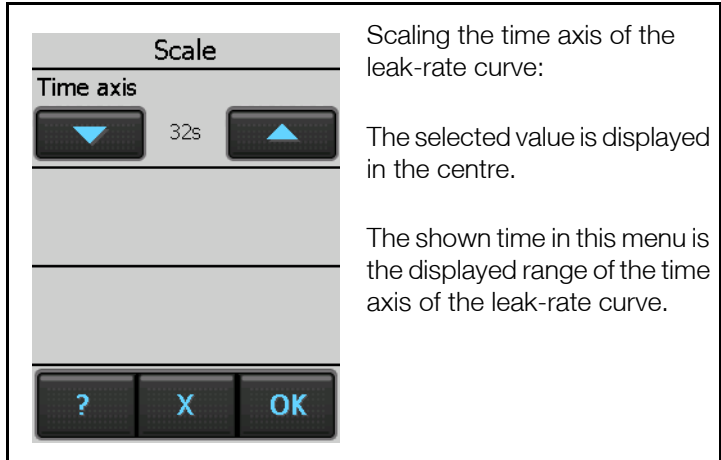


Fig. 16 Menu scaling of the time axis

Operating the remote control

5.3.5 Sound volume

In this menu you can set the volume of the acoustic signals at the leak detector and at the remote control using the "Arrow up" and "Arrow down" buttons.

The volume of the loudspeaker of the remote control and the connected leak detector can be adjusted within 15 volume levels.

Both devices play an example tone at the volume corresponding to the set levels.

Volume		
Leak detector		
▼	▲	
Remote control		
▼	▲	
15		
?	X	OK

Setting the volume:

- Set the volume of the leak detector and/or the remote control with the arrow keys.
- Level 0: the volume is turned off
- Confirm the set level with "OK".

The volume of the leak detector is overwritten by the remote control.

Fig. 17 Volume menu



Danger

Possible risk of hearing damage.

The hearing may be damaged by the alarm signal.

If a high volume is set, only briefly expose the hearing to the alarm signal or use ear protection.

Operating the remote control

5.3.6 Recorder

Recording measurements, copying or deleting recorded data.

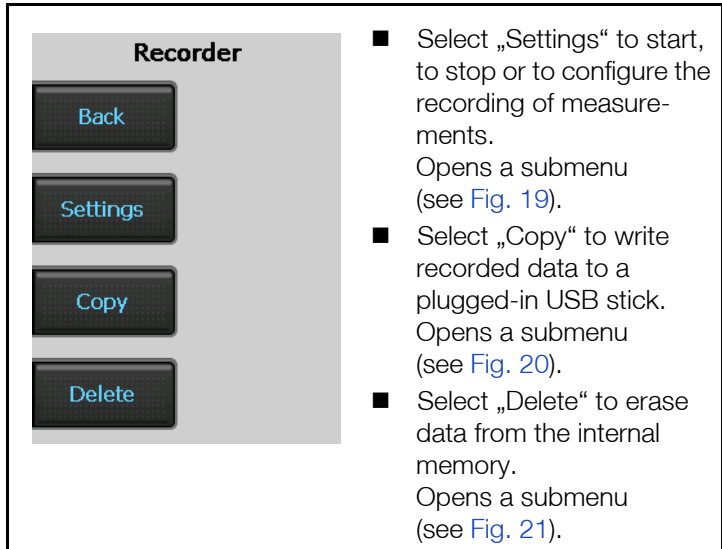



Fig. 18 Recorder menu

Operating the remote control

Preparing and configuring of recording.



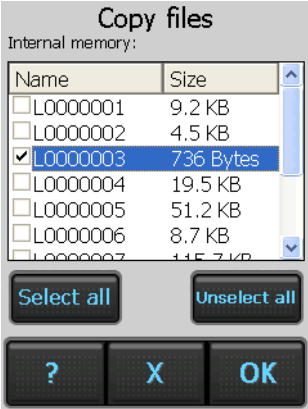
- Select „Auto record On“ to prepare the recording. The recording to a new data file will start if the measurement mode will be activated. If the measurement mode is stopped again the recording quits and the data file is closed.
- Select „Auto record Off“ if no recording should be done.
- „Interval“ is the duration between the storage of two measured values to the data file.
- „Memory location“ selects the storage to the USB stick or the internal memory.

Fig. 19 Recorder submenu settings

Notice: Set correct values of date and time to identify the appropriate data files after recording. (See [5.3.8.2](#))

Operating the remote control

Recorded data files can be copied to a plugged-in USB stick.

