Product Information One-channel Controller TOPAX® L

Important values securely under control

As a one-channel controller the TOPAX DE monitors the current water values during the preparation of the water and it controls in real-time the connected metering system for treating the water. In this way it ensures constant water values in the most varied of applications – taking into account the given norms and guidelines – it is universally applicable.

One of its main applications is to ensure the quality of the water in water systems by evaluating the measurements of, amongst other things, the free chlorine, chlorine dioxide, pH, redox, hydrogen peroxide and the conductivity and to control the chlorine gas meter – and/ or salt-flow rate electro-analysis unit.

Convincing features

The TOPAX L is available in different variants, which differ only in their measurement and control units: depending on the model, it measures and controls free chlorine (TOPAX L 1), chlorine dioxide (TOPAX L 4), hydrogen peroxide (TOPAX L 5), pH-value (TOPAX L 2), Redox (TOPAX L 3) or inductive or conductive conductivity (TOPAX LF 1 and LF 2). All models measure the temperature.

Encased in a classic industrial housing (wall mount or installation design), the TOPAX L can be smoothly integrated into existing systems. It is operated via the menu using 2-line alphanumeric LCD, with a plastic film keyboard and it displays measured values, temperature, operating- and status reports. A password feature protects it against unauthorised use.

The possibility to directly connect the most diverse sensors for measuring the water parameters completes every TOPAX L model's set requirement for optimal water treatment.

With the serial RS 485 interface and the TopView software (both optional) all TOPAX L variants can be remoted controlled and configured from a PC.

Mode of operation

The TOPAX L has a digital input and two analog inputs (sensor and temperature), and/or one analog outputs (0/4...20 mA) and 3 relay. All in- and outputs are galvanically isolated. The controllers work as P- oder PI- controllers with two adjustable switching points in the direction of action. Thus enabling the dosing pumps as well as the actuators and solenoid valves to be controlled.

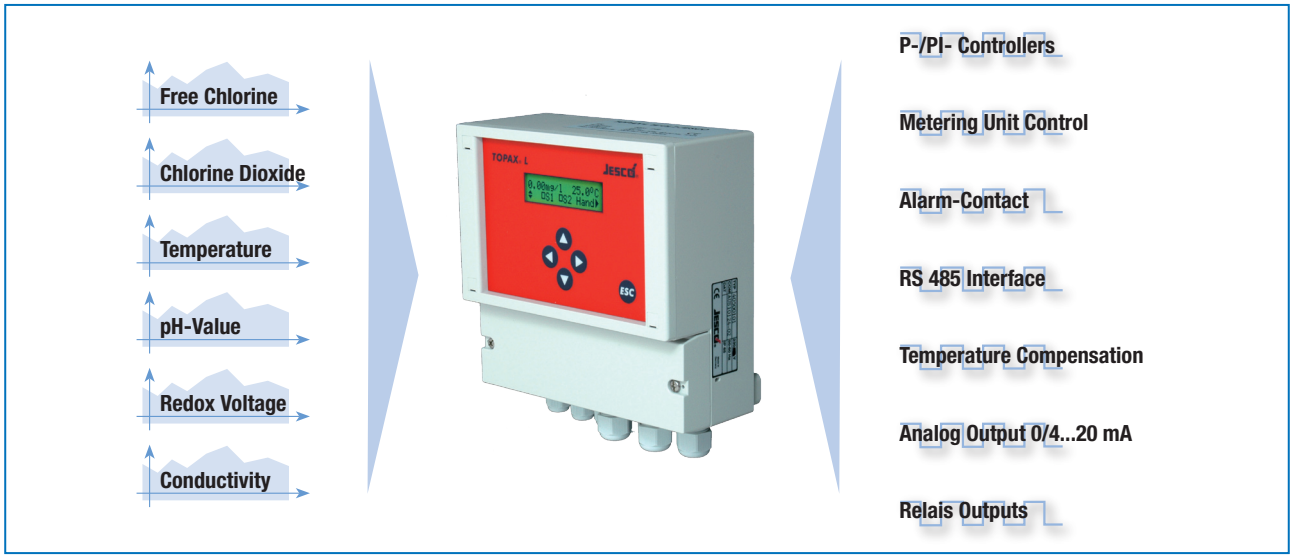
The compensation for the temperature measurement can be done either automatically or manually. An alarm feature monitors the measurement on the basis of freely configurable min. and max. limit values. The free chlorine and chlorine dioxide (TOPAX L 1 and L 4) can be measured using optionally a potentiostatic or an amperometric measuring cell.

Very accurate and quick controls are attained thanks to its microprocessor-controlled measurement amplifier and controller. The Lutz-Jesco sensors and/or test water panels are connected in the easiest of ways using terminal blocks.

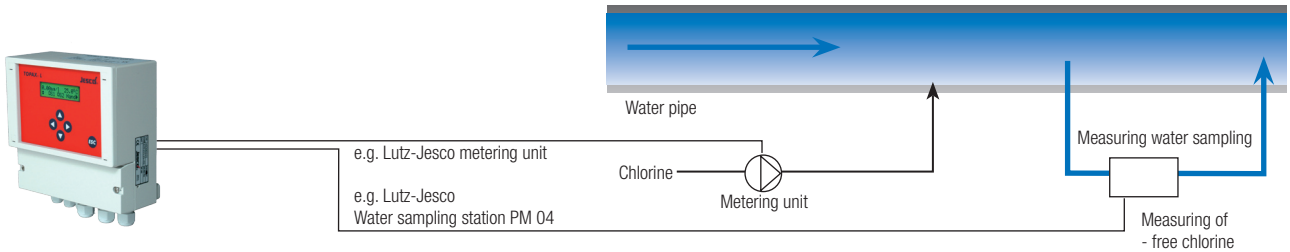
In Short

- Measuring input for free chlorine or chlorine dioxide, hydrogen peroxide, pH-value, Redox or conductivity
- Measuring input for temperature
- Disturbance variable settings (depending on model variant)
- P- or PI- controllers
- Analog output (0/4...20 mA)
- Up to 3 relay outputs
- Digital input (Sample water missing)
- Electrically isolated in- and outputs
- pH-compensation for free chlorine
- Automatical temperature compensation of pH-value
- Alarm function
- RS 485 interface (optional)
- Alphanumeric LCD display with membrane keypad and password protection

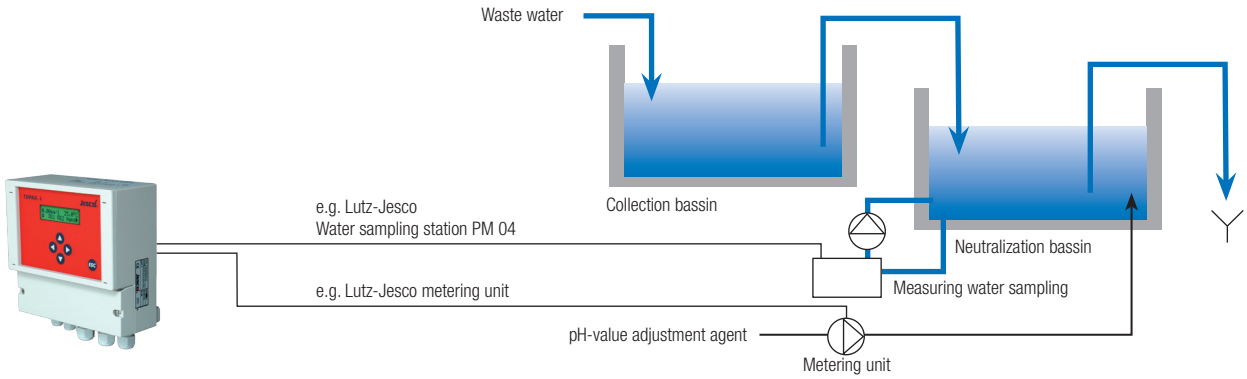
Measurement inputs (depending on model variant) and main functions of the TOPAX L



Application of the TOPAX L



Records the actual chlorine concentration of drinking water and controls the dosing of chlorine.



Records the actual pH-value of waste water before discharge into public sewerage system and controls the dosing of pH-value adjustment agent.

Technical Data

Metering range	L 1	L 2	L 3	L 4	L 5	LF 1	LF 2
	free chlorine (Cl_2)	pH-value	Redox	Chlorine dioxide (ClO_2)	Hydrogen peroxide (H_2O_2)	Conductivity inductive	Conductivity conductive
	0...4 mg/l	0...14 pH	-1500...+1500 V	0...20 mg/l	0...100 mg/l	0....20 MΩ, C=0.05 0...2 µS/cm, C=0.05 0...20 µS/cm, C=0.05 0...200 µS/cm, C=0.05 0...2 mS/cm, C=0.2 0...20 mS/cm, C=1 0...200 mS/cm, C=10	0...20 mS/cm, C=6.4 0...200 mS/cm, C=6.4 0...2000 mS/cm, C=6.4
Temperature	-30.0...+140.0 °C						
Temperature-compensation	Manual or automatic with Pt100						
Display	Measurement values with relative units. Status messages, sensors, calibration, controller and alarm.						

In-/Outputs	
Measuring inputs	2 inputs, accuracy < 0.1 mV or < 0.01 °C
Digital input	External controller stop or water deficiency sensor.
Analog outputs	0/4...20 mA, electrically isolated, maximum 500 Ohm load
Relay outputs	3 potential-free dry contacts, freely configurable, 6 A, 250 V, max. 550 VA
Controller variants	1 controller • ON/OFF Controlling with hysteresis option • Proportional (P) or Proportional Integral (PI) controller, pulse-frequency or continuous output controller. (0/4...20 mA),
Switch-points	2 dual switch points, with adjustable operation mode
Alarm function	Minimum and maximum threshold values and delay times (0 ... 2000 s)

	TOPAX L panel mounting housing	TOPAX L wall mounting housing
Housing material	Noryl	ABS
Dimensions (W x H x D)	96 x 96 x 127 (150) mm	165 x 160 (190) x 80 mm
Weight	0.8 kg	1.0 kg
Connectors	Push-screw terminal for up to maximum 1.5 mm² section wiring	Spring-load terminal for up to maximum 1.5 mm² section wiring
Protection class	IP 54 (front), IP 30 (housing)	IP 65
Supply voltage	230 V AC, + 6 %, - 10 %, 40...60 Hz 120 V AC, 1 Ph, 50...60 Hz 24 V AC, 1 Ph, 50...60 Hz	
Power input	10 VA	
Internal fuse	None	230 V: 63 mA delayed-action fuse 110 V: 125 mA delayed-action fuse 24 V: 800 mA semi delayed-action fuse
Display	LCD display, 2 lines, 2x 16 chars, backlight displays measurement values and relative units, operating and relay conditions	
Operating temperature	0 - 50 °C	
Atmospheric moisture	0 - 90 % non condensing	
Interface (Optional)	RS 485, baud rate 9600, data format 8 Bit, 1 start and 1 stop bit, no even parity It is possible to activate the TOPAX DE with the software TopView (Windows, A/N 78349). TopView offers a log file function, central logging, graphical visualisation and remote alarm visualisation. To connect a TOPAX L with the USB interface of a PC the adapter „USB to RS 485“ (A/N 44300102) is needed.	

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Model variants

The TOPAX L is available in several different variations:

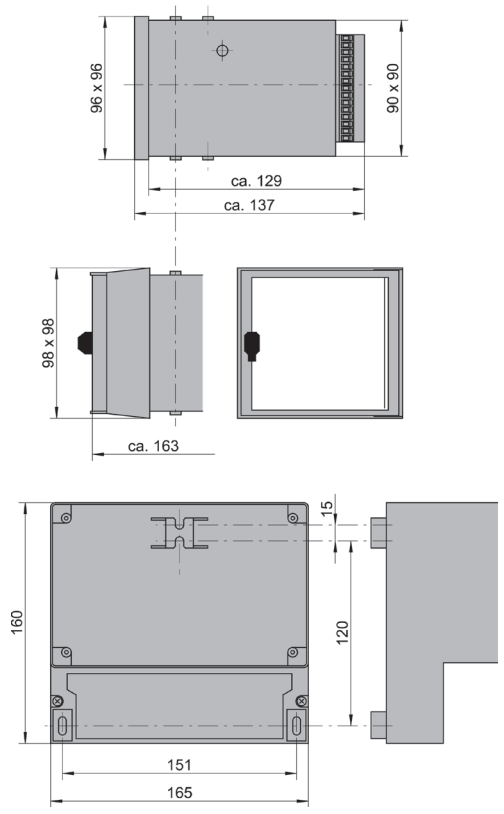
Order No.	TOPAX L 1	TOPAX L 2	TOPAX L 3	TOPAX L 4	TOPAX L 5	TOPAX LF 1	TOPAX LF 2
Measurement	Free chlorine (Cl_2)	pH-value	Redox	Chlorine dioxide (ClO_2)	Hydrogen peroxide (H_2O_2)	Conductivity inductive	Conductivity conductive
Panel mouting housing, 230 V AC	40500121	40500122	40500123	40500126	40500127	40500124	40500125
Panel mouting housing, 120 V AC	40500131	40500132	40500133	40500136	40500137	40500134	40500135
Panel mouting housing, 24 V AC	40500151	40500152	40500153	40500156	40500157	40500154	40500155
Wall mouting housing, 230 V AC	40500101	40500102	40500103	40500106	40500107	40500104	40500105
Wall mouting housing, 120 V AC	40500111	40500112	40500113	40500116	40500117	40500114	40500115
Wall mouting housing, 24 V AC	40500141	40500142	40500143	40500146	40500147	40500144	40500145

Scope of Delivery

- TOPAX L
- Mounting material
- Operating manual
- Measurement protocol
- Terminal plan for the sensors

The product is delivered as a free-standing unit or mounted on a water measurement panel.

Dimensional figure



All measurements are given in mm

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