

# 1-/2-channel transmitter

## Liquiline CM442R

Compact multiparameter DIN-rail and cabinet device for all industries



More information and current pricing:

[www.at.endress.com/CM442R](http://www.at.endress.com/CM442R)

### Benefits:

- **Saves space, saves money:**  
Extremely small footprint, saves space in cabinets – perfect for skids.
- **High-speed installation:**  
No cut-out in cabinet door, one-click DIN-rail mounting, minimized wiring.
- **Simple and safe commissioning:**  
Saving configuration on SD card enables fast set-up on duplicate installations.
- **Easy to operate and service:**  
Intuitive user interface, hot plug & play with pre-calibrated Memosens sensors, universal components fit all parameters.
- **Process control from a distance:**  
Integrated web server that allows the operator to remotely view diagnostic data, perform configurations, or access device parameters in any web browser - even via Smartphone.
- **Higher availability, lower costs:**  
Heartbeat Technology enables status-oriented maintenance and easy verification of the entire measuring point and helps to carry out optimization measures.

### Specs at a glance

- **Input** 1 to 2x Memosens digital input 2x 0/4 to 20mA Input optional 2x Digital input optional
- **Output / communication** 2 to 8x 0/4 to 20 mA current outputs Alarmrelay, 2x relay, ProfibusDP, Modbus RS485, Modbus TCP, Ethernet
- **Ingres protection** Transmitter: IP20 Optional Display: IP66

**Field of application:** Liquiline CM442R is an easy-to-use, digital multiparameter transmitter for process monitoring and control in all applications - even where mounting space is limited. It saves you time and money through simplified and quick system integration, installation, and handling. The 1-/2-channel controller is extremely compact and fits in every cabinet. Liquiline CM442R provides you with all the benefits of a best-in-class transmitter platform from clever simplicity to maximum process safety.

## Features and specifications

### Sludge Level

#### Measuring principle

Ultrasonic sensor

#### Application

Modular 4 wire controller

Multichannel: 1/2 digital channels for Memosens protocol

Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity

Two sensors connectable in any combination

Functionality modular extendable at any time

Plug and play for modules and sensors

#### Characteristic

Robust plastic housing

All non-ex applications

#### Design

2x Memosens input, 2 to 4x current output, alarmrelay

2x relay, SD card for software update and copy & paste of setup

#### Material

DIN rail housing: PC-FR

Display seal: EPDM

---

## Sludge Level

**Dimension**

99 x 100 x 97 mm  
3.9 x 3.94 x 3.82 inch

---

**Process temperature**

0 to 60 °C (32 to 140 °F)

---

**Ingres protection**

Transmitter: IP20  
Optional Display: IP66

---

**Input**

1 to 2x Memosens digital input  
2x 0/4 to 20mA Input optional  
2x Digital input optional

---

**Output / communication**

2 to 8x 0/4 to 20 mA current outputs  
Alarmrelay, 2x relay, ProfibusDP, Modbus RS485,  
Modbus TCP, Ethernet

---

**Additional certifications**

EAC, cCSAus

---

## Disinfection

**Measuring principle**

Total chlorine

---

**Application**

Modular 4 wire controller  
Multichannel: 1/2 digital channels for Memosens protocol  
Multiparameter: pH, redox, ISFET, conductivity inductive and conductive,  
dissolved oxygen, nitrate and turbidity  
Two sensors connectable in any combination  
Functionality modular extendable at any time  
Plug and play for modules and sensors

---

---

## Disinfection

### Characteristic

Robust plastic housing  
All non-ex applications

---

### Design

2x Memosens input, 2 to 4x current output, alarmrelay  
2x relay, SD card for software update and copy & paste of setup

---

### Material

DIN rail housing: PC-FR  
Display seal: EPDM

---

### Dimension

99 x 100 x 97 mm  
3.9 x 3.94 x 3.82 inch

---

### Process temperature

0 to 60 °C (32 to 140 °F)

---

### Input

1 to 2x Memosens digital input  
2x 0/4 to 20mA Input optional  
2x Digital input optional

---

### Output / communication

2 to 8x 0/4 to 20 mA current outputs  
Alarmrelay, 2x relay, ProfibusDP, Modbus RS485,  
Modbus TCP, Ethernet

---

### Additional certifications

EAC, cCSAus

---

## Turbidity

### Measuring principle

Single beam scattered light

---

## Turbidity

### Application

Modular 4 wire controller

Multichannel: 1/2 digital channels for Memosens protocol

Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity

Two sensors connectable in any combination

Functionality modular extendable at any time

Plug and play for modules and sensors

### Characteristic

Robust plastic housing

All non-ex applications

### Design

2x Memosens input, 2 to 4x current output, alarmrelay

2x relay, SD card for software update and copy & paste of setup

### Material

DIN rail housing: PC-FR

Display seal: EPDM

### Dimension

99 x 100 x 97 mm

3.9 x 3.94 x 3.82 inch

### Process temperature

0 to 60 °C (32 to 140 °F)

### Ingres protection

Transmitter: IP20

Optional Display: IP66

### Input

1 to 2x Memosens digital input

2x 0/4 to 20mA Input optional

2x Digital input optional

---

## Turbidity

**Output / communication**

2 to 8x 0/4 to 20 mA current outputs  
Alarmrelay, 2x relay, ProfibusDP, Modbus RS485,  
Modbus TCP, Ethernet

