

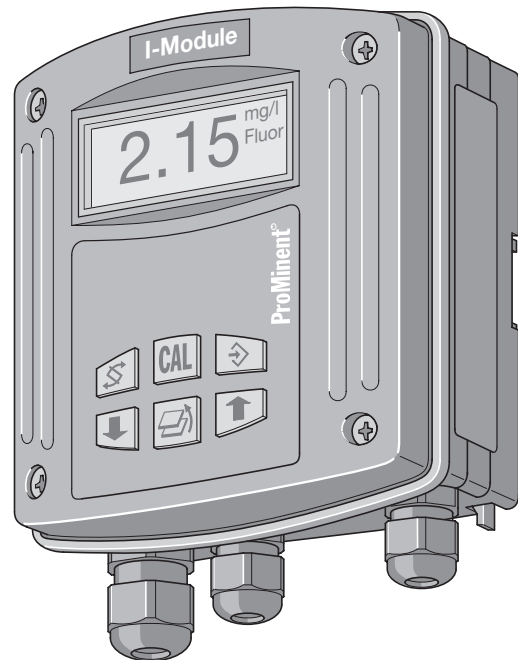
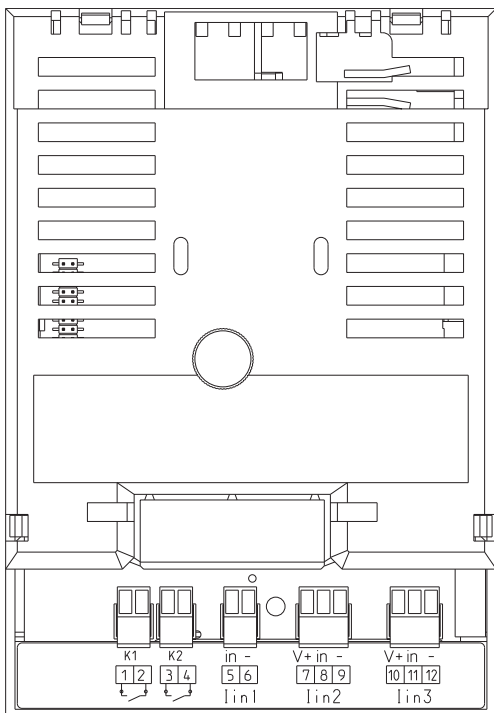


# Supplementary Instructions

## DULCOMARIN® II, I Module

(Current Input Module,  
Standard Signal Inputs mA)

### DXMa



**DXMa** \_\_\_\_\_

Please enter the identcode of your module!

**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!**

**These operating resp. supplementary instructions apply only in conjunction with the following ticked operating resp. supplementary instructions:**

- Operating Instructions Multi-Channel Measuring and Control System  
DULCOMARIN® II Swimming Pool Controller and Disinfection Controller DXCa  
Part 1: Mounting and Installation
- Operating Instructions Multi-Channel Measuring and Control System  
DULCOMARIN® II Swimming Pool Controller DXCa  
Part 2: Operation
- Operating Instructions Multi-Channel Measuring and Control System  
DULCOMARIN® II Disinfection Controller DXCa  
Part 2: Operation
- Supplementary Instructions DULCOMARIN® II Videographic Recorder  
Operation
- Supplementary Instructions DULCOMARIN® II, M Module  
(Measurement Module for pH, Redox/ORP, Temperature) DXMaM  
Operation
- Supplementary Instructions DULCOMARIN® II, M Module  
(Measurement Module for pH, Redox/ORP, Temperature) DXMaM  
Connection
- Supplementary Instructions DULCOMARIN® II, A Module  
(Actuator Module, Pumps and Standard Signal Outputs mA) DXMaA
- Supplementary Instructions DULCOMARIN® II, N Module  
(Power Supply Module without Relays) DXMaN
- Supplementary Instructions DULCOMARIN® II, P Module  
(Power Supply Module with Relays) DXMaP
- Supplementary Instructions DULCOMARIN® II, I Module  
(Current Input Module, Standard Signal Inputs mA) DXMal

### Imprint:

Supplementary Instructions  
DULCOMARIN® II, I Module  
(Current Input Module, Standard Signal Inputs mA)  
DXMal

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**Identcode**

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



Only the sensor module and the current input module in the mounting type W "wall-mounted" are available with controls and then with different languages.

