

# Technical Data Sheet

## BECSys ChemLock



The BECSys ChemLock is a system for electrically interlocking a water chemistry controller with the main circulation pump. An electrical interlock of chemical feeders with the circulation pump is a critical safety system, which BECS Technology recommends in all installations and is required by code in some jurisdictions.

A very dangerous situation occurs when a water chemistry controller feeds chemicals into a static line, i.e. a pipe that isn't circulating water. Both acid and chlorine will build up in the pipe and combine to form highly toxic chlorine gas. When circulation resumes, the chlorine gas will be pumped into the pool and will off-gas at the water surface – precisely where swimmers are breathing.

To help prevent this situation most water chemistry controllers have a feature to deactivate chemical feeds during “no flow” conditions. However, these methods are not fool-proof. A dedicated flow switch in the sample stream (the most common approach) can fail in the “flow” position, which will allow the controller to feed chemicals even when water is not circulating through the system.



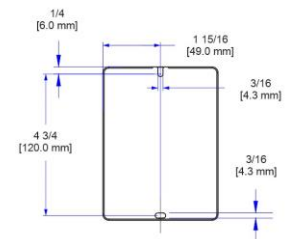
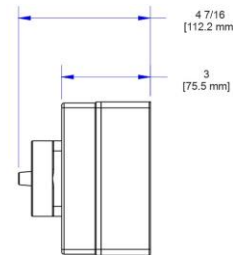
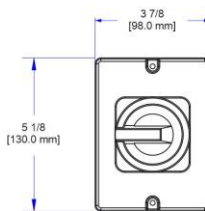
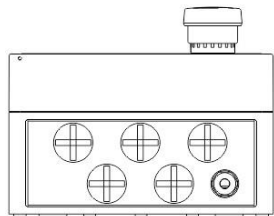
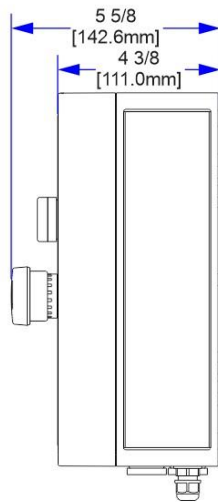
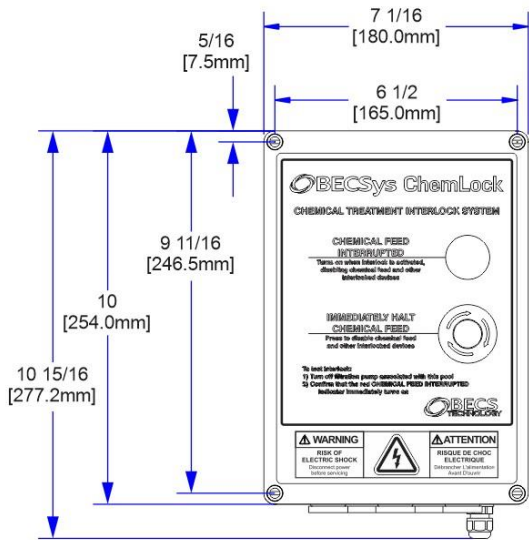
The BECSys ChemLock provides an independent electrical interlock of up to 4 chemical feeders (or other devices). The ChemLock interrupts the power to the interlocked chemical feeders whenever a supplied dry contact signal indicates the circulation pump is not running. This is typically a Run/Confirm signal from a pump or VFD, but can be any dry contact signal that indicates the pump is not running, e.g. a current transformer. An electrical interlock like this is the surest and safest way to prevent chemicals from being fed into a static line because even if the water chemistry controller attempts to activate the feeder(s) while the circulation pump is not running, chemical cannot be fed because the power to the feeder(s) has been interrupted.

A large red LED on the front panel clearly indicates that chemical feeds are interrupted. This makes it quite easy for operators and health inspectors to verify the system is operational; simply turn off the circulation pump and verify the LED is on. The ChemLock also provides a way for the operator to immediately halt chemical feeds. Pressing the large button on the front panel will halt interlocked chemical feeds and illuminate the LED indicating that chemical feeds are interrupted. A disconnect switch is included, which allows the BECSys ChemLock to be safely serviced without throwing the circuit breaker at the electrical panel.

The BECSys ChemLock is covered by a 1 year manufacturer's warranty and is UL508A approved.

### Features

- Electrical Interlock of up to 4 chemical feeders (up to 5A each) with circulation pump
- Disconnect Switch included
- Bright red Chemical Feed Interrupted indicator
- Button to Immediately Halt Chemical Feed
- Works with any water chemistry controller
- UL508A approved



| Specifications                           |  |
|--|--|
| <b>Part Numbers</b>                      |  |
| BECSys ChemLock                          | 2100480                                  |
| <b>Physical</b>                          |  |
| Enclosure Material                       | Glass Reinforced Polycarbonate           |
| Overlay Material                         | UV Stabilized Polyester                  |
| Dimensions                               | Width: 7.09" Height: 10.00" Depth: 4.37" |
| Weight                                   | 7 lbs                                    |
| <b>Environmental</b>                     |  |
| Storage Temperature                      | -40 to 85 °C                             |
| Ambient Operating Temperature            | 5 to 50 °C                               |
| Ambient Humidity                         | 95% non-condensing maximum               |
| <b>Electrical</b>                        |  |
| Voltage                                  | 115 VAC, 50/60 Hz                        |
| Phase                                    | Single                                   |
| Current (system)                         | 28 Amps max                              |
| Current (each interlocked feeder/device) | 5 Amps max                               |