Brief Operating Instructions **Liquiline CM42B**

Two-wire transmitter Device for DIN rail mounting Measurement with digital Memosens sensors





About this document Liquiline CM42B

1 About this document

1.1 Safety information

Structure of information	Meaning
▲ DANGER Causes (/consequences) If necessary, Consequences of non- compliance (if applicable) Corrective action	This symbol alerts you to a dangerous situation. Failure to avoid the dangerous situation will result in a fatal or serious injury.
Causes (/consequences) If necessary, Consequences of non- compliance (if applicable) ► Corrective action	This symbol alerts you to a dangerous situation. Failure to avoid the dangerous situation can result in a fatal or serious injury.
Causes (/consequences) If necessary, Consequences of non- compliance (if applicable) Corrective action	This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or more serious injuries.
NOTICE Cause/situation If necessary, Consequences of non- compliance (if applicable) Action/note	This symbol alerts you to situations which may result in damage to property.

1.2 Symbols

Additional information, tips

✓ Permitted

▼ Recommended

Not permitted or not recommended

Reference to device documentation

Reference to page
Reference to graphic

Result of an individual step

1.3 Symbols on the device

↑—■ Reference to device documentation

Do not dispose of products bearing this marking as unsorted municipal waste. Instead, return them to the manufacturer for disposal under the applicable conditions.

Liquiline CM42B About this document

1.4 Documentation

In addition to these Brief Operating Instructions , the following manuals are available on the product pages on our website:

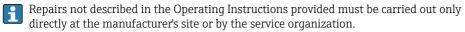
- Operating Instructions, BA02381C
 - Device description
 - Commissioning
 - Operation
 - Device-specific diagnostics and troubleshooting
 - Maintenance
 - Repair and spare parts
 - Accessories
 - Technical data
- Security Manual, SD03215C

Basic safety instructions Liquiline CM42B

2 Basic safety instructions

2.1 Requirements for the personnel

- Installation, commissioning, operation and maintenance of the measuring system may be carried out only by specially trained technical personnel.
- The technical personnel must be authorized by the plant operator to carry out the specified activities.
- The electrical connection may be performed only by an electrical technician.
- The technical personnel must have read and understood these Operating Instructions and must follow the instructions contained therein.
- Faults at the measuring point may only be rectified by authorized and specially trained personnel.



2.2 Intended use

2.2.1 Areas of application

The device is a two-wire transmitter for connecting digital sensors with Memosens technology or analog sensors (configurable). It features a 4 to 20 mA current output with optional HART communication and can be operated via an on-site display or optionally using a smartphone or other mobile devices via Bluetooth.

The device is designed for use in the following industries:

- Chemical industry
- Life sciences
- Water and wastewater
- Food and beverage production
- Power stations
- Other industrial applications

2.2.2 Non-designated use

Any use other than that intended puts the safety of people and the measuring system at risk. Therefore, any other use is not permitted.

The manufacturer is not liable for harm caused by improper or unintended use.

2.3 Safety at the workplace

The operator is responsible for ensuring compliance with the following safety regulations:

- Installation guidelines
- Local standards and regulations
- Regulations for explosion protection

Liquiline CM42B Basic safety instructions

Electromagnetic compatibility

 The product has been tested for electromagnetic compatibility in accordance with the applicable international standards for industrial applications.

 The electromagnetic compatibility indicated applies only to a product that has been connected in accordance with these Operating Instructions.

2.4 Operational safety

Before commissioning the entire measuring point:

- 1. Verify that all connections are correct.
- 2. Ensure that electrical cables and hose connections are undamaged.

Procedure for damaged products:

- 1. Do not operate damaged products, and protect them against unintentional operation.
- 2. Label damaged products as defective.

During operation:

► If faults cannot be rectified, take products out of service and protect them against unintentional operation.

2.5 Product safety

The product is designed to meet state-of-the-art safety requirements, has been tested, and left the factory in a condition in which it is safe to operate. The relevant regulations and international standards have been observed.

2.6 IT security

We only provide a warranty if the device is installed and used as described in the Operating Instructions and the Security Manual. The device is equipped with security mechanisms to protect it against any inadvertent changes to the device settings.

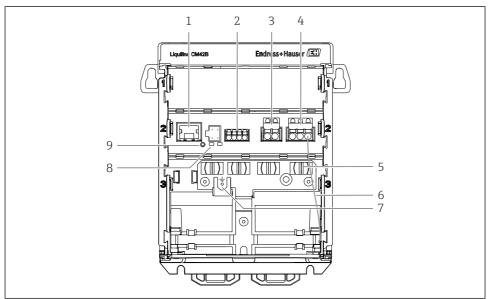
IT security measures in line with operators' security standards and designed to provide additional protection for the device and device data transfer must be implemented by the operators themselves. For further information, see the Security Manual.

