

- ▲ Supports the hygienic operation of evaporation coolers as per VDI 2047, sheet 2 resp. 42 federal regulations for emission protection law
- ▲ Large illuminated graphic display
- ▲ Simple operation by clear arranged menu guidance
- ▲ Bleeding control of up to three cooling towers is possible
- ▲ Additional monitoring measurements like pH or Redox can be integrated
- ▲ Optional: Integrated screen recorder for data recording



The Versatronic cooling water allows fully automatic desalination control and timer-controlled biocide dosing of up to three cooling towers. If the device is only designed for one or two cooling towers, two weekly timers can also be set per measuring channel for the dosing of two different biocides.

The Versatronic also includes a communication function to the circulation pump of the cooling tower.

Logic links between the functions of bleeding, biocide dosing and circulation control provide adequate process reliability.

Functions:

- ▲ Adjustable interlocking between biocide dosing and bleeding (preferred bleeding)
- ▲ Weekly timer with up to 4 dosing points per day (max. 28 per week) for biocide dosing, dosing duration and application time per dosing time freely selectable
- ▲ Communication with the circulation pump of the cooling circuit (control gives a running command to the circulating pump if it is not running, after starting the circulation, bleeding or biocide dosing remain blocked for an adjustable time)
- ▲ Selectable conductivity measuring principle (inductive or conductive measurement)
- ▲ Additional measurement (incl. control output) integrable
- ▲ Standard signal output (0/4 - 20 mA) for each measuring channel
- ▲ Option: Integrated screen recorder for data recording and visualization
- ▲ Option: Current screen display of the device on the PC/laptop via Ethernet interface (integrated web browser)

Technical data:

Bleeding inductive

Default setting display range: 0 – 5000 µS/cm
 Default setting W+: 1800 µS/cm
 Default setting Ws: 1700 µS/cm
 Default setting W-: 1600 µS/cm

**Bleeding conductive
(electrode measurement)**

Default setting display range: 0 - 500 µS/cm
 Default setting W+: 180 µS/cm
 Default setting Ws: 170 µS/cm
 Default setting W-: 160 µS/cm

Biocide timer

Weekly timer, up to 4 dosing points per day selectable
 Dosing time: 0 – 23 h 59 min 59 s
 Application time: 0 – 23 h 59 min 59 s

pH measurement

Default setting display range: 0 - 14 pH
 Preset setpoint: 7 pH

Redox measurement

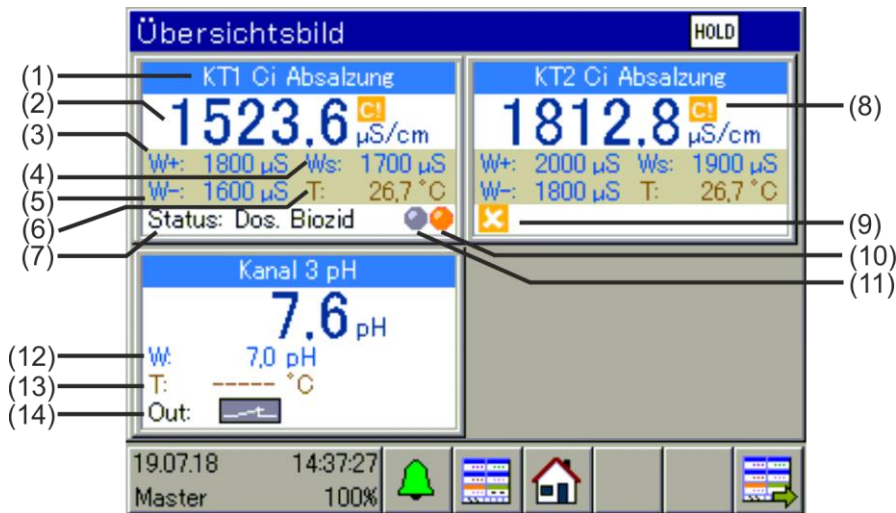
Default setting display range: 0 - 500 mV
 Preset setpoint: 200 mV

