Measurement and control device Versatronic

4-channel measurement and control device in modular design

- Chemical-resistant housing for wall mounting or control cabinet installation
- 5.5“ TFT-colored touch screen
- Large clamping space
- Acquisition and processing of up to 4 measured variables (Conductivity, pH, Redox, Cl, ClO_2, PAA, …)
- Features per channel:
  - 1 analysis input
  - 1 temperature input
  - 1 release input
  - 1 freely programmable controller
  - 1 or more control outputs
  - 1 standard signal output (0/2 - 10 V or 0/4 - 20 mA)
- PC configuration software for device configuration via prearranged setup screens
- Bi-directional data transfer via RS 485 or USB interface (standard), alternatively via Ethernet (LAN) interface or USB data stick (optional)

The measurement and control device Versatronic provides in addition to the simultaneous processing of up to 4 measurement and control channels, also various communication interfaces such as RS 485, Profibus, USB, Ethernet.
System states can be called-up via remote access at any time by an integrated web server.

A paperless recorder (optional) is able to record all measured values and switching states during a period of up to one year. By using an extensive evaluation software, the recorded data can be analyzed and visualized comfortably.

Technical data:

Power supply	110 - 240 V (+10/-15 %) 48 - 63 Hz
Safety type	IP 67
Inputs	max. 6 binary and 5 analog inputs
Outputs	max. 7 (11) binary and 4 analog outputs
Interfaces	RS 422/485, USB, Profibus DP, Ethernet
Power consumption	54 VA
Resistance	chemically resistant plastic housing (ABS)
Permissible ambient temperature	-5 °C to +50 °C
Display	colored touch screen
Dimensions (w ∗ h ∗ d)	301.5 x 301 x 137.5 mm
Weight	3.4 kg

Note: To guarantee the newest state of our products, we reserve the rights for single technical changes.

pH measurement

Measuring range:	-2 to +16 pH
Measurement accuracy:	≤ 0.5 %

Redox measurement

Measuring range:	-1500 to +1000 mV
Measurement accuracy:	≤ 0.5 %

Temperature measurement

Measuring range:	-200 to +850 °C
Measurement accuracy:	≤ 0.1 %

Conductive conductivity measurement (Cr)

Units:	uS/cm, mS/cm
Measuring range:	0 - 99999 *
	0 - 99.999 *
	0 - 999.99 *
	0 - 9999.9 *
Cell constant:	4.00 to 8.00 cm^{-1}
Measurement accuracy:	≤ 1 %

Inductive conductivity measurement (Ci)

Units:	uS/cm, mS/cm
Measuring range:	0 - 99999 *
	0 - 99.999 *
	0 - 999.99 *
	0 - 9999.9 *
Cell constant:	0.01 to 10 cm^{-1}
Measurement accuracy:	
0 to 999 uS/cm	≤ 1.5 %
1 to 500 mS/cm	≤ 1.0 %
500.1 to 2000 mS/cm	≤ 1.5 %

Universal input

Measuring range:	0(4) - 20 mA
Measurement accuracy:	≤ 0.1 %

Outputs per measurement channel

Switch outputs:	1 or 2 control outputs
Analog outputs:	1 or 2 analog outputs 0(4) - 20 mA

Controller types

Two-point controller
Three-point controller
Coarse and precise controller
Continuous controller

Controller output types

Pulse width output
Pulse width output
Continuous output

Control parameter

Nominal value (W):	Measuring range of measurement module
Proportioning band (Xp):	0 - 9999.9 %
Rate time (Tv):	0 - 9999 s
Reset time (Tn):	0 - 9999 s
Switching period (Cy):	0 - 9999 s
Contact gap (Xsh):	0 - 999.9 **
Switching hysteresis (Xd):	0 - 999.9 **
Operating point (Y0):	-100 to +100 %
Max. degree of operation (Y):	0 - 100 %
Min. relay activation time (Tk):	0 - 60 s
Max. pulse rate:	0 - 240 min-1
Start-up delay:	0 - 999.9 s
Switch-off delay:	0 - 999.9 s
Alarm tolerance:	0 - 999.9 **
Alarm delay:	0 - 9999 s

