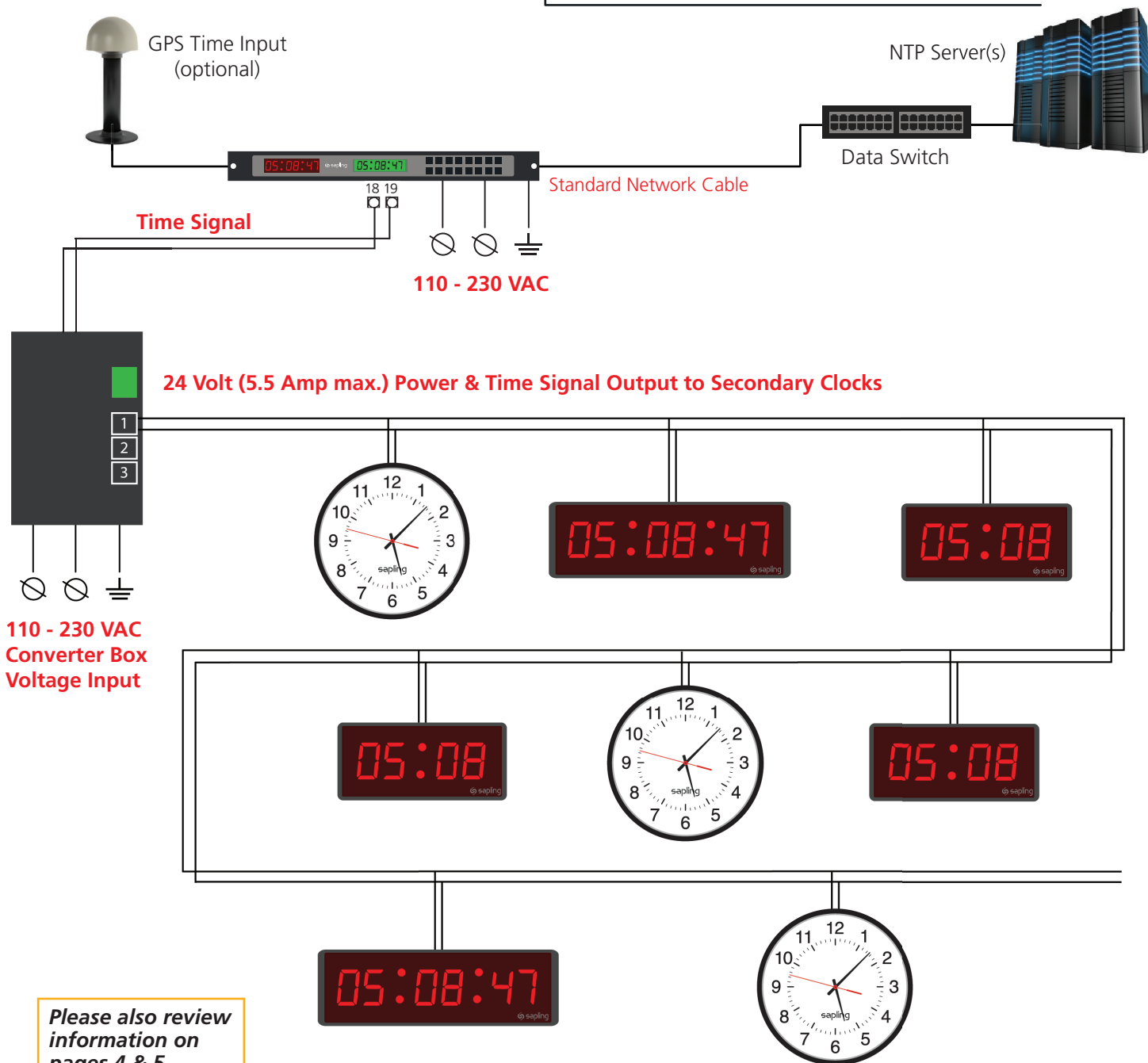


Sapling 2-Wire Digital Communication System Line Drawing

Single Converter Box

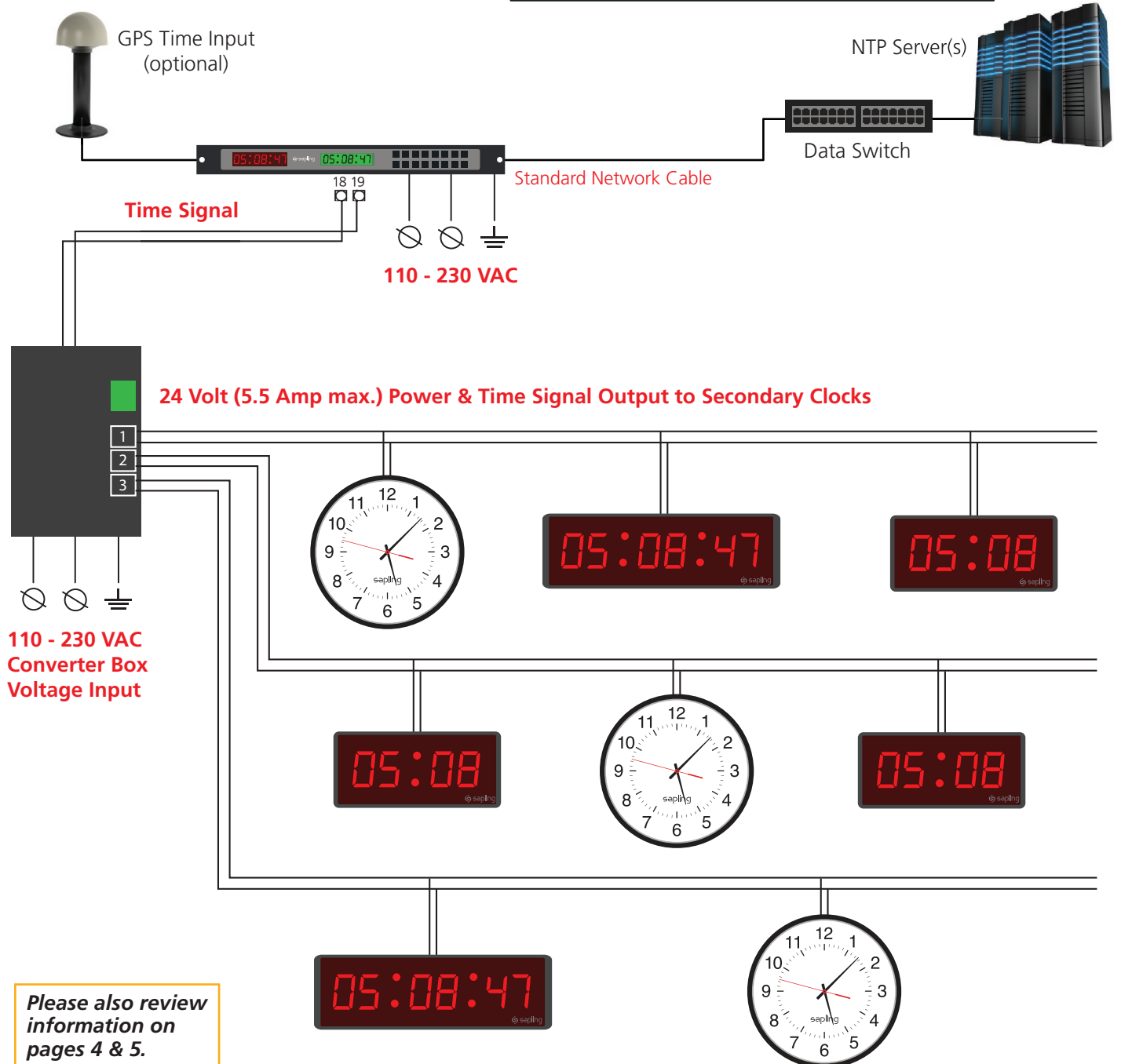
Configuration A - Small 2-Wire Clock System using one converter box on a single clock run.



Sapling 2-Wire Digital Communication System Line Drawing

Single Converter Box

Configuration B - Small 2-Wire Clock System using one converter box on a triple clock run.