Product description Liquiline CM42B

3 Product description

3.1 Product design

3.1.1 **Device**

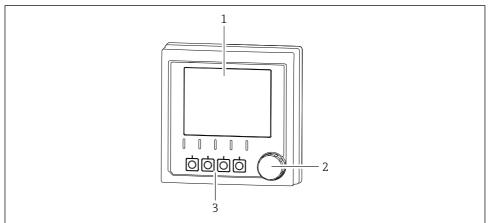


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- 1 RJ50 socket for display cable
- 2 Memosens input
- 3 Current output 1: 4 to 20 mA/optional HART, passive
- 4 Current output 2 (optional): 4 to 20 mA, passive
- 5 Cable mounting rail
- 6 *Internal ground cable (wired at the factory)*
- 7 Connection for potential equalization or functional earth, connection established via cable lug 6.35 mm
- 8 Status LEDs
- 9 Reset button

Liquiline CM42B Product description

3.1.2 Display (optional)



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■ 1 Display (optional)

- 1 Display
- 2 Navigator
- 3 Soft keys, assignment depends on menu

3.1.3 Measuring parameters

The transmitter is designed for digital Memosens sensors.

The following measurement parameters are:

- pH/ORP
- Conductivity, measured conductively
- Conductivity, measured inductively
- Dissolved oxygen, measured amperometrically
- Dissolved oxygen, measured optically

The measurement parameters and sensor type can be switched via the user interface.

For a list of compatible sensors, see the Operating Instructions, 'Accessories' section.

4 Incoming acceptance and product identification

4.1 Incoming acceptance

- 1. Verify that the packaging is undamaged.
 - Notify the supplier of any damage to the packaging.
 Keep the damaged packaging until the issue has been resolved.
- 2. Verify that the contents are undamaged.
 - Notify the supplier of any damage to the delivery contents. Keep the damaged goods until the issue has been resolved.
- 3. Check that the delivery is complete and nothing is missing.
 - ► Compare the shipping documents with your order.
- 4. Pack the product for storage and transportation in such a way that it is protected against impact and moisture.
 - The original packaging offers the best protection.

 Make sure to comply with the permitted ambient conditions.

If you have any questions, please contact your supplier or your local Sales Center.

4.2 Product identification

4.2.1 Nameplate

The following information on the device can be found on the nameplate:

- Manufacturer identification
- Product designation
- Serial number
- Ambient conditions
- Input and output values
- Safety information and warnings
- Certificate information
- ► Compare the information on the nameplate with the order.

4.2.2 Identifying the product

Manufacturer address

Endress+Hauser Conducta GmbH+Co. KG Dieselstraße 24 70839 Gerlingen Germany

Product page

www.endress.com/CM42B

Interpreting the order code

The order code and serial number of your product can be found in the following locations:

- On the nameplate
- In the delivery papers
- On the internal label

Obtaining information on the product

- 1. Scan the QR code on the product.
- 2. Open the URL in a web browser.
- 3. Click the product overview.
 - A new window opens. Here you fill information pertaining to your device, including the product documentation.

Obtaining information on the product (if there is no option for scanning the QR code)

- 1. Go to www.endress.com.
- 2. Page search (magnifying glass symbol): Enter valid serial number.
- 3. Search (magnifying glass).
 - ► The product structure is displayed in a popup window.
- 4. Click the product overview.
 - ► A new window opens. Here you fill information pertaining to your device, including the product documentation.



4.3 Scope of delivery

The scope of delivery includes:

- Liquiline CM42B
- Brief Operating Instructions
- Safety instructions for hazardous area (for Ex versions)
- ► If you have any queries:

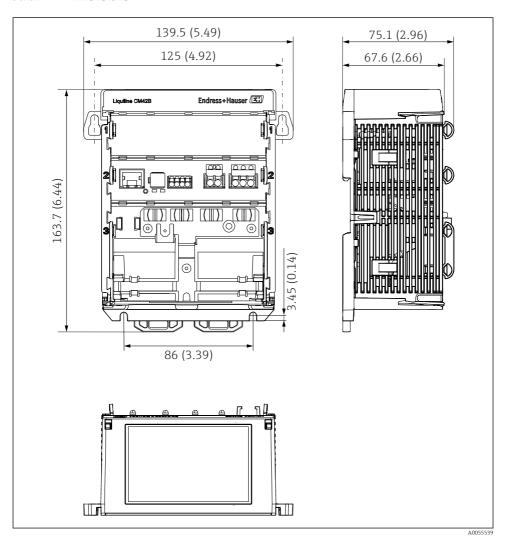
Please contact your supplier or local sales center.

Mounting Liquiline CM42B

5 Mounting

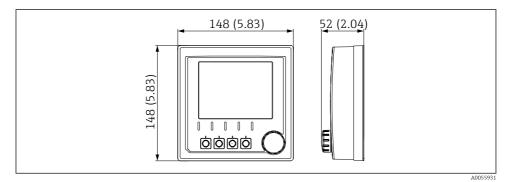
5.1 Mounting requirements

5.1.1 Dimensions



■ 2 Dimensions of device in mm (inch)

Liquiline CM42B Mounting



■ 3 Dimensions of display in mm (inch)

5.1.2 Pollution degree

The device is designed for operation in a pollution degree 2 environment.

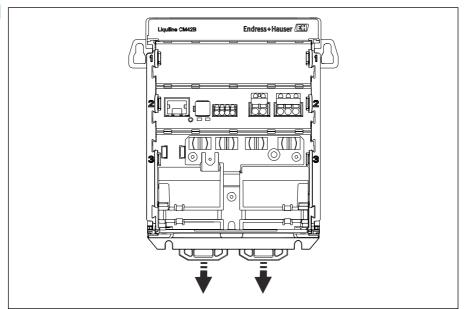
► Install the device in an appropriate housing.

