

# MATIC

## MERCURY / MC

(Mercury free)



CE

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# MERCURY/MC (Mercury free)

(European Patent)

**Dear customer,**

To confirm our company's dedication to the cause of environmental protection, we are delighted to introduce you to the MERCURY/MC waste water level controller. We have been manufacturing the MERCURY/MC since 1990, entirely from materials that conform to European RoHS directive (2002/95/EC).

- 1) Unlike the other control devices on the market, which are all made in more or less the same way and all use the same type of electrical contacts, our patented MERCURY/MC level controller is based on a totally different design that eliminates the causes of failure and malfunctioning commonly found in conventional products.

One of the main problems with level controllers is the fact that condensation tends to form inside them. If this happens it can easily lead to malfunctioning through:

- 1) oxidation of the electrical contacts
- 2) oxidation and eventual seizure of mechanical parts
- 3) more frequently, the formation of water droplets from the condensate on the electrical contacts themselves, creating an electrical bridge even when the contacts are mechanically opened (to a typical gap of 0.3 mm), and permitting current to continue flowing.

These common faults have been completely eliminated by the intelligent design of our patented level controller, thanks to the following features:

- A) The electrical contacts are protected by 3 sealed chambers.
- B) The float is packed with thermal insulation to reduce the range of temperature variation inside the switch chamber. This insulation is achieved by injecting non-hygroscopic, closed cell, expanded polyurethane. This production technique, protected by our own patent, has allowed us to homologate the MERCURY/MC as double insulated at a pressure of 10 bars with leading test and certification institutes. The MERCURY/MC is the only level controller on the market that boasts this grade of homologation.
- C) The most important aspect of the MERCURY/MC's design is the attention we have paid to protecting the electrical contacts and choosing the right contacts for the job. The following is a description of these essential components.

Our level controller stands out from the competition for the adoption of a 10 A, 250 Vac electrical control switch with self-cleaning contacts and a contact gap of 5 mm instead of the 0.3 mm obtained with most common level controller contacts.



MERCURY/MC switchgear



STANDARD MICROSWITCH  
in conventional controllers



SUB-MINIATURE MICROSWITCH  
in conventional controllers

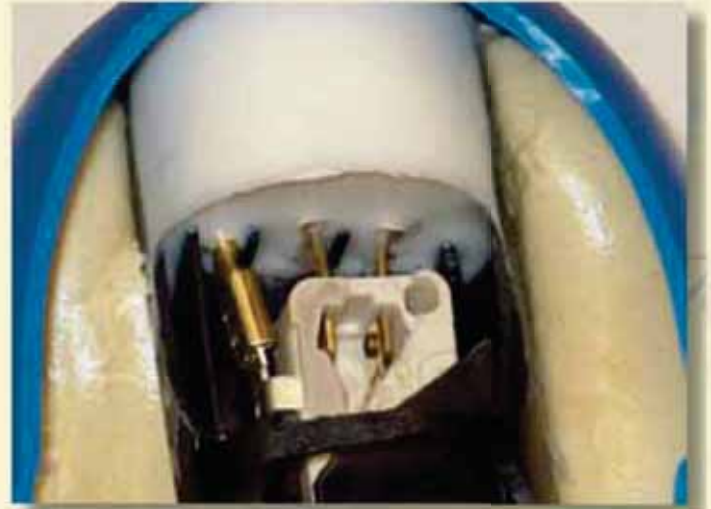


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This impressive contact gap is large enough to break up any water droplets that might form as the result of condensation, and guarantees efficient circuit breaking and interruption of the current to the relay coil.

To enhance the reliability of our level controllers even further, the connections between the electrical contacts and the control wiring are embedded in epoxy resin that fully seals the copper strands. This prevents any condensation from penetrating the switchgear as the result of air movement along the wires between the copper strands and the wire sheaths.



The switch is operated by two balls housed in an obstacle-free cylindrical chamber that guarantees the same operating sensitivity through 360°. The switch is impact and shock proof because the balls trip the microswitch through the action of a lever that is protected by a shield at the end of its travel.



## Homologation data

Rated voltage	250 V AC
Resistive load	10 A
Operating temperature	55°C
Max. operating pressure	10 BAR

