Level | Pressure | Flow | Temperature | Liquid Analysis | Registration | Systems Components | Services | Solutions

Technical information

CE4

Automatic Measurement Station
With integrated water sampler for continuous monitoring of online parameters in liquid media

Application areas

Waste water
- Self monitoring at domestic and industrial treatment plants
- Control for efficient running of treatment plants
- Analysis of process and control cleaning systems
- Monitoring of industrial / intermittent discharge

Surface water
- Quality monitoring in rivers and lakes
- Quality monitoring in reservoirs
- Monitoring direct dischargers

Drinking water
- Monitoring water supplies and sources
- Quality monitoring at distribution points

Advantages

Complete and compact turnkey system for online measurement of a number of independent parameters, water sampling, data acquisition and data analysis.

Flexible and modular:
- "Made to measure" to suit individual measurement requirements
- Measurement parameters can be quickly and easily retrofitted
- Uses standard sensors

Communications: control and data transmission via analogue, digital, PROFIBUS or Modem connection.

Easy to maintain and user friendly:
- Simple calibration process
- Easy access to all sensors
- Simple cleaning – automatic cleaning system option
- Overpressure monitoring to act as an early warning system for blockages

CE

TI102R/09/en
51006322

Endress+Hauser
People for Process Automation

Function and system design

Measuring principle

The pump positioned in the base of the station feeds the medium from the sampling point through the integrated PVC pipework system to the outflow. The sensors fitted into the analysis pipework measure their respective parameters. The transmitters required for these sensors are mounted in the electronic compartment of the system and record the sensor measurement signal. The measured value is transmitted to the integrated data recorder. The recorded measurements can be transmitted from the recorder to a PC using the built-in RS232 or RS485 interface, modem, PROFIBUS or by using an ATA flash card.
In order to complete more in-depth laboratory analysis of the medium an ASP Station 2000 stationary water sampler can be integrated into station. The samples are taken using the vacuum principle on a timed, quantity proportionally or event controlled basis. The samples are then distributed into individual bottles where they are stored at a constantly controlled temperature (e.g. at 4 °C).

Measuring system

The CE4 measurement station is a modularly constructed complete system for online monitoring and recording the most important parameters in the water and wastewater industry. The system consists of single modules that can be specifically adapted to individual measurement tasks. All components are installed in a stainless steel weatherproof cabinet.

These measurement systems can be integrated into the CE 4 measurement station as standard	**Additional measurements include**[1]
pH value and temperature	SAC (Spectral Absorption Coefficient)
Redox potential	Nitrate
Conductivity	Chlorine
Dissolved oxygen	Chlordioxide
Turbidity	

1) Further parameters on request

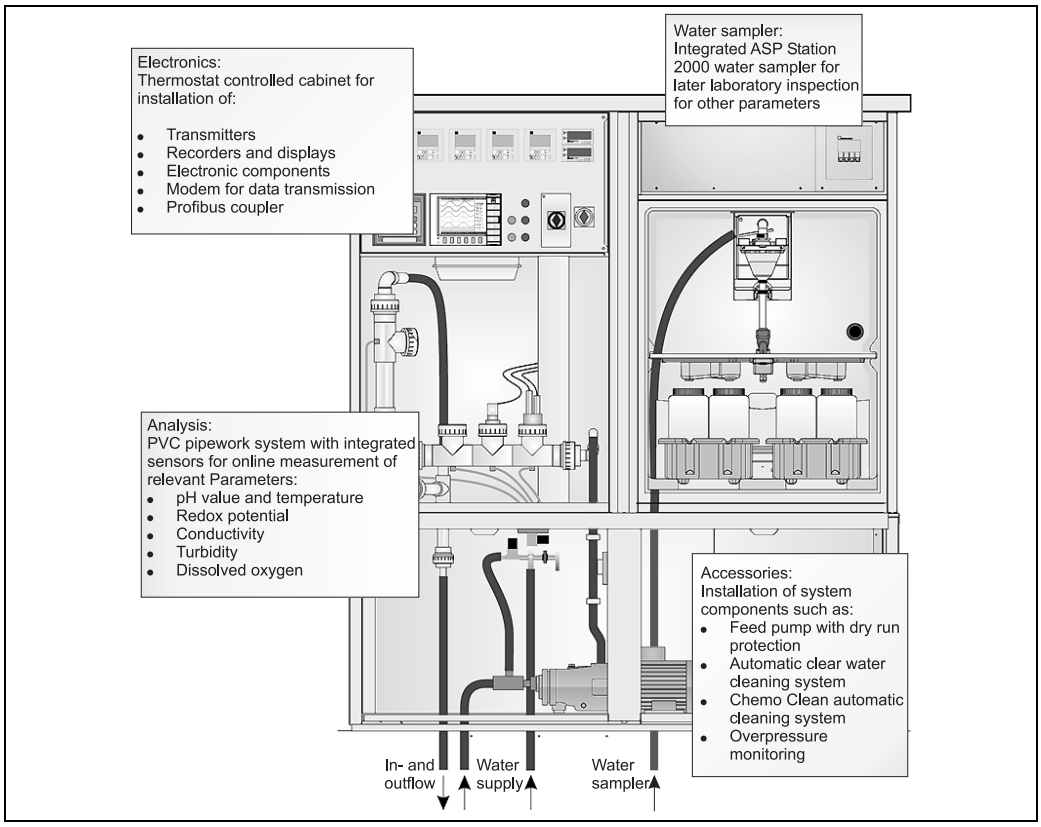


Fig 1: System construction of a CE4 measurement station

Sampling

The sampling system consists of an ASP Station 2000 stationary water sample. The samples are taken using the vacuum principle on a timed, quantity proportionally or event controlled basis. The samples are then distributed in compliance with EN 25667 into individual bottles where they are stored at a constantly controlled temperature (e.g. at 4 °C).