Mounting Liquiline CM42B

5.2 Mounting the device

5.2.1 Mounting on DIN rail as per IEC 60715



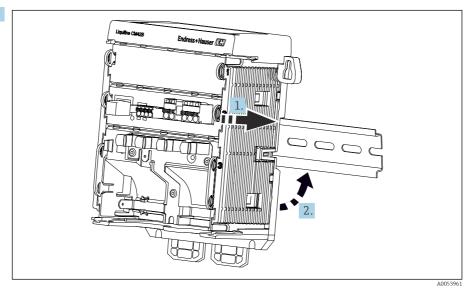


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When delivered, the securing clips are locked to secure the DIN rail. Unlock the securing clips by pulling them downwards.

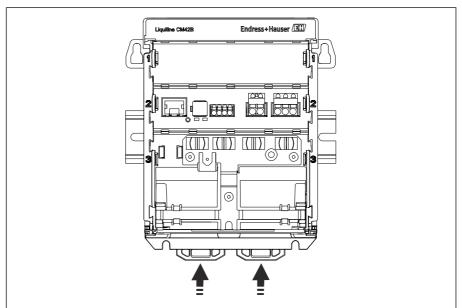
Liquiline CM42B Mounting





Attach the device from the top to the DIN rail (1) and secure it by pressing down (2).





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Slide the securing clips upwards until they click, thereby securing the device to the DIN rail.

Mounting Liquiline CM42B

NOTICE

Condensation on the device

Potential device failure

- ► The device complies with the IP20 degree of protection. It is designed only for environments with non-condensing moisture.
- ► Comply with the specified ambient conditions, e.g. by installing the device in an appropriate protective enclosure.

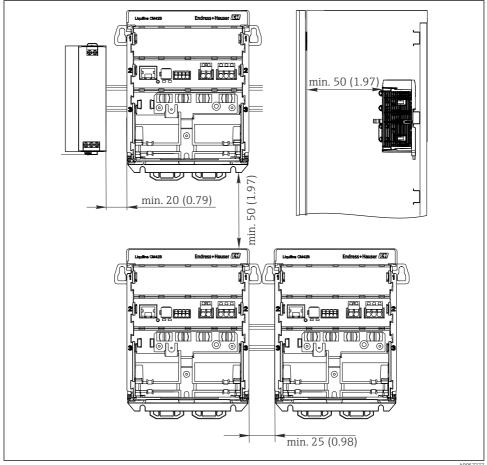
NOTICE

Incorrect mounting location in the cabinet, spacing regulations not observed

Possible malfunctions as a result of heat buildup and interference from neighboring devices!

- ▶ Do not position the device directly above sources of heat.
- ► The components are designed for convection-based cooling. Avoid heat buildup. Ensure openings are not covered, e.g. by cables.
- ► Observe the specified distances to other devices.
- ▶ Physically separate the device from frequency converters and high-voltage devices.

Liquiline CM42B Mounting



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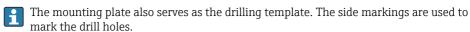
₩ 4 Minimum clearance in mm (in)

Minimum clearances required:

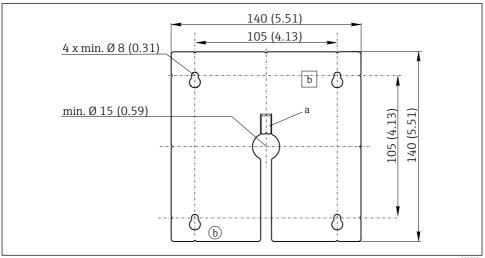
- Distance at the side, to other devices and control cabinet wall: at least 20 mm (0.79 inch)
- Distance above and below the device and depth distance (to control cabinet door or other devices installed there):

at least 50 mm (1.97 inch)

5.2.2 Mounting the display (optional)



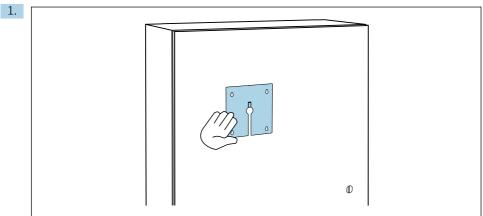
Mounting Liquiline CM42B



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- **■** 5 *Mounting plate of external display, dimensions in mm (in)*
- a Retaining tab
- *b* Production-related recesses, no function for the user

Mounting the display on the door of the cabinet

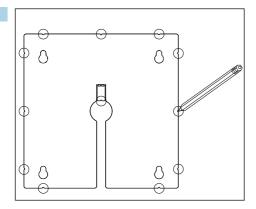


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Hold the mounting plate from the outside against the door of the control cabinet. Select the position at which the display is to be mounted.

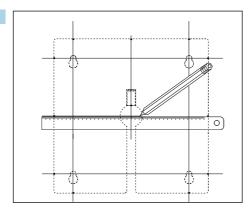
Liquiline CM42B Mounting

2.



Make all the markings.

3.

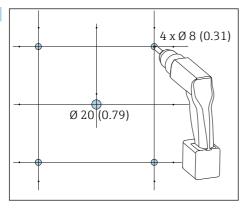


Draw lines to interconnect all the marks.

