

Systeme für Aquakultur,
Aquaristik, Labore und
zur Wasseraufbereitung

Systems for aqua culture,
sea water aquaria, labs and
water desalination and purification

Systèmes pour aquacultur,
aquariums eau de mer,
laboratoires et traitements d'eau



AquaCare GmbH & Co. KG
Am Wiesenbusch 11
D-45966 Gladbeck
Tel.: +49-2043-375758-0
Fax: +49-2043-375758-90
<http://www.aquacare.de>
e-mail: info@aquacare.de

Instruction Manual 19" Measuring System



modification possible

Content

1.	Safety Instructions	2
1.1.	General information	2
1.2.	Indication of information	2
1.3.	Qualification of the personnel.....	2
1.4.	Dangers if safety information are not minded	2
1.5.	Safe working	2
1.6.	Safety information for the operator	2
1.7.	Safety information for maintaining and assembling personnel	2
1.8.	Arbitrary reconstruction and spare parts production	2
1.9.	Illegal operation	3
1.10.	Linked aggregates	3
2.	Designated use	3
3.	Equipment	3
4.	Installation	3
5.	Warranty	3
6.	Technical data	3

1. Safety Instructions

1.1. General information

This manual contains basic information that are important for assembly, operation, and maintenance. This should be read before mounting by the assembly operator and the responsible operator and/or qualified personnel. This instruction must be disposable the at unit at any time.

Pay attention to this safety instruction as well as to the special instructions within the other chapters. In addition local laws and safety instruction must be minded.

1.2. Indication of information



If safety information are important for life or health for persons they are marked with the relevant hazard symbol according DIN 4844-W9.



Safety information marked with this symbol can cause danger for the machine and its function if not respected.



This hints can ease the work with the machine and its maintenance.

At the machine directly marked information as rotation arrow, fluid connections and setting points should be noticed. These marks should be readable at any time.

1.3. Qualification of the personnel

The staff for operation, maintaining, inspection and assembly must be qualified for these work. Responsibility and controlling of the personnel should be directed by the operator.

1.4. Dangers if safety information are not minded

If safety information are not minded persons, environment, and the machine can be endangered. Failure of observe lead to loss of the warranty.

Failure of observe can coarse:

- Failure of important functions of the machine.

- Failure of stipulated methods for maintenance.
- Endanger of persons with electric, chemical or mechanical impacts.

1.5. Safe working

Working with the machine is only allowed if all safety information of this manual, national laws and rules for preventing accidents and internal working, operating and safety rules of the operator must be minded.

1.6. Safety information for the operator

Contact protection for rotating or moving parts should not be removed while operation.

Risks of electrical energy must be averted. Please pay attention to the local laws and information, too.

1.7. Safety information for maintaining and assembling personnel

The operator must take care that all works for assembling, inspecting and maintaining are made by authorized and qualified personnel. These persons must be informed about the machine and the works by reading the manual or otherwise.

Working at the machine is only permitted if unit is out of operation. The described procedure of putting out of operation must be redeemed. Immediately after the work safety and protection facilities must be mounted and put into function.

Before starting again all issues treated in the chapter “putting into operation” must be minded.

1.8. Arbitrary reconstruction and spare parts production

Reconstruction or modifying the unit are only proper if the manufacture agrees. Original spare parts and authorized accessories by the manufacture are made for the safety. The use of other parts can destroy the warranty demands.

1.9. Illegal operation

Safety is only guaranteed if the unit is running within the field of application described in „designated use“ in this manual. The technical limits mentioned in manual (chapter “Technical data”) must be redeemed.

1.10. Linked aggregates

The listed information dealing with safety and operation in manuals of linked aggregates must be redeemed, too.

2. Designated use

AquaCare measuring techniques are only made for aquaria and aqua culture units. Other purposes are only allowed after consultation with AquaCare.

3. Equipment

The AquaCare 19” measuring system is equipped with one to four monitors. Each monitor is able to show the parameter, controls an output (option),

gives a 4-20 mA signal (option) or has RS 485 port (option). At the back side you find all connectors for sensors and outputs (option).

4. Installation

The box has only the protection typ IP30. So the unit should be installed at place that will not reach water.



Before opening the box make sure that the power adapter is currentless.

The electrical supply must be conform with the data at the rating plate.

Make sure that the outputs of the unit are not overloaded.

5. Warranty

You have 24 months warranty on all AquaCare units excepts spare parts like sensors. You have no warranty if parts are broken by violent (for example short cut at outputs). For consequential losses AquaCare is not liable.