Robust and reliable:

- Stainless steel cabinet with foamed insulation for safe sample preservation
- Sampling compartment with seamless internal shell and foamed heat exchanger, no freezing or corrosion of cooling elements

Simple and user friendly:

- Interactive menu-led operation with Quick Setup for swift commissioning
- All wetted parts can be easily dismantled cleaned, maintained and reassembled without the need for any tools
- Separate bottle trays with handles for easy sample transportation

Data security

Different recorders are available from Endress+Hauser for storing and listing the measured values (e.g. Ecograph or Memograph).

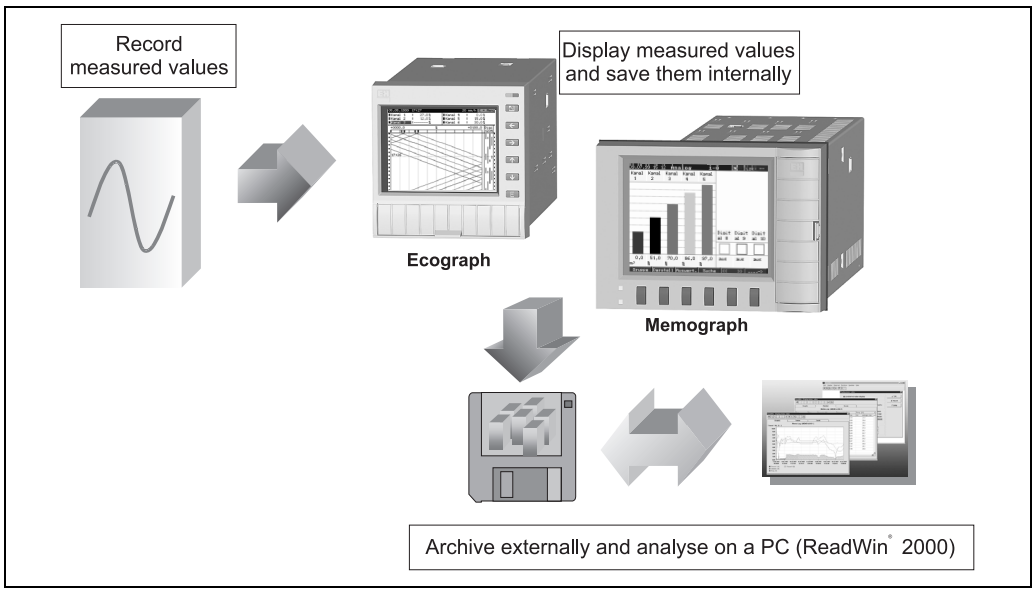


Fig 2: Endress+Hauser recorders for data security in the CE4 measurement station

Memograph	Ecograph	Ecograph A
Paperless recorder for electronic recording of digital and analogue input signals. Memograph plots signal sequences, monitors alarm set points, analyses measurement points, stores the recorded data internally and archives this on diskette, ATA flash memory card and PC.	Paperless recorder for electronic recording of digital and analogue input signals. Ecograph records measured value sequences, quantities, operating times, monitors alarm set points and stores this data both internally and on a diskette.	Functions of this device are the same as the Ecograph, additionally: counter inputs, quantity integration and the generation of intermediate, daily, monthly and yearly reports.

Memograph	Ecograph	Ecograph A
■ Multi-channel: 8 or 16 universal, 37 digital inputs, 4 mathematics channels and 8 combinations for the digital inputs. ■ Maintenance-free: No wear and tear - no paper and pens. ■ Universal: Free selection of signal display mode. ■ Secure: Complete data security concept. ■ Reliable: Alarm set point and self monitoring functions. ■ Informative: Event search, automatic signal analysis. ■ Practical: Easily read grouping for individual channelss. ■ Communicative: Interfaces for set-up and data transmission.	■ Electronic recording replaces dotting and strip chart recorders, saves on consumables. ■ Universal inputs measure all signals, guarantees universal application possibilities. ■ Quick Setup and integrated operating instructions enables set-up in minutes, saves time. ■ FLASH memory, reliable archiving even on power failure.	
8 to16 analogue inputs, 8 maths channels	3 to 6 analogue inputs	
Max. 37 digital inputs	4 digital inputs	
Communication		
RS232, RS485, PROFIBUS, Modem	RS232, RS485	

Data transmission
- RS232/RS485:
  Data transmission of the measured values using the RS232 or RS485 serial interface of the Memograph or Ecograph. This is done with the assistance of a 9 pin SUB D plug and socket connection.
- PROFIBUS:
  Measured value and device set-up transmission using PROFIBUS-DP; connection is made by means of an IFAK Profibus coupler.
- Modem:
  Measured value and alarm violation transmission from the Memograph paperless recorder fitted with Tele-alarm software. The message can be transmitted directly to a PC or as an SMS to a cell telephone.

Function monitoring

Collective alarm:

Output of a number of system component fault events, such as:
- Faults in the individual measuring circuits
- Faults occurring in the water sampler
- Dry run in the feed pump
- Overpressure in the pipe network

The transmission is done using a potential free output.

Overpressure monitoring:
An excessive rise in operating pressure in the pipework caused by soiling and deposits is automatically recognised by the overpressure monitor and then a warning is transmitted. This means that a possible blockage of the system can be avoided by this early warning system. As soon as the pressure in the pipework reaches a set point, the feed pump is automatically switched off. Any mechanical or water damage to the system is therefore avoided.

Manual cleaning using clear water:
A manual cleaning system for the analysis pipework involves a backwash of the suction hose and sensor point cleaning with clear water spray heads. This cleaning system is manually operated by a ball valve.

