EA01773C/07/EN/01.26-00
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2026-01-31

Installation Instructions
Liquiline System CA8x analyzer

Housing parts

Endress+Hauser
People for Process Automation

Table of contents

1 Spare parts kits

These installation instructions apply to the following spare parts kits:

Order code	Designation	Page
71218400	CA8x/CAT860: wall mounting	→ 8
71218402	CA8x/CAT860: housing bottom	→ 9
71218409	CA8x: door with window	→ 10
71218425	CA8x/CAT860: lock cylinder	→ 10
71218429	CA8x/CAT860: door stop	→ 11
71218434	CA8x: bottle tray, no cooling	→ 11
71218471	CA8x: bottle tray for cooling	→ 11
71218473	CA8x: analyzer stand	→ 12
71218431	CA8x: drain pipe, complete	→ 13

2 Intended use

- The parts of the kits must only be used as spare parts for CA8x analyzers. Any other use is not permitted!
- Only use original parts from Endress+Hauser.
- In the Device Viewer, check if the spare part is suitable for the device in question.

3 Personnel authorized to carry out conversion

- 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 perform the stated tasks.
- The electrical connection may only be established by an electrical technician.
- The technical personnel must have read and understood these Installation Instructions and must follow the instructions they contain.
- Measuring point faults may be repaired only by authorized and specially trained personnel.
- In the case of Ex-certified devices, the technical staff must also be trained in explosion protection.

Repairs not described in the Operating Instructions provided must only be carried out directly at the manufacturer's site or by the service organization.

4 Safety instructions

⚠ WARNING

Risk of death due to electric shock!

- Perform work on the device with the utmost caution, especially when the device remains fully or partially powered on during maintenance tasks.
- The analyzer has no power switch. If necessary, use the system-side circuit breaker.
- Follow the instructions in the relevant chapters of this manual, as the procedure for electrical safety depends on the service kits used.
- All work must be carried out according to applicable safety standards.
- Follow the instructions in the Operating Instructions for the device.

⚠ CAUTION

Risk to health due to contact with reagents (chemicals) or process solutions!

- Wear chemical-resistant protective gloves, protective goggles and protective clothing,
- Immediately rinse splashes with plenty of water and a 1% sodium bicarbonate solution ($NaHCO_3$, baking soda).
- In case of eye contact, rinse the affected area with plenty of water and then seek medical advice. Show the relevant safety data sheet to the physician.
- Note the nationally applicable workplace safety regulations for the work area when handling toxic or corrosive chemicals.

⚠ CAUTION

Electronic assemblies are sensitive to electrostatic discharges (ESD)!

- Before removing an assembly from the antistatic packaging, it must be discharged, e.g. at a protective ground. Continuous grounding, e.g. with an ESD wristband, is recommended.

Potential impact on the process

Before decommissioning an active device, the potential impact on the overall process must be taken into account! This applies in particular when using the switching contacts, the analog signal outputs or the communication interface of the associated measuring instrument to control process variables. Coordinate service tasks with the operator!

Contact Endress+Hauser Service if you have questions: www.addresses.endress.com

5 Scope of delivery

The scope of delivery is stored in the Spare Parts Finder (SFT) as a components sheet. The QR code below enables access to the scope of delivery including an overview of devices with the item numbers of the maintenance parts. The order code, product root or serial number of the device must be entered for this purpose.

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https://sft-p.cdn.endress.com/

6 Replacing the components

6.1 General information

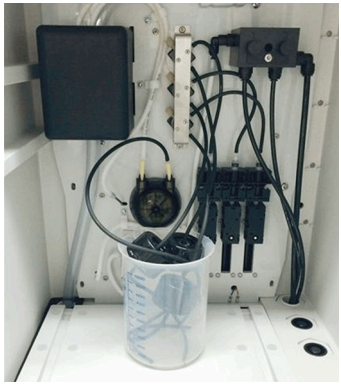
The system must be cleaned before carrying out the following tasks:
- When working on components that come into contact with reagents or process solutions.
- If working on or with the reagent bottles or the container for the standard solution itself.
- If the reagent bottles or the container for the standard solution have to be removed for the planned work (e.g., for better access or due to weight).
- If the analyzer needs to be disconnected from its liquid connections.

