

Conductive Level Controller Type MCLC

Rail Mounting

- 24V AC Power Supply
- 2-point liquid level control
- 220V AC Power Supply
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- 24V AC Power Supply
- 2-point liquid level control



The MCLC Conductive Level Controller provides reliable, cost effective, 2-point liquid level control. The unit uses electrodes to electrically detect the liquid level. The MCLC has no moving parts and may be used in water, wastewater, and any other heavy-bodied conductive liquids. The MCLC controller includes a sensitivity adjustment for reliable operation in a variety of conductive liquids. The MCLC can be connected to up to three Michshur's A20 - stainless steel 316 Liquid level electrodes, which can easily be cut to the correct length for accurate On / Off or High / Low level settings. The three-probe system allows two different liquid levels for control. The MCLC operates on 24 VAC or 230 VAC.

Applications:

For sewage, sea water, etc., liquid having a low conductive resistance

- Level control in tanks, reservoirs, sewage plants, underground wells, mixing plants etc.
- Level control for element protection in pipes, channels, and irrigation systems
- Flow detection in pipes, channels, and irrigation systems
- Ice bank control in cold drink dispensers, ice makers, water chillers, bulk milk tanks, etc.
- Dispensing of liquids by volume
- Indication of liquid buildup due to filter blockages
- Pollution / foul water detection for rivers, drains, etc.
- Alarm control warning of abnormal or dangerously Max. (high) or Min. (low) levels
- Flood detection at basements, warehouses, archives and museums

Operation

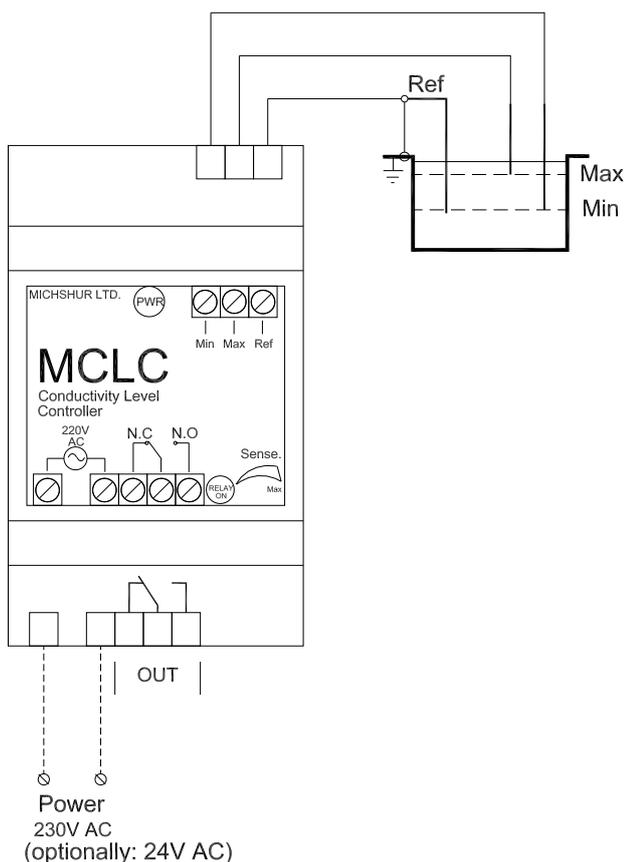
Operation:

The MCLC Conductive Level Controller consists of a plug-in, DIN mount, controller connected to a set of up to 3 stainless steel electrodes (ROD / probes). These are cut to correct length and inserted vertically into the liquid. A low AC voltage is applied between the level electrodes and a reference (earth) electrode (or the tank body, if it is electrically conductive). The liquid provides a low conductive resistance between the reference electrode and the two heights level, Max. (high level) and Min. (low level) electrodes. For two-point control a low-level probe is used as well. In this case the relay does not de-energize until the water level falls below the low-level probe. Using the low-level probe allows a wide differential between switching a pump ON and OFF, and can avoid excessive pump operation during tank emptying or filling.

Relay turn ON while more then Min. Level and up to the Max. Level. The output relay in the controller is de-energized (OFF) while the level of liquid is more then Max-level and stay de-energized until the level of liquid is down to lower then the Min-level. It is then energized (ON) until the liquid level reaches the high-level probe.

If this differential operation is not required, only the reference and Max-level electrodes need to be connected. The output relay in the controller will de-energized when the water level reaches the high-level probe (Tank is full) and de-energized when the water level falls below it.

Electrical connection:



Two level hysteresis operation:

	#	Max.	Min.	Relay (Pump)
	1	Liquid	Liquid	OFF
	2	Dry	Liquid	OFF
	3	Dry	Dry	ON
	4	Dry	Liquid	ON
	5	Liquid	Liquid	OFF

Technical Specifications

Specifications:

Power Supply	24 VAC or 230 VAC
Power Consumption	Max 2.5 VA
Temperature Range	316 SS: - 10 to 82 °C (- 14 to 180 °F) ETFE: - 10 to 120 °C (- 14 to 248 °F)
Max Pressure	290 psi (20 Bar)
Output	5 Amp. N.O. / N.C. relay (250 VAC max)
Operation mode:	One level electrode or Two levels with hysteresis
Sensitivity Adjustment	Sensitivity Adjustment: available via potentiometer
Output Voltage of Electrodes	less than 8 VAC
Insulation resistance	100 M Ω (at 500 VDC) *
Ambient temperature Operating	- 10 °C to 55 °C
Ambient humidity Operating	45% to 85%
Life expectancy Mechanical	10,000,000 operations
Weight Approx.	190 g

* between power terminals and electrode terminals, and between electrode terminals and contact terminals

Installation notes:

In sewage use, electrode holders must be installed at least 10 to 20 cm apart from one another. For acids, alkalis and sea water, electrode holders may be as much as 1 meter apart to operate properly. When taping one of the electrodes to prevent it from contacting the other electrodes in water, do not tape the electrode entirely but leave at least 100 mm of its end uncovered. When the required length of the electrode is more than 1 m, use a separator to prevent the electrodes from contacting one another.

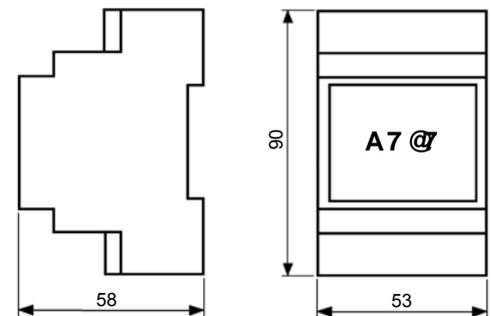
Kind of water Specific resistance Applicable type:

City water	5 to 10 k Ω /cm	General-purpose type
Well water	2 to 5 k Ω /cm	General-purpose type
Industrial water	5 to 15 k Ω /cm	General-purpose type
Rainwater	15 to 25 k Ω /cm	General-purpose type
Sea water	0.03 k Ω /cm	Low-sensitivity type
Sewage	0.5 to 2 k Ω /cm	Low-sensitivity type
Distilled water	100 k Ω /cm or less	High-sensitivity type

Related Products:

A20 - stainless steel 316 Liquid level control electrodes

Dimensions (mm):



How to order:



Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing.

Modifications may take place and materials specified may be replaced by others without prior notice.



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