Automatic clear water cleaning system:
Cleaning the analysis pipework, back wash of the suction hose and cleaning the sensors using clear water spray heads. Control of this system is taken on by an integrated PLC with a user-definable cleaning cycle interval and duration.

Automatic cleaning system Chemo Clean:
Cleaning the analysis pipework, back wash of the suction hose and cleaning the sensors using spray heads, clear water and chemical cleaning agents. The user selects the cleaning agent to suit the individual application. Control of this cleaning system is taken on by an integrated PLC with a user-definable cleaning cycle interval and duration.

Inputs

Measurement type and range

Endress+Hauser Sensor type	Measurement	Ranges
pH sensor CPS11	pH value and temperature	pH: 1 to 12 temperature: -15 to 80 °C
Redox sensor CPS12	Redox potential	-1000 mV to +1000 mV
Conductivity sensor CLS21	Conductivity	10 µS/cm to 20 mS/cm
Oxygen sensor COS41	Dissolved oxygen	0.05 mg/l to 20.0 mg/l
Turbidity sensor CUS41	Turbidity	0.00 to 9999 FNU 0.00 to 9000 ppm 0.0 to 300.0 g/l 0.0 to 200.0 %
Turbidity sensor CUS31	Turbidity for drinking water applications	0.000 to 9999 FNU 0.00 to 3000 ppm 0.0 to 3.0 g/l 0.0 to 200.0 %
Optionally:		
Nitrate sensor CNS70 and nitrate transmitter CNM750	Nitrate	0 to 25 mg/l_N 25 to 50 mg/l_N
SAC sensor CSS70 and SAC transmitter CSM750	Spectral Absorption Coefficient (SAC)	0.3 to 50 m^{-1} 15 to 700 m^{-1}
Chlorine sensor CCS140/141 and armature CCA250	Chlorine	▪ Chlorine sensor CCS140: 0.05 to 20 mg Cl_2/l ▪ Chlorine sensor CCS141: 0.01 to 5.0 mg Cl_2/l

Outputs

Output signal

Liquisys M transmitter
Current output 4 to 20 mA

ASP Station 2000 water sampler
3 relay outputs max. 250 V/3 A

Alarm output
Fault event outputs using a potential free contact (cummulative alarm)

Power supply

Electrical connection

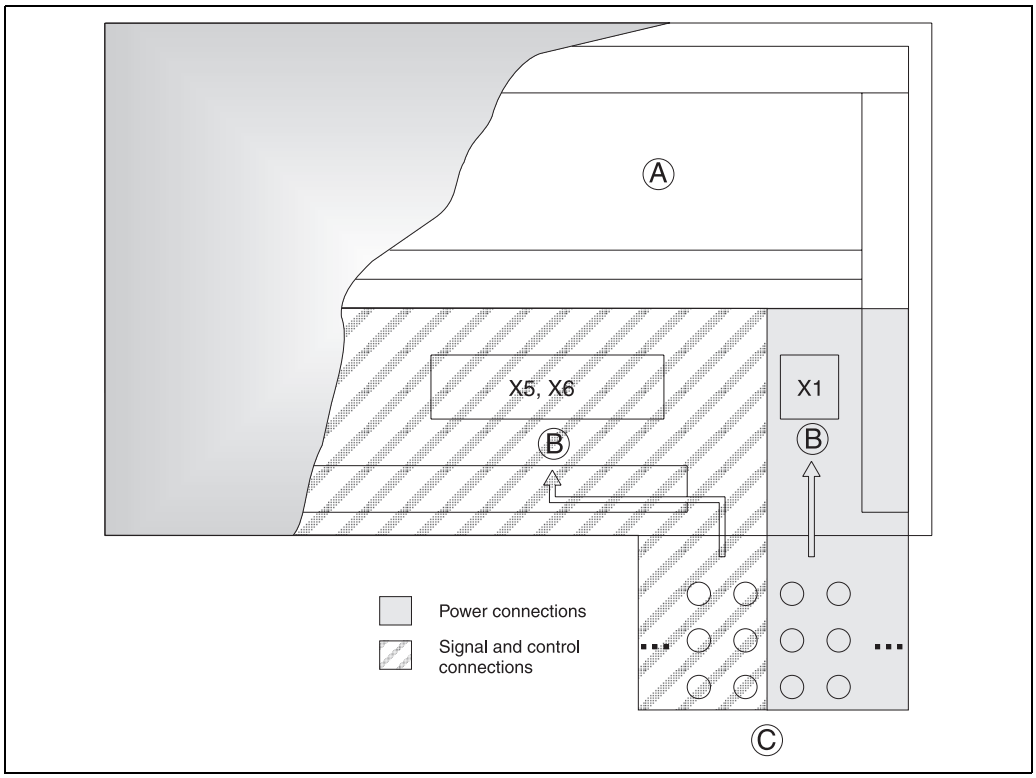


Fig 3: Measurement station terminal connections - Installation plate in the electronic compartment

Pos. A: Terminals, fuses and switch components for the internal wiring.
Pos. B: Terminal connection area
- *Terminal strip X1:*
  Power inputs (e.g. power supply for an external pump)
  Mains power connection 230 V AC / 50 Hz or 400 V AC / 50 Hz
- *Terminal strip X5:*
  Digital signal inputs or outputs (e.g. cummulative alarm, water sampler)
- *Terminal strip X6:*
  Analogue signal inputs or outputs (e.g. 0/4 to 20 mA measured signal)

Pos. C: PG cable entries IP68

Supply voltage

230 V, 50Hz / 400 V, 50 Hz

Cable entries

Cables are fed into the electronic compartment using the installed cable channel.

- 2 x cable gland M32
- 2 x cable gland M25
- 2 x cable gland M20
- 2 x cable gland M16

Cable entries can be installed in the left hand side or right hand side of the unit base.

