Assembly and operating instructions
DULCOMARIN® II, N-Module
(Power Supply Module without Relay) DXMaN

Please enter the identity code of your device here! DXMa ________________

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!
Technical changes reserved.
<table>
<thead>
<tr>
<th>Further applicable documents</th>
<th>These operating instructions and supplementary instructions are only valid in combination with the following operating and supplementary instructions:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Multi-channel measuring and control system operating instructions DULCOMARIN® II Swimming Pool Controller and Disinfection Controller DXCa Part 1: Assembly and installation</td>
</tr>
</tbody>
</table>
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## 1 Identity code

*The identity code describes the external modules for the DULCOMARIN® II, series DXM.*

*Only the M module of mounting type “W” “Wall mounting” can be ordered with operating elements and with different languages.*

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### DXMa

<table>
<thead>
<tr>
<th>External modules for the DULCOMARIN® II, series DXM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module:</strong></td>
</tr>
<tr>
<td>M M module, measuring module: pH, redox, temperature</td>
</tr>
<tr>
<td>A A module, control module: 3 pumps and 4 analog outputs</td>
</tr>
<tr>
<td>R R module, control module: Chlorine gas metering device with feedback ¹ ² ³</td>
</tr>
<tr>
<td>N N module, power supply module without relay ¹ ² ³</td>
</tr>
<tr>
<td>P P module, power supply module without relay, only mounting type “D” ² ³</td>
</tr>
<tr>
<td>I I module, current input module, 3 mA inputs, 2 digital inputs</td>
</tr>
</tbody>
</table>

**Mounting type:**

- 0 Without housing, only P-module (IP 00)
- W Wall mounted (IP 65)
- H Mounting rail (IP 20)
- E Upgrade module (insert module for DXCa, IP 20)

**Version:**

- 0 With controls
- 2 Without controls
- 3 Without controls (only mounting type “E”)

**Application:**

- 0 Standard
- S Swimming pool (only m module)

**Language:**

- 00 No controls ² ³
- DE German
- EN English
- ES Spanish
- FR French
- IT Italian

**Certification:**

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<table>
<thead>
<tr>
<th>DXMa</th>
<th>External modules for the DULCOMARIN® II, series DXM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>00 No certification, only P-module without housing</td>
</tr>
<tr>
<td></td>
<td>01 CE mark</td>
</tr>
</tbody>
</table>

1) only mounting type W wall mounting / 2) only in version “2” without controls
2 About this device

The N-module DXMaN (power module without relay) supplies the modules of a DULCOMARIN® II system with electrical power.

2.1 Safety chapter

The DXMaN module must only be used as a power supply for the DULCOMARIN® II.

The DXMaN module must only be used as part of a DULCOMARIN® II.

Only trained personnel may install the N module DXMaN.

2.2 Storage and transport

CAUTION!
Protect the module against moisture and the effects of chemicals, even while still packaged.

Store and transport the module in its original packaging.

Ambient conditions for storage and transportation:

- Temperature: -10 °C ... 70 °C
- Max. permissible relative humidity: 95 %, non-condensing (DIN IEC 60068-2-30)
3 Assembly and installation

**NOTICE!**
The installation must only be carried out by technically trained personnel.

When assembling and installing this device, observe the instructions in the operating instructions "Multi-channel measuring and control system DULCOMARIN® II Swimming Pool Controller and Disinfection Controller DXCa Part 1: Assembly and installation".

The central unit does not allocate the N modules any "NodeIDs". They do not form an active part of the bus system.

Make the CAN connection according to the "Multi-channel measuring and control system operating instructions DULCOMARIN® II Swimming Pool Controller and Disinfection Controller DXCa Part 1, Assembly and Installation".

**WARNING!**
Mains voltage
Possible consequence: Fatal or very serious injuries.

External fuse necessary.

If mains voltage is connected to the device, then the fuse carrier is also under mains voltage.

Before working on the device, disconnect the device from the mains voltage and secure to prevent switching back on.
Fig. 1: Terminal Wiring Diagram

1. Fuse 5x20 slow-acting
2. CAN connector plug M12 5 pole.
3. LED 2
4. LED 1
5. Connector for central unit
6. CAN bus connector to the modules

Terminal allocation

<table>
<thead>
<tr>
<th>Description</th>
<th>Terminal identifier</th>
<th>Terminal no.</th>
<th>Pol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains</td>
<td>X1</td>
<td>11</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>L(1)</td>
</tr>
</tbody>
</table>
The two LEDS (LED 1 and LED 2) indicate the load of the 24V power supply for the CAN bus.

Flash code LEDs power supply monitoring DULCOMARIN® II (N and P module)

<table>
<thead>
<tr>
<th>Operating status</th>
<th>LED 1 (H2, power)</th>
<th>LED 2 (H3, power)</th>
<th>Power</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>off</td>
<td>green</td>
<td>&lt; 1.1 A</td>
<td>All OK</td>
</tr>
<tr>
<td>Limit load</td>
<td>red</td>
<td>off</td>
<td>&gt; 1.1 A</td>
<td>Insert another power supply module into the loop</td>
</tr>
<tr>
<td>Overload / short circuit</td>
<td>red, flashing</td>
<td>off</td>
<td>&gt; 1.35 A</td>
<td>Check wiring</td>
</tr>
</tbody>
</table>

Power supply module

Locate the power supply module in the CAN bus backbone (DULCOMARIN® II DULCO-Net)

The central unit always contains a power supply module.

<table>
<thead>
<tr>
<th>Number of pools</th>
<th>Additional N- or P-modules</th>
<th>Number of pools</th>
<th>Additional N- or P-modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
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<td>15</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>16</td>
<td>8</td>
</tr>
</tbody>
</table>

(Exception: number of pools = 2)

Electrical data

- Nominal voltage (X1): 90 - 253 V AC (50/60 Hz)
- Maximum power consumption: 500 mA at 90 V AC // 180 mA at 253 V AC
- Internal fusing with: Micro fuse 5 x 20 mm, 630 mA, 250 V, slow-acting

The N module DXMaN is a 24 V direct current power supply module (24 V DC, 1 A). Degree of protection: IP 20 (within the DXM housing: IP 65)
3.1 Repairs (fuse change only)

**WARNING!**
Mains voltage
Possible consequence: Fatal or very serious injuries.
External fuse necessary.
If mains voltage is connected to the device, then the fuse carrier is also under mains voltage.
Before working on the device, disconnect the device from the mains voltage and secure to prevent switching back on.

**NOTICE!**
The fuse only may be replaced by technically trained personnel. All other repair work may only be carried out by Customer Service.
Otherwise, general safety regulations apply.

Use only original fuses: Micro fuse 5 x 20 mm, 630 mA, 250 V, slow-acting (Order No. 712030).