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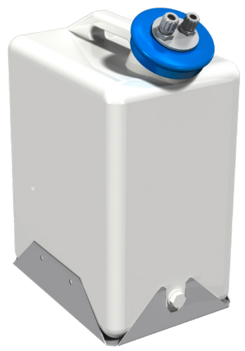
Endress+Hauser
People for Process Automation

BRIEF OPERATING INSTRUCTIONS en

Condensate Container
for analyzer solutions



1. Intended use

The use of the condensate container is to collect condensate within the gas outlet in order to prevent condensate formation in the direct environment of the measuring device.

2. About this document

This short instruction describes the steps to install and configure I/Os and/or handle alarms during installation or maintenance.

3. Supplementary and other relevant documents

Operating Instructions for MARSIC300 (part no. 8029898)
Technical Instructions for MARSIC300 (part no. 8030681)

You can download these documents from www.endress.com. To find a publication, enter the relevant part number in the search field.

4. Hardware installation

1. If the system is already installed and operating: Make sure that the measuring device is not in measuring mode.
2. Feed the measuring device with instrument air to eliminate humidity within the measuring gas lines.
3. Shut down the measuring device according to the procedure described in the Operating Instructions and switch off power supply.

⚠ **WARNING:**
Danger to life by electric voltage
- ▶ Make sure that the device is voltage-free before continuing further steps.

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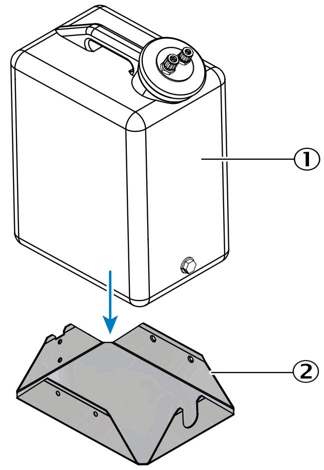
4. Disconnect the sample gas outlet.
5. Place a metal stand for the condensate container on the floor close to the measuring device enclosure and attach it safely.
6. Place the condensate container in the metal stand.

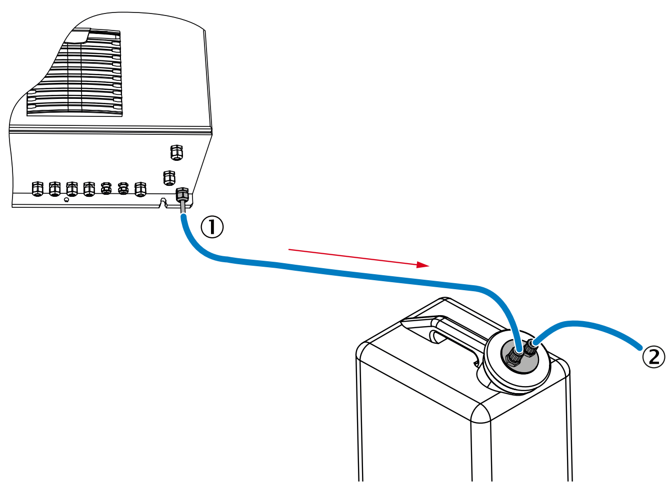


①. Condensate container
②. Metal stand

7. Connect the sample gas outlet to the condensate container.

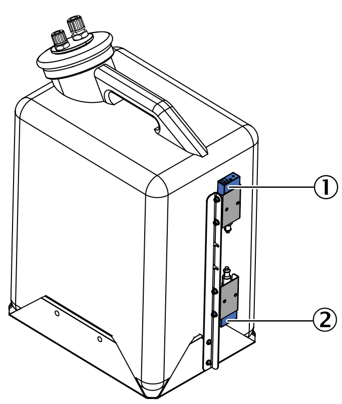
IMPORTANT:
- ▶ To avoid condensate collection within the gas line, the line should be facing downwards to the container.

- ▶ Connect the sample gas outlet of the measuring system ① to the **smaller** connection of the condensate container.
- ▶ Connect the gas line for the destination of the sample gas outlet ② to the **larger** connection of the condensate container.



