

# A measured step forward

## Measuring and control technology



Dosing | Liquids  
Conveying | Gases  
Control | Systems

# Lutz-Jesco Measuring and Control Technology

Persuasive, hit-off properties



## Persuasive, hit-off properties

The TOPAX DX is packed with the long standing experience of a number of TOPAX Controller generations by Lutz-Jesco. Its modular construction makes it a flexible and highly compatible partner in as far as measuring and control technology is concerned. Because of the unit's capability of directly connecting up a varying number of water parameter measuring sensors, TOPAX DX efficiently meets all requirements for optimised water treatment processes.

TOPAX® is a registered trademark of Lutz-Jesco GmbH, Wedemark, Germany

# TOPAX DX Multi-channel Controller

Important values under control



## Important values under control

In its capacity as a multi-channel controller, the TOPAX DX monitors the water value data recorded during water processing and provides for real-time control of the metering system connected up for water treatment. Meaning that in this way constant water values are consistently provided for all applications – in compliance with standards and directives in force – and that the unit is universally applicable.

One of the principal applications is the preservation of the quality of the water in outdoor swimming pools, by the analysis of the measurement data mainly involving free chlorine, pH, ORP, total chlorine and conductivity further to the control of chlorine gas, liquid and solid metering and salt flow electrolysis devices, as the case may be.

## Operating Mode

The TOPAX DX is provided with a good number of digital as well as analogue inputs, further to a considerable number of controller outputs and controller types. Every single water parameter that is measured, can be controlled.

The microprocessor controlled metering amplifier and controller, enables very accurate and extremely quick control processes. The hook-up of Lutz-Jesco sensors and water sampling stations respectively is thus easily achieved, by way of terminal blocks on the TOPAX DX modules.

Initial unit setup operations are supported via sensor pre-selection functions displayed in clear text, assigned to the various output signals so that they can be configured. Once the configuration process has ended, the complete terminal connection plan is both displayed in the logbook and stored on an integrated memory card.

# Lutz-Jesco Measuring and Control Technology

## Persuasive technology for swimming pools and industrial facilities

---



### The right choice. Always.

Lutz-Jesco Controllers feature miscellaneous implementation uses as they are engineered to be multi-purpose controllers.

Via a number of different function increments, the bus-compatible TOPAX DX controller is easily customised to all your application requirements.

The TOPAX Controller can furthermore be connected up to the PC-supported TopView process control system – this for up to 15 of the Controllers in the TOPAX family. TOPAX DX, TOPAX DE and TOPAX L. These versions can all be implemented as controllers for free chlorine, chlorine dioxide, pH-value, ORP or conductivity. In the automatic operating mode the most important setting values are displayed with the simple pressing-in of a key.

### Everything under control with TopView

Communication is the future: TopView, the TOPAX computer software provides for control and display of networked TOPAX systems via a PC – and thereby remote controlling and remote setting of the Controller. Furthermore, centralised logging of the measured data and values is also possible. Meaning that TopView totally re-aligns itself to your requirements, as the program can be implemented for a number of different setup levels.

### Technology. That convinces you.

Automatically operated measuring and control units see to it that the required water quality is maintained in all modern water treatment processes. All the necessary operational elements are installed in the ready-wired, ready for connection water sampling stations. Thanks to the variety of our product range, we can supply the most suitable water sampling station for each application required.

### The perfect solution

All parameters for mandatory logging - even bonded chlorine data – can be measured, calculated, controlled and adjusted online: the DCM 01 measuring system features cutting-edge measuring technology and electronics, for maximized ease of use. The pre-constructed water sampling station makes installation all the more easier. The innovative system is furthermore equipped with low-maintenance sensors and automatic self-test functions.



# Measuring amplifier and Controller

## TOPAX DX Multi-channel Controller

The TOPAX DX is provided with a good number of digital as well as analogue inputs, further to a considerable number of controller outputs and controller types. Every single water parameter that is measured, can be controlled.

