Supplementary Instructions
DULCOMARIN® II, M Module
(Measurement Module for pH, redox/ORP, temperature)
DXMaM: Connection

Please enter the identcode of your module!

These supplementary instructions apply only in conjunction with the
“Operating Instructions DULCOMARIN® II, Part 1: Mounting and Installation”!
Please carefully read these operating instructions before use! - Do not discard!
The operator shall be liable for any damage caused by installation or operating errors!
Imprint:
Supplementary Instructions
DULCOMARIN® II, M Module
(Measurement Module for pH, redox/ORP, temperature)
DXMaM: Connection
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Identcode

The identcode describes the external modules for the DULCOMARIN® II, series DXM.

### Measurement module for DULCOMARIN® II, series DXM

<table>
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<tr>
<th>DXMa</th>
<th>Measurement module for DULCOMARIN® II, series DXM</th>
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<tr>
<td>M</td>
<td>Module: M-module, measurement module: pH, ORP, temperature</td>
</tr>
<tr>
<td>W</td>
<td>Wall mounting (IP 65)</td>
</tr>
<tr>
<td>H</td>
<td>Mounting rail (IP 20)</td>
</tr>
<tr>
<td>E</td>
<td>Retrofit module (installation module for DXCa, IP 20)</td>
</tr>
</tbody>
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**Type of mounting:**
- W: Wall mounting (IP 65)
- H: Mounting rail (IP 20)
- E: Retrofit module (installation module for DXCa, IP 20)

**Version:**
- 0: With controls (only M module, mounting type W) ¹)
- 1: Without controls
- 2: Without controls (without mounting type "E" and "H")

**Application:**
- S: Swimming pool (only M module)

**Language:**
- 00: No controls ²)
- DE: German
- EN: English
- ES: Spanish
- FR: French
- IT: Italian

**Approval:**
- 01: CE mark

¹) only with installation: "W"
²) only with Version: 2, no operator control
About this module

The measurement module DXMaM provides the following functions to the DULCOMARIN® II e.g.:

- Measurement and control of the pH value
- Measurement and display (optional control) of the redox/ORP
- Measurement and display of the temperature of the sample water
- Monitoring of the sample water throughput

The measurement module DXMaM is equipped with the following inputs:

- 1 temperature input for Pt1000 (Pt100, automatic sensor detection)
- 2 sensor inputs for pH or redox/ORP measurement with equipotential bonding
- 3 digital inputs for pause, changeover of parameter sets, sample water monitoring

Mounting and Installation

CAUTION

- The installation may only be performed by specially trained personnel!
- Please carefully read the instructions in the "Operating Instructions DULCOMARIN® II, Part 1: Mounting and Installation" before carrying out any mounting and installation work!

NOTE

The terminal diagram is enclosed at the end of these operating instructions.

Technical data

Electrical data

Pt1000/Pt100 input
(RTD) (Kl. 1, 2):
- Input range: -20 ... 150 °C
- Accuracy: ± 0.5 °C
- Representation: 0.1 °C

Sensor input (ORP)
(Kl. 3, 4) for redox/ORP:
- Input resistance: > 10¹² Ohm
- All reference electrodes with diaphragm can be connected.
- Input range: redox/ORP: -1200 mV ... +1200 mV
- Accuracy: ± 0.5 % of the input range
- Connection of reference electrode through shield connection
- Connection options for an liquid reference potential electrode

Sensor input (pH)
(Kl. 7, 8) for pH:
- Input resistance: > 10¹² Ohm
- Input range: pH: -1 ... 15 (0 ... 100 °C)
- Representation: 0.01 pH
- Further data as "Sensor input (ORP)".

Digital inputs
(K1, K2, K3) (Kl. 9 – 14):
- galvanically isolated among each other
- Insulation voltage: 500 V
- max. switch frequency: 2 kHz
- Connectable contacts: mechanical relays
- max. connectable cable length: 20 m

Environmental conditions

- Storage temperature: -10...70 °C
- Type of protection: IP 20 (within the housing DXM: IP 65)
- Climate: Permissible relative humidity: 95 %, non-condensing (DIN IEC 60068-2-30)

Materials

- Housing: PPE-GF 10
Terminal assignment / Terminal diagram

Terminal assignment

<table>
<thead>
<tr>
<th>Description</th>
<th>Terminal designation</th>
<th>Terminal no.</th>
<th>Pol.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp. input</td>
<td>RTD</td>
<td>1</td>
<td>+</td>
<td>Pt1000/100 (temp. sensor)</td>
</tr>
<tr>
<td>Pt1000/100</td>
<td></td>
<td>2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>pH/ORP input 1</td>
<td>(pH) ORP</td>
<td>3</td>
<td>Ref.</td>
<td>ORP sensor</td>
</tr>
<tr>
<td>Liquid reference potential 1</td>
<td>POT 1</td>
<td>4</td>
<td>meas. sig.</td>
<td></td>
</tr>
<tr>
<td>Liquid reference potential 2</td>
<td>POT 2</td>
<td>6</td>
<td></td>
<td>pH sensor</td>
</tr>
<tr>
<td>pH/ORP input 2</td>
<td>(pH) ORP</td>
<td>7</td>
<td>Ref.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
<td>meas. sig.</td>
<td></td>
</tr>
<tr>
<td>Digital input 1</td>
<td>K 1</td>
<td>9</td>
<td>+</td>
<td>Sample water (error)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Digital input 2</td>
<td>K 2</td>
<td>11</td>
<td>+</td>
<td>Pause control (backflushing)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Digital input 3</td>
<td>K 3</td>
<td>13</td>
<td>+</td>
<td>ECO MODE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Terminal diagram

Terminal diagram combination probe

Detail W

Detail X

*The function "Liquid reference potential" must be activated in the software.
Terminal diagram two-probe measuring chain

Temp. input

Input 1

Liquid reference potential

Input 2

Digital inputs

Detail Y

Detail Z

* The function "Liquid reference potential" must be activated in the software.

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