Cable specification

- Power supply e.g.: NYY-J 3 core, max. 4.5 mm
- Analogue and signal cables e.g.: LiYY 10 x 0.34 mm
- Interface RS485 e.g.: LiYCY 2 x 0.25 mm

Power consumption (complete system)

Total 1500 W

Operating condition

Installation

Sampling point

- Medium removal for the pump and the sampling system must be taken from representative point in the channel, i.e. not on the edge of the channel and not in the sump or floor of the channel. A point offering a homogeneous mixture should be selected.
- There should always be enough medium available at the sampling point so that the a good head of water is always available.
- Suction hose is immersed by using a weight (see "Accessories").

Sampling hose installation

The sampling hose must always be installed with a downward slope from the measurement station to the sampling point. Depending on the application, some of the hoses may require protection.

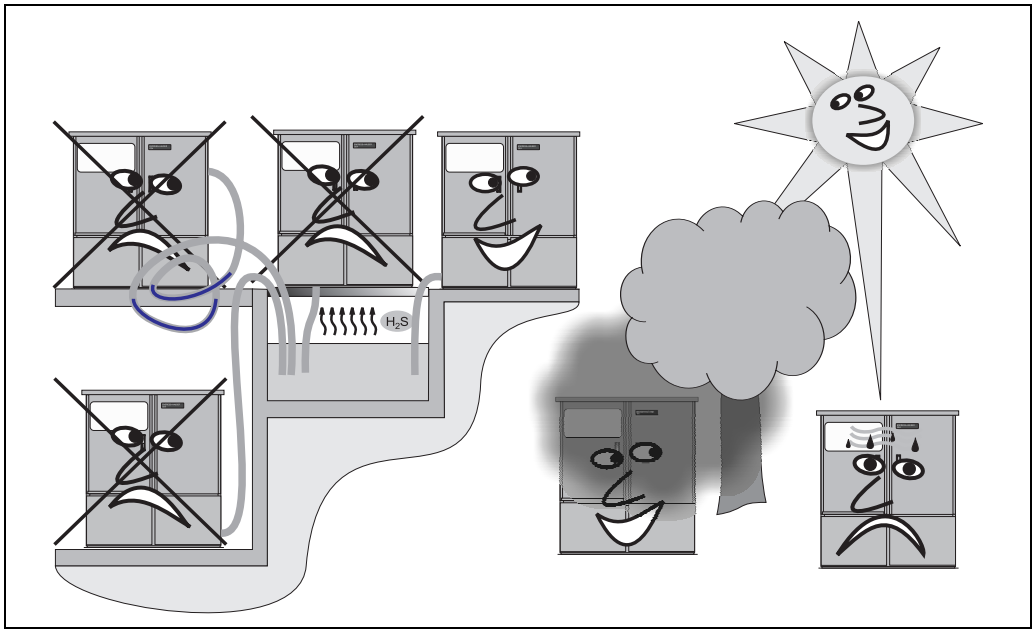


Fig 3: Installation notes

Installation point

- If possible avoid direct sunlight.
- Always ensure a minimum spacing (see drawing "Dimensions") between the rear panel of the CE4 measurement station and any walls.
- Free and depressurised leakage must be guaranteed.

Foundation plan

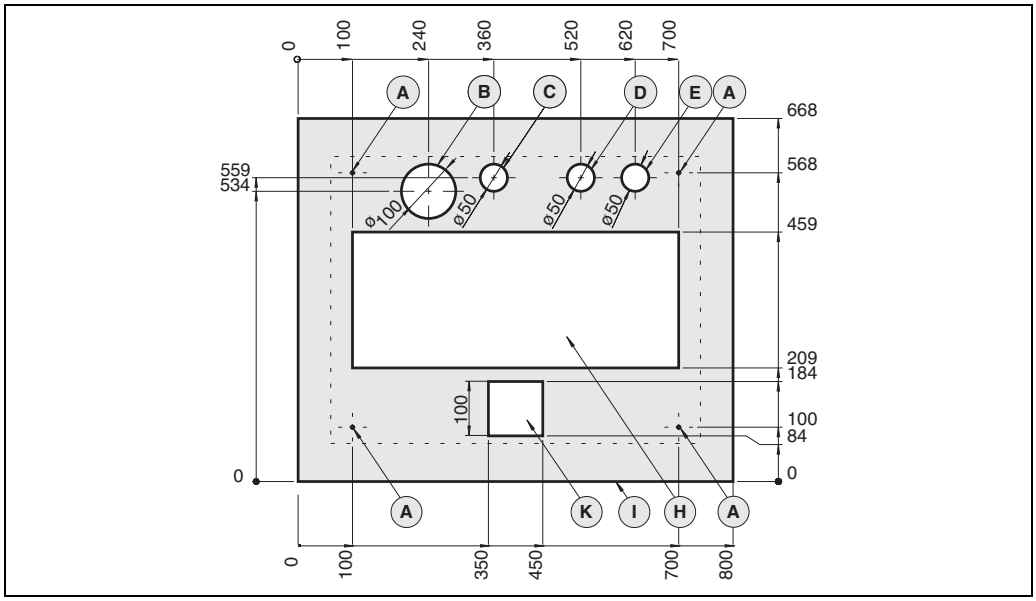


Fig 5: Foundation drawing without water sampler

Pos. A: M8x20 rawl bolts or M8 rawl plugs
Pos. B: In and outflow hoses for the measurement liquid
Pos. C: Water supply
Pos. D: Power cables
Pos. E: Signal cables
Pos. H: Feed pump installation area
Pos. I: Cabinet base
Pos. K: Overflow shaft