The points of intersection of the lines mark the position of the 5 necessary boreholes.

Mounting Liquiline CM42B





■ 6 Diameter of boreholes in mm (in)

Drill the holes. \rightarrow \blacksquare 5, \triangleq 16

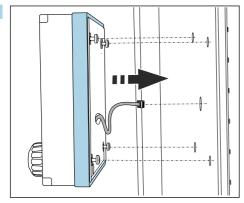
A CAUTION

Sharp-edged, non-deburred boreholes

Risk of injury, display cable may get damaged!

► Trim and deburr all boreholes. In particular, make sure that the middle borehole for the display cable is properly deburred.



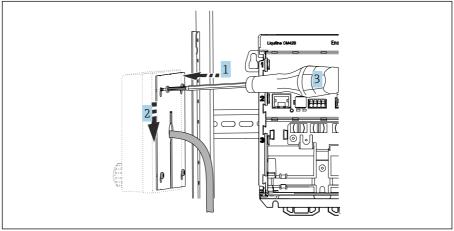


Pull the display cable through the central borehole.

6. Insert the display with the Torx screws unscrewed (but still in place) through the holes from the outside. Ensure that the rubber frame (seal, highlighted blue) does not become damaged and is properly positioned on the surface of the door.

Liquiline CM42B Mounting





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Place the mounting plate on the inside over the screws (1), slide it down (2) and tighten the screws (3).

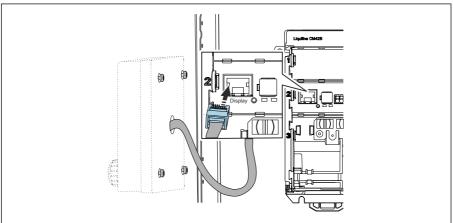
Mounting Liquiline CM42B

8. NOTICE

Incorrect installation

Damage and malfunctions possible.

► Lay cables in such a way that they do not get squashed e.g. when closing the cabinet door.

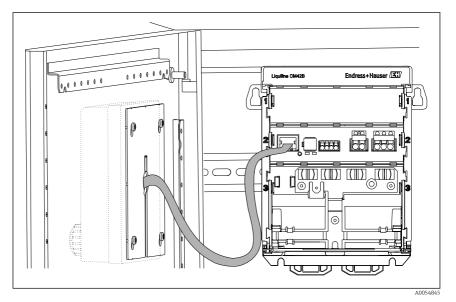


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Connect the display cable to the RJ50 socket of the transmitter. The RJ50 socket is labeled **Display**.

► The display is now mounted and ready to use.

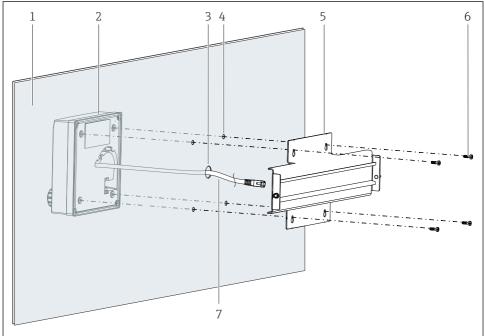
Liquiline CM42B Mounting



■ 7 Mounted display

Mounting Liquiline CM42B

5.2.3 Mounting on panel (incl. display)



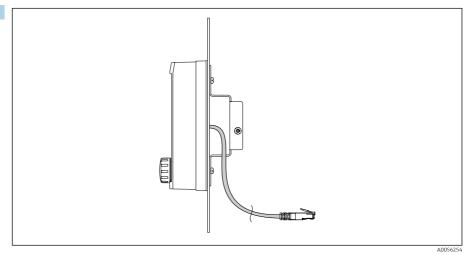
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■ 8 Mounting display and DIN rail

- 1 Panel/mounting surface
- 2 Display
- 3 Borehole for display cable
- 4 Boreholes for screws
- 5 DIN rail
- 6 Screws
- 7 Display cable

Liquiline CM42B Mounting

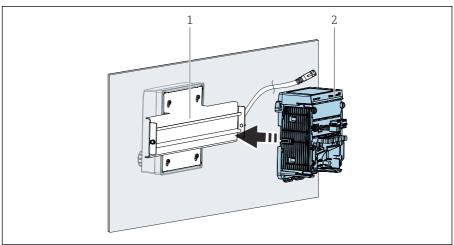




■ 9 Layout of the display cable

Route the display cable as shown in the illustration.





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- 1 DIN rail
- 2 Transmitter

Secure the transmitter (2) to the DIN rail (1) as described in .

5.3 Post-mounting check

1. Following installation, check all devices (transmitter, display) for damage.

Electrical connection Liquiline CM42B

2. Verify that all securing clips have been fully snapped into place and that the device is securely positioned on the DIN rail.

- 3. Verify that the specified installation clearances have been observed.
- 4. Ensure that the temperature limits are observed at the mounting location.

6 Electrical connection

6.1 Connecting requirements

6.1.1 Supply voltage

 Connect the device to a Safety Extra Low Voltage (SELV) or Protective Extra Low Voltage (PELV) system only.

6.1.2 Power units

▶ Use power units according to IEC 60558-2-16, IEC 62368-1 Class ES1 or IEC 61010-1.