Outputs per measuring channel

Bleeding: 3 make contacts
 Additional measurement: 1 make contact

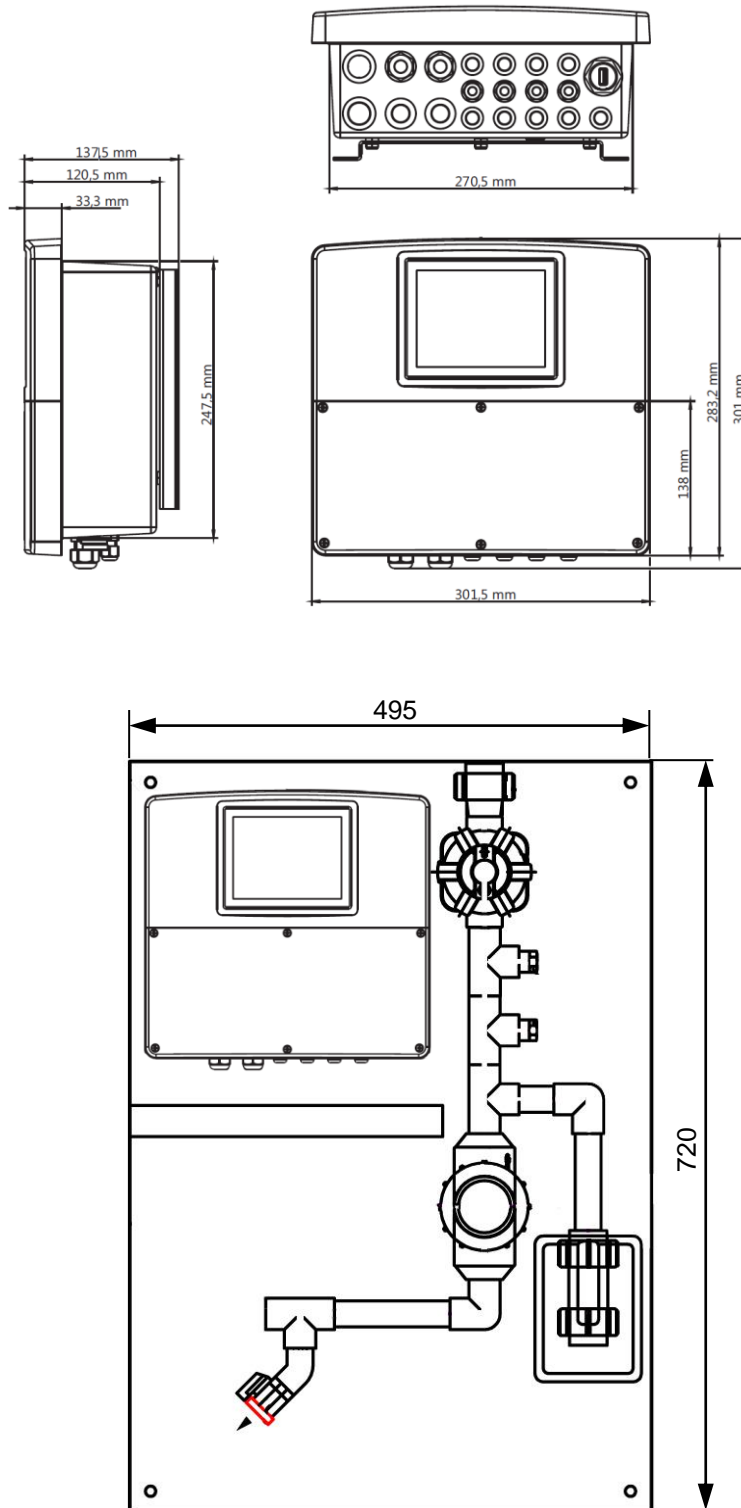
Default setting analog outputs: 4 - 20 mA

Display of the Versatronic bleeding device



- | | |
|---|--|
| 1 Name of measuring channel | 8 Calibration timer expired (perform calibration!) |
| 2 Reading | 9 Not approved (control output disabled) |
| 3 Switch point bleeding ON | 10 Biocide dosing flag |
| 4 Switching point pre-bleeding on | 11 Circulation flag |
| 5 Switch point bleeding OFF | 12 Nominal value controller additional measurement |
| 6 Temperature of cooling water | 13 Additional temperature measurement |
| 7 Current status of cooling water treatment | 14 Switching state output additional measurement (output active) |

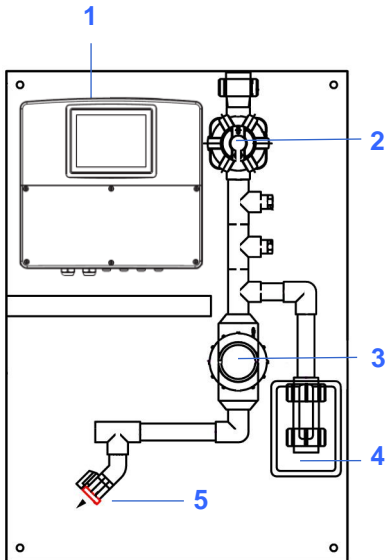
Dimensions:



Complete device:

Article/name

Material No.