The following kits are subject to cleaning as a result:
- 71218400 Kit CA8x/CAT860 wall mounting
- 71218402 Kit CA8x/CAT860 housing bottom
- 71218434 Kit CA8x bottle tray, no cooling
- 71218471 Kit CA8x bottle tray for cooling
- 71218431 Kit CA8x drain pipe complete

No cleaning is required for the following kits:
- 71218409 Kit CA8x door with window
- 71218425 Kit CA8x/CAT860 lock cylinder
- 71218429 Kit CA8x/CAT860 door stop
- 71218473 Kit CA8x analyzer stand (Exception: analyzer stand with internal fittings, e.g., for sampling)

6.2 Preparation

1. Select **Mode → Manual mode** and confirm by pressing the navigator button.
2. Wait until the analyzer has finished the measurement and **Manual** is displayed as the **Current mode**.
3. Stop the sample feed.
4. Remove the covers of the reagent bottles and the hoses and place them in a plastic vessel.



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1 Beaker for covers with hoses

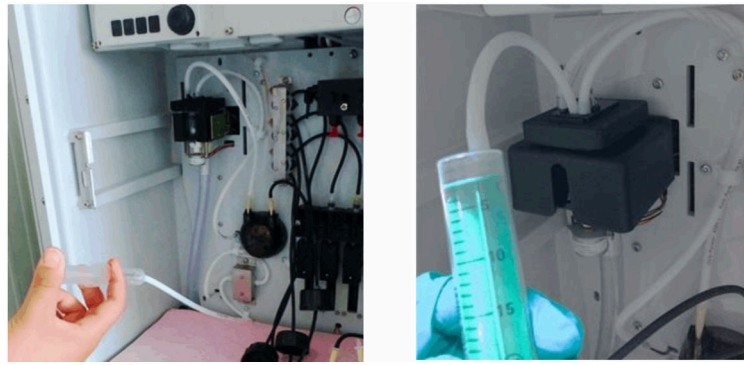
5. Remove the bottle tray together with the bottles from the analyzer.
6. Place the hoses in an empty beaker and select **Menu → Operation → Maintenance → Decommissioning → Empty hoses**.

The software evaluates this as the bottles being removed. Therefore, they need to be reinserted at a later time.

7. Place the hoses in a beaker with distilled or treated water and select **Menu → Operation → Maintenance → Decommissioning → Rinse with water**. Wait until rinsing is finished.
8. Place the hoses back in an empty beaker and select **Menu → Operation → Maintenance → Decommissioning → Empty hoses**.

All the hoses are now flushed, clean and filled with air. It is now possible to work on the analyzer without risk.

9. The analyzer cannot drain the SPx sample hose and, if applicable, the photometer cuvette/reactor (depending on parameters). To do this, remove the hose and drain it with a dispenser.



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2 *Draining the SPx sample hose and photometer*

10. **Disconnect the analyzer from the power supply using the circuit breaker provided on the system and secure the circuit breaker against unintentional recommissioning.**

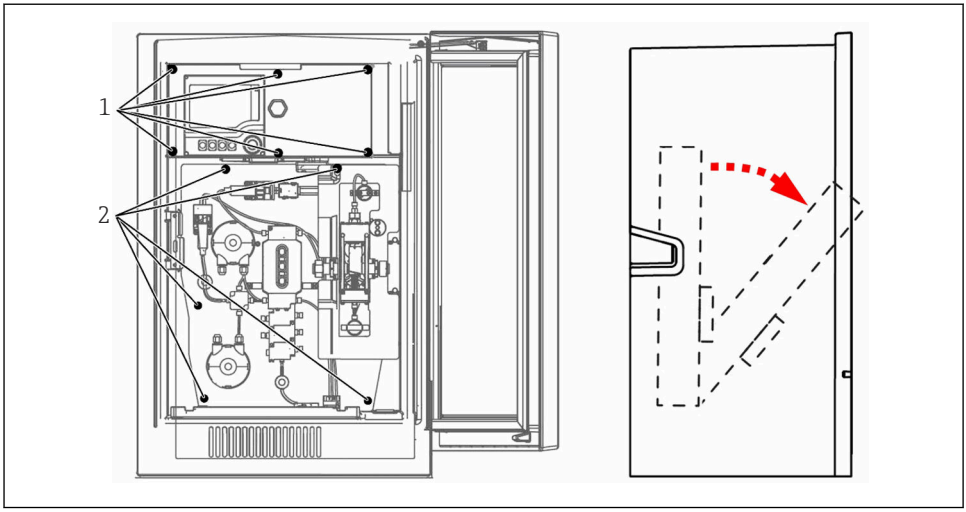
WARNING

Risk of injury due to high voltage present during operation on the transmitter module and high-voltage circuit board.