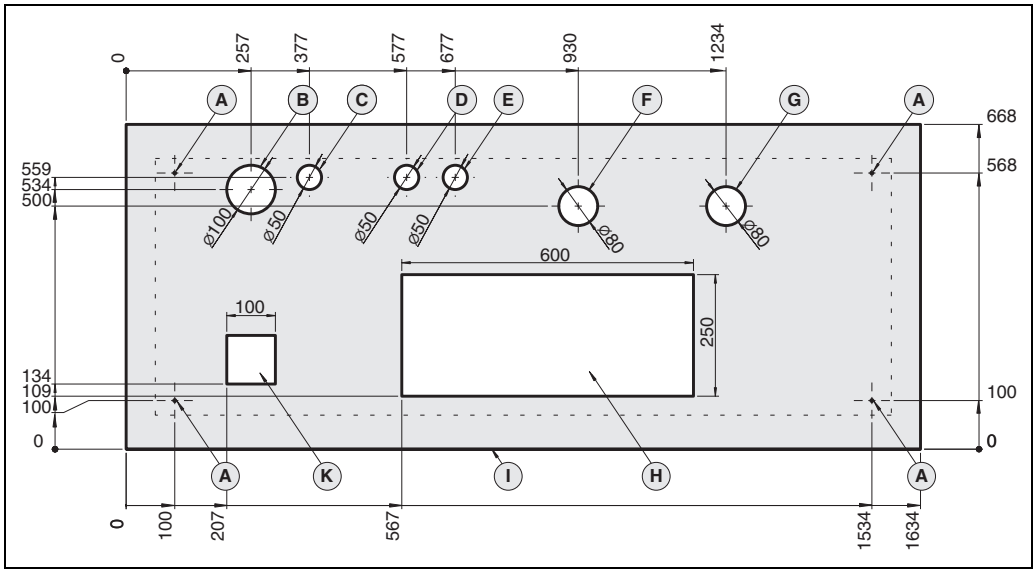


Fig 6: Foundation drawing with water sampler

Pos. A: M8x20 rawl bolts or M8 rawl plugs
Pos. B: In and outflow hoses for the measurement liquid
Pos. C: Water supply
Pos. D: Power cables
Pos. E: Signal cables
Pos. F: Water sampler suction hose
Pos. G: Water sampler overflow and condensation water
Pos. H: Feed pump installation area
Pos. I: Cabinet base
Pos. K: Overflow shaft

Connections

It is recommended that all cables and hoses are fed in from the bottom through the foundation base.

- Inflow hose: ID 25 mm
- Outflow hose: ID 32 mm
- Cleaning system water connection (filter and pipe isolator local supply): ID 19 mm, 2 to 4 bar
- Water sampler suction hose: ID 19 mm
- Water sampler overflow: ID 18 mm
- Drip water outflow hose: ID 9.5 mm

Application dependent selection of the feed pump:
Eccentric pump: For wastewater after the sand filter in a treatment plant and generally for media without abrasive solids (e.g.: sand) and long fibres.
Peristaltic pump: For wastewater in a treatment plant after screening.

Installation aids

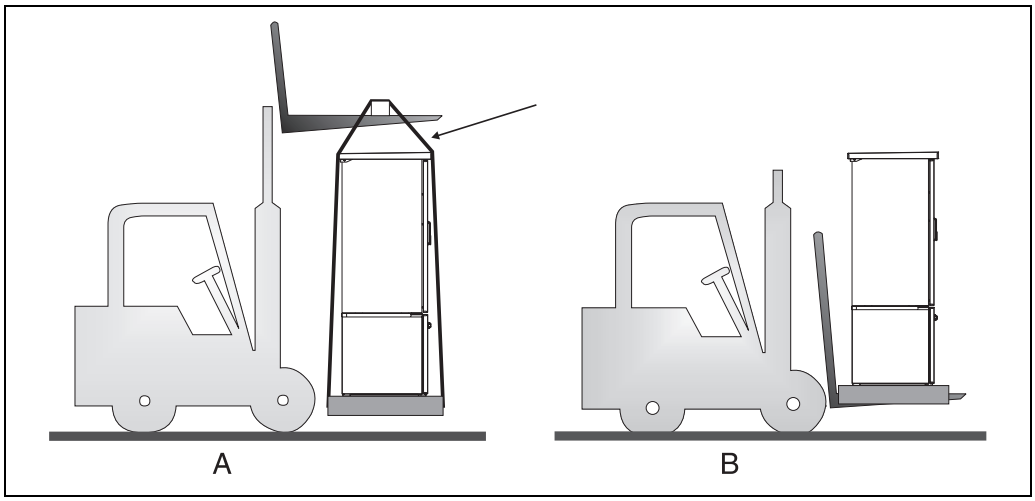


Fig 7: Transport to installation point

Pos. A: Measurement station lifting tackle for crane transportation. Use the correct weight transportation slings (see arrow).
Pos. B: Moving the measurement station using a fork lift truck.

Environment

Ambient temperature range	-20 to 40 °C
Storage temperature	-20 to 60 °C
Protection degree	■ Analysis compartment and base IP 44 ■ Water sampler controller IP 65 ■ Water sampler electronic compartment IP 43 ■ Sampling compartment IP 54
Electromagnetic compatibility (EMC)	All active electronic devices in the measurement station are CE marked in accordance with the EMC regulations. All Endress+Hauser devices in the measurement station fulfil the requirements laid down in the IEC 61326.

Process

Medium temperature

0 to 40 °C

Medium

Liquid, flowing media. Free from abrasive solids.

Process pressure

- Sampler pressureless: The water sampler is not designed for use in pressurised systems!
- Analysis pipework: 0 to 6 bar at max. 25 °C medium temperature!

