



Operating Instructions

ALMEMO® WLAN module

ZA 1739-WL

English
V1.2
08.06.2022

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2 Explanation of symbols

 Notice

 Result

Back Text displayed within a software

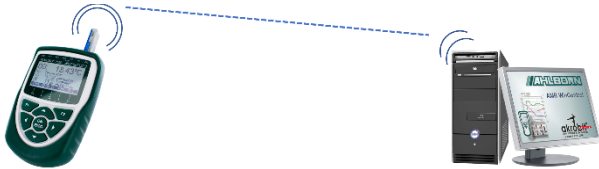
3 Product

The ALMEMO® WLAN module is used to establish a wireless connection between the ALMEMO® measuring device and a PC and one or more ALMEMO® measuring devices. In doing so, the connection can be established either via the local WLAN network of the ALMEMO® WLAN module (use as access point) or via an external WLAN network (e.g. company network) (use as client).

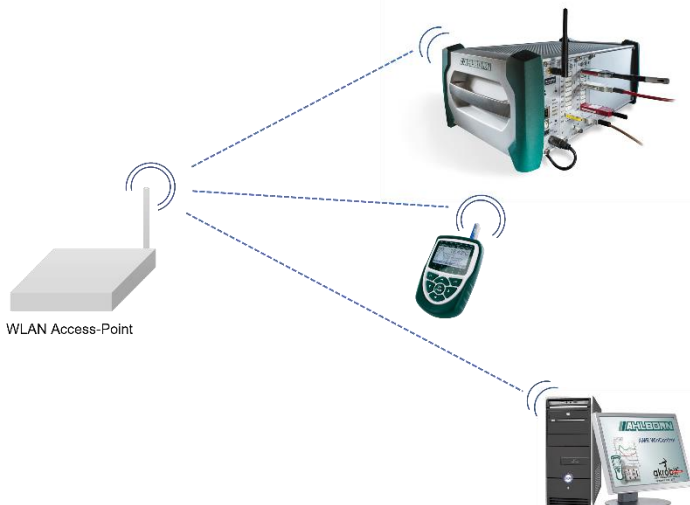
The connection to a PC, tablet or smartphone can be used to configure the ALMEMO® measuring device or to read out measured values during or after a measurement.

Examples for networking with the ALMEMO® WLAN module

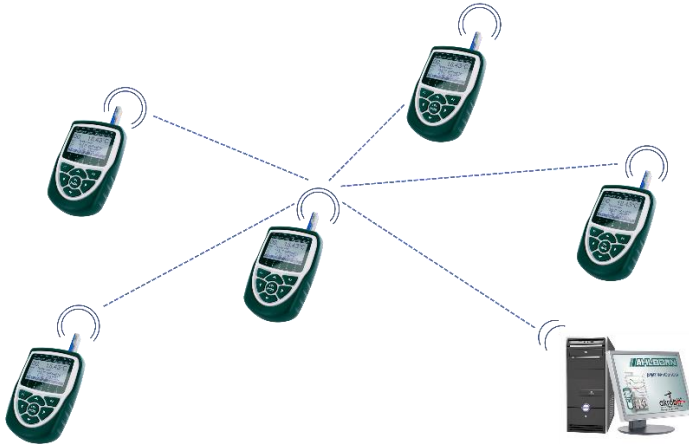
Direct connection between ALMEMO® measuring device and PC



Connection to a WLAN network (e.g. company network)



ALMEMO® WLAN module as WLAN access point for several devices



4 Setting the ALMEMO® WLAN module

4.1 Opening the configuration page of the ALMEMO® WLAN module

1. Connect a PC, tablet or smartphone to the WLAN network spanned by the ALMEMO® WLAN module.



The WLAN SSID of the WLAN network spanned by the ALMEMO® WLAN module is xPico240_[last 6 digits of the MAC address]. The MAC address is printed on the ALMEMO® WLAN module. The default password is ZA1739WL.

2. Open an Internet browser on your PC, tablet or smartphone.
 3. To open the configuration page of the ALMEMO® WLAN module, type the IP address 192.168.0.1 into the address line of the browser.
 4. Click ENTER.
 5. Enter the username `admin` and the password `AMR`.
- The configuration page of the ALMEMO® WLAN module opens.

