

Heat technology – technical support

Below are described some errors, which the technicians could meet in the field and what are the possibilities of resolving this problems.

1) If the customer's printer is not working, the cause of the problem may be in incorrectly set switches or not properly connected cable:

a) Switch 3 is not in the "ON" position. After the so - called "switch setting" the printer, it is necessary to turn the printer off and on again, so that the new configurations of the switches are saved to the memory.

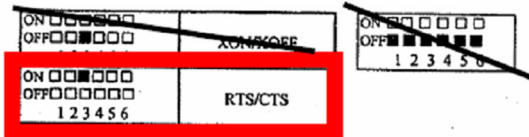
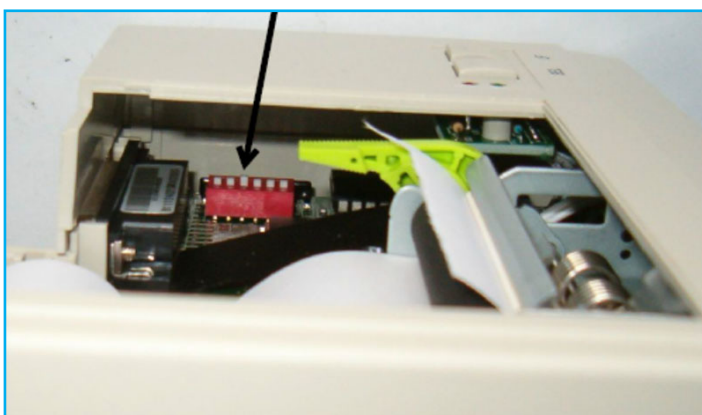


Figure 2-10 DIP Switch Setting

Pin Assignment of DB25

Pin No.	Signal	Source	Description
2	RXD	Host	Printer receive data from host.
3	TXD	Printer	Printer transmit data, printer transmit XON/XOFF code to host while in use of handshaking of XON/XOFF.
5	CTS	Printer	There are two states of this signal, "Mark" and "Space". "Mark" indicates that the printer is busy and unable to receive data; "Space" indicates that printer is ready to receive data.
7	GND	Printer	Signal ground
20	DTR	Host	In "SPACE" status for not less than 3ms, for control of printer power.



b) the cable is not properly connected (it is not possible to use an ordinary cable used for PCs)

K1/3) —————	(K2/2
K1/2) —————	(K2/3
K1/7) —————	(K2/5
K1/5) —————	(K2/6
CANON 25 - MALE	CANON 9.FEMALE

2) Error 24 is reported in Climacell - A float switch is located fairly close to the drain pump. The float switch uses the principle of a reed relay, in which there is a magnet placed in the float and relay in the solid part that contracts or expands depending on the distance of the float. Magnetic field of the pump was influencing the position of the float and the automatic system had subsequently interpreted it as an error, the sensor gets blocked and does not switch, even though it is not faulty. With a magnetic plate (frame) the magnetic field of the pump has been shielded (image Location of the frame).

In this case it is necessary to perform a test - to solve the problem by placing a magnetic stainless plate - a special frame - onto the shield-barrier around the level sensor. The construction has been modified and the problem should not occur again - it was something that is not described in the manual. If a plate is already in place, then the level sensor might probably be faulty. It needs to be checked, whether the barrier is made of magnetic stainless steel - magnet.



Image Location of the frame

3) Modular system - faulty plates - the image shows one of the causes of defect of the modular system plate - for some unknown reason, damage is being done to a electrical relay (SSR). If that happens, 230 V will not be measured on the clamps N1/L1 (image Connection diagram), as it should be, but for example 168 V. Defect of this plate may then cause destruction of the controlled valve - either it will get overheated, will start oscillating or loud knocks will be heard.

When the plate is damaged, there are bad signals for - either / or: cooling valve, freezing valve, generator valve, fan.

The modular plate has been replaced; the new one should be more resistant.

4) Sometimes, water drips out of the generator of CLC. This might be because the drain hose has shifted from its correct position (see image Hose). End of the hose - a plastic joint - must be secured to the bottom plate. It also depends on the length of the hose installed in the device. If the hose is longer or shorter, the joint may shift to the side on the bottom and then is no longer aligned with the generators properly and as a consequence, water drips out on the generator. Sometimes, it is sufficient to place the same hose - about 5 cm long - on the other side of the joint pointing towards the generator. When attaching the generator must then be ensured that the tube was secured in the correct position - directly into the condensation tank of the generator.

Controlling sterilisation exposure in the range \pm (Laboratory)

Basic temperature controlling during sterilisation exposure for big steam sterilizers is based on the requirements of the EN 285 + A1 standard. Controlling is characterised by a temperature range of $-0\text{ }^{\circ}\text{C} / +3\text{ }^{\circ}\text{C}$ above the nominal sterilisation temperature.