Pump data

Eccentric pump

max. suction height: 5 m
max. suction length: 15 m

Peristaltic pump

max. suction height: 7 m
max. suction length: 30 m

Mechanical construction

Design dimensions

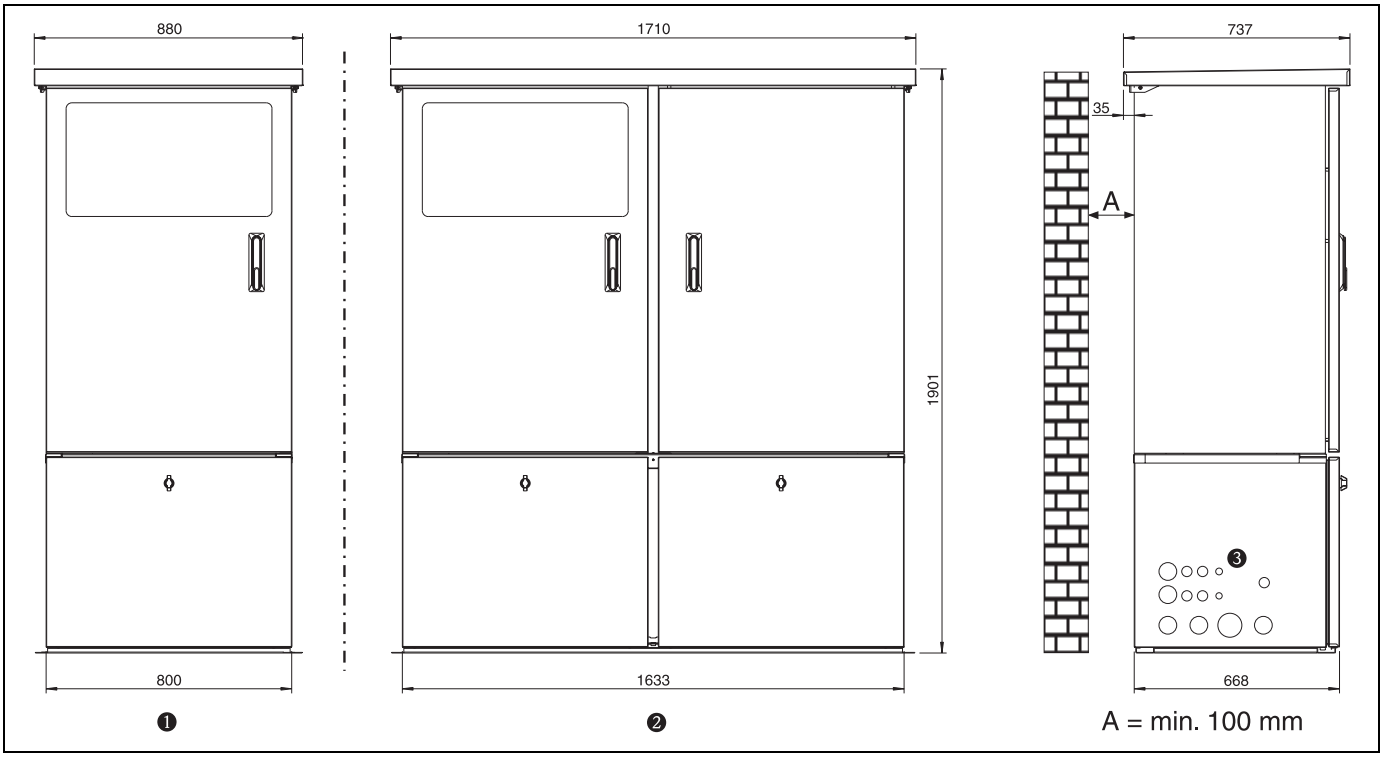


Fig 8: Dimensions in mm
– A min. 100 mm wall space for ventilation
– Pos. 1: without water sampler
– Pos. 2: with water sampler
– Pos. 3: Cable entry and hose connection as option - see product structure

Weight (complete system)

- Total: 400 kg
- Analysis cabinet without water sampler: approx. 210 kg

Materials

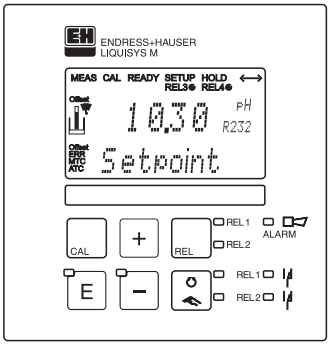
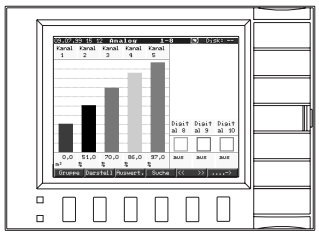
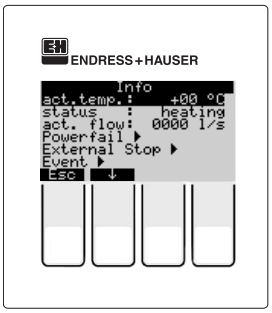
Module	Component	Material
Water sampler	Cabinet Inner shell, ditribution pan Insulation Suction hose, dosing tube Hose connection, dosing chamber cover Conductivity switch sensors Dosing chamber Outflow hose, pneumatic hoses, air manager gasket Distribution tap Distribution tap cover, bottles Air manager housing Vacuum pump head Vacuum pump membrane	SS 304 H PS PU CO_2 foamed PVC PP, POM, PA 304 H PMMA Silicon PP PE PC Anodised aluminium EPDM
Analysis compartment	Cabinet Pipework, outflow hose Inflow hose	SS 304 H PVC NBR
Eccentric pump	Housing Motor Connections Rotor Stator	GG 25 Varnished steel PP St. steel1.4021 / ASI 420 Nitrile
Peristaltic pump	Housing Motor/drive Connections Hose Lubrication	Aluminium Varnished steel Stainless steel NR (natural rubber) Glycerene
Base, roof	Sheet steel Insulation	SS 304 H PU CO_2 foamed