The microprocessor controlled metering amplifier and controller, enables very accurate and extremely quick control processes. The hook-up of Lutz-Jesco sensors and water sampling stations respectively is thus easily achieved, by way of terminal blocks on the TOPAX DX modules.

Initial unit setup operations are supported via sensor pre-selection functions displayed in clear text, assigned to the various output signals so that they can be freely configured. Once the configuration process has ended, the complete terminal connection diagram is displayed both in the logbook and stored on the memory card.



### In brief

- Measures free chlorine with open or membrane coated amperometric and potentiostatic measuring cells
- Measure total chlorine, pH value, temperature, ORP and conductivity
- Displays the effective chlorine dissociation curve (pH value dependant, on-hand disinfection capacity)
- Up to 6 measuring and 8 digital inputs
- 8 continuous outputs 0/4 ... 20 mA
- Up to 4 P-, PI-, PD- or PID controllers
- Extremely easy to handle, controlled start-up
- Large monitor with clear text operator guidance, a smooth, Multilanguage menu structure and a contextual online help function
- Glass monitor with integrated keyboard

## TOPAX DE Two-channel Controller

The TOPAX DE comes in a number of different versions, differing from one another solely in as far as measuring and control inputs are concerned. Enclosed in a classic, industrial style housing the TOPAX DE enables problem-free integration into existing systems.



### In brief

- Measuring input for free chlorine or chlorine dioxide
- Measuring input for pH value, ORP (depending on unit version) and temperature
- Disturbance variable switch (depending on unit version)
- Up to 2 P-, PI-, PD- or PID controllers
- Up to three 0/4 ... 20 mA analogue outputs
- LCD graphical display with membrane keypad and password protection

## TOPAX L, TOPAX LF One-channel Controller

The TOPAX L and TOPAX LF controllers come in a number of different versions, differing from one another solely in as far as measuring and control inputs are concerned. Enclosed in classic, industrial style housings (with either wall or panel mounting options) the TOPAX L and TOPAX LF enable problem-free integration into existing systems.



### In brief

- Measuring input for free chlorine, chlorine dioxide, hydrogen peroxide, pH-value, ORP or conductivity data
- Measuring input for temperature
- P or PI controllers
- 0/4 ... 20 mA analogue output and 2 relays plus 1 alarm relay
- Digital input (water measurement failures)
- LCD graphical display with membrane keypad and password protection

# Water sampling stations

---



## EASYPOL SMART 02 Water Sampling Station

The EASYPOL SMART 02 distinguishes itself thanks to its compact and top-notch quality construction. Unlike the conventional water sampling stations, the flow conditions and sensor mapping are arranged for internally to the station. Which makes the unit particularly suitable for the processing of bathing water in private swimming pool and whirlpool facilities. All the devices required for measuring and control are built into the station. Combined with the TOPAX DX SMART two-channel controller version, the water sampling station provides for very easy to operate controls.

### In brief

- Ideal for private pools
- Easy operation
- Very clear, graphical colour-display
- Compact and top-notch quality construction
- Measurement of free chlorine or redox for disinfection
- Measures pH values
- Measures temperature and conductivity (optional)
- Flow controller
- Test sample tap provided for calibration
- Flocculants metering control
- 4 ... 20 mA output
- Long-term data storage unit with graphic trend-display
- Data export via memory card or computer interface (optional)
- Timer control for active oxygen



## EASYPOL Water Sampling Station

Depending on its expansion level, the EASYPOL water sampling station enables free chlorine, pH-value and temperature measuring processes. Ideally designed for private swimming pools.

Water quality monitoring is efficiently provided by one of the TOPAX range of electronic controllers. All the elements required for measuring, control and metering as conforms to standards, are built into the water sampling station. With up to three flexible-hose pumps, alongside disinfectants, it is also possible to meter other chemical products, e.g. flocculants.