**DXMa Internal modules for DULCOMARIN® II, series DXC**

These modules can be ordered via the identcode of the DXC (see "Operating Instructions Multi-Channel Measuring and Control System DULCOMARIN® II Swimming Pool Controller and Disinfection Controller DXCa, Part 1: Mounting and Installation").

## 1 About this Module

With the current input module DXMal, 2 switches / relays and 3 sensors can be connected via the mA inputs 0/4...20 mA of the DULCOMARIN® II.

The control module DXMal is equipped with the following inputs:

- contact inputs for sample water monitoring and pause
- 3 standard signal inputs 0/4 - 20 mA  
The mA values of the sensors for flow, turbidity, UV intensity, conductive conductivity, dissolved oxygen, and ammonia are recorded as treated (compensated and calibrated).  
The mA values of the sensors for ClO<sub>2</sub>, H<sub>2</sub>O<sub>2</sub>, PES, fluoride, and chlorite can be temperature-compensated. For this purpose, a PT1000 sensor with mA transformer must be connected to a mA input.

## 2 Safety Chapter

The current input module DXMal may only be used as component part of the DULCOMARIN® II. The installation may only be performed by specially trained personnel!

## 3 Storage and Transport

Only store and transport the module in its original packaging.



### CAUTION

**Also protect the packaged module against humidity and exposure to chemicals!**

Environmental conditions for storage and transport:

Temperature: - 10 °C to 70 °C

Climate: Permissible relative humidity: 95%, non-condensing (DIN IEC 60068-2-30)

## 4 Mounting and Installation



### WARNING

- **The installation may only be performed by specially trained personnel!**
- **Please observe the notes in the “Operating Instructions Multi-Channel Measuring and Control System DULCOMARIN® II Swimming Pool Controller and Disinfection Controller DXCa, Part 1: Mounting and Installation” before carrying out any mounting and installation work!**

### NOTE

**The terminal connection diagram is enclosed at the end of these supplementary instructions.**

Carry out the CAN connection as described in the “Operating Instructions Multi-Channel Measuring and Control System DULCOMARIN® II Swimming Pool Controller and Disinfection Controller DXCa, Part 1: Mounting and Installation”.

## 5 Technical Data

### Electrical data

*Digital inputs*

(K1 - K2): 2 inputs: for contacts, switching transistors and for analogue PLC outputs according to DIN EN 61131-2

Insulation voltage:	500 V
Input resistance:	3.5 kΩ
Off-load voltage:	10 V ... 12 V
Switching point:	passive: 1.750 Ω, typical active: 3.15 mA, typical
Input current:	4 mA (0 V) 5.8 mA (30 V)
Input capacity:	100 nF
Switching hysteresis:	20 μA
Max. switching frequency:	1 kHz

*Standard signal outputs mA*

(I out 1 - I out 3): 3 inputs: 0/4 ... 20 mA, electrically isolated

Insulation voltage:	500 V
Input resistance:	50 Ω
Load rating:	30 mA
2 inputs with 2-wire connection (loop supply) (I out 2, I out 3):	Supply voltage 22.0 V - 25.0 V
Measuring accuracy:	± 0.5 % of the measuring range (at 25 °C)
Representation:	1/215

### Environmental conditions

*Storage temperature:* -10...70 °C

*Type of protection*

Type of protection: as internal module IP 20  
as external module, wall-mounted IP 65 pursuant to IEC 60529, DIN EN 60529, VDE 0470  
as external module, control panel-mounted IP 54 pursuant to IEC 60529, DIN EN 60529, VDE 0470

*Humidity:* Permissible relative humidity: 95 %, non-condensing (DIN IEC 60068-2-30)

