

June 01, 2021

Sub: Circular letter No: 011

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Dear partners!

Our service department has analyzed typical problems and frequent mistakes made by users when starting the CRYSTAL station (all modifications).



The text will contain references to the paragraphs of the Installation and Operation Manual of the CRYSTAL station, so it is advisable to have it at hand! This document is available for download on our website in the Technical Support section, link: <https://darin7.ru/index.php#big-form2> .

Hereinafter, this Manual will be referred for brevity as "IOM".

So, you proceed to the installation of the CRYSTAL station or the installation of the station is almost complete:

1. Pay attention to terminals 1 and 2 "STOP" (External stop) on the CRYSTAL controller board (see para.4.3.1 of the IOM) – the **flow sensor** of the pool water exchange circuit must be connected to them. If it is not connected, the automatic blocking of the dosing pumps is activated. In this case, the display shows the following notification: Pumps are blocked, external stop signal. All LEDs on the controller also go out. With a working flow sensor, it is guaranteed that the dosing of reagents into the “standing” water of the pool pipeline is excluded (when the filter is backwashed, when the circulation pump is “knocked out” or turned off by someone, etc.). It does not matter where the measuring cell of the station takes the water: directly from the pool using the “measuring” water pump or from the pool pipeline.

2. If **there is no flow sensor** in the pool water exchange circuit, then it is necessary to install an additional contactor in the electrical panel of the pool to simulate the flow sensor signals (see Appendix No. 2 of the IOM, last page). This will allow the CRYSTAL station to operate in normal mode and automatically block the dosing pumps when the filtration circulation pump is stopped, except for the case when the filter is backwashed. If during the filter backwashing, according to the readings of the pH, CL or Redax electrodes, it is necessary to dose the reagents, then the dosing pumps operate and dosing into the “standing” water of the pool pipeline takes place as long as the filter backwashing continues. With a full filter backwashing (5-7 minutes plus 1-2 minutes for compaction), a lot of reagents can be dosed, and when filtration is turned on, this "cloud" will fall into the pool...

3. And the last case, when **there is no flow sensor and the contactor is not installed**, and the pool needs to be started urgently today – in extreme cases, for a short time, you can install a jumper on these terminals, it will close the contacts and disable the automatic blocking of the dosing pumps. It is very important: this is a temporary measure, so it CANNOT be done for long time! You, in fact, “deceive” the station: if the filtration circulation pump is turned off (the pump automated device is “knocked out”, someone turned off the automated device for any work, etc.), the station will continue reagents dosing into the “standing” water of the pool pipeline, as the controller “will not notice” the shutdown of the filtration circulation pump (after all, you “deceive” it!). When the filtration circulation pump is turned on, and this can happen even a few hours after it was turned off, this explosive mixture of reagents will fall into the pool in one gulp. There have been such cases in history and, unfortunately, visitors to the pool were harmed (this was many years ago).

CONCLUSION: operation of the CRYSTAL station without a flow sensor in the pool water exchange circuit is extremely UNADVISABLE! This is technically incompetent and can lead to dangerous consequences!

Best regards, DARIN