6. Technical data

Please look at technical data and instruction manual of each module, too.	
Dimensions	19” housing 480 × 210 × 135 mm
Material of housing	ABS
1. module	pH monitor pH controller (max. 5 A AC and DC; max. 150 W ohm resistive load) ORP monitor ORP controller (max. 5 A AC and DC; max. 150 W ohm resistive load) oxygen monitor oxygen controller (max. 5 A AC and DC; max. 150 W ohm resistive load) conductivity monitor conductivity controller (max. 5 A AC and DC; max. 150 W ohm resistive load)
2. module	
3. module	
4. module	
Electrical input	Look at the data sheets of the modules
Type of protection	IP 30

7. Configuration and Parameterization of pH-module

WTW monitor pH 296 with lab pH sensor and NTC temperature sensor TFK 325 (relay version; the menu of monitors without relay is shorter)		
Configuration = CO		
Cod	555	may be changed
Co		
CFu	pH	do not change!
CCL	AutoCalTEC	may be changed
Ctc	Auto TP	do not change!
Cln	oth	do not change!
	ntc	do not change!
CR1	-	you may configure the chart recorder
CR2	-	you may configure the chart recorder
Crc REL 1	UL . LL	pH controller: do not change!
	LL pH	do not change!
Crc REL 2	UL . LL	temperature controller: do not change!
	LL °C	do not change!
CrF REL 1	C	do not change! Or if you want to chill choose "O"
CrF REL 2	C	do not change!

Parameterization = PA		
Cod	555	may be changed
PA		
Pr 1		you may parameterize the chart recorder
Pr 2		you may parameterize the chart recorder
PL		
LL REL 1	08.00	Please choose the nominal pH value
HS REL 1	0	Please choose the hysteresis (only if values are strongly fluctuating)
Td REL 1	00:10	Please choose the delay time: normally 10 seconds are o.k.
LL REL 2	25 °C	Please choose the nominal temperature value
HS REL 2	0°C	Please choose the hysteresis (only if values are strongly fluctuating)
Td REL 2	00:05	Please choose the delay time: normally 10 seconds are o.k.
PCd	000	You may choose a code number against unauthorised access.

8. Configuration and Parameterization of ORP-module

WTW monitor pH 296 with lab ORP sensor (relay version; the menu of monitors without relay is shorter)

Configuration = CO		
Cod	555	may be changed
Co		
CFu	mV	do not change!
Ctc	TP	do not change!
Cln	oth	do not change!
	ntc	do not change!
CR1	-	you may configure the chart recorder
CR2	-	you may configure the chart recorder
Crc REL 1	UL . LL	mV controller: do not change!
	LL mV	do not change!
Crc REL 2	UL . LL	temperature controller: do not change!
	LL °C	do not change!
CrF REL 1	C	do not change!
CrF REL 2	C	do not change!

Parameterization = PA		
Cod	555	may be changed
PA		
Pr 1		you may parameterize the chart recorder
Pr 2		you may parameterize the chart recorder
PL		
LL REL 1	300	Please choose the nominal mV value
HS REL 1	10	Please choose the hysteresis (only if values are strongly fluctuating)
Td REL 1	00 : 10	Please choose the delay time: normally 10 seconds are o.k.
LL REL 2	25 °C	Please choose the nominal temperature value
HS REL 2	0 °C	Please choose the hysteresis (only if values are strongly fluctuating)
Td REL 2	00 : 10	Please choose the delay time: normally 10 seconds are o.k.
PCd	000	You may choose a code number against unauthorised access

9. Configuration and Parameterization of oxygen-module

10. Configuration and Parameterization of conductivity-module

WTW Messumformer LF 296 mit Leitfähigkeitssensor TetraCon 325 (relay version; the menu of monitors without relay is shorter)

Configuration = CO

Cod	555	may be changed
Cln	uAr	do not change!; cell constant has to be adjusted in calibration modus
CFu	k	do not change!
Cm	1999 $\mu\text{S}/\text{cm}$	do not change!
Cr1	-	you may configure the chart recorder
Cr2	-	you may configure the chart recorder
CrC REL 1	UL . LL	conductivity controller: do not change!
	LL	do not change!
CrC REL 2	nF	
CrF REL 1	C	

Parameterization = PA

Cod	555	may be changed
PA		
Pr 1		you may parameterize the chart recorder
Pr 2		you may parameterize the chart recorder
PL		
LL $\mu\text{S}/\text{cm}$ REL 1	30	Please choose the nominal conductivity value
HS $\mu\text{S}/\text{cm}$ REL 1	0	Please choose the hysteresis (only if values are strongly fluctuating)
td $\mu\text{S}/\text{cm}$ REL 1	00 : 05	Please choose the delay time: normally 10 seconds are o.k.
Pt	0 , 0 °C	may be changed for exact calibration
Ptr	25 °C	do not change!
PtF	nLF °C	do not change!
PCd	000	You may choose a code number against unauthorised access