

TOPAX® LF 1 Controller

- Conductivity parameter measuring and controller device (conductive conductivity).
- Temperature controller device.

Measuring Unit

Measurements	Conductivity	
Measuring range	0 ... 20,00 MOhm	C = 0,05/cm
	0 ... 2,000 μ S/cm	C = 0,05/cm
	0 ... 20,00 μ S/cm	C = 0,05/cm
	0 ... 200,0 μ S/cm	C = 0,05/cm
	0 ... 2,000 mS/cm	C = 0,2/cm
	0 ... 20,00 mS/cm	C = 1/cm
Temperature metering range	-22 ... +284 °F	
Display	Measurement values with relative units. Status messages, sensors, calibration, controller and alarm.	
Temperature compensation	Either manually or automatically with Pt 100 measuring principle.	
Temperature coefficient	32 - 46.4% / °F	

Controller Unit

Switch points	2 switch points with adjustable effective direction setting
Controller options	ON/OFF controller with optional hysteresis Proportional (P) controller - pulse-pause, pulse-frequency or continuous controller. Proportional Integral (PI) controller - pulse-pause, pulse-frequency or continuous controller.
Hysteresis	freely adjustable within the metering range
Proportional gain KP	freely adjustable within the metering range
Reset time TN	0 - 2000 sec
Minimum impulse	0.1 - 9.9 sec
Pulse and pause time	02 - 99 sec
Impulse frequency	100 - 7200 impulses/h
Switch-on delay	0 - 200 sec.
Alarm function	minimum and maximum threshold value and delay time



Panel-mounted

Power Supply	Order No.
230 V AC, + 6%, - 10%, 1 Ph, 40 ... 60 Hz	40500124
130 V AC, 1 Ph, 50 ... 60 Hz	40500134
24 V AC, 1 Ph, 50 ... 60 Hz	40500154

Wall-mounted

Power Supply	Order No.
230 V AC, + 6%, - 10%, 1 Ph, 50 ... 60 Hz	40500104
130 V AC, 1 Ph, 50 ... 60 Hz	40500114
24 V AC, 1 Ph, 50 ... 60 Hz	40500144

Technical Data

Feature	TOPAX® LF panel-mounted	TOPAX® LF wall-mounted
Housing material	Noryl	ABS
Dimensions	3.78" x 3.78" x 5" (WxHxD) for panel mounting	6.5" x 6.3" x 3.15" (WxHxD) for wall mounting
Weight	1.76 pounds	2.645 pounds
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
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	Backlit LCD display, two 16 character text lines. Displays measurement values with relative units and additional temperature display. Relay state also displayed.	
Inout 1 / Electrolytic Conductivity (conductive measuring principle)	Electrolytic conductivity, conductive measuring, for dual electrode measuring cell, adjustable metering range 0.00 ... 20.00 M /cm or 0.000 ... 2.000 or 0.00 ... 20.00 or 0.0 ... 200.0 μ S/cm or 0.000 ... 2.000 or 0.00 ... 20.00 or 0.0 ... 200.0 mS/cm Operative measurement errors at nominal operative conditions < 1 % on measure value + 0.4 μ S x c C-value settings: for the 20 M/cm, 2. 20 and 200 μ S/cm ranges, recommended c-value is c=0.05/cm, for the 2 mS/cm range, recommended c-value is c= 0.2/cm, for the 20 mS/cm range, recommended c-value is c= 1.0/cm (adjustable respectively 0.001/cm ... 9.999/cm), for the 200 mS/cm range, recommended c-value is c= 10/cm (adjustable respectively 0.01/cm ... 99.99/cm) Temperature coefficient setting: 32.0 ... 46.4 % / °F	
Input 2 / temperature	Temperature, measurement range -22.0 ... +284.0 °F, Pt 100, dual lead connection, accuracy < 32.018 °F	
Digital input	External controller stop or water deficiency sensor. Controller stop (break contact element).	
Analog Output	One 0/4 ... 20 mA, electrically isolated, configurable, maximum 500 Ohm apparent ohmic resistance, accuracy <0.1 mA.	
Relay outputs	3 potential-free dry contacts, freely configurable, 2 A, 250 V, max. 550 VA for control (2) and alarm alerts (1).	
Interface options	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) or proportional integral (PI) controller, either a pulse-pause or pulse-frequency or continuous (0/4 ... 20 mA) output controller, allocated to chlorine measuring, two limit values with timing relay for alarm alerts.	
Switch-points	Two dual switch points, adjustable within the metering range	
Alarm functions	Two, with maximum and minimum limit values and time delay	
3 potential-free dry contacts contact load	2 A/ 250 V, max. 550 VA ohmic resistive load (with RC-protective circuit)	
Operating temperature	32 - 122 °F	
Storage temperature	-4 - 144 °F	
Atmospheric moisture	0 - 90 % non condensing	
EMC	Compliant to DIN standards EN 50081 -1 and 50081 -2	
Conformity mark	CE	