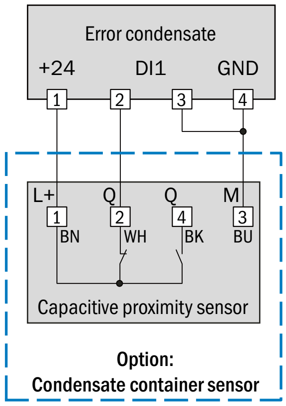
①. Sample gas outlet: from measuring system
②. Sample gas outlet: from final destination

8. Decide how often the condensate container has to be emptied and install the appropriate level sensor.
   - ① **at the top** of the container: infrequent emptying
   - ② **at the bottom** of the container: frequent emptying



①. Level sensor at top of the container
②. Level sensor at bottom of the container

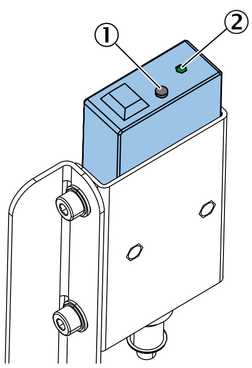
9. Connect the digital inputs of the level sensor according to the wiring diagram on the right.
   ▸ Use the pins 1, 2, 3, 4 at the digital input DI1 as described.

Plug	Pin	Assignment	Diagram
Digital Input	1	+24 V DC	
	2	+	
	3	–	
	4	GND	

10. Commission the measuring device as described in Operating Instructions for MARSIC300 (part no. 8017316).

5. IO-configuration and alarm handling

1. Adjust the level sensor's sensitivity using the screwdriver included in the condensate container kit.
   ▸ Turn adjustment screw **counterclockwise** until end position is reached.
   ▸ Turn **clockwise** until LED turns on.
   ▸ Slowly turn **counterclockwise** until LED turns off.
   ▸ From point where LED turns off, make an additional 1/4 turn **counterclockwise**.



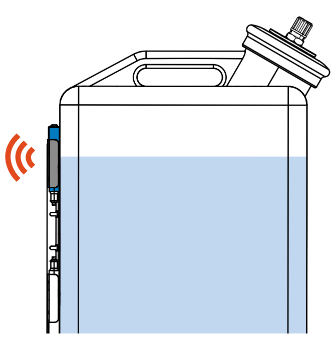
①. Adjustment screw
②. Status LED

The status LED ② indicates whether the sensor is triggered or not and sends an alarm-signal to the measuring device. The LED should be "off" when the container is empty.

⚠ **WARNING:**
Health risk through toxic compounds in condensate container
▸ Observe all safety regulations for the application.

2. Empty the condensate container each time the alarm signal is initiated.

- The alarm stops automatically after emptying the container.



6. Parameter setting for MARSIC300, device version YXD6

1. Start SOPAS ET software on a PC and activate variable BV394:
   ▸ Navigate to menu: **Parameterization/Variables and functions/Boolean values (BV)**.
   ▸ Select **index 394** and activate checkbox in column start value.
   ▸ If signal inversion is not needed, select **index 384** and deactivate checkbox in column start value.

   Signal of condensate container is expected on iDI01.
2. Restart MARSIC300, see Operating Instructions.

7. Parameter setting for MARSIC300, device versions 0000, YN56, Y008, ZL50

1. Start SOPAS ET software on a PC and change designation of BV300 to **"Condensate container"**.
   ▸ Navigate to menu: **Parameterization/Variables and functions/Boolean values (BV)**.
   ▸ Select **Index 300**, click **Edit** and type in **"Condensate container"**.
   ▸ Click save.
2. Read iDI Signal on BV300
   ▸ Navigate to the menu: **Parameterization/Formulas**
   ▸ Select **Index 129**, click **Edit** and type in **"bv300=!iDIXX"** (replace XX with your chosen internal DI).
3. Entry Logbook
   ▸ Navigate to menu: **Parameterization/Logbook texts (TXTl)**
   ▸ Select **Index 77**, click **Edit** and type in the following:
      ▸ **Source: bv300**
      ▸ **Device: Condensate container**
      ▸ **Text: M077 Condensate vessel**
      ▸ **Classification: Maintenance request**
4. Put signal on Modbus:
   ▸ Navigate to menu: **Parameterization/IO/Data/Modbus values (MBVi)**
   ▸ Select **Index 85,** click **Edit,** activate checkbox **Active** and type in the following:
      ▸ **Name: Condensate container**
      ▸ **Source: BV300**
   ▸ Check if **Data type** is selected to **Bool**.
   ▸ Activate checkbox "**Endress+Hauser Std. Meas.**"
   ▸ Check if **Register type** is selected to **DI**.
   ▸ Type in **Pos. "21"**
5. If customer wants to read out via MODBUS:
   ▸ Check:
      ▸ **Signal: Condensate container**
      ▸ **Tag: BV300**
      ▸ **Start Input State: 1020**
      ▸ **Data Type: Bool**