4.2 Changing the network key of the ALMEMO® WLAN module

1. Open the configuration page of the ALMEMO® WLAN module (see section 4.1 Opening the configuration page of the ALMEMO® WLAN module).
2. Click on the menu `Network`.
3. Make sure that the button `ap0` is selected.
4. Click on `Link`.
5. Click on `Configuration`.
6. Type the new network key in the line `Passphrase`.
7. Click `Submit`.

- The connection to the configuration page is interrupted because the connection to the WLAN network of the ALMEMO® WLAN module is interrupted.
- The new network key must be used to reconnect to the WLAN network of the ALMEMO® WLAN module.

4.3 Changing the password of the ALMEMO® WLAN module configuration page

1. Open the configuration page of the ALMEMO® WLAN module (see chapter 4.1 Opening the configuration page of the ALMEMO® WLAN module)
 2. Click on the menu `User`.
 3. Click on `admin` (or on the name of another user if you have set other users).
 4. Click in the field next to `Password:` and type the new password.
 5. Click `Submit`.
- The new password must be used to reopen the configuration page.

4.4 Deleting a configured WLAN connection in ALMEMO® WLAN module

1. Open the configuration page of the ALMEMO® WLAN module (see chapter 4.1 Opening the configuration page of the ALMEMO® WLAN module).
2. Click on the menu `WLAN Profiles`.
3. Click the checkbox in the row of the WLAN network whose access data you want to delete from the ALMEMO® WLAN module so that a check mark is placed.
4. Click `Apply`.
5. Click `Submit`.

4.5 Setting the static IP address for the ALMEMO® WLAN module

1. Open the configuration page of the ALMEMO® WLAN module (see section 4.1 Opening the configuration page of the ALMEMO® WLAN module).
2. Click on the menu Network.
3. Click on wlan0.
4. Click on Interface.
5. Click on Configuration.
6. Type the desired static IP address into the line IP Address.



If you want to connect the ALMEMO® WLAN module to a WLAN network, make sure that the static IP address matches the address range of the WLAN network.

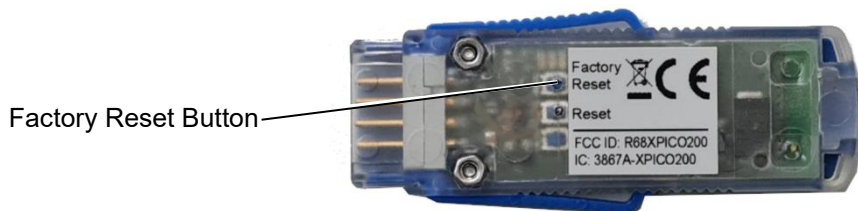
7. Click Submit.
- The static IP address is set for the ALMEMO® WLAN module.
 - The configuration page of the ALMEMO® WLAN module can still be opened as described in chapter 4.1 Opening the configuration page of the ALMEMO® WLAN module.

4.6 Resetting the ALMEMO® WLAN module to factory settings

4.6.1 Factory reset using the factory reset button

1. Plug the ALMEMO® WLAN module into the A1 socket of an ALMEMO® measuring device.
- The green and orange LEDs of the ALMEMO® WLAN module light up.
2. If necessary, remove the ALMEMO® plug of the power adapter from the DC socket to gain access to the factory reset button.

3. Insert a pointed object (such as a paper clip) into the hole in the housing of the ALMEMO® WLAN module next to which Factory Reset is printed to press the Factory Reset button for 5 seconds.



- The orange LED of the ALMEMO® WLAN module first flashes and then no longer lights up.
- The orange LED of the ALMEMO® WLAN module flashes. The reset is performed.
- The orange LED of the ALMEMO® WLAN module lights up. The reset is complete.
- All settings of the ALMEMO® WLAN module are reset to the factory settings.

4.6.2 Factory reset via configuration page


1. Open the configuration page of the ALMEMO® WLAN module (see chapter 4.1 Connecting the ALMEMO® measuring device to the WLAN network via the ALMEMO® WLAN module).
 2. Click on the menu Device.
 3. Click on Factory Defaults.
 4. In the new line above the table click on Okay.
- All settings of the ALMEMO® WLAN module are reset to the factory defaults.
 - To open the configuration page, you must reconnect to the WLAN network.