### In brief

- The ideal choice for private pools
- Measures free chlorine, pH value, REDOX to control disinfection and temperature
- Amperometric measuring cell for chlorine
- Problem-free metering via flexible-hose pumps
- Recirculation of the sampling water into the water management system
- Minimized installation complexity
- Easy operation and maintenance due to transparent construction
- Optic and electronic functions control
- Compliant to DIN 19643 (depending on version configuration)



## DCM 01 Water sampling station

The DCM is engineered solely for outdoor swimming pools. Due to the combination of a potentiostatic membrane coated measuring cell for free and combined chlorine measuring processes with the high-performance TOPAX DX multi-channel controller, it is possible to ensure overall system measuring, display and control of all the relevant disinfection parameters.

It is furthermore possible to provide control processes e.g. for activated carbon powder, flocculants or fresh water supply, as well as PC-managed communication functions with other water sampling stations.

### In brief

- For outdoor swimming pools
- Potentiostatic measuring of free chlorine
- Membrane coated measuring cell for combined chlorine measuring processes
- Measures pH value, ORP and temperature
- High-performance TOPAX DX multi-channel controller
- Flow controller
- Hydrostatic flow adjustment
- Data export via memory card or computer interface (optional)
- Flocculants metering pump control

# Water sampling stations

## PM 01 Water sampling station

The PM 01 water sampling station is intended for the continuous measurement and display of the free chlorine, pH values, ORP potential, temperature and conductivity (optional) parameters, in compliance with the DIN 19643 standard provisions. Water quality control processes based on the measuring signals at hand are performed by one of the TOPAX range controllers. All the elements required for measuring, control and metering, are built into the water sampling station. The sensors for water value measurement are arranged into a transparent, multipurpose fitting block. The sampling station water flow conditions provide for consistently steady measuring values.

### In brief

- Measures free chlorine, pH value, ORP and temperature
- Measures conductivity (optional)
- Hydrostatic flow adjustment
- Flow controller
- Potentiostatic measuring of chlorine
- Zero-point calibration not required
- Transparent construction
- Compliant to the DIN 19643 standard provisions
- Designed for assembly integration of one of the TOPAX range controllers
- Integrated debris and dirt trapping function



## PM 03 Water sampling station

The PM 03 water sampling station efficiently meets any measuring and control technology requirements in water management networks subject to pressure loads. They are intended for the determination and measuring of chlorine and chlorine dioxide concentration values in water treatment processes. The PM 03 unit is excellently suited for implementation in hot-water networks with temperatures up to 60 °C and pressure levels up to 6 bar. The water sampling station construction elements subject to temperature and pressure loads are all built in high-grade materials.

### In brief

- Measures free chlorine, chlorine dioxide, pH value and ORP
- Measures temperature (optional)
- Very clear and reliably-operating construction design
- Pressure-resistant up to 6 bar
- Up to 60 °C temperatures
- Unit pipework and wiring are factory-assembled
- Features possibility of recirculation of the sampling water into the mains network



## PM 04 Water sampling station

Depending on its expansion level, the PM 04 water sampling station is intended for the continuous measurement of free chlorine, chlorine dioxide, pH value, ORP potential and temperature parameters. Water quality monitoring is efficiently provided by either a TOPAX DE or a TOPAX L controller unit. All the elements required for measuring, control and metering, are built into the water sampling station. The sensors for water value measurement are arranged into a transparent, multipurpose housing block. The sampling station water flow conditions provide for consistently steady measuring values.

### In brief

- Measures free chlorine or chlorine dioxide by means of potentiostatic measuring cells
- Measured pH value, ORP and temperature (depending on the unit version)
- Hydrostatic flow adjustment
- Flow controller
- Zero-point calibration not required
- Compact, transparent construction design



# Sensor Technology and Accessories



Sensors

## Sensors

The Lutz-Jesco sensors definitely distinguish themselves due to high-performance quality, strong construction and an excellent price-performance ratio. Intensive research and a long-standing experience in the business result in the successful performance of all your measuring issue requirements. Lutz-Jesco has a wide range of sensors on offer.

