Using a Symmetrical Timer to Alternate Lead with Two-Boiler Sequencing

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If two boilers are connected using peer-to-peer sequencing, a symmetrical timer can be used to provide lead boiler alternation on a continuous basis. The timer will change the state of the output based on the setpoint entered. The relay outputs of the timer are connected to digital inputs on each boiler. When one is active, the other will not be active.

For the example, a Schneider Electric RE22R2MMU timer is used. This timer is DIN-rail mounted, accepts 24VDC or 24-240VAC input and has two double-throw relay outputs. The alternation time can be set for as long as 100 hours using dials on the face of the relay.

The relay is shown installed in the control panel for the first boiler. Anytime power on the first boiler is removed, alternation will stop, and the second boiler will revert to local operation if it was a slave. Once power is returned, the first boiler will start over as the lead boiler for a full duration of the timer.

CONFIGURATION

Using the dial on the timer, set the function to “D”. Set the function of R2 to “TIMED” and then set the timer duration by choosing a timing range and then setting the timing dial. A range of “10h-100h” is recommended.

Set up digital input 2***** to allow the control to be selected as a sequencing master.

DIGITAL INPUT SETUP → DI 2 → USE → FORCE SEQ. MSTR
DIGITAL INPUT SETUP → DI 2 → ACTION → OR

Set up the sequencing to allow the digital input to be used for master selection.

SEQUENCING SETUP → MASTER SLCT → INPUT

***NOTE:** Any input can be used – adjust settings accordingly.

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WIRING