5 Connecting the ALMEMO® measuring device to a PC via ALMEMO® WLAN module


Connecting ALMEMO® WLAN module to ALMEMO® measuring device

1. Plug the ALMEMO® WLAN module into the A1 socket of an ALMEMO® measuring device.
2. Switch on the ALMEMO® measuring device.
 - The green LED of the ALMEMO® WLAN module lights up and the orange LED flashes. The ALMEMO® WLAN module spans a WLAN network.
 - The green and orange LEDs of the ALMEMO® WLAN module light up.

Connecting a PC to the WLAN network

3. Connect a PC to the WLAN network set up by the ALMEMO® WLAN module.
-  The WLAN SSID of the WLAN network spanned by the ALMEMO® WLAN module is xPico240_[last 6 digits of MAC address]. The MAC address is printed on the ALMEMO® WLAN module.
- The default network key is ZA1739WL .

Establishing connection with ALMEMO® measuring device

4. Select the IP address 192.168.0.1 and the port 10001 in the software with which you want to address the ALMEMO® measuring device.
-  The baud rate in the ALMEMO® WLAN module is preset to 115 200 baud. Set this baud rate also at the ALMEMO® measuring device and do not change it.

6 Connecting ALMEMO® measuring device to WLAN network via ALMEMO® WLAN module

Connecting ALMEMO® WLAN module to ALMEMO® measuring device

1. Plug the ALMEMO® WLAN module into the A1 socket of an ALMEMO® measuring device.
2. Switch on the ALMEMO® measuring device.
 - The green LED of the ALMEMO® WLAN module lights up and the orange LED flashes. The ALMEMO® WLAN module spans a WLAN network.
 - The green and orange LEDs of the ALMEMO® WLAN module light up.

Open the configuration page of the ALMEMO® WLAN module.

3. Connect a PC, tablet or smartphone to the WLAN network set up by the ALMEMO® WLAN module.



The WLAN SSID of the WLAN network spanned by the ALMEMO® WLAN module is xPico240_[last 6 digits of the MAC address]. The MAC address is printed on the ALMEMO® WLAN module.

The default password is ZA1739WL.

4. Open an Internet browser on your PC, tablet or smartphone.
5. To open the configuration page of the ALMEMO® WLAN module, type the IP address 192.168.0.1 into the address line of the browser.
6. Press the ENTER key.
7. Enter the user name admin and the password AMR.
 - The configuration page of the ALMEMO® WLAN module opens.

Connecting the ALMEMO® WLAN module to the WLAN network

8. Click on the menu QuickConnect.
 - The available WLAN networks in the surrounding area of the ALMEMO® WLAN module are scanned and then listed in a table.
9. Click on the WLAN SSID of the WLAN network to which you want to connect the ALMEMO® WLAN module.
10. If the WLAN network is secured, enter the WLAN network key in the field next to Password:

6 Connecting ALMEMO® measuring device to WLAN network via ALMEMO® WLAN module

11. Click Apply.


12. Click Submit.

13. Click OK.

- The ALMEMO® WLAN module is connected as a client in the WLAN network. The IP address that the ALMEMO® WLAN module has received from the DHCP server of the WLAN network is written in the menu Status in the section Interface wlan0 in the line IP Address.



If a static IP address is set in the ALMEMO® WLAN module, this IP address is displayed in the menu Status in the section Interface wlan0 in the line IP Address (see chapter 4.5 Setting a static IP address for the ALMEMO® WLAN module). If necessary, talk to your system administrator about this.

- This IP address is used to contact the ALMEMO® measuring device in the WLAN network.
- This IP address can be used to open the configuration page of the ALMEMO® WLAN module via the WLAN network.
- The configuration page can also be opened via the IP address 192.168.0.1 if the PC, tablet or smartphone is connected to the WLAN network of the ALMEMO® WLAN module (xPico240_[last 6 digits of the MAC address]).
- All WLAN networks stored in the ALMEMO® WLAN module are displayed in the menu WLAN Profiles. The currently connected WLAN network is displayed with the icon .

Establishing connection with ALMEMO® measuring device

14. Connect the PC with which you want to address the ALMEMO® measuring device to the WLAN network to which the ALMEMO® WLAN module is connected.
15. In the software that you want to use to address the ALMEMO® measuring device, select the IP address that the DHCP server of the WLAN network




6 Connecting ALMEMO® measuring device to WLAN network via ALMEMO® WLAN module

has assigned to the ALMEMO® WLAN module or the static IP address of the ALMEMO® WLAN module, and port 10001.