- ► Only open the protective cover (see CAD/detail drawings in the spare parts finder) when the device is switched off!

6.3 Access for service work

The graphic below shows opening the connection compartment cover and folding the carrier plate forward.



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3 Access for service work on the rear of the carrier plates

1 Screws for connection compartment cover
2 Screws for securing the carrier plates

6.4 Replacing the wall holder unit

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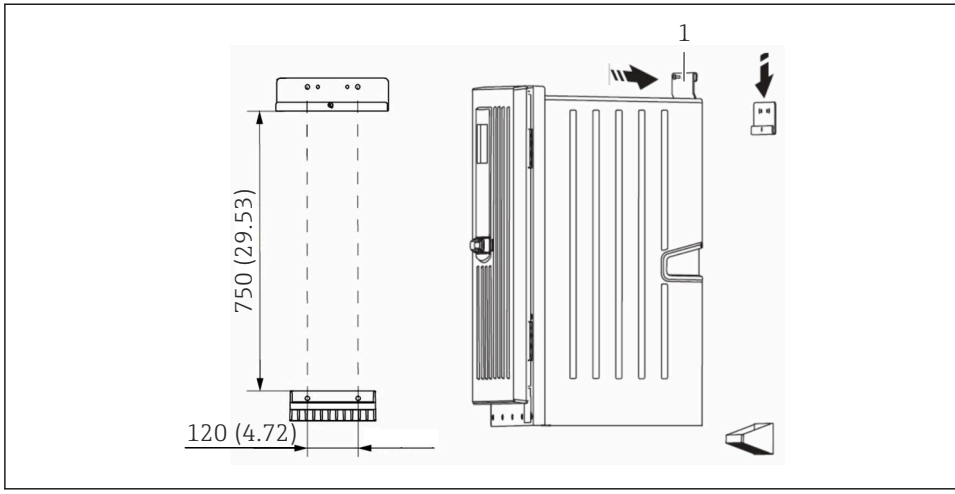
4 Link to Components Sheet, including scope of delivery and device overview

1. Carry out preparatory work as per section 6.2 → 7.
2. Remove the bottle tray together with the bottles.
3. Disconnect the analyzer from the power supply. Follow the warnings in the "Safety instructions" section → 4!
4. Release all the electrical and hydraulic connections and the securing screw (1) of the wall holder unit → 5, 9. Remove the analyzer from the wall.
5. Replace the wall mounting. Refit the safety screw (1).



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5 Wall mounting

1 Securing screw

6. Insert the bottle tray including all the bottles and connect the hoses.
7. Put the analyzer back into operation → 14.

6.5 Replacing the housing bottom

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6 Link to Components Sheet, including scope of delivery and device overview

1. Carry out preparatory work as per Section 6.2 → 7.
2. Remove the bottle tray together with the bottles.
3. Replace the housing bottom.
4. Insert the bottle tray including all the bottles and connect the hoses.
5. Put the analyzer back into operation → 14.

6.6 Replacing the door with window

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7 Link to Components Sheet, including scope of delivery and device overview

1. Release the door stop from the housing.
2. Lift the old door out of the hinges and remove the hinges from the housing.
3. Fit the accessories supplied on the new door.
4. Fit the new door and secure the door stop to the housing.

6.7 Replacing the lock cylinder

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8 Link to Components Sheet, including scope of delivery and device overview

1. Open the door handle.
2. Release the locking screw of the lock cylinder in the door handle.
3. Remove the old closing cylinder and insert the new cylinder.

6.8 Replacing the door stop

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9 *Link to Components Sheet, including scope of delivery and device overview*

1. Open the door and remove the old stop.
2. Fit the new stop.

6.9 Replacing the bottle tray

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10 *Link to Components Sheet, including scope of delivery and device overview (bottle tray for cooling)*

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11 *Link to Components Sheet, including scope of delivery and device overview (bottle tray no cooling)*

1. Carry out preparatory work as per Section 6.2 → 7.
2. Remove the bottle tray together with the bottles.
3. Insert the new bottle tray.
4. Insert the bottles into the new bottle tray.
5. Put the analyzer back into operation → 14.

6.10 Replacing the analyzer stand

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12 Link to Components Sheet, including scope of delivery and device overview

The procedure for replacing the analyzer stand depends on the use of the analyzer stand.

Analyzer stands without internal fittings:

1. Remove the connecting screws between the analyzer and the analyzer stand (access via open analyzer stand).
2. Lift the analyzer with a suitable lifting tool and replace the analyzer stand.
3. Secure the analyzer on the analyzer stand with the screws supplied.