Human interface

Display elements

Liquisys M transmitter	Visual Data Manager Memograph/ paperless recorder Ecograph	ASP Station 2000 water sampler
Liquid crystal display: 2 line, five and nine digit with status display	■ Diplay: STN colour graphic display with 145 mm (Memograph)/126 mm (Ecograph) screen diagonal, 76800 dots (320x240 pixel) ■ Display modes: Curves/sequences, plotting in zones, column/bar graph, digital display, event list (alarm set points/power failures) ■ Signal grouping: 8 groups each with 8 channels	Liquid crystal display: illuminated 128x64 dot, 32 characters, 8 lines

Operating elements

Liquisys M transmitter	Visual Data Manager Memograph/ paperless recorder Ecograph	ASP Station 2000 water sampler
6 operating keys on the device with alarm message and direct front end operation for the output contacts. 	Interactive menu led operation with integrated help function using 6 operating keys on the device.  *Example of display and operating elements on a Memograph*	Interactive menu-led operation using 4 keys. Selection lists and short form set-up (Quick Setup) for fast commissioning. 

Remote operation

Liquisys M transmitter	Visual Data Manager Memograph/ paperless recorder Ecograph	ASP Station 2000 water sampler
Optionally: Interfaces for PROFIBUS® PA and DP or HART® protocol.	PC with ReadWin® 2000 PC operating software: Remote set-up using front mounted RS232 serial interface, using rear mounted RS232 (e.g. modem: only Memograph) or RS422/RS485 interfaces or using Ethernet (only Memograph)	Programme start and stop using digital input.

Certificates and approvals

CE mark

The device fulfils the legal requirements laid down in the EC directives. Endress+Hauser confirms a successful test of the device by adding the CE mark.

Additional standards and guidelines

- IEC 60529:
  Housing protection (IP code)
- IEC 61010-1:
  Safety requirements for electrical measurement, control and laboratory devices (Endress+Hauser units)
- EN 61326 (IEC 61326):
  Electromagnetic compatibility (EMC requirements)
- IEC 60204-1
  Electrical installation of machinery (safety requirements for the control panel)
- 89/336/EWG
  EMC regulations
- 73/237/EWG
  Low voltage regulations

Ordering information

Product structure

Measurement station CE4
Measurement station with integrated pipe system and sensors for online measurement of relevant parameters in liquids. Integrated electrical compartment for mounting transmitters, electrical components and integrated sampler. Dimensions: WxHxD: 1710x1900x740 mm; Weight: approx. 400 kg; Flow rate: 0.5 to 1.5 m^3/h, Hose connection: ID 25 mm (inflow), ID 32 mm (outflow)

	Sampler
A	Sampler not required
B	1 programme
C	7 programme
D	7 programmes + memory + interface cable + ReadWin® 2000
E	7 programmes + Profibus DP

		Language
A		Operating language: German
B		Operating language: English
C		Operating language: French
D		Operating language: Italian
E		Operating language: Spanish
F		Operating language: Dutch
G		Operating language: Danish
K		Operating language: Czech
P		Operating language: Polish

			Sample distribution
A			Sample distribution not required
B			Composite container 1x30 l PE
C			Composite container 1x60 l PE
N			Distribution 4x12 l PE
L			Distribution 4x20 l PE
E			Distribution 12x3 l PE
F			Distribution 24x1 l PE
G			Distribution 12x2 l glass
H			Distribution 24x1 l glass
K			Distribution 12x1 l + 6x3 l PE
O			Distribution 6x3 l + 2x12 l PE
P			Distribution 12x1 l + 2x12 l PE

				pH value and temperature measurement
A				pH /temperature measurement not required
B				Measurement system pH Liquisys M CPM223-PR0105 / CPS11-2AA2ESA
C				Measurement system pH Liquisys M CPM223-PR0105 / CPS11-2AA2ESA with signal surge arrester HAW562+HAW560
D				Measurement system pH Liquisys M with Profibus DP CPM223-PR0405 / CPS11-2AA2ESA

					Conductivity measurement
A					Conductivity measurement not required
B					Conductivity measurement system Liquisys M CLM223-CD0005 / CLS21-C1E4A
C					Conductivity measurement system Liquisys M CLM223-CD0005 / CLS21-C1E4A with signal surge arrester HAW562+HAW560
D					Conductivity meas. sys. Liquisys M with Profibus DP CLM223-CD0405 / CLS21-C1E4A

						Redox measurement
A						Redox measurement not required
B						Redox measurement system Liquisys M CPM223-PR0005 / CPS12-OPA2ESA
C						Redox measurement system Liquisys M CPM223-PR0005 / CPS12-OPA2ESA with signal surge arrester HAW562+HAW560
D						Redox meas. sys. Liquisys M with Profibus DP CPM223-PR0405 / CPS12-OPA2ESA

							Oxygen measurement
A							Oxygen measurement not required
B							O_2 measurement system Liquisys M COM223-DX0005 / COS41-2F
C							O_2 meas. system Liquisys M COM223-DX0005 / COS41-2F + HAW562+HAW560
D							O_2 meas. sys. Liquisys M with Profibus DP COM223-DX0405 / COS41-2F

								Turbidity measurement
A								Turbidity measurement not required
B								Turbidity measurement system Liquisys M CUM223-TU0005 / CUS41-A2
C								Turbidity measurement system Liquisys M CUM223-TU0005 / CUS41-A2 with signal surge arrester HAW562+HAW560
D								Turbidity meas. sys. Liquisys M with Profibus DP CUM223-TU0405 / CUS41-A2

CE4-										⇐ **Order code (part 1)**

	Registration and other measurements
A	Recording and other measurements not required
B	Fitting and wiring an Eco-Graph A (e.g. RSG22-61EAA1AAA1), order unit separately
C	Fitting and wiring a Memo-Graph (z.B. RSG10-A111A21AA), order unit separately
D	FMU 861-R7D1A1 flow transmitter fitted and fully wired
E	Fitting and wiring a supplied transmitter
F	Fitting and wiring a supplied recorder

