



pH: -2...+16 pH
 mV: ±2000 mV
 Ion: 0.01 ng/l...100 g/l
 Conductivity: 0...2000 mS/cm
 Dissolved oxygen: 0...60 mg/l
 0...600%
 Air pressure: 600...1300 hPa
 Temperature: -5...+105 °C

Ion: R362x only

Two independent channels for all measurements!

R3624: + one extra connector for 4-pole conductivity electrodes!

Control

Two independent channels allow to control any two functions simultaneously, each with its own temperature compensation.

On/off or proportional control.

Four solid state relays programmable for high/low level control, wash program or alarm functions.

Allows to stop temporarily the control (relays off) without holding the measurements.

Wash program for an automatic periodical cleaning of the electrodes.

A programmable alarm function prevents the overdosing of chemicals in the process liquid. Each time a pre-set level is exceeded the corresponding relay is closed and the alarm timer starts to count down. When this level is still exceeded after count down of the timer all relays will be opened and an alarm be given. The system should then be checked thoroughly for e.g. broken electrodes, interrupted cables, empty vessels, etc...

pH

Multi-point (1...5) calibration for more linearity.

Selectable resolution from 0.001 pH to 0.1 pH.

Automatic calibration with any of eleven pre-programmed and five user specified pH buffers. *Create your own buffer/temperature tables!*

mV

Features mV calibration for accurate ORP measurements.

Selectable resolution from 0.1 mV to 1 mV.

Ion (R362x only)

Direct concentration measurement.

Multi-point (2...5) calibration and an additional blank correction for measuring low concentrations.

Conductivity

Multi-point (1...3) calibration for more linearity.

The 4-pole design reduces considerably the problems of polarisation and fouling. By utilising four electrodes, no current flows through the measuring circuit. The AC-current is only applied to the outer pair of rings allowing the inner pair of electrodes to measure the voltage without any polarisation effects. **A 4-pole electrode permits to measure with the highest degree of accuracy and linearity (R3624 only).**



An electrode with a typical cell constant of 1 cm⁻¹ permits to measure from 0.01 µS/cm to 200 mS/cm in five ranges.

An electrode with a typical cell constant of 0.1 cm⁻¹ permits to measure from 0.001 µS/cm to 20 mS/cm in five ranges.

An electrode with a typical cell constant of 10 cm⁻¹ permits to measure from 0.1 µS/cm to 2000 mS/cm in five ranges.

Automatically selects correct range and frequency.

Selectable reference temperature: 20° or 25 °C.

Automatic calibration with any of three preprogrammed and three user specified standard solutions. *Create your own standard/temp. tables!*

Accurate low conductivity measurements by eliminating the capacitive component of the electrode and its cable (avoid the use of long cables!).

Dissolved oxygen

Operates with a galvanic oxygen electrode requiring no polarisation time and no zero calibration.

Selectable resolution from 0.01 mg/l (0.1%) to 0.1 mg/l (1%).

Rapid air calibration.

Manual salinity compensation 0-40.

Automatic air pressure compensation 600-1300 hPa.

CODE	DESCRIPTION
R3610	Controller for pH/mV/ion/conductivity/dissolved oxygen
R3620	Controller for pH/mV/ion/conductivity/dissolved oxygen
R3624	Controller for pH/mV/ion/conductivity/dissolved oxygen
A2002	Data acquisition software DIS-2 + RS232/RS485 adaptor (optional)
A2003	Data acquisition software DIS-2 + RS485/Ethernet adaptor (optional)
→ Add a US-sign for 120 VAC versions, e.g.: R3610-US	

Temperature

Reads temperatures with 0.1 °C resolution.

Manual or automatic temperature compensation.

Calibrates temperature probe for quality measurements.

Inputs

Two inputs for pH, mV, Ion, conductivity or dissolved oxygen.

Two inputs for temperature.

R3624: one DIN-8 connector for 4-pole conductivity electrodes with built-in Pt1000.

Outputs *(R362x only)*

Two programmable 4-20 mA analogue outputs, for connection to a proportional pump, a PLC or an industrial recorder.

RS485 interface permits to connect up to 31 controllers in a network system with a computer.

Display

A large bright LCD screen with white backlight enables to view all channels simultaneously.

The interactive LCD screen provides step by step instructions in the language of your choice (English, Dutch, French, German).

Real-time clock displays time and date.

Shows a GLP report on the LCD screen.

Connections

All connections, except for the inputs, can be done through internal screw terminals.