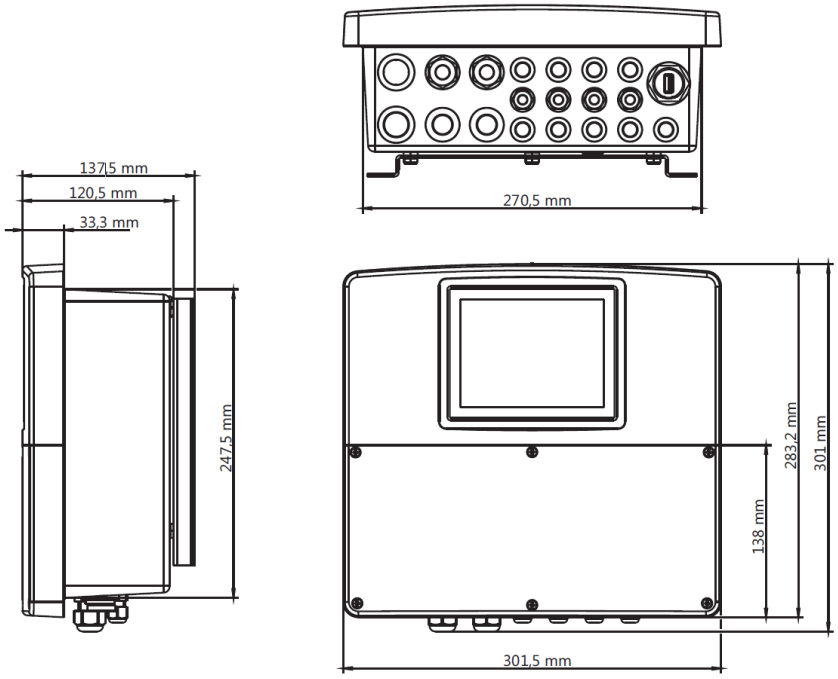
Limit alarm settings

Alarm type :	min. alarm, max. alarm, alarm window, inverse alarm window invertiert
Limit value:	0 - 99999 **
Hysteresis:	0 - 99999 **
Window width:	0 - 99999 **
Start-up delay:	0 - 999 s
Switch-off delay:	0 - 999 s

* Unit varies depending on selection for „Unit for calculation“ (µS/cm or mS/cm)

** Unit depends on the type of measurement (pH, mV, µS/cm, mS/cm, …)

Dimensions:


137,5 mm
120,5 mm
33,3 mm
247,5 mm
270,5 mm
283,2 mm
301 mm
138 mm
301,5 mm

Order code (Pos. 1 - 8):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Type	Measurem. channel				Extension slot			Extension slot		Extension slot		Interface		Fct.-ext.
	1	2	3	4	1	2	3	4	5	6	7	COM2	COM3	
ESD01	I	R	P	X	T	T	N	2	0	6	6	0	E	U

1. Type

ECD01	Ecolab (Ci meas. module f. probe 1024XXXX, blue)
ESD01	Ecolab (Ci meas. module f. probe 2552XX, white
C1D01	Ecolab cooling water, 1 cooling tower
C2D01	Ecolab cooling water, 2 cooling towers
C3D01	Ecolab cooling water, 3 cooling towers

2. Measurement channel 1

0	not used
I	Measurement Ci (inductive conductivity)
R	Measurement Cr (conductive conductivity)
P	Measurement pH
X	Measurement ORP (Redox)
C	Measurement Cl (chlorine)
D	Measurement Cd (chlorine dioxide)
A	Measurement Pa (peracetic acid)

3. Measurement channel 2

0	not used
I	Measurement Ci (inductive conductivity)
R	Measurement Cr (conductive conductivity)
P	Measurement pH
X	Measurement ORP (Redox)
C	Measurement Cl (chlorine)
D	Measurement Cd (chlorine dioxide)
A	Measurement Pa (peracetic acid)

4. Measurement channel 3

0	not used
I	Measurement Ci (inductive conductivity)
R	Measurement Cr (conductive conductivity)
P	Measurement pH
X	Measurement ORP (Redox)