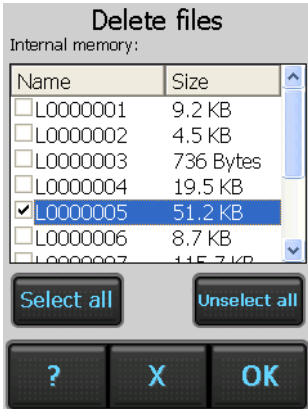


Name	Size
<input type="checkbox"/> L0000001	9.2 KB
<input type="checkbox"/> L0000002	4.5 KB
<input checked="" type="checkbox"/> L0000003	736 Bytes
<input type="checkbox"/> L0000004	19.5 KB
<input type="checkbox"/> L0000005	51.2 KB
<input type="checkbox"/> L0000006	8.7 KB
<input type="checkbox"/> L0000007	115.7 KB

- Plug-in the USB stick to the RC310.
- Select the files by clicking on it or use the „Select all“ button.
- Press „OK“ to copy the selected files to the USB stick.
- Apply the shown message with „OK“.
- The USB stick can be unplugged.

Fig. 20 Recorder submenu Copy files

Recorded data files can be deleted from the internal memory.



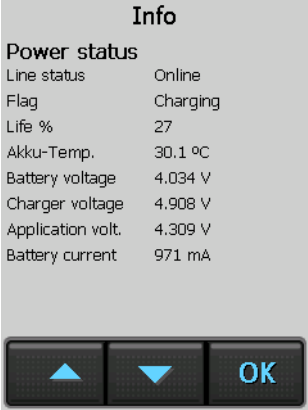
Name	Size
<input type="checkbox"/> L0000001	9.2 KB
<input type="checkbox"/> L0000002	4.5 KB
<input type="checkbox"/> L0000003	736 Bytes
<input type="checkbox"/> L0000004	19.5 KB
<input checked="" type="checkbox"/> L0000005	51.2 KB
<input type="checkbox"/> L0000006	8.7 KB
<input type="checkbox"/> L0000007	115.7 KB

- Select the files by clicking on it or use the „Select all“ button.
- Press „OK“ to delete the selected files
- Apply the shown message with „OK“ if the selected files should be deleted.
- A message confirms that the files are deleted, apply with „OK“.

Fig. 21 Recorder submenu Delete files

Operating the remote control

5.3.7 Info: device information



Info	
Power status	
Line status	Online
Flag	Charging
Life %	27
Akku-Temp.	30.1 °C
Battery voltage	4.034 V
Charger voltage	4.908 V
Application volt.	4.309 V
Battery current	971 mA

"Info" provides among others information about the power level of the battery, the wireless connection, and gives information on the current version on 4 information pages.

Detailed information:

- Select the desired information with the arrow keys.
- Return to the main menu with "OK".

Fig. 22 Info menu

Operating the remote control

5.3.8 Miscellaneous

In the "Miscellaneous" menu, you can set the language, make software updates, set the time and the date, and select energy-saving options.

The menu point Service offers expanded functions and test options via an access PIN.

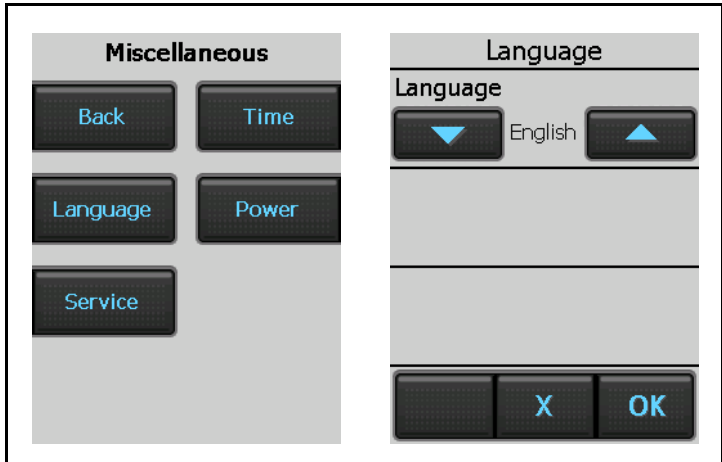


Fig. 23 Miscellaneous menu, submenu Language

Language selection:

- By clicking on "Language", the sub-menu is opened for selecting the language.
- The current language is displayed in the centre. Available are: German, English, French, Spanish, Russian and Chinese.
- Select the desired language with the arrow keys and confirm with "OK".