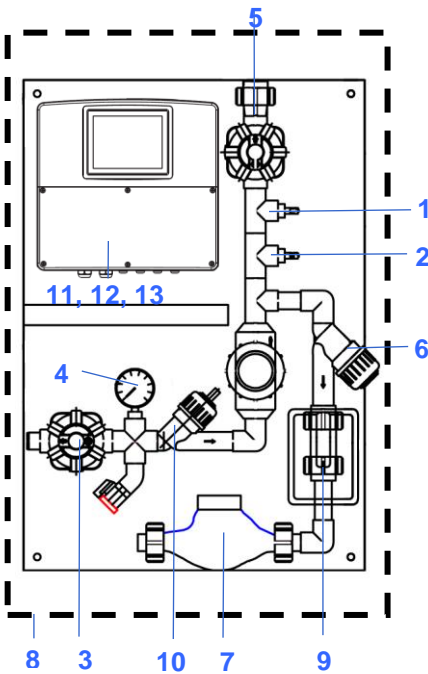


Versatronic Cooling Water basic device

Bleeding device Versatronic Cooling Water with pre-circulation control pre-assembled on a mounting plate (500 x 720 mm)

on request

- Extent of supply:
- Versatronic Cooling Water conductivity measuring unit (1)
 - Manual diaphragm valve (2)
 - Conductivity measuring probe (3)
 - Motor driven ball cock 230 V (4)
 - Test portion cock (5)


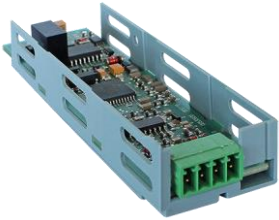


Versatronic Cooling Water options

on request

- Option 1** Metering valve 1 for biocide metering, ready-assembled
- Option 2** Metering valve 2 for metering of a 2nd biocide or a anticorrosive, ready-assembled
- Option 3** Manual diaphragm valve on inlet side
- Option 4** Manometer 0-10 bar
- Option 5** Orifice (-30 %), on outlet side
- Option 6** Filter in front of drain valve, DN 20, PVC, 0.5 mm
- Option 7** Contact water meter with pulse output 1 pulse/litre
- Option 8** Unit in a GFK cabinet with heating
- Option 9** Motor diaphragm valve instead of motor driven ball cock
- Option 10** additional pH measuring incl. probe, ready-assembled
- Option 11** Profibus interface
- Option 12** Ethernet interface
- Option 13** Screen recorder

Ordering data single components:

	Article	Article no.
	Basic unit Versatronic basic unit incl. operating instructions	155201
	Measuring module Measuring module Plug-in card Ci (inductive conductivity) Measuring module Plug-in card Cr (conductive conductivity) Measuring module Plug-in card pH/Redox	255250 255251 255252
	Input Plug-in card Plug-in card, universal input Plug-in card, binary input (3 make contacts)	255253 255254
	Output Plug-in card Plug-in card, analog output (0/4 - 20 mA) Plug-in card, binary output (1 change-over contact) Plug-in card, binary output (2 make contacts) Plug-in card, binary output (2 x PhotoMOS) Plug-in card, binary output (1 x TRIAC) Plug-in card, power supply +/-5 V, 24 V	255255 255256 255257 255258 255259 255260
	Interface Plug-in card Plug-in card, Profibus-DP interface Plug-in card, Ethernet interface	255261 255262



Article	Article no.
USB host socket	255263
Ethernet RJ-45 plug for self-assembly	255266
Panel mounting set	255267
Cable gland set Versatronic	255268
Resistor box for Ci basic adjustment/calibration adapter	255269
USB cable with plug USB/A - USB/B, length: 3 m	255273
Software	
Setup software Versatronic (CD)	255264
Software PCA 3000	255270
Software PCC	255271
Function extension	
Unlock code for registration function	255265

Inductive conductivity measurement probes with integrated temperature sensor

Construction:	Oval spherical cap, streamline-shaped with 8 mm meter flume diameter
Material:	PVDF
Dimensions:	39 x 50 (Ø * h)
Pressure resistance:	PN = 10 bar at 20 °C
Temperature resistance:	max. 120 °C
Temperature sensor:	PT100
Time of response of temperature sensor in measurement cell:	approx. 30 s (90 % value) with stainless steel sensor
Material sensor's protecting tube:	Stainless steel, 1.4571
Sealing element:	O-ring, EPDM 281
Length connection cable:	10 m
Type of lead:	7-pin special measurement lead
Measuring lead connection:	prefabricated for terminal connection

Article

Material No.