Analyzer stands with internal fittings (e.g., filters, sample preparation):

1. NOTICE

   Risk of injury and/or material damage from leaking media!
   - ▶ Follow the warnings in the "Safety instructions" section → 4!
   - ▶ If necessary, shut off the supply of process solutions.
   - ▶ Have a bucket ready to collect any leaking process solutions.

   Transfer the fittings into the new analyzer stand one-to-one.
2. Remove the connecting screws between the analyzer and the analyzer stand (access via open analyzer stand).
3. Lift the analyzer with a suitable lifting tool and replace the analyzer stand.
4. Secure the analyzer on the analyzer stand with the screws supplied.
5. Refit the connections for the fittings.

6.11 Replacing the drain pipe (CA8x single parameters only)

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13 *Link to Components Sheet, including scope of delivery and device overview*

1. Carry out preparatory work as per Section 6.2 → 7.
2. Remove the bottle tray together with the bottles.
3. Remove all the hoses from the outlet.
4. Remove the old outlet and insert the new outlet.
5. Reconnect the hoses.
6. Insert the bottle tray together with the bottles.
7. Put the analyzer back into operation → 14.

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14 *Drain pipe*

6.12 Recommissioning

1. Re-establish the power supply to the device.
2. Insert the bottle tray together with all bottles.
3. Screw the cover with the hoses onto the bottles. Ensure that the hoses are not mixed up! If in doubt, refer to the hose connection diagram on the inside of the device door.
4. Select **Menu → Operation → Maintenance → Bottle replacement**.

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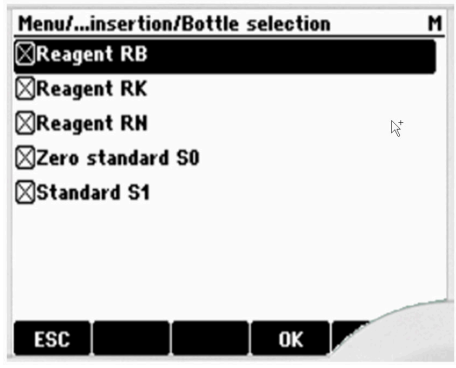
5. Select the **Bottle insertion** entry, then the **Bottle selection** entry.
6. Activate all bottles and confirm by pressing **OK**. Confirm the **Bottle insertion** entry by pressing **OK**.
7. Press the **Bottles inserted confirmation** entry to confirm that all bottles have been inserted.



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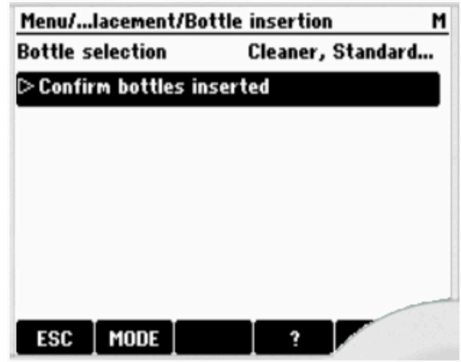

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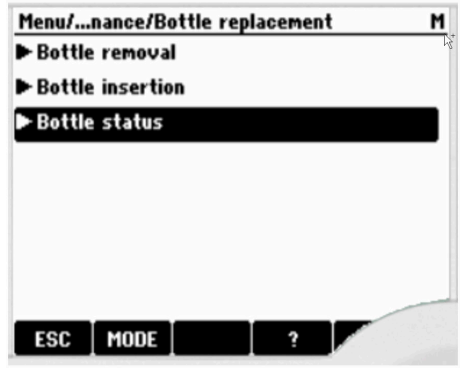
8. Check the status of the bottles in the **Bottle status** menu. The status of all bottles must be "inserted". The analyzer will not start a measurement or calibration if any bottles are marked as "removed".



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9. Select **Menu → Operation → Maintenance → Commissioning**. Confirm the **Start commissioning** entry.

7 Additional documentation

Detailed information on the devices shown here can be found in the Operating Instructions for each device and in the other documentation, available at:

- Product page: https://www.endress.com/
- Spare parts finder: https://sft-p.cdn.endress.com/
- Device Viewer: www.endress.com/device-viewer
- Smartphone/tablet: Endress+Hauser Operations app

8 Disposal

If required by the Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), the product is marked with the depicted symbol in order to minimize the disposal of WEEE as unsorted municipal waste. Do not dispose of products bearing this marking as unsorted municipal waste. Instead, return them to the manufacturer for disposal under the applicable conditions.

www.addresses.endress.com

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