5. Measurement channel 4

0	not used
I	Measurement Ci (inductive conductivity)
R	Measurement Cr (conductive conductivity)
P	Measurement pH
X	Measurement ORP (Redox)

6. Extension slot 1

0	not used
L	Analog input, linear scaling
T	Analog input, temperature (PT100)
C	Analog input, Cl

7. Extension slot 2

0	not used
L	Analog input, linear scaling
T	Analog input, temperature (PT100)
C	Analog input, Cl

8. Extension slot 3

0	not used
N	Binary input (3 make contacts)

Order code (Pos. 9 - 15):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Type	Measurem. channel				Extension slot			Extension slot 4	Extension slot 5	Extension slot 6	Extension slot 7	Interface COM2	Interface COM3	Fct.-ext.
	1	2	3	4	1	2	3							
2	0	6	6		0	E		U						

9. Extension slot 4

0	not used
1	Binary output, 1 change-over contact
2	Binary output, 2 make contacts
3	Binary output, 2 x PhotoMos
4	Binary output, 1 x TRIAC

10. Extension slot 5

0	not used
1	Binary output, 1 change-over contact
2	Binary output, 2 make contacts
3	Binary output, 2 x PhotoMos
4	Binary output, 1 x TRIAC
7	Power supply +/-5 V, 24 V

11. Extension slot 6

0	not used
1	Binary output, 1 change-over contact
2	Binary output, 2 make contacts
3	Binary output, 2 x PhotoMos
4	Binary output, 1 x TRIAC
6	Analog output 0/4 – 20 mA

12. Extension slot 7

0	not used
1	Binary output, 1 change-over contact
2	Binary output, 2 make contacts
3	Binary output, 2 x PhotoMos
4	Binary output, 1 x TRIAC
6	Analog output 0/4 – 20 mA

13. Interface COM2

0	not used
B	Profibus-DP

14. Interface COM3

0	not used
E	Ethernet

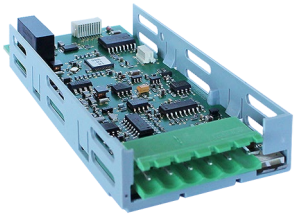
15. Function extension

0	no function extension
U	USB host socket
S	Activation registration function
US	USB host socket and registration function

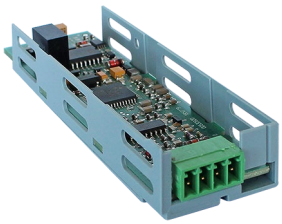
Example code (4 channel device): **Versatronic ECD01-IRPX-TTN-2066-0E-U**

Order data

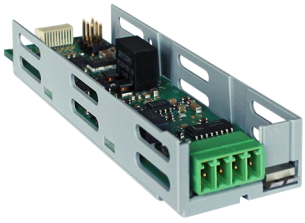
Article	Article no.
Basic unit	
Versatronic basic unit incl. operating instructions	155201



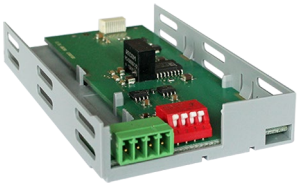
Measuring module	
Measuring module Plug-in card Ci (inductive conductivity) for probe 1024xxxx, blue	10240817
Measuring module Plug-in card Ci for probe 2552xx, white	255250
Measuring module Plug-in card Cr (conductive conductivity)	255251
Measuring module Plug-in card pH/Redox	255252



Input Plug-in card	
Plug-in card, universal input	255253
Plug-in card, binary input (3 make contacts)	255254



Output Plug-in card	
Plug-in card, analog output (0/4 - 20 mA)	255255
Plug-in card, binary output (1 change-over contact)	255256
Plug-in card, binary output (2 make contacts)	255257
Plug-in card, binary output (2 x PhotoMOS)	255258
Plug-in card, binary output (1 x TRIAC)	255259
Plug-in card, power supply +/-5 V, 24 V	255260



Interface Plug-in card	
Plug-in card, Profibus-DP interface	255261
Plug-in card, Ethernet interface	255262