

SYSTEM AND PUMP CONTROLS

System Control Panel (SCP-6)

SCP-6 Description:

The System Control Panel (SCP-6) is designed to be used with multiple hot water boiler systems. The SCP-6 provides boiler pump or isolation valves run-on delay. In addition, the SCP-6 can provide an interlock to combustion air, and/or a lead-lag function for two primary circulating pumps. The SCP-6 control is designed as an interface between a boiler sequencing control such as a Heat-Timer Multi-Mod, HWR-Q or SEQ and the boilers and pumps. The SCP-6 panel will control up to six boilers or three lo/hi boilers, six boiler (secondary) pumps, two system (primary) circulator pumps in lead-lag mode, a combustion air damper/fan, and a system pump alarm output.

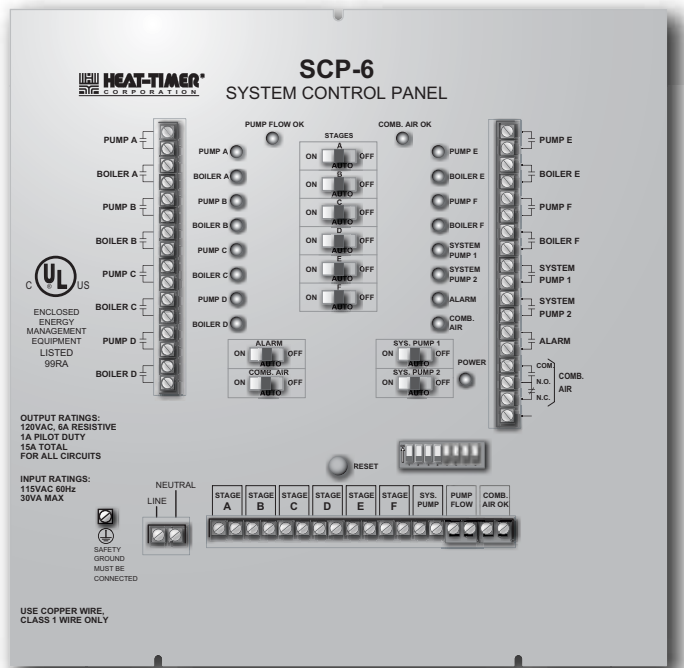
When the heating system is activated, the SCP-6 will bring on one of two system (primary) circulator pump relays. The system pump lead-lag function can be performed every time the system

pump is activated, every 24 hours, every 7 days, or either system pump can be specified to be lead. If there is no proof of flow in 30 seconds, the SCP-6 will activate the lag system pump relay and the alarm relay to signal the user that one of the system pumps has failed.

Once combustion air flow has been proved, the SCP-6 will activate the appropriate boiler stage relays and their (secondary) boiler pump relays. As the sequencing control continues to add boiler stages, the SCP-6 will activate additional boiler stages and their boiler pumps. When the sequencing control removes a boiler from the system, the SCP-6 will turn the boiler stage relay off. However, the boiler pump relay for that stage will remain activated for an adjustable time delay period. If at any point the combustion air flow fails, all boiler stages will be turned off. However, the boiler pumps for any boilers that were active will remain on until the time delay period has elapsed.

SCP-6 Features:

- System Control Panel with 6 boiler inputs and system pump input.
- Selectable system (primary) circulator pump lead/lag function: Rotate every time activated, every 24 hours, every 7 days, or either pump can be specified to always be lead.
- Pump Exercise option for 10 Seconds for every 7 days of no operation. Applies to all pumps.
- Alarm contacts for system (primary) circulator pump failure with LED indicator.
- Manual reset to clear system (primary) circulator pump failure alarm.
- ON/AUTO/OFF switch for system (primary) circulator pump failure alarm.
- ON/AUTO/OFF switches for both system (primary) circulator pump outputs with LED indicators.
- ON/AUTO/OFF switch for combustion fan with LED indicator.
- Combustion air interlock to disable all boiler stages if combustion air is interrupted or cannot be proved.
- ON/AUTO/OFF switch for each boiler stage and its associated boiler (secondary) pump with LED indicators.
- Adjustable delay on break for boiler (secondary) pumps: 0 to 15 minutes of additional pump run time.
- Multiple SCP-6s can be cascaded together for additional boiler stages.