	Electrical fittings
1	Standard electrical fittings
2	Lighting and socket in the analysis compartment
3	230 V AC power supply surge arrester
4	400 V AC power supply surge arrester

	Power supply and pump
A	230 V AC power supply, pump supplied by customer
B	230 V AC power supply, pump supplied by customer, el. pump overload and terminals fitted
C	230 V AC power supply with eccentric pump for solids free water
D	230 V AC power supply, with peristaltic pump
E	400 V AC power supply, pump supplied by customer
F	400 V AC power supply, pump supplied by customer, el. pump overload and terminals fitted
G	400 V AC power supply with eccentric pump for solids free water
H	400 V AC power supply, with peristaltic pump

	Cleaning
	(Filter and pipe isolater to be supplied on site)
1	Cleaning system not required
2	Manual cleaning system using clear water
3	Automatic cleaning system for the sensors using clear water
4	Automatic cleaning system for the sensors and suction hose backwash using clear water, with overpressure monitor
5	Sensor cleaning using Chemo Clean
6	Sensor cleaning using Chemo Clean, suction hose backwash using clear water, with overpressure monitor

	Cabinet mechanical construction
A	Basic model, V2A, cable entry and hose connection from below
B	Basic model, V2A, cable entry and hose connection from the left
C	Basic model, V2A, cable entry and hose connection from the right

CE4-	⇐ **Order code**

CE4 measurement station documentation

	Documentation language
A	Documentation language: German
B	Documentation language: English
C	Documentation language: French

	Documentation quantity
1	Documentation 1 set
2	Documentation 2 sets
3	Documentation 3 sets
4	Documentation 4 sets
9	Others

	Model
A	Standard documentation

CE4DOKU-	**A**	⇐ Order code

Accessories

ASP Station 2000 water sampler accessories

Order code	Accessory
RPS20A-BA	Bottle 1 l PE incl. lid
RPS20A-BB	Bottle 2 l glass incl. lid
RPS20A-B3	Composite container PE 30 l
RPS20A-B6	Composite container PE 60 l
RPS20A-FB	Bottle tray 6x3 l PE with bottles
RPS20A-FC	Bottle tray 12x1 l PE with bottles
RPS20A-FD	Bottle tray 6x2 l glass with bottles
RPS20A-FE	Bottle tray 12x1 l glass with bottles
RPS20A-FF	Bottle tray 2x12 l PE with bottles
RPS20A-PA	PROFIBUS® DP slave module for DIN rail mounting from unit software version ≥ V4.10, 7 programme version
RPS20A-SF	Retrofitting kit for capacitive medium detection from unit software ≥ V2.03
RPS20A-SG	Retrofit kit for flow through armature without base and base cover
RPS20A-VA	Distribution system incl. tap, tap drive, frame for distribution pan
RPS20A-VK	Interface cable for PC with ReadWin® 2000 PC software, stereo jack
50041303	1 l bottle, white glass with lid
50035320	Lid for 1 l Bottle, PE
50088586	3 l bottle PE incl. lid
51002312	12 l bottle PE incl. lid
51000416	20 l bottle PE incl. lid
50089636	Distribution pan 6 way for 12 bottle distribution
50089637	Distribution pan 12 way for 24 bottle distribution
50090886	Hinged submersion holder
50079731	Suction filter complete
50079739	Hose weight L = 400 mm V2A
UE-SDH	Hose weight L = 500 mm V2A (for 16 mm suction hose)
51001074	Suction hose NBR black rubber, internal diameter 13 mm, length 3 m
51001075	Suction hose NBR black rubber, internal diameter 13 mm, length 5 m
51001076	Suction hose NBR black rubber, internal diameter 13 mm, length 10 m
50076633	Suction hose NBR rubber, internal diameter 16 mm, sold by the metre
50031904	Suction hose PVC, internal diameter 19 mm, sold by the metre
RPS20X-DH	Glass dosing chamber with fixings (350 ml)

ASP Station 2000 water sampler software retro-fit

Software retrofit (programme, operating language)			
	Software		
	B	7 programmes	
		Language	
		A	German
		B	English
		C	French
		D	Italian
		E	Spanish
		F	Dutch
		G	Danisch
		K	Czech
		P	Polish
RPS20A1-	**B**		⇐ Order code

Measurement station suction accessories

Order code	Accessory
51006353	Inflow PVC hose, internal diameter 25 mm, sold by the metre
51006362	Hose weight for 25 mm internal diameter suction hose for the CE4 measurement station
50031919	Outlet soft PVC hose, 32x5 (internal) webbed, sold by the metre
51004674	VA metal hanger for TAG 25x100

Additional documentation

- ❑ Brochure Field of activities 'Water samplers and Measurement stations (FA013C/09/en)
- ❑ Operating instructions CE4 measurement station (BA160R/09/en)
- ❑ Operating instructions ASP Station 2000 (BA080R/09/c4)
- ❑ Technical Information:
  ASP Station 2000 (TI059R/09/en)
  Visual Data Manager Memograph (TI054R/09/en)
  Paperless recorder Ecograph (TI075R/09/en)
  Transmitter Liquisys M (TI194C/07/en)

International Head Quarter

Endress+Hauser
GmbH+Co. KG
Instruments International
Colmarer Str. 6
79576 Weil am Rhein
Deutschland

Tel. +49 76 21 9 75 02
Fax +49 76 21 9 75 34 5
www.endress.com
info@ii.endress.com

Endress+Hauser

People for Process Automation

TI102R/09/en/06.05
51006322
FM+SGML 6.0 ProMoDo