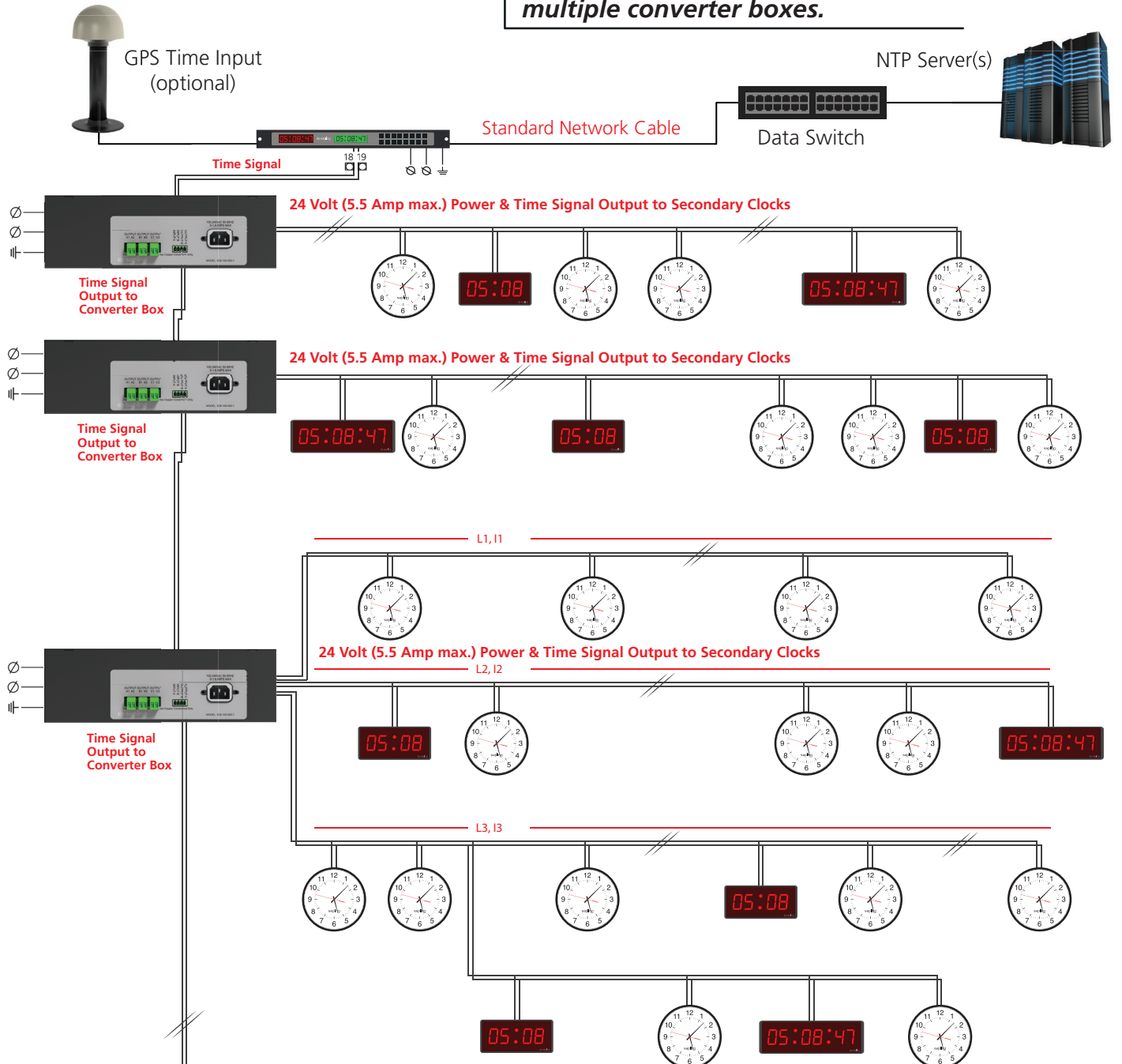
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Multiple Converter Boxes

Configuration C - Large 2-Wire Clock System using multiple converter boxes.



*Please also review
information on
pages 4 & 5.*

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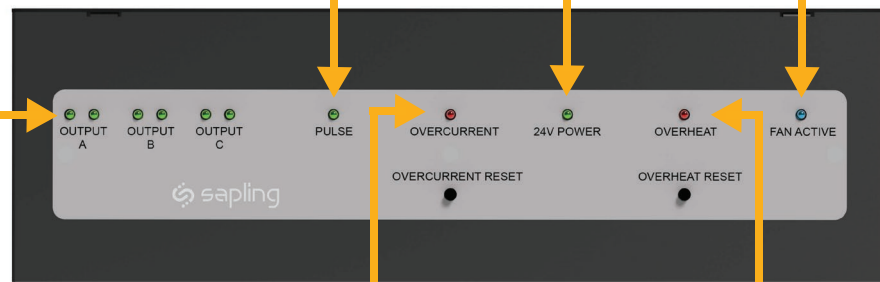
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Sapling Converter Box Front Panel

PULSE LED - The pulse LED indicates that the converter box processor is active.

24V POWER LED - Shows that the converter box is distributing 24V power.

FAN ACTIVE LED - Indicates whether or not the cooling fan is active.

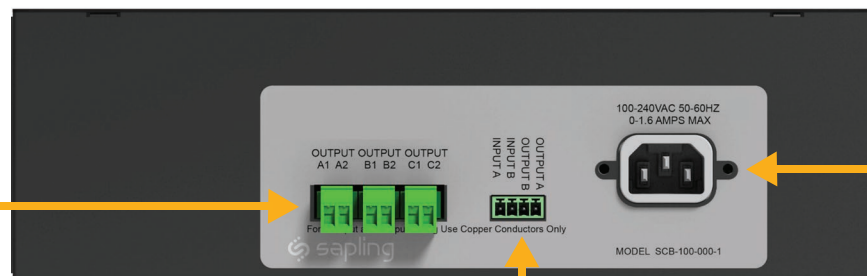


OUTPUT VOLTAGE LED INDICATORS - The converter box has three Voltage Output LED pairs: A, B, and C. Each pair