6.1.3 Electrostatic discharge (ESD)

NOTICE

Electrostatic discharge (ESD)

Risk of damaging the electronic components

► Take personal protective measures to avoid ESD, such as discharging beforehand at PE or permanent grounding with a wrist strap, for example.

6.1.4 Unconnected cable cores

NOTICE

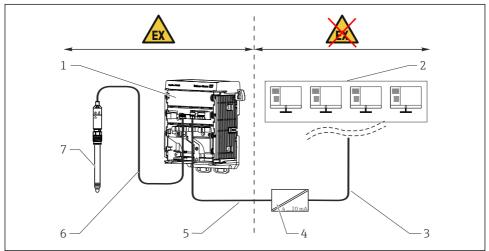
Unconnected cable cores can lead to malfunctions or damage to the device if they come into contact with connections, terminals and other conductive parts.

► Ensure that unconnected cable cores are not in contact with connections, terminals and other conductive parts of the device.

Liquiline CM42B Electrical connection

6.1.5 Installation in hazardous areas

Installation in hazardous area Ex ia Ga



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- 1 Hazardous area version of Liquiline CM42B
- 2 Control station
- 3 4 to 20 mA signal line/optional HART
- 4 Ex ia active barrier
- 5 Supply and signal circuit Ex ia (4 to 20 mA)
- 6 Intrinsically safe sensor circuit Ex ia
- 7 Hazardous area version of sensor

6.2 Connecting the device

6.2.1 Connecting the cable shield

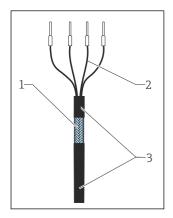
The descriptions of each of the connections specify which cables must be shielded.

Only use terminated original cables where possible.

Clamping range of grounding clamps: 4 to 11 mm (0.16 to 0.43 in)

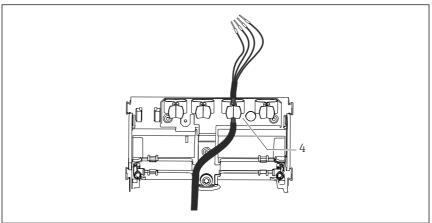
Cable sample (does not necessarily correspond to the original cable supplied)

Electrical connection Liquiline CM42B



■ 10 Terminated cable

- 1 Outer shield (exposed)
- 2 Cable cores with ferrules
- 3 Cable sheath (insulation)
- 1. Route the cable in such a way that the exposed cable shield fits into one of the grounding clamps and the cable cores can be easily routed as far as the terminal plugs.
- 2. Connect the cable to the grounding clamp.
- 3. Clamp the cable into place.



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■ 11 Cable into grounding clamp

4 Grounding clamp

The cable shield is grounded by the grounding clamp. $^{1)}$

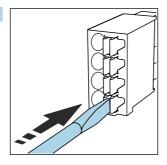
1) Refer to the instructions provided in the "Ensuring the degree of protection" section.

Liquiline CM42B Electrical connection

4. Connect cable cores as per the wiring diagram.

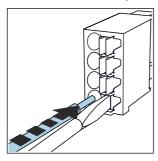
6.2.2 Cable terminals





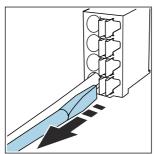
Press the screwdriver against the clip (opens the terminal).





Insert the cable until the limit stop.



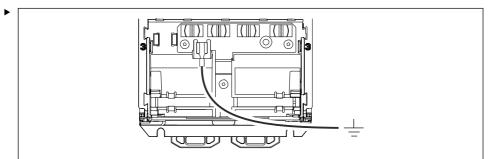


Remove the screwdriver (closes the terminal).

4. After connecting, check all the cable cores to ensure they are secure.

Electrical connection Liquiline CM42B

6.2.3 Connecting the potential equalization



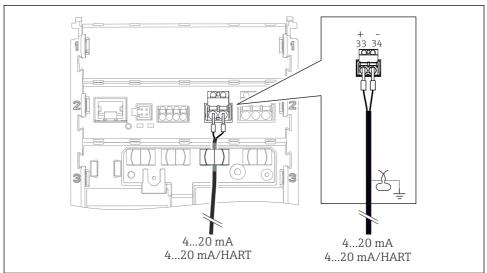
A0055873

Attach the potential equalization connection to the earth or potential equalization system with a separate line. A 6.35~mm cable socket is used for connection

6.2.4 Connecting the power supply and signal circuit

► Connect the current outputs with shielded two-wire cables as described in the following illustrations.

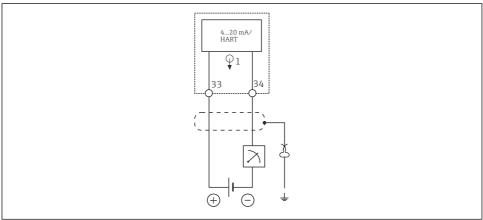
The type of shield connection depends on the anticipated interference influence. Grounding one side of the shield is sufficient to suppress electrical fields. To suppress interference due to an alternating magnetic field, the shield must be earthed on both sides.