This all is decisive for a standard controlling as well as the whole sequence of reaching and controlling the sterilisation pressure (temperature), data evaluation, respective alarms, notifications, etc. Some of the customers prefer a different method with a temperature range above as well as below the nominal sterilisation temperature (controlling \pm).

However, such tolerated temperature range does not comply with the EN 285 + A1 standard.

For that reason, for the SPHP machines a new type of a sterilisation program has been prepared (.las), controlling of which is based on a tolerance range \pm (Laboratory).

Sterilisation temperature on the controlling temperature sensor in this kind of programs is usually close to the nominal sterilisation temperature and can also be below it (usually $-1\text{ }^{\circ}\text{C} / +1\text{ }^{\circ}\text{C}$).

Moreover, the start of a sterilisation exposure can in some cases occur even before the nominal sterilisation temperature is reached.

A set of basic sterilisation programs (.las) has been created that will be gradually expanded. It is possible to define all necessary parameters in Program data (Movex3).

Application of \pm (Laboratory) type of controlling on the SPHP sterilizers is enabled by firmware Z469836 version V 121 (or higher), Program data R474232 version V 20 (or higher) and by a new template (.las) for Movex3.

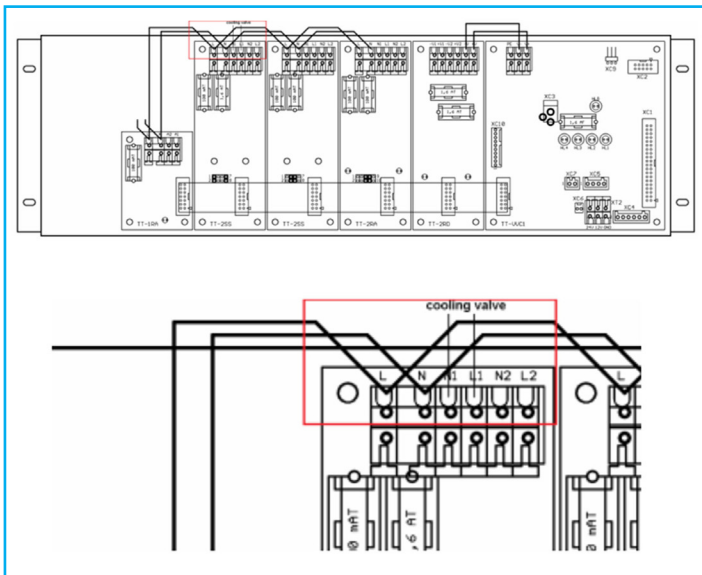
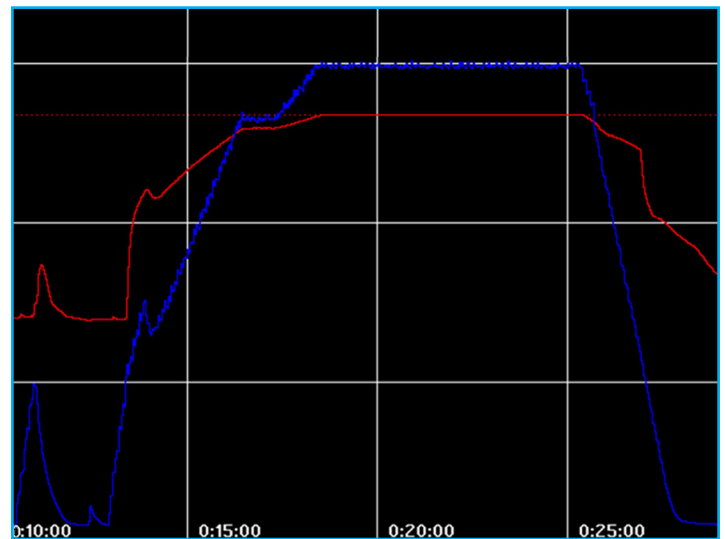


Image Connection diagram

5) Hoses of CLC slip out of the water inlet. This happens because of the fact that customers connect CLC to their water distribution systems with higher pressure, which contradicts the manual. Apart from the tank supplied by us, CLC can be connected to a water distribution system, but it is necessary to ensure the following:

- use distilled water or demineralised water, maximum volume $8\text{ }\mu\text{S} / \text{cm}$
- pressure must be reduced by a pressure-reducing valve to no more than 0.5 bar



Hose

6) If a probe for measuring lighting intensity is used with FC/CLC - old one (Sensorika, 0346701 - VIS, 0346702 - UV), temperature is limited to no more than $50\text{ }^{\circ}\text{C}$; since this year, a new probe is used (Rotronic, 0346713 - VIS, 0346712 - UV) with temperature limited to no more than $70\text{ }^{\circ}\text{C}$. If the customer wants to reach a higher temperature, they have to remove the probe and to make appropriate settings in the service mode. However, there is a risk that the customer does not remove the probe and it will burn - this is a problem when handling complaints.