### Materials

*Housing:* PPE-GF 10

## 6 Terminal Assignment

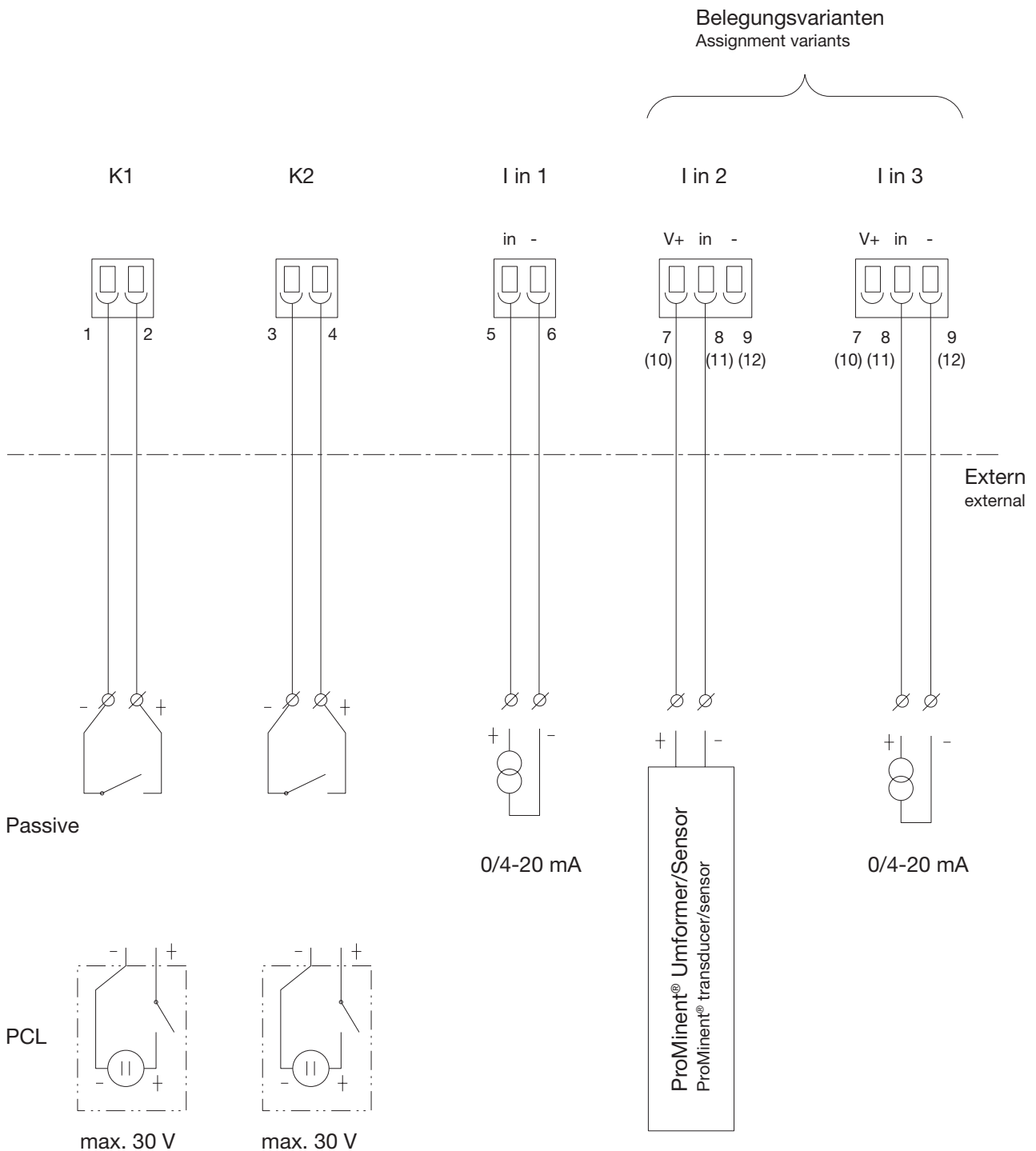
Description	Terminal description	Terminal no.	Polarity	Function
Contact input 1	K 1	1	-	Fault measuring water
		2	+	
Contact input 2	K 2	3	-	Pause control (e.g. backwashing)
		4	+	
Analogue input 1	I out 1	5	out	Flow (turbidity)
		6	GND (-)	
Analogue input 2	I out 2	7	V+	Fluoride (O <sub>2</sub> , ClO <sub>2</sub> , ClO <sub>2</sub> <sup>-</sup> , H <sub>2</sub> O <sub>2</sub> , NH <sub>4</sub> OH)
		8	out	
		9	GND (-)	
Analogue input 3	I out 3	10	V+	Temperature (UV, turbidity, conductivity, ClO <sub>2</sub> <sup>-</sup> )
		11	out	
		12	GND (-)	

For the measured variables via the terminal "I out 2", the software includes the following functionalities:

	F <sup>-</sup>	O <sub>2</sub>	ClO <sub>2</sub>	ClO <sub>2</sub> <sup>-</sup>	H <sub>2</sub> O <sub>2</sub>
Controlling *	-	-	X	X	X
Calibration	X	-	X	-	X

\* Configure a pump in advance (see "Operating Instructions Multi-Channel Measuring and Control System DULCOMARIN® II Disinfection Controller, DXCa, Part 2: Operation")

## 7 Terminal Connection Diagram



**Technical changes reserved.**

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