### Sensors for Free Chlorine

- **Open, amperometric measuring cell**  
The low-cost solution for all halogens and oxidizing chemicals
- **Open, potentiostatic measuring cell**  
with automatic electrode cleaning, selective measuring system with zero deviation, sturdy compact construction design
- **Membrane coated, potentiostatic measuring cell for high selectivity**, internal temperature compensation

### Sensor for Total Chlorine

- For the determination of total chlorine values in water.

### pH and ORP Electrodes

- Available in glass, plastic and pressure-resistant versions

### Temperature Sensors

- Available as Pt 100 resistance thermometers

### Conductivity Measuring Probes

- For inductive or conductive conductivity measurement

### Flow rate and Level Sensors

- For monitoring metering unit operations



Fitting blocks

## Fittings

For optimised plant integration and to make installation all the more easier, chlorine measuring cells, pH and ORP electrodes, temperature and flow-rate sensors can all be combined into one unit. Lutz-Jesco aptly has an extensive range of fittings on offer. So that you always have the ideal solution for sensor hook-up arrangements in all your processes.

### Flow rate fittings

- For direct installation in pipe works or bypass elements

### Immersion fittings

- For installation in tanks and reservoirs

### Fitting blocks

- For pipe work bypass installations



Flow rate fittings

# Sensor Technology and Accessories

## A comprehensive range of accessories

The fully-developed line of accessories we have on offer enables optimisation of and integration into existing processing and metering systems.

## Photometer

The photometer is intended for calibration of measuring systems by means of a comparison measurement. Particularly in plants featuring a number of measuring stations, this unit provides for quick and easy comparison measurements. The Lutz-Jesco Photometer combines this fundamental feature with high levels of measuring accuracy and a sturdy construction design.

### Measuring processes for:

- Free chlorine
- Bonded chlorine
- Total chlorine
- Chlorine dioxide
- pH value
- Cyanuric acid
- Acid capacity



Photometer

## TopView

TopView, the TOPAX computer software provides for control of networked TOPAX systems via a PC – and thereby remote controlling and remote setting of the Controller. Furthermore, centralised logging of the measured data and values is also possible. Meaning that TopView totally realigns itself to your requirements, as the program can be implemented for a number of different setup levels.

### In brief

- TOPAX controller display, operation and monitoring
- Connection options for up to 15 devices
- Connection of digital sub-groups
- Parameter archiving selection options
- Controller parameters can be set directly via the PC
- Display and logging of all alarm events
- Daily operation log



TopView computer software

## Further Products

From our fully-developed range of accessories:

Separately driven fans, digital frequency inverters, digital teleindication, converters, transformers, and much more.

Should you nevertheless have any further special or custom requests:  
The solution is always at hand!