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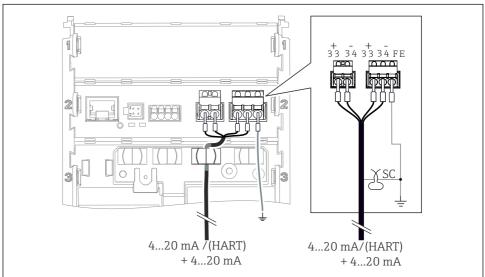
■ 12 Connection of 1 current output

Liquiline CM42B Electrical connection



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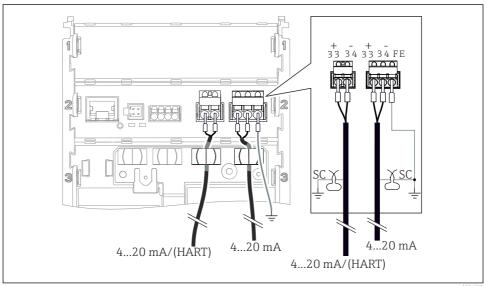
■ 13 Wiring diagram: 1 current output



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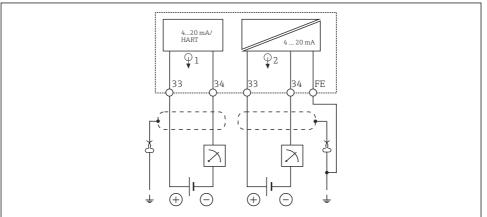
■ 14 Connection of 2 current outputs via 1 cable

Electrical connection Liquiline CM42B



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Connection of 2 current outputs via 2 cables **■** 15



A0054915

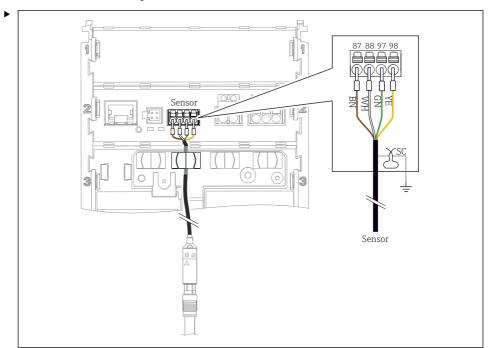
№ 16 Wiring diagram: 2 current outputs

6.2.5 Connecting the sensor

Memosens sensors

Liquiline CM42B Electrical connection

Connecting sensors with Memosens plug-in head (via Memosens cable) and sensors with a fixed cable and Memosens protocol



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■ 17 Connecting Memosens sensors

Connect the sensor cable as shown in the illustration.

6.3 Ensuring the degree of protection

Only the mechanical and electrical connections which are described in these instructions, and which are necessary for the required intended use, may be established on the device delivered.

► Exercise care when carrying out the work.

Individual types of protection permitted for this product (impermeability (IP), electrical safety, EMC interference immunity, explosion protection) can no longer be guaranteed if, for example:

- Covers are left off
- Different power units to the ones permitted are used
- The display is not properly secured (risk of moisture entering due to inadequate sealing)
- Cables/cable ends are loose or insufficiently tightened
- Cable shields not grounded using grounding clamp in accordance with the instructions

• Grounding is not ensured by connection for potential equalization

Operation options Liquiline CM42B

6.4 Post-connection check

WARNING

Connection errors

The safety of people and of the measuring point is under threat. The manufacturer does not accept any responsibility for errors that result from failure to comply with the instructions in this manual.

- ▶ Put the device into operation only if you can answer **yes** to **all** the following questions.
- Are the device and cable undamaged (visual inspection)?
- Do the cables have adequate strain relief?
- Are the cables routed without loops and cross-overs?
- Does the supply voltage match the information on the nameplate?
- No reverse polarity?
- Correct terminal assignment?

7 Operation options

7.1 Overview of operation options

Operation and settings via:

- Operating elements on the device
- SmartBlue app (does not support the full range of functions)
- PLC control station (via HART)

7.2 Access to operating menu via on-site display

7.2.1 User management

The on-site display menu offers user management functions. There are 2 roles in user management:

- Operator
- Maintenance

Both roles can be protected via a PIN as an option. Only one PIN can be set for the Operator role if a PIN is also set for the Maintenance role.

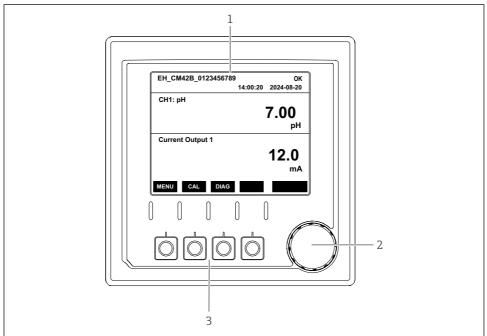
Each role can change its own PIN.

It is recommended to set the PINs after initial commissioning.

If PINs are set, the two roles appear first when the menu is called up. To access other menu items, login is required with a role.

