

## TOPAX® DE 1 Controller

- Measuring and controlling device for free chlorine.
- Measuring device for pH value and temperature.
- pH compensation.

### Measuring Unit

<b>Measurements</b>	Free chlorine, pH value, temperature	
<b>Measuring range</b>	0.00 - 4.00 mg/l Cl <sub>2</sub>	chlorine measurement
	0.00 - 14.00 pH	pH measurement
	-30 - 140 °C	temperature measurement
<b>Display</b>	Measurement values with units.	
	Status messages, sensors, calibration, controller and alarm.	
<b>Temperature compensation</b>	Either manually or automatically with Pt 100.	

### Controller Unit

<b>Hysteresis</b>	0.00 - 4.00 mg/l or pH 0.00 - 14.00
<b>Proportional gain XP</b>	0.00 - 4.00 mg/l or pH 0.00 - 14.00
<b>Integral gain TN</b>	0 - 2000 sec
<b>Derivative gain TV</b>	0 - 500 sec
<b>Minimum impulse</b>	0.0 - 9.9 sec
<b>Pulse + pause time</b>	01 - 99 sec
<b>Impulse frequency</b>	100 - 7200 impulses/h
<b>Servo-motor actuation time</b>	20 - 300 sec
<b>Start-up delay</b>	0 - 2000 sec
<b>Alarm function</b>	2 minimum and maximum threshold values and delay times
<b>Control</b>	0 - 2000 sec



### Panel-mounted

Power Supply	Order No.
230 V AC, + 6 %, - 10 %, 1 Ph, 40 ... 60 Hz	40400121
130 V AC, 1 Ph, 50 ... 60 Hz	40400131
24 V AC, 1 Ph, 50 ... 60 Hz	40400151

### Wall-mounted

Power Supply	Item Order No.
230 V AC, + 6 %, - 10 %, 1 Ph, 50 ... 60 Hz	40400101
130 V AC, 1 Ph, 50 ... 60 Hz	40400111
24 V AC, 1 Ph, 50 ... 60 Hz	40400141
24 V DC	40400161

## Technical Data

Feature	TOPAX® DE panel-mounted	TOPAX® DE wall-mounted
Housing material	Noryl	ABS
Dimensions	96 x 96 x 127 (150) mm (WxHxD) for panel mounting	165 x 160 (190) x 80 mm (WxHxD) for wall mounting
Weight	0.8 kg	1.0 kg
Connectors	Push-screw terminal for up to maximum 1.5 mm <sup>2</sup> section wiring	Spring-load terminal for up to maximum 1.5 mm <sup>2</sup> section wiring
Protection class	IP 54 (front), IP 30 (housing)	IP 65
Supply voltage	230 V AC, + 6 %, - 10 %, 40 ... 60 Hz 130 V AC, 1 Ph, 50 ... 60 Hz 24 V AC, 1 Ph, 50 ... 60 Hz	230 V AC, + 6 %, - 10 %, 1 Ph, 40 ... 60 Hz 130 V AC, 1 Ph, 50 ... 60 Hz 24 V AC, 1 Ph, 50 ... 60 Hz 24 V DC
Power input	10 VA	10 VA
Internal fuse	None	230 V: 63 mA delayed-action fuse 110V: 125 mA delayed-action fuse 24 V: 800 mA semi delayed-action fuse
Display	44x62 LCD graphical display, with illumination display measurement of values and relative units, operating conditions and text lines	128x62 backlit graphical display, displays measurement values and relative units, operating conditions and text lines
Inout 1 / free chlorine	Potentiostat for direct-flow 3 electrode system, measurement range 0.00 ... 4.00 mg/l chlorine (free chlorine, Cl <sub>2</sub> ), accuracy < 0.1 mV	
Input 2 / pH-value	PH value, measurement range 0.00 ... 14.00 pH, electrically isolated, accuracy < 0.1 mV	
Input 3 / temperature	Temperature, measurement range -30.0 ... +140.0 °C, Pt 100, dual lead connection, accuracy < 0.01 °C	
Digital input	External controller stop or water deficiency sensor.	
Outputs	Two 0/4-20 mA, electrically isolated, maximum 500 Ohm load	Three 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	
Interfaces (optional)	RS485, baud rate 9600, data format 8Bit, 1 start and 1 stop bit, no even parity	
Controller options	One on-off (with hysteresis) proportional (P), proportional integral (PI) or proportional integral derivative (PID) controller, either a pulse-pause or pulse-frequency or three-point step-controller or continuous (0 ... 20 mA) output controller, for chlorine measuring, two limit values with timing relay (0 ... 2000 s) for alarm alerts.	
Switch-points	Two dual switch points, adjustable within the metering range	
Alarm functions T	wo, with maximum and minimum limit values and time delay	
3 potential-free dry contacts contact load	6 A/ 250 V, max. 550 VA ohmic resistive load (with RC-protective circuit)	
Operating temperature	0 - 50 °C	
Storage temperature	-20 - 65 °C	
Atmospheric moisture	0 - 90 % non condensing	
EMC	Compliant to DIN standards EN 50081 -1 and 50081 -2	
Conformity mark	CE	