The baud rate in the ALMEMO® WLAN module is preset to 115 200 baud. Set this baud rate also at the ALMEMO® measuring device and do not change it.

7 Using the ALMEMO® WLAN module as a WLAN access point

-  Up to five WLAN clients can be connected to the ALMEMO® WLAN module.
 -  If the ALMEMO® WLAN module is used as an access point, a connection can be established between a PC and the ALMEMO® WLAN module without an additional WLAN network.
 -  If you want to connect several ALMEMO® WLAN modules without an additional WLAN network, define one ALMEMO® WLAN module as the master WLAN module. For differentiation, this ALMEMO® WLAN module is called access point module in the following.
- ! To use the ALMEMO® WLAN module as an access point, no WLAN network must be stored in the ALMEMO® WLAN module (see chapter 4.4 Delete configured WLAN connection in ALMEMO® WLAN module).

7.1 Connecting the ALMEMO® WLAN module to the ALMEMO® measuring device

1. Plug the ALMEMO® WLAN module into the A1 socket of an ALMEMO® measuring device.
2. Switch on the ALMEMO® measuring device.
 - The green LED of the ALMEMO® WLAN module lights up and the orange LED flashes. The ALMEMO® WLAN module spans a WLAN network.
 - The green and orange LEDs of the ALMEMO® WLAN module light up.

7.2 Connecting the PC to the ALMEMO® WLAN module

See Chapter 5 Connecting the ALMEMO® measuring device to a PC via the ALMEMO® WLAN module.

- The ALMEMO® measuring device to which the WLAN module is connected has the IP address 192.168.0.1 and can be addressed via port 10001.

7.3 Connecting tablet or smartphone with ALMEMO® WLAN module

1. Connect a tablet or smartphone to the WLAN network set up by the ALMEMO® WLAN module.



The WLAN SSID of the WLAN network spanned by the ALMEMO® WLAN module is xPico240_[last 6 digits of the MAC address]. The MAC address is printed on the ALMEMO® WLAN module.

The default password is ZA1739WL.

- The tablet or smartphone receives an IP address from the ALMEMO® WLAN module and is connected to the WLAN network of the ALMEMO® WLAN module.

7.4 Connecting ALMEMO® WLAN module with access point module

Preparing for networking

1. Set an ALMEMO® WLAN module as the master WLAN module (referred to below as the access point module).
2. Make a note of the last six digits of the MAC address of the access point module. The MAC address is printed on the ALMEMO® WLAN module.
3. Plug an ALMEMO® WLAN module (referred to as client module in the following) onto the ALMEMO® measuring device that is to be connected to the access point as a client and switch the ALMEMO® measuring device on.


Connect another ALMEMO® WLAN module to the access point module.


4. Connect a PC, tablet or smartphone to the WLAN network set up by the client module.




The WLAN SSID of the WLAN network spanned by the client module is xPico240_[last 6 digits of MAC address]. The MAC address is printed on the ALMEMO® WLAN module.

The default password is ZA1739WL.

5. Open an Internet browser on your PC, tablet or smartphone.
 6. To open the configuration page of the client module, in the address line of the browser type the IP address 192.168.0.1 .
 7. Press the ENTER key.
 8. Enter the user name admin and the password AMR.
 - The configuration page of the client module opens.
 9. Click on the menu QuickConnect.
 - The available WLAN networks in the surrounding area of the client module are scanned and then listed in a table.
 10. Click on the WLAN SSID of the access point module, xPico240_[last 6 digits of the access point module's MAC address].
 11. Enter the WLAN network key ZA1739WL in the field next to Password:
 12. Click Apply.
 13. Click Submit.
 14. Click OK.
 - The client module is connected to the WLAN network of the access point module. The IP address that the client module received from the DHCP server of the access point module is in the menu Status in the section Interface wlan0 in the line IP Address.
-  If a static IP address is set in the ALMEMO® WLAN module, this IP address is displayed in the menu Status in the section Interface wlan0 in the line IP Address (see Chapter 4.5 Setting a static IP address for the ALMEMO® WLAN module). If necessary, talk to your system administrator about this.
- This IP address is used to contact the ALMEMO® measuring device in the WLAN network.
 - This IP address can be used to open the configuration page of the ALMEMO® WLAN module via the WLAN network spanned by the access point module.