Liquiline CM42B Operation options

7.2.2 Operating elements



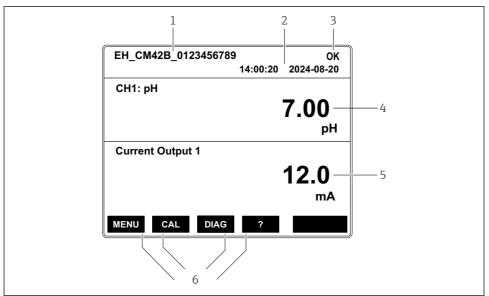
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■ 18 Operating elements

- 1 Display
- 2 Navigator
- 3 Soft keys

Operation options Liquiline CM42B

7.2.3 Structure of the display



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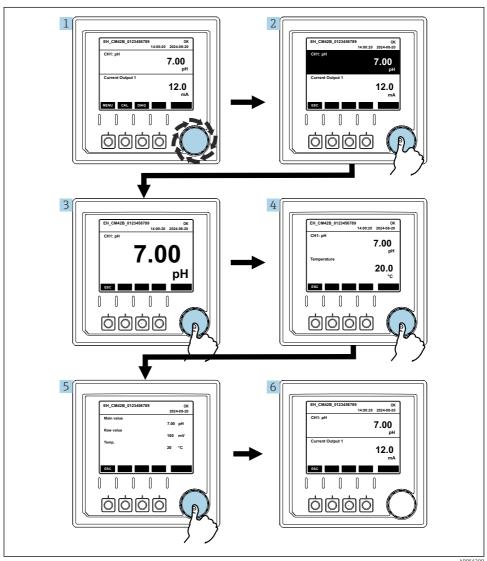
■ 19 Structure of the display: Start screen (device with one current output)

- 1 Device name or menu path
- 2 Date and time
- 3 Status symbols
- 4 Primary value display
- 5 Display of current output value (depending on the order, the device has 1 or 2 current outputs, the illustration shows a device with one current output)
- 6 Assignment of the soft keys

Liquiline CM42B Operation options

7.2.4 Navigating through the display

Measured values



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Navigating through measured values **№** 20

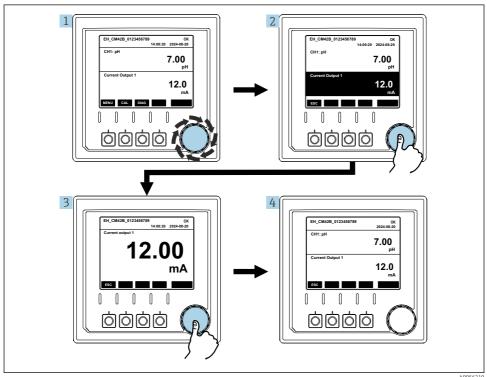
Press the navigator, or turn the navigator and continue turning.

Measured value is selected (inverted display).

Operation options Liquiline CM42B

- 2. Press the navigator.
 - The display shows the primary value.
- 3. Press the navigator.
 - ► The display shows the primary value and temperature.
- Press the navigator. 4.
 - └ The display shows the primary value, temperature and secondary measured values.
- 5. Press the navigator.
 - ► The display shows the primary value and current outputs.

Current output



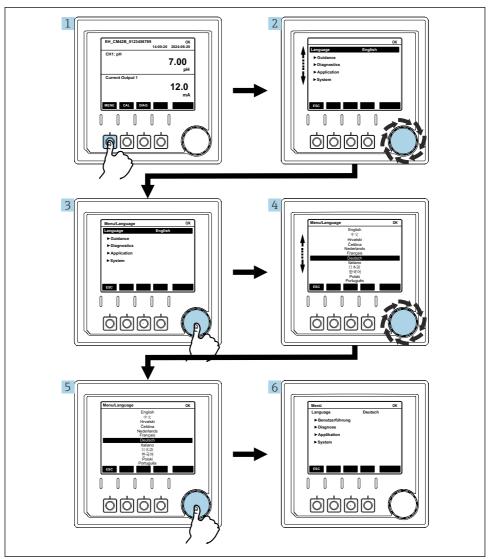
 21 Navigation, displaying a current output

- Press the navigator, or turn the navigator and continue turning. 1.
 - └ Current output is selected (black background).
- 2. Press the navigator.
 - ► The display shows the current output details.

Liquiline CM42B Operation options

- 3. Press the navigator.
 - The display shows the primary value and current outputs.

7.2.5 Operation concept menus



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Operation options Liquiline CM42B

The options available in the menu depend on the specific user authorization.

- 1. Press the soft key.
 - ► The menu is called up.
- 2. Turn the navigator.
 - └ The menu item is selected.
- 3. Press the navigator.
 - ► The function is called up.
- 4. Turn the navigator.
 - ► The value is selected (e.g. from a list).
- 5. Press the navigator.
 - ► The setting is adopted.

7.3 Access to the operating menu via the operating tool

7.3.1 Access to the operating menu via the SmartBlue app

The SmartBlue App is available for download from the Google Play Store for Android devices and from the Apple App Store for iOS devices.

System requirements

- Mobile device with Bluetooth® 4.0 or higher
- Internet access

Download the SmartBlue app:



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Download the SmartBlue app via QR code.

Connect the device to the SmartBlue app:

1. Bluetooth is enabled on the mobile device.

 $\label{thm:connectivity/Bluetooth} Activate \ Bluetooth \ on the \ device: \\ \textbf{Menu/System/Connectvity/Bluetooth/Bluetooth} \\ \textbf{module}$

Liquiline CM42B Operation options

2.



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Launch the SmartBlue app on the mobile device.

- The live list displays all of the devices that are within range.
- 3. Tap the device to select it.
- 4. Log in with username and password.

