4-channel transmitter
Liquiline CM444R

Expandable multiparameter DIN-rail and cabinet device for all industries

Benefits:

- **Saves space, saves money:**
  Small footprint, 4 channels in one device, expandable at any time, 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.

More information and current pricing: [www.endress.com/CM444R](http://www.endress.com/CM444R)

**Specs at a glance**

- **Input** 1 to 4x Memosens digital input 2x 0/4 to 20mA Input optional 2 to 4x Digital input optional
- **Output / communication** 2 to 8x 0/4 to 20 mA current outputs, alarmrelay, 4x relay, ProfibusDP, Modbus RS485, Modbus TCP, Ethernet
Field of application: Liquiline CM444R allows you to connect up to 4 Memosens sensors of your choice from over 12 measurement parameters. With its compact design, it fits into any cabinet and can be expanded at any time with inputs, outputs, controllers, math modules, and sensor channels. The transmitter belongs to the Liquiline platform with standardized system integration, operation, and spare parts. Heartbeat Technology helps you find the ideal balance between measurement point availability and maintenance costs.

Features and specifications

<table>
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<tr>
<th>pH</th>
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- **Measuring principle**
  Potentiometric

- **Application**
  Modular 4 wire controller
  Multichannel: 1 to 4 digital channels for Memosens protocol
  Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity
  4 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**
  2 to 4x Memosens input, 2 to 8x current output,
  Alarmrelay, 4x relay, SD card for software update and copy & paste of setup

- **Material**
  DIN rail housing: PC-FR
  Display seal: EPDM
pH

**Dimension**
220 x 100 x 97 mm  
8.66 x 3.94 x 3.82 inch

**Process temperature**
0 to 55 °C (32 to 130 °F)

**Ingress protection**
Transmitter: IP20  
Optional Display: IP66

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

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

**Additional certifications**
EAC, cCSAus

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ORP / Redox

**Measuring principle**
Sensor ORP / Redox

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

**Characteristic**
Robust plastic housing
All non-ex applications

**Design**
2 to 4x Memosens input, 2 to 8x current output
Alarmrelay, 4x relay, SD card for software update and copy & paste of setup

**Material**
DIN rail housing: PC-FR
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4x relay, ProfibusDP, Modbus RS485, Modbus TCP, Ethernet

**Additional certifications**
EAC, cCSAus
**Conductivity**

**Measuring principle**
Conductive

**Application**
Modular 4 wire controller  
Multichannel: 1 to 4 digital channels for Memosens protocol  
Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity  
4 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**
2 to 4x Memosens input, 2 to 8x current output  
Alarm relay, 4x relay, SD card for software update and copy & paste of setup

**Material**
DIN rail housing: PC-FR  
Display seal: EPDM

**Dimension**
220 x 100 x 97 mm  
8.66 x 3.94 x 3.82 inch

**Process temperature**
0 to 55 °C (32 to 130 °F)

**Ingress protection**
Transmitter: IP20  
Optional Display: IP66
Conductivity

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

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

**Additional certifications**
EAC, cCSAus

Oxygen

**Measuring principle**
Amperometric oxygen measurement

**Application**
Modular 4 wire controller
Multichannel: 1 to 4 digital channels for Memosens protocol
Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity
4 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**
2 to 4x Memosens input, 2 to 8x current output,
Alarmrelay, 4x relay, SD card for software update and copy & paste of setup

**Material**
DIN rail housing: PC-FR
Display seal: EPDM
### Oxygen

| Dimension       | 220 x 100 x 97 mm  
|                 | 8.66 x 3.94 x 3.82 inch |
| Process temperature | 0 to 55 °C (32 to 130 °F) |
| Input           | 1 to 4x Memosens digital input  
|                 | 2x 0/4 to 20mA Input optional  
|                 | 2 to 4x Digital input optional |
| Output / communication | 2 to 8x 0/4 to 20 mA current outputs, alarmrelay,  
|                 | 4x relay, ProfibusDP, Modbus RS485, Modbus TCP, Ethernet |

### Additional certifications

- EAC
- cCSAus

### Disinfection

<table>
<thead>
<tr>
<th>Measuring principle</th>
<th>Total chlorine</th>
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</thead>
</table>
| Application         | Modular 4 wire controller  
|                     | Multichannel: 1 to 4 digital channels for Memosens protocol  
|                     | Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity  
|                     | 4 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
**Disinfection**

**Design**
2 to 4x Memosens input, 2 to 8x current output, Alarmrelay, 4x relay, SD card for software update and copy & paste of setup

**Material**
DIN rail housing: PC-FR
Display seal: EPDM

**Dimension**
220 x 100 x 97 mm
8.66 x 3.94 x 3.82 inch

**Process temperature**
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**Additional certifications**
EAC, cCSAus

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**Turbidity**

**Measuring principle**
Single beam scattered light
### Application
- Modular 4 wire controller
- Multichannel: 1 to 4 digital channels for Memosens protocol
- Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity
- 4 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
- 2 to 4x Memosens input, 2 to 8x current output,
- Alarmrelay, 4x relay, SD card for software update and copy & paste of setup

### Material
- DIN rail housing: PC-FR
- Display seal: EPDM

### Dimension
- 220 x 100 x 97 mm
- 8.66 x 3.94 x 3.82 inch

### Process temperature
- 0 to 55 °C (32 to 130 °F)

### Ingress protection
- Transmitter: IP20
- Optional Display: IP66

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

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

**Additional certifications**
- EAC, cCSAus

## Sludge Level

**Measuring principle**
Ultrasonic sensor

**Application**
- Modular 4 wire controller
- Multichannel: 1 to 4 digital channels for Memosens protocol
- Multiparameter: pH, redox, ISFET, conductivity inductive and conductive, dissolved oxygen, nitrate and turbidity
- 4 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**
- 2 to 4x Memosens input, 2 to 8x current output,
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**Material**
- DIN rail housing: PC-FR
- Display seal: EPDM

**Dimension**
- 220 x 100 x 97 mm
- 8.66 x 3.94 x 3.82 inch
### Sludge Level

**Process temperature**
0 to 55 °C (32 to 130 °F)

**Ingress protection**
Transmitter: IP20  
Optional Display: IP66

**Input**
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