Energy-saving options, time and date:

see the following chapter.

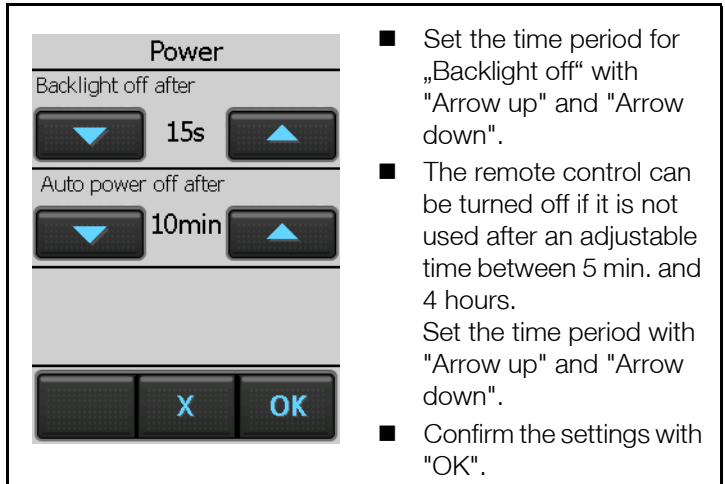
Service:

The service menu is accessible via a PIN.

Operating the remote control

5.3.8.1 Energy-saving options (RC310WL)

The background illumination can be automatically decreased after a time between 15 s and 10 min („Backlight off“). This lowers the energy consumption and the operating time of the battery is extended.



- Set the time period for „Backlight off“ with "Arrow up" and "Arrow down".
- The remote control can be turned off if it is not used after an adjustable time between 5 min. and 4 hours. Set the time period with "Arrow up" and "Arrow down".
- Confirm the settings with "OK".

Fig. 24 Energy menu

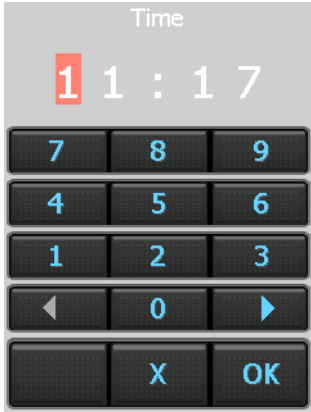
Resetting the decreased background illumination:

By tapping on the touch display, the regular background illumination is turned on again.

Operating the remote control

5.3.8.2 Set Time and Date

Setting the time:



- The fields can be selected individually with "<" and ">".
- The field selected for change is marked red.
- Make changes via the numeric keypad.
- After changing a digit, the red mark automatically changes to the next field.
- Confirm the set time with "OK".
- The date can be set in the same way.

Fig. 25 Time menu

Notice: The wired remote control RC310C can not store date and time if the connecting cable is removed or the leak detector is turned off.

Operating the remote control

5.4 Operating the leak detector

The "START/STOP" and "ZERO" buttons on the remote control can be used to operate the leak detector in the same manner as on the actual leak detector.

Notice: You must observe the operating instructions of the leak detector in any case!

If the remote control displays a menu page of the configuration, you can change to the status display of the leak detector with "Back".

The leak detector can be in the modes „Running up“ or „Stand-By“:

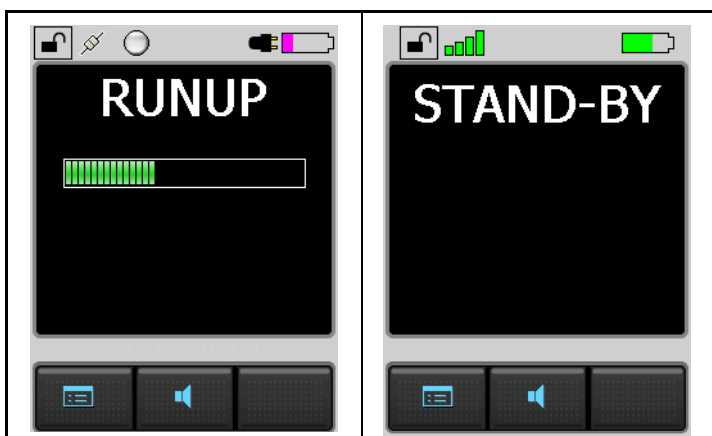


Fig. 26 „Running up“ and „Stand-By“ status displays

START button

Pressing the START button for the first time activates the leak detector so that it starts measuring.