Cabinet

Robust dust and splash-proof cabinet for wall mounting.

Data-logging *(R362x only)*

Stores up to 12000 values including temperature, time and date at a programmable interval.

An optional powerful data acquisition software for PC + RS485/RS232 or RS485/Ethernet adaptor is available separately.

Can be connected in a network system with up to 31 controllers and a computer.

Two-way communication with any computer using RS485.

Programmable identification number.

Stores minimum/maximum readings for each channel.

Special features

Three year warranty.

No electrical interference between electrodes in the same solution.

Galvanic input/output isolation eliminates ground loop interferences.

A first special timer can start a wash program for an automatic periodical cleaning of the electrodes.

A second special timer can give alarm to interrupt the process control in case of a pump overfeed or an electrode failure.

Password protection prevents any unauthorised modification of the instrument's settings.

GLP

All procedures for a "Good Laboratory Practice" are on board.

Pre-programmed standards

pH buffers: 1.68, 2.00, 4.00, 4.01, 6.87, 7.00, 9.18, 9.21, 10.01, 12.00, 12.45 (at 25 °C).

Conductivity: 1413 µS/cm, 12.88 mS/cm, 111.8 mS/cm (at 25 °C).

SPECIFICATIONS		R3610 - R3620 - R3624
pH	Range	-2...+16 pH
	Resolution	0.001 pH
	Accuracy	0.1% ± 1 digit
	Calibration	1...5 points
	Buffers	11 pre-programmed + 5 user specified
	Temperature compensation	-5...+105 °C
	ISO-pH	6...8 pH
mV	Slope	80...120%
	Range	±2000 mV
	Resolution	0.1 mV
	Accuracy	0.1% ± 1 digit
	Calibration	1 point
ION <i>(R362x only)</i>	Range	0.01 ng/l...100 g/l
	Resolution	3 digits
	Accuracy	0.5% ± 1 digit
	Calibration	2...5 points + blank
CONDUCTIVITY	Range (cc dependent)	0...2000 mS/cm
	Resolution (cc dependent)	0.001 µS/cm
	Accuracy	0.5% f.s. of range
	Calibration	1...3 points
	Standards	3 pre-programmed + 3 user specified
	Cell constant (cc)	0.1/1/10 cm ⁻¹ ±30%
	Temperature compensation	-5...+105 °C
	Reference temperature	20 ° or 25 °C
	Temperature coefficient	natural waters (EN27888)
	Capacitive compensation	✓
DISSOLVED OXYGEN	Range	0...60 mg/l (0...600%)
	Resolution	0.01 mg/l (0.1%)
	Accuracy	1% ± 1 digit
	Calibration	1 point
	Temperature compensation	0...50 °C
	Salinity compensation	0...40
	Air pressure compensation	600...1300 hPa
TEMPERATURE	Range	-5...+105 °C
	Resolution	0.1 °C
	Accuracy	0.1 °C
	Calibration	1 point
AIR PRESSURE	Range	600...1300 hPa
	Calibration	1 point
CHANNELS	Measurement	2
	Temperature	2
INPUTS	Measurement	2 BNC, 10 ¹² Ω
	Temperature	2 BNC, for Pt1000
	Four-pole conductivity cell	1 DIN-8 <i>(R3624 only)</i>
CALIBRATION	Reminder	0...999 h
	GLP	✓
CONTROL	On/Off	✓
	Proportional	✓
	Wash program	✓
	Alarm timer	✓
DISPLAY	LCD	240x64 pixels
	White backlight	✓
	Real time clock	✓
ANALOG OUTPUT <i>(R362x only)</i>	Two outputs	4...20 mA max. 300 Ω load
COMMUNICATION	RS485, baud rate	300...19200 b/s
	Computer	via RS485/RS232 interface
DATA-LOGGING <i>(R362x only)</i>	Data sets	12000 + °C/date/time
	Modes	all
	Interval	1 s...4 h
RELAY OUTPUT	Four relays	4 solid state
	Voltage	12...250 VAC/ min. 1 mA/ max. 1 A
SECURITY	Identification number	✓
	Password protection	✓
AMBIENT CONDITIONS	Temperature	0...40 °C
	Humidity	0...95%, non condensing
POWER SUPPLY	Mains	210...250 VAC, 50/60 Hz
DIMENSIONS	WxDxH	28x17x6 cm
WEIGHT	Meter	1.3 kg

→ You will find ordering codes and descriptions of electrodes, calibration solutions, accessories... on pages 19...