



Application Report

Controls for swimming pools and swimming ponds as well as bio pools and natural pools

Partner Othmar Bürgy AG
Area Building technology



Building Technology

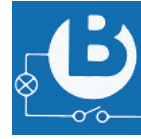
Consulting

Project planning

Programming

Partner

With its many years of experience and well-coordinated teams, Othmar Bürgy AG is the competent of sophisticated and complex switchgear, electrical distribution and control systems.



ComatReleco products in operation

- PLC & HMI
- Installation contactors
- Industrial relays

In nature, habitats regulate themselves and reach a functional homeostasis. If a biotope is moved to an artificial environment, sophisticated technology is required to achieve a sustainable balance. Those who would like to swim in a bio pool with nonchemical filtering need an automated system for monitoring and control.

Sophisticated water treatment interacting with selected materials guarantees crystalclear water without having to add hazardous chemicals. This may sound simple enough but is in fact a highly complex process that requires seamless monitoring and subtle control.

In one specific case, a natural pool with a counterflow jet, lighting, water feature and cover as well as a hot tub with a fountain were implemented. The required water is cleaned using a bio filter and brought up to the desired temperature with heat exchangers. Thanks to the automatic backwash of the filter, the natural pool is practically maintenance-free.

A programmable logic controller (PLC) centrally processes all incoming signals sent by the temperature and level probes, scanners, sensors for position monitoring and the dimmer switch, and controls the output of pumps, motors, compressors, heating, hatches, valves and lighting.

All this technical equipment means that the owner can get into natural water at a pleasant temperature to enjoy his or her swimming experience. The counterflow is adapted to the user's fitness, the lighting will come on when it gets dark and the cover closes automatically when nobody is in the pool.



Customer project with swimming pool and hot tub, including fountain.

The controls were wired and installed by Othmar Bürgy AG, while ComatReleco implemented the programming of the PLC and the visualisation of the operating elements.

So the swimming facilities can be operated at the appropriate level, control visualisation is divided into a customer view and maintenance view to enable parametrisation. In the customer view, changes such as hardware outputs and timings can be easily and intuitively made using a 7" touch screen, without the software having to be reprogrammed. The controls offer a comprehensive range of functions with snap-in modules for inputs and outputs as well as memory to record and document on-site events. They can be expanded in modules and individually parametrised, thanks to the sequencer. There are no licencing fees for the software to program the PLC.



Control cabinet with PLC and ComatReleco products.