Item Description

System Control Panel SCP-6

Part

926601-00



ISO 9001:2000
CERTIFIED



20 New Dutch Lane, Fairfield, NJ 07004 973-575-4004 • Fax 973-575-4052 • <http://www.heat-timer.com>

056023-00 REV A

SYSTEM AND PUMP CONTROLS

Pump Lead-Lag (PLL)

Pump Lead-Lag (PLL) Description:

The PLL control provides a lead-lag rotation functionality to a dual pump system. In addition, it is capable of controlling two operating pumps and one auxiliary pump in a 3 pump system.

In a 2 pump system, the PLL acts as a rotation control to rotate the lead pump either based on demand/per call or timed rotation. Rotation can be set based on Dip Switches 2 through 6. Alternating pumps based on demand, activates a different pump each time a call for a pump is initiated. The demand must be initiated through Pump 1 Input terminals. Timed rotation has four options; 4 hours, 12 hours, 24 hours, and 7 days rotation. When rotation is to take place while the lead pump is in operation, the lag pump relay will energize and the lead pump will continue to run, in addition to the lag pump, for a few extra seconds to prohibit the flow switch from tripping and restarting the boiler.

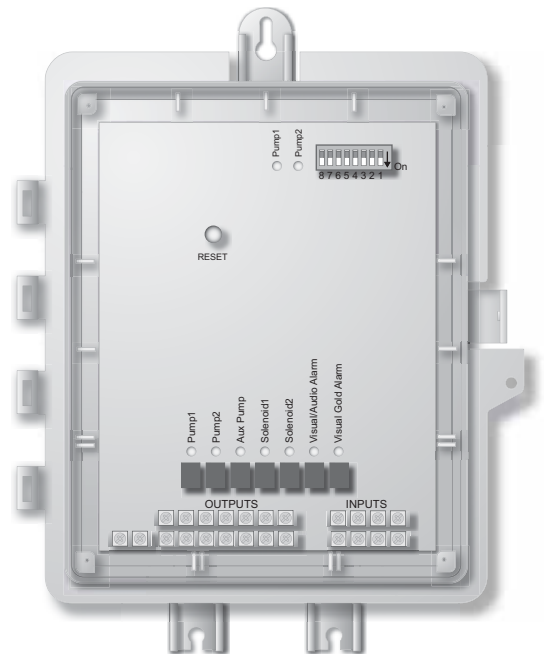
If the lead pump flow fails for over 30 seconds, using Flow1 input terminals, the PLL will de-energize that pump relay, turn on the relevant pump LED alarm, and

Pump Lead-Lag (PLL) Features:

- 2 Rotating Pump Operation mode.
- 2 Primary Pump Operation with an Auxiliary Pump. (3 Pump mode.)
- Rotation Options Alternate, 4 Hour, 12 Hour, 24 Hour, and 7 Days. (Available in 2 Pump Mode only.)
- When in timed rotation, Lead Pump will continue to run for a few additional seconds after Lag Pump starts for continual flow.
- Visual Gold Alarm in addition to Visual/Audio Alarm for No flow for 30 seconds.
- Auxiliary Pump operation when any primary pump fails for 30 seconds. (Available in 3 Pump Mode only.)
- Solenoid valve control relays for primary Pump failure. (Available in 3 Pump Mode only.)
- Controllable Pump exercise for 10 seconds for every week of no operation. Applies to all pumps including Auxiliary Pump.

energize the lag pump relay and the 2 alarm relays. If the lag pump flow fails for over 30 seconds while the lead pump is in alarm, the PLL will de-energize the 2nd pump relay and turn on the relevant pump LED alarm. The PLL will not operate any pumps until the situation has been rectified and the Reset button is pushed.

In a 3 pump system, no rotation functionality is available. The PLL control manages an auxiliary pump in addition to 2 primary pumps. The auxiliary pump will run whenever any of the primary pumps fails for over 30 seconds. In that case, the PLL will deenergize that pump relay and energize the auxiliary pump relay and the two alarm output relays in addition to the relevant alarm LED and solenoid valve. If the 2nd primary pump flow fails for over 30 seconds while the 1st primary pump is in alarm, the PLL will de-energize the 2nd pump relay and energize the relevant solenoid valve. This will allow the auxiliary pump to replace both primary pumps until the situation is rectified and the Reset button is pushed.



Item Description

Pump Lead-Lag (PLL)

Part #

926720-00