If the START button is pressed again while measuring, the maximum leak rate display (holding function) is activated. This displays the maximum leak rate which has occurred since „START“.

Press „START“ again to re-initialise the holding function. (See the Operating instructions of the leak test device used.)

Operating the remote control

After starting up, the leak test device can be in „Evacuating“ (Pumping down) or „Measure“ mode:

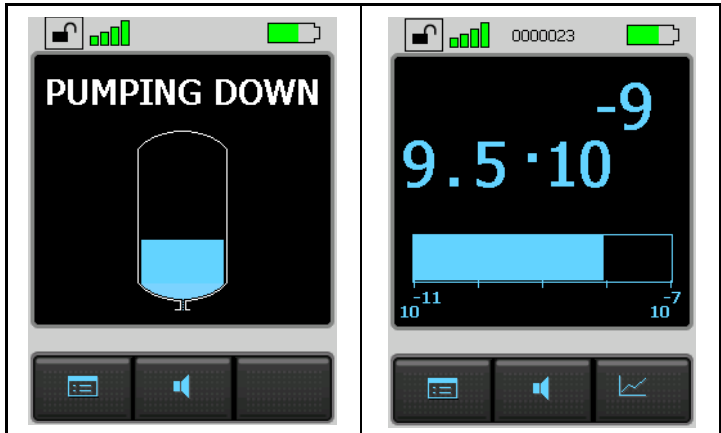


Fig. 27 „Evacuating“ and „Measure“ status displays (numerical and bar graph)

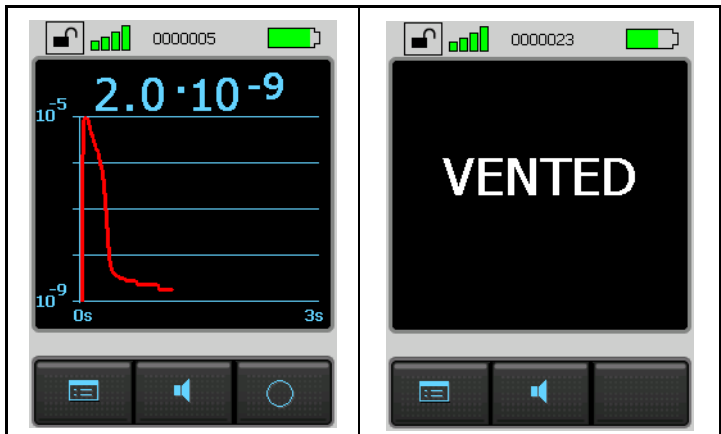


Fig. 28 „Measure“ (curve) and „Vented“ status displays

Operating the remote control

STOP button

Pressing the STOP button interrupts the measurements. The inlet is vented if the button is pressed and held. (See the Operating Instructions of the leak test device used.)

ZERO button

Pressing the ZERO button activates the background suppression in the leak detector. (See the operating instructions of the leak detector.)

Notice: The „Calibration“ function can only be activated on the leak detector, not with the remote control.



Fig. 29 „Calibration“ status display

Operating the remote control

5.5 Paging-Function

With the paging function the remote control RC310WL can easily be located, if it is searched sometimes.

Open the following menu at the leak detector:

Settings - Miscellaneous - Paging function

Pressing the button „On“ lets an acoustic signal sound at the remote control, the button „Off“ quits this signal.

Maintenance tasks

6 Maintenance tasks

6.1 Spare parts

Description	SP No.
Replacement battery RC310WL, 3.7 V, 5800 mAh	E 200003316
Housing shell set RC310 including keypad foil and fixture	EK 200003315
Wall plug-in power supply RC310WL	E 200003317

6.2 Maintenance

The RC310 remote control requires any maintenance. Only the battery of the RC310WL needs replacing if its storage capacity becomes less.



Possible short circuit hazard.

The battery might ignite, explode, leak battery fluid, or become overheated and cause burns due to short circuit. Do not short-circuit the battery of the RC310WL remote control.



Possible explosion hazard.

Do not set fire to the battery of the RC310WL remote control.

Notice: Only use batteries approved by Oerlikon Leybold Vacuum. Do not use any damaged batteries.

Notice: The battery is a wearing part and subject to a six-month warranty period.