---

**Additional certifications**

EAC, cCSAus

---

## Oxygen

**Measuring principle**

Amperometric oxygen measurement

---

**Application**

Modular 4 wire controller  
Multichannel: 1/2 digital channels for Memosens protocol  
Multiparameter: pH, redox, ISFET, conductivity inductive and conductive,  
dissolved oxygen, nitrate and turbidity  
Two sensors connectable in any combination  
Functionality modular extendable at any time  
Plug and play for modules and sensors

---

**Characteristic**

Robust plastic housing  
All non-ex applications

---

**Design**

2x Memosens input, 2 to 4x current output, alarmrelay  
2x relay, SD card for software update and copy & paste of setup

---

**Material**

DIN rail housing: PC-FR  
Display seal: EPDM

---

**Dimension**

99 x 100 x 97 mm  
3.9 x 3.94 x 3.82 inch

---

## Oxygen

**Process temperature**

0 to 60 °C (32 to 140 °F)

---

**Input**

1 to 2x Memosens digital input

2x 0/4 to 20mA Input optional

2x Digital input optional

---

**Output / communication**

2 to 8x 0/4 to 20 mA current outputs

Alarmrelay, 2x relay, ProfibusDP, Modbus RS485,

Modbus TCP, Ethernet

---

**Additional certifications**

EAC, cCSAus

---

## Conductivity

**Measuring principle**

Potentiometric

---

**Application**

Modular 4 wire controller

Multichannel: 1/2 digital channels for Memosens protocol

Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity

Two sensors connectable in any combination

Functionality modular extendable at any time

Plug and play for modules and sensors

---

**Characteristic**

Robust plastic housing

All non-ex applications

---

**Design**

2x Memosens input, 2 to 4x current output, alarmrelay

2x relay, SD card for software update and copy & paste of setup

---

---

**Conductivity****Material**

DIN rail housing: PC-FR

Display seal: EPDM

---

**Dimension**

99 x 100 x 97 mm

3.9 x 3.94 x 3.82 inch

---

**Process temperature**

0 to 60 °C (32 to 140 °F)

---

**Ingres protection**

Transmitter: IP20

Optional Display: IP66

---

**Input**

1 to 2x Memosens digital input

2x 0/4 to 20mA Input optional

2x Digital input optional

---

**Output / communication**

2 to 8x 0/4 to 20 mA current outputs

Alarmrelay, 2x relay, ProfibusDP, Modbus RS485,

Modbus TCP, Ethernet

---

**Additional certifications**

EAC, cCSAus

---

**pH****Measuring principle**

Potentiometric



pH

**Application**

Modular 4 wire controller

Multichannel: 1/2 digital channels for Memosens protocol

Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity

Two sensors connectable in any combination

Functionality modular extendable at any time

Plug and play for modules and sensors

**Characteristic**

Robust plastic housing

All non-ex applications

**Design**

2x Memosens input, 2 to 4x current output, alarmrelay

2x relay, SD card for software update and copy & paste of setup

**Material**

DIN rail housing: PC-FR

Display seal: EPDM

**Dimension**

99 x 100 x 97 mm

3.9 x 3.94 x 3.82 inch

**Process temperature**

0 to 60 °C (32 to 140 °F)

**Ingres protection**

Transmitter: IP20

Optional Display: IP66

**Input**

1 to 2x Memosens digital input

2x 0/4 to 20mA Input optional

2x Digital input optional

pH

**Output / communication**  
2 to 8x 0/4 to 20 mA current outputs  
Alarmrelay, 2x relay, ProfibusDP, Modbus RS485,  
Modbus TCP, Ethernet

---

**Additional certifications**

EAC, cCSAus

---

ORP / Redox

**Measuring principle**

Sensor ORP / Redox

---

**Application**

Modular 4 wire controller

Multichannel: 1/2 digital channels for Memosens protocol

Multiparameter: pH, redox, ISFET, conductivity inductive and conductive,  
dissolved oxygen, nitrate and turbidity

Two sensors connectable in any combination

Functionality modular extendable at any time

Plug and play for modules and sensors

---

**Characteristic**

Robust plastic housing

All non-ex applications

---

**Design**

2x Memosens input, 2 to 4x current output, alarmrelay

2x relay, SD card for software update and copy & paste of setup

---

**Material**

DIN rail housing: PC-FR

Display seal: EPDM

---

**Dimension**

99 x 100 x 97 mm

3.9 x 3.94 x 3.82 inch

---

ORP / Redox

**Process temperature**

0 to 60 °C (32 to 140 °F)

---

**Ingres protection**

Transmitter: IP20

Optional Display: IP66

---

**Input**

1 to 2x Memosens digital input

2x 0/4 to 20mA Input optional

2x Digital input optional

---

**Output / communication**

2 to 8x 0/4 to 20 mA current outputs

Alarmrelay, 2x relay, ProfibusDP, Modbus RS485,

Modbus TCP, Ethernet

---

**Additional certifications**

EAC, cCSAus

---

More information [www.at.endress.com/CM442R](http://www.at.endress.com/CM442R)