Initial access data:

- Username: admin
- Default password: Serial number of the device
- If the mainboard of the device is replaced, the default password of the admin account may change.

This is the case if a generic kit that was not ordered for the serial number of the device was used when replacing the mainboard.

In this case, the module serial number of the mainboard is the default password.

7.3.2 Smartblue app accounts

The SmartBlue app is protected against unauthorized access by means of password-protected accounts. The authentication options of the mobile device can be used to log into the accounts.

The following accounts are available:

- operator
- maintenance
- admin

7.3.3 Functions via the Smartblue app

The SmartBlue app supports the following functions:

- Firmware update
- User management
- Export of information for the service

System integration Liquiline CM42B

8 System integration

8.1 Integrating the measuring instrument into the system

Interfaces for measured value transmission (depending on order):

- 4 to 20 mA current output (passive)
- HART

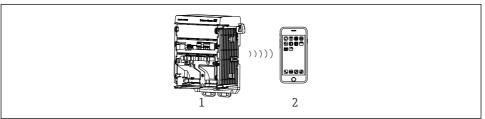
8.1.1 Current output

Depending on the order, the device has 1 or 2 current outputs.

- Signal range 4 to 20 mA (passive)
- The assignment of a process value to a current value is configurable within the signal range.
- Failure current can be configured from list.

8.1.2 Bluetooth® LE wireless technology

With the Bluetooth® LE wireless technology (energy-efficient wireless transmission) option that can be ordered, the device can be controlled via mobile devices.



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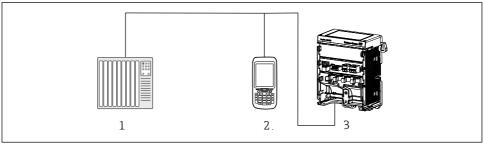
■ 22 Options for remote operation via Bluetooth® LE wireless technology

- 1 Transmitter with Bluetooth® LE wireless technology
- 2 Smartphone / tablet with SmartBlue (app)

8.1.3 HART

HART operation is possible via the different hosts.

Liquiline CM42B System integration



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- **■** 23 Wiring options for remote operation via HART protocol
- PLC (programmable logic controller)
- 2 HART operating device (e.g. SFX350), optional
- 3 Transmitter

The device can communicate via the HART protocol using current output 1 (depending on order).

Follow the steps below to integrate the device into the system for this purpose:

- 1. Connect the HART modem or HART handheld terminal to current output 1 (communication load 250 - 500 Ohm).
- 2. Establish a connection via the HART device.
- 3. Operate the transmitter via the HART device. To do so, follow the HART device Operating Instructions.
- More detailed information on HART communication is provided on the product pages on the Internet (\rightarrow BA00486C).

Commissioning Liquiline CM42B

9 Commissioning

9.1 Preliminaries

- ► Connect the device.
 - ► The device starts and displays the measured value.

Bluetooth® must be enabled on the mobile device for operation via the SmartBlue app.

9.2 Post-installation and function check

▲ WARNING

Incorrect connection, incorrect supply voltage

Safety risks for staff and device malfunctions!

- ► Check that all connections have been established correctly in accordance with the wiring diagram.
- ► Ensure that the supply voltage matches the voltage indicated on the nameplate.

Liquiline CM42B Maintenance

9.3 Time and date

► Configure the time and date under the following path: Menu/System/Date and Time

When using the Smartblue app, the date and time can also be automatically transferred from the mobile device.

9.4 Configuring the operating language

► Configure the operating language under the following path: **Menu/Language**.

10 Maintenance

10.1 Cleaning

10.1.1 External display (in installed state)

► Clean the front of the housing using commercially available cleaning agents only.

The front is resistant to:

- Ethanol (for a short time)
- Diluted acids (max. 2% HCl)
- Diluted bases (max. 3% NaOH)
- Soap-based household cleaning agents

NOTICE

Cleaning agents not permitted

Damage to the housing surface or housing seal

- ▶ Never use concentrated mineral acids or alkaline solutions for cleaning.
- ► Never use organic cleaners such as acetone, benzyl alcohol, methanol, methylene chloride, xylene or concentrated glycerol cleaner.
- ▶ Never use high-pressure steam for cleaning.

10.2 Replacing the battery

Battery type: 3V button cell, xR2032

Only replace the battery when the device is in a de-energized state.

In the case of devices in hazardous areas, only use the batteries that are specified in the relevant XA documentation.

- Disconnect all cables
 - ► to de-energize the device.
- 2. Remove the plug-in module. To do this, press the locking clips on the sides together.
- 3. Replace the battery at the bottom of the plug-in module.
- 4. Insert the plug-in module again until the clips on the side click into place.

Technical data Liquiline CM42B

5. Connect the cables.

Dispose of batteries correctly

▶ Always dispose of batteries in accordance with local regulations on battery disposal.

11 Technical data

Voltage input	Nom. 24 V DC Min. 17 V DC Max. 30V DC ELV
Current	4 – 20 mA loop Max. 23 mA
Degree of protection	IP20
Macro environment	Pollution degree 4
Micro environment	Pollution degree 2
Weight	0.43 kg (0.95 lbs)
Dimensions	140 mm x 164 mm 75 mm (5.51 in x 6.46 in x 2.95 in)







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