

TOPAX® DE 4 Controller

- Free chlorine measuring and controller device.
- pH value, temperature and ORP controller device.
- pH compensation.

Measuring Unit

Measurements	Free chlorine, pH value, temperature, ORP	
Measuring range	0.00 - 4.00 mg/l Cl ₂	chlorine measurement
	0.00 - 14.00 pH	pH measurement
	-30 - 140 °C	temperature measurement
	-1500...+1500 mV	ORP
Display	Measurement values with relative units.	
	Status messages, sensors, calibration, controller and alarm.	
Temperature compensation	Either manually or automatically with Pt 100 measuring principle.	

Controller Unit

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



Panel-mounted

Power Supply	Order No.
230 V AC, + 6 %, - 10 %, 40 ... 60 Hz	40400124
130 V AC, 1 Ph, 50 ... 60 Hz	40400134
24 V AC, 1 Ph, 50 ... 60 Hz	40400154

Wall-mounted

Power Supply	Order No.
230 V AC, + 6 %, - 10 %, 50 ... 60 Hz	40400104
130 V AC, 1 Ph, 50 ... 60 Hz	40400114
24 V AC, 1 Ph, 50 ... 60 Hz	40400144
24 V DC	40400164

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 ² section wiring	Spring-load terminal for up to maximum 1.5 mm ² 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 ₂), 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	
Input 4 / ORP	-1500...+1500 mV, electrically isolated, accuracy <0.1 mV	
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, one 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	Two, 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	