- The configuration page of the client module can also be opened via the IP address 192.168.0.1 if the PC, tablet or smartphone is connected to the WLAN network of the client module (xPico240_[last 6 digits of the MAC address]).
- All WLAN networks stored in the client module are displayed in the menu WLAN Profiles. The currently connected WLAN network is displayed with the icon  .

Connecting the ALMEMO® measuring device via the WLAN network of the access point module

15. Connect the PC with which you want to address the ALMEMO® measuring device to the WLAN network of the access point module.
 16. In the software with which you want to address the ALMEMO® measuring device, select the IP address that the DHCP server of the access point module has assigned to the client module, or the static IP address of the ALMEMO® WLAN module, and port 10001.
-  The baud rate in the ALMEMO® WLAN module is preset to 115 200 baud. Set this baud rate also at the ALMEMO® measuring device and do not change it.

8 Technical data

WLAN-Features:	Soft Access Point + Client Up to 5 simultaneous client connections Connection to any WLAN network as client connection via WLAN QuickConnect.
Configuration:	Configuration is carried out via the integrated web manager in the standard browser of a WLAN-capable end device of the customer (e.g. laptop, tablet, smartphone).
Standards:	IEEE 802.11 a/b/g/d/h/i up to 54 Mbps; 802.11 n (1x1) up to 150 Mbps IEEE 802.11 r fast roaming
Frequency band:	Dual Band 2.4 GHz and 5 GHz, Channels 1-13, UNII-1, 2a, 2e and 3
Encryption:	ES/CCMP and TKIP encryption, WPA/WPA2 Personal WPA2 Enterprise (EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST) SSLv3/TLS 1.2 with PKI and X.509 Certificates (up to 4096-bit Keys) AES Algorithm, 256-bit, 192-bit, 128-bit
Protocol:	DHCP Client, Server (Soft Access Point), HTTP Server/Client IPv4, TCP/IP, UDP/IP, ARP, ICMP, Auto-IP, DNS SNMP v1/v2 IPv6
TCP port:	10001 (default)
Baud rate:	115200 Baud

Power supply:	Via ALMEMO® device
Current consumption:	approx. 60 mA with 12 V supply approx. 75 mA with 9 V supply approx. 100 mA with 6 V supply
Dimensions:	Module built into ALMEMO® connector 61 mm x 25 mm x 8 mm (L x W x D)
ALMEMO® Baud rate:	115,2 kBaud (fixed)
Operation conditions:	Operating: -10 °C to +50 °C
Type approval:	USA (FCC Part 15), Canada (IC RSS), EU (RED), Japan (MIC), China (SRRC), AU/NZS

9 Certificate of conformity



Doc-Nr. CE_ZA1739WL_001_20220502_R1.doc

EU-Konformitätserklärung

EU-Declaration of Conformity

nach/according to EN 17050-1

Hersteller: Ahlborn Mess- und Regelungstechnik GmbH
Manufacturer:
Adresse: Eichenfeldstrasse 1
Address: 83607 Holzkirchen
Germany

bestätigt, dass das Produkt
declares, that the product

Produktbezeichnung:
Product Name: ALMEMO® WLAN-Modul
Produkt Typ:
Product Type: ZA1739WL
Produkt Optionen:
Product Options:

den nachfolgenden Europäischen Anforderungen und Richtlinien entspricht und folglich das CE
Zeichen trägt.
conforms to following European Product Specifications and Regulations and carries the CE
marking accordingly.

2014/30/EU EMV Richtlinie
EMC Directive
2014/53/EU RED Richtlinie
RED Directive
Angewandte harmonisierte Normen EMV (EMC)
und technische Spezifikationen: EN 61326-2-3: 2013 Tabelle 2
Applied harmonised standards and
technical specifications:

Holzkirchen, 16.05.2022
Ort, Datum der Ausstellung
Place, date of issue

Christian Schmidt /
Entwicklungsleitung

Benedikt Kroll /
Qualitätsmanagement

Besides greatest diligence,
the possibility of incorrect information cannot be excluded!
Subject to technical modifications without prior notice!

You will find the present and further Operating Instruction,
as well as the ALMEMO® Manual
on **www.ahlborn.com** under the tab
SERVICE on **DOWNLOADS**

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