Conductivity measuring probe as above, with adapter for PP flow fitting or PVC flow fitting

255202

Measuring probe material: PVDF
Adapter material: PVDF



Calibration adaptor for conductivity basic adjustment with simulation resistances for five measuring ranges

2551269



Flow fitting

287514

Material: PVC
Temperature resistance: up to 50 °C
Connections: d40 adhesive muffs



Article **Material No.**



**Conductive conductivity measurement probe
as described above**

255143

installed in PVC flow fitting seat
Temperature: max. 55 °C
Connections: d 32 adhesive muffs



Calibration box for bleeding (conductive)
with simulation resistances
for the measurement ranges 0 ... 5, 0 ... 50, 0 ... 500 $\mu\text{S/cm}$

255199



Article

Material No.



pH-Combination Electrode

with screw-in thread PG 13.5 and plug-in screw connection, glass shaft = 120 mm, Ø = 12 mm, collector Ag/AgCl, sintered.

pH-Combination Electrode

with dirt-repelling PTFE-circular diaphragm
pH range: 0 - 12
Temperature range: -15 °C ...+80 °C
Pressure: up to 6 bar
Minimum conductivity: 100 µS/cm

418853008

Redox Combination Electrode

with screw-in thread PG 13.5 and plug-in screw connection, glass shaft Ø = 12 mm, L = 120 mm, platinum electrode, Ag/AgCl sintered collector, in KCl gel, ceramic diaphragm
Temperature up to approx. 80 °C

418853010



Temperature sensor Pt 100

with PG 13.5 screw-in thread and screw connection
glass shaft Ø = 12 mm, L = 120 mm
Temperature up to 100 °C

418853004



Article

Material No.

Impedance converter

418853005

We recommend the installation of the impedance converter in order to prevent negative influences on the measurement signal of pH-measurement due to electrical fields of near live wires, dirt or moistures.

The impedance converter is also used to short-out higher distances (more than 10 m) between measurement chain and measurement unit.

The impedance converter is screwed onto the measurement chain directly.

The delivery performance includes also a battery (live approx. 5 years).

Internal resistance: $R_i \leq 5 \Omega$

Permitted surrounding temp.: -10...+50 °C

Permitted storing temp.: -10...+60 °C

Housing: PVC

Length: 108 mm

Weight: 0.09 kg



Connection cable with rotating matching plug for Redox measurement

Length 2 m

418853101

Length 5 m

418853102

Length 10 m

418853103

Length 20 m

418853104

Connection cable (doubly shielded) with rotating matching plug for pH-measurement

Length 5 m

418853106

Length 10 m

418853107

Length 15 m

418853108

Length 20 m

418853109

Connection cable (3-conductor connection) with rotating matching plug for temperature-measurement

255197

Length 10 m

Connection cable (doubly shielded) with rotating matching plug for pH electrode with integrated temperature sensor Pt 100

on request

Length 10 m



Article **Material No.**



Buffer solutions

pH 4,01	20 ml	418853125
pH 7,00	20 ml	418853126
pH 9,21	20 ml	418853127

pH 4,01	1 l	418853121
pH 7,00	1 l	418853122
pH 9,21	1 l	418853123

Redox-buffer solution 468 mV	250 ml	418853124
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Detergent for Combination pH and ORP/Redox Electrodes 418853128

Pepsin-hydrochloric acid solution 250 ml



Angle seat flow fitting 418853202

for Combination pH or ORP/Redox Electrodes

Material:	transparent PVC
Operational temperature:	max. 60 °C
Pressure resistance:	10 bar (at 20 °C) 5 bar (at 40 °C) 1 bar (at 60 °C)
Nominal diameter:	DN 25, 1" (d = 32)
Connections:	d32 adhesive muffs



Flow fitting 418853213

for 3 measuring probes

Material:	PP
Angle support:	stainless steel
Operational temperature:	max. 80 °C
Pressure resistance:	10 bar (at 20 °C)
Connection thread:	G1/2
Hose connection:	6/12 mm (int. Ø/ext. Ø)



Article

Material No.

Motor driven ball cock

on request

Type:	closed when currentless
Nominal voltage:	230 V AC 50/60 Hz
Nominal width	DN20
Material	
Armature:	brass nickel-plated
Closing body and spindle:	stainless steel
Spindle seal:	O-ring, EPDM
Ball seat:	PTFE, O-ring Viton