Maintenance tasks

Replacing the battery (RC310WL)

See also

„Installation manual rechargeable battery RC310WL“, document number 300338099_000_A1.

- Loosen the 6 screws and remove the lower shell.
- Carefully pull the plug out of the circuit board socket.
- Release the battery bracket and remove the battery.
- Install the new battery in reverse order.
- Dispose of the old battery in accordance with the applicable regulations.

6.3 Cleaning

Notice: Do not use any solvents.
Clean the plastic housing of the device, the front foil and the display using a soft cloth, moistened with some water or soap suds.

7 Transport and disposal

7.1 Transporting



Possible risk of damage.

The RC310 remote control may be damaged by improper transport.

Always transport the RC310 remote control in its original packaging.

7.2 Disposal

Dispose of the device in accordance with the applicable statutory provisions on the disposal of electronic devices, especially also regarding the installed rechargeable battery.

Technical Data

8 Technical Data

8.1 Weight / dimensions

Dimensions (L x W x H)	210 x 90 x 46 mm
Weight RC310C (non-wireless)	ca. 0,4 kg
Weight RC310WL (wireless)	ca. 0,5 kg
Type of protection	IP 42

8.2 Characteristics

Audio alarm at 1 m distance	70 db(A) max.
Headphone jack stereo 3.5 mm	>2 x 32 Ohm
Range of wireless transmission	>100 m in free field
HF output power	+6dBm (4mW)
Frequency of wireless transmission	2,4 GHz
Internal memory capacity	64 MB, 32 MB of which is available for recording data
Battery operation time (RC1000WL)	>8 hours (depending on battery level)
Display	TFT-Touch 1/4 VGA / 3,5" 240 x 320 px, max. error 4 px
RC310WL charging voltage from power supply	24 V DC, max. 0,7 A
RC310C supply voltage from leak detector	24 V DC, max. 0,7 A

8.3 Environmental Conditions

Only for use within buildings.	EN 61010
Permissible ambient temperature (during operation)	5 to +40 ° C
Permissible storage temperature	-10 to +60 ° C
Maximum relative humidity	80% to 31°C, linear decreasing 50% at 40°C
Max. permissible height above sea level (during operation)	2000 m

8.4 Mains power for wall plug-in power supply

Mains voltages and frequencies	100 -250 V 50/60 Hz
Interchangeable blades of mains plug	Europe, North America, Japan, UK, China, Australia
Power consumption	max.30 VA

8.5 Wireless permits of RC310WL

CE, FCC, IC, TELEC, MIC, MII

Ordering information

9 Ordering information

Description	Cat. No.
RC310C remote control, non-wireless	252 014V01
RC310WL remote control, wireless	252 013V01
Accessories:	
10 m extension cable	14022
Wireless transmitter (to operate a second leak detector)	252 015V01

10 Declaration of conformity

At the next two pages the declarations of conformity are to be found regarding the wireless remote control RC310WL and the non-wireless version RC310C.

EC Declaration of Conformity

We, Oerlikon Leybold Vacuum GmbH, herewith declare that the products defined below meet the basic requirements regarding safety and health of the relevant EEC directives by design, type and the versions which are brought in to circulation by us.

In case of any products changes made without our approval, this declaration will be void.

Designation of the products: Remote control for leak test equipment

Model: RC310WL remote control for leak detector

Part-No.: 252014V01

The products meet the requirements of the following directives:

- Directive on Radio Equipment and Telecommunications Terminal Equipment (1999/5/EC)
- Directive on Low Voltage (2006/95/EC)
- Directive on Electromagnetic Compatibility (2004/108/EC)

Applied harmonized standards:

- ETSI EN 300 328 V1.7.1
- EN 50371 :
- EN 60950-1 :
- EN 301 489 - 1 :
- EN 301 489 - 17 :
- EN 61000-6-4 : Part EN 55022 Class B
- EN 61000-6-2 : Parts EN 61000-4-2
EN 61000-4-3

Documentation Officer:

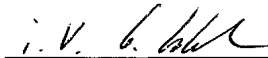
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In case of any products changes made without our approval, this declaration will be void.

Designation of the products: Remote control for leak test equipment
Model: RC310C remote control for leak detector
Part-No.: 252013V01

The products meet the requirements of the following directives:

- Directive on Electromagnetic Compatibility (2004/108/EC)

Applied harmonized standards:

- EN 61326-1
- EN 61000-6-4 : Part EN 55011 Class B
- EN 61000-6-2 : Parts EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-6

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