Dampening and electrolytic solutions

# Product overview

Operation / Version										
	TOPAX® DX		TOPAX® DE		TOPAX® L / LF					
	Software languages: DE, GB, NL, ES, FR, PO, CZ, RU, NO		Software languages: DE, GB, ES, FR		Software languages: DE, GB, NL, ES, FR, CZ, SE, PL					
	DX	DE7	DE8	L1	L2	L3	L4	L5	LF1	LF2
<b>Measuring</b>										
Number of inputs	4 - 6	4	4	2	2	2	2	2	2	2
Disinfection (Cl <sub>2</sub> or ClO <sub>2</sub> )	•	Cl <sub>2</sub>	•	Cl <sub>2</sub>	-	-	ClO <sub>2</sub>	-	-	-
pH	•	•	•	-	•	-	-	-	-	-
ORP	•	°	°	-	-	•	-	-	-	-
Temperature	•	•	•	•	•	•	•	•	•	•
Total chlorine	•	-	-	-	-	-	-	-	-	-
Conductivity	• <sup>a</sup>	-	-	-	-	-	-	-	• <sup>c</sup>	• <sup>d</sup>
Hydrogen peroxide	-	-	-	-	-	-	-	•	-	-
<b>Compensation</b>										
pH compensation	Cl <sub>2</sub>	-	Cl <sub>2</sub>	-	-	-	-	-	-	-
Temperature compensation	•	•	•	•	•	•	•	•	•	•
<b>Disturbance variable input</b>										
0/4 ... 20 mA	• <sup>a</sup>	°	°	-	-	-	-	-	-	-
<b>Measuring value outputs (20 mA)</b>										
Wall mounted housing	8	5	5	1	1	1	1	1	1	1
Panel mounted housing	-	-	-	1	1	1	1	1	1	1
<b>Control</b>										
Number of controllers	1 - 4	2	2	1	1	1	1	1	1	1
Free chlorine / Chlorine dioxide / ORP	•	•	•	Cl <sub>2</sub>	-	ORP	ClO <sub>2</sub>	-	-	-
pH	•	•	•	-	•	-	-	-	-	-
Bonded chlorine	°	-	-	-	-	-	-	-	-	-
Conductivity	°	-	-	-	-	-	-	-	• <sup>c</sup>	• <sup>d</sup>
Hydrogen peroxide	-	-	-	-	-	-	-	•	-	-
<b>Controller outputs</b>										
Analogue 0/4 ... 20 mA	•	•	•	• <sup>a</sup>	• <sup>a</sup>	• <sup>a</sup>	• <sup>a</sup>	• <sup>a</sup>	• <sup>a</sup>	• <sup>a</sup>
3-point step	•	•	•	-	-	-	-	-	-	-
Pulse length	•	•	•	•	•	•	•	•	•	•
Pulse frequency	•	•	•	•	•	•	•	•	•	•
Ethernet	• <sup>e</sup>	-	-	-	-	-	-	-	-	-

# Measuring and Control Technology

Operation / Version										
	TOPAX® DX		TOPAX® DE		TOPAX® L / LF					
	Software languages: DE, GB, NL, ES, FR, PO, CZ, RU, NO		Software languages: DE, GB, ES, FR		Software languages: DE, GB, NL, ES, FR, CZ, SE, PL					
	DX	DE7	DE8	L1	L2	L3	L4	L5	LF1	LF2
<b>Controller performance</b>										
Dual-side control	•	•	•	•	•	•	•	•	•	•
ON/OFF	•	•	•	•	•	•	•	•	•	•
P	•	•	•	•	•	•	•	•	•	•
PI	•	•	•	•	•	•	•	•	•	•
PID	•	•	•	-	-	-	-	-	-	-
<b>Alarm functions</b>										
Alarm relay	•	•	•	•	•	•	•	•	•	•
<b>Communication</b>										
RS 485	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦
Ethernet	• <sup>e</sup>	-	-	-	-	-	-	-	-	-
TopView software connection	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦
<b>Display</b>										
One-colour	-	-	-	•	•	•	•	•	•	•
Colour	•	•	•	-	-	-	-	-	-	-
Graphics-capable	•	•	•	-	-	-	-	-	-	-
<b>Additional functions</b>										
Logbook	•	•	•	-	-	-	-	-	-	-
Screen writer	•	•	•	-	-	-	-	-	-	-
<b>Input supply voltage</b>										
110 ... 240 V 50/60 Hz	•	•	•	-	-	-	-	-	-	-
230 V 50/60 Hz	-	-	-	•	•	•	•	•	•	•
120 V 50/60 Hz	-	-	-	◦	◦	◦	◦	◦	◦	◦
24 V 50/60 Hz	-	-	-	◦	◦	◦	◦	◦	◦	◦
24 V DC	◦	◦	◦	-	-	-	-	-	-	-
<b>Device version</b>										
Wall mounted housing	•	•	•	•	•	•	•	•	•	•
Panel mounted housing	-	-	-	•	•	•	•	•	•	•

- Standard equipment
- <sup>a</sup> unless not otherwise implemented
- <sup>b</sup> not possible with disturbance variable input
- <sup>c</sup> conductive
- <sup>d</sup> inductive
- <sup>e</sup> TOPAX DX Net only

- optional – on demand:
- not available

Further software languages on request.



Metering pumps, accessories chlorine gas technology, measuring and control technology, centrifugal pumps, disinfection systems and plant engineering and construction



Products for swimming pool water disinfection based on brine-electrolysis, domestic water systems technology

**Lutz-Jesco GmbH**  
Am Bostelberge 19 • D-30900 Wedemark  
[www.lutz-jesco.de](http://www.lutz-jesco.de)



Tap and tank pumps, flow meters, double diaphragm pumps, centrifugal pumps

**Lutz Pumpen GmbH**  
P.O. Box 1462 • D-97864 Wertheim  
[www.lutz-pumpen.de](http://www.lutz-pumpen.de)



Head office  
**Lutz-Jesco GmbH**  
Am Bostelberge 19  
30900 Wedemark  
Germany

Tel.: +49 5130 5802-0  
Fax: +49 5130 580268

E-mail: [info@lutz-jesco.com](mailto:info@lutz-jesco.com)  
Internet: [www.lutz-jesco.de](http://www.lutz-jesco.de)

Hungary  
**Lutz-Jesco Üzletág**  
Vasvári P. u. 9.  
9024 Győr  
Hungary

Tel.: +36 96 523046  
Fax: +36 96 523047

E-mail: [info@lutz-jesco.hu](mailto:info@lutz-jesco.hu)  
Internet: [www.lutz-jesco.hu](http://www.lutz-jesco.hu)

Austria  
**Lutz-Jesco GmbH**  
Aredstraße 7/2  
2544 Leobersdorf  
Austria

Tel.: +43 2256 62180  
Fax: +43 2256 6218062

E-mail: [info@lutz-jesco.at](mailto:info@lutz-jesco.at)  
Internet: [www.lutz-jesco.at](http://www.lutz-jesco.at)

Netherlands  
**Lutz-Jesco Nederland B.V.**  
Nijverheidstraat 14 C  
2984 AH Ridderkerk  
Netherlands

Tel.: +31 180 499460  
Fax: +31 180 497516

E-mail: [info@lutz-jesco.nl](mailto:info@lutz-jesco.nl)  
Internet: [www.lutz-jesco.nl](http://www.lutz-jesco.nl)

Great Britain  
**Lutz-Jesco (GB) Ltd.**  
Gateway Estate  
West Midlands Freeport  
Birmingham B26 3QD  
Great Britain

Tel.: +44 121 782 2662  
Fax: +44 121 782 2680

E-mail: [info@lutz-jesco.co.uk](mailto:info@lutz-jesco.co.uk)  
Internet: [www.lutz-jesco.co.uk](http://www.lutz-jesco.co.uk)

USA  
**Lutz-JESCO America Corp.**  
55 Bernar Park  
Rochester, N.Y. 14624  
USA

Tel.: +1 585 426-0990  
Fax: +1 585 426-4025

E-mail: [mail@jescoamerica.com](mailto:mail@jescoamerica.com)  
Internet: [www.jescoamerica.com](http://www.jescoamerica.com)

East Asia  
**Lutz-Jesco East Asia Sdn Bhd**  
6 Jalan Saudagar U1/16  
Hicom Glenmarie Industrial Park  
40150 Shah Alam/ Selangor  
Malaysia

Tel.: +603 55692322  
Fax: +603 55691322

E-mail: [info@lutz-jescoasia.com](mailto:info@lutz-jescoasia.com)  
Internet: [www.lutz-jescoasia.com](http://www.lutz-jescoasia.com)

Middle East  
**Lutz-Jesco Middle East FZE**  
P.O. Box 9614  
SAIF-Free Zone Center  
Sharjah  
UAE

Tel.: +971 6 5572205  
Fax: +971 6 5572230

E-mail: [info@jescome.com](mailto:info@jescome.com)  
Internet: [www.jescome.com](http://www.jescome.com)

