CHEWATEC

CHEWATEC MC III

Comfort solution for measuring and control

WATER PARAMETER ANALYSIS MADE EASY

Comfort water treatment unit

Wide variety of measured parameters

CHEWATEC MC III

The controller **CHEWATEC MC III** is our compact all-rounder for water analysis. With its specially designed functionalities, e.g. processing or interference variables and switchover of control parameters, it closes the control circuit between sensors and metering pumps. The two measuring and control channels of the CHEWATEC MC III can be individually configured to meet customer requirements. Everything that you need for the reliable treatment of industrial and process water, potable water as well as swimming pool water.

Features

- Simple operation thanks to a clearly arranged display
- More for your money: two measuring and control channels now in the basic configuration
- Versatile use: all common measured variables can be set per channel and subsequently altered
- Control from everywhere: LAN-capable and convenient remote access via integrated web server
- Maximum flexibility: individually adjustable to different operating statuses, e.g. Day-Night mode
- Excellent process safety and reliability: avoidance of incorrect metering by time-based monitoring of control variables

Areas of application

- Measurement and control of water parameters in industrial and process water treatment plants
- Monitoring of the water parameters potable water
- Measurement of pH value and disinfection parameters in the food and beverage industry
- Measurement and control of the hygiene parameters in swimming pools
- Monitoring of the chlorine dioxide concentration in systems for legionella control and prevention, for example in schools, hotels or hospitals

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Technical Information

Measuring range

mV connection type:
- pH: 0.00 ... 14.00
- ORP voltage: -1500 ... +1500 mV

Connection type mA (amperometric measured variables, measuring ranges corresponding to the sensors):
- Chlorine
- Chlorine dioxide
- Chlorite
- Bromine
- Ozone
- Hydrogen peroxide (PER sensor)
- Hydrogen peroxide (PEROX sensor with PEROX transducer V2)
- Peracetic acid
- Dissolved oxygen

Connection type mA (potentiometer measured variables, measuring ranges corresponding to the transmitter):
- pH
- ORP voltage
- Fluoride
- Conductivity (measuring ranges corresponding to the transmitters):
- via Transmitter 0/4 ... 20 mA
- Temperature:
- via Pt 100/Pt 1000, measuring range 0 ... 150 °C

Resolution
- pH: 0.01
- ORP voltage: 1 mV
- Temperature: 0.1 °C
- Amperometric analysis (chlorine etc.): 0.001/0.01 ppm, 0.01 vol.%, 0.1 vol.%

Accuracy
- 0.3% based on the full-scale reading

Measurement input
- pH/ORP (input resistance > $0.5 \times 10^{12}\ \Omega$)

Temperature compensation
- Pt 100/Pt 1000 for pH, chlorine dioxide (CDP) sensor and fluoride

Correction range
- 0 … 100 °C

Basic measuring variable

- AA: 2 measuring channels with freely selectable measured variables for mA. Including interference variable and pH compensation for chlorine
- VA: 2 measuring channels with freely selectable measured variables for mV (pH and ORP) and mA. Including interference variable and pH compensation for chlorine
- VV: 2 measuring channels for pH and ORP.
- L3: 2 measuring channels for the measured variable conductive conductivity.
- PID controller with pulse frequency-based metering pump control for 2 metering pumps.
- 2 analogue outputs for measured value, correction value or control variable (dependent on the optional equipment).
- 4 digital inputs for sample water fault detection, pause and parameter switch-over.
- 2 output relays selectable as limit value, cycle timer, real-time timer or intermittent programmable control output (depending on the optional equipment).
- Measured variables and language selection during commissioning.
- Temperature compensation of the pH, chlorine dioxide (CDP) and fluoride measurement via Pt 100/Pt 1000.
- 22 operating languages: all European languages as well as Chinese, Russian, Thai, Korean. The operating language is selected during commissioning and can be changed at any time by a keyboard shortcut. The documentation language is selected via the identity code. A data carrier is also supplied that contains all other languages.
- Saving and transfer of device parametrisation by means of the SD card.
- Calibration and event data logger (without SD card, data is saved in the controller).
- Interference variable processing (flow) via frequency (contact water meter).
- Subsequent upgrade of the software function by means of an activation key or firmware update

pH compensation range for chlorine

- Sensor CLE 3 and CLE 3.1: 6.5 ... 8.5, sensor CBR: 6.5 ... 9.5

Disturbance signals

- Flow via 0/4 … 20 mA or contact water meter 1 - 500 Hz, the interference variable acts on both channels

Control characteristic

- P/PID control

Control

- 2 x bidirectional control

Analogue outputs

- 2 (3) x 0/4 ... 20 mA electrically isolated, max. load 450 Ω, range and assignment (measured, correction, control variable) can be set

Control outputs

- 2 x 2 pulse frequency outputs for metering pump control 2 relays (limit value, 3-point step or pulse length control)

Alarm relay

- 250 V ~3 A, 700 VA contact type changeover contact

Digital control inputs

- 2 (5) as a remote-control input for the functions pause control / sample water fault, parameter set switch-over, level monitoring of chemical tanks

Electrical connection

- 90 – 253 V, 50/60 Hz, 25 VA, 24 V DC

Field bus connection

- PROFIBUS®-DP, Modbus RTU, PROFINET

Ambient temperature

- 0 ... 50°C (for use indoors or with a protective enclosure)

Enclosure rating

- Wall-mounted: IP 66 and IP 67 (NEMA 4X) Installation in the control cabinet: IP 54 for control cabinet door

Tests and approvals

- CE, MET (corresponding to UL according to IEC 61010)

Housing material

- PC with flame proofing equipment

Dimensions

- 250 x 220 x 122 mm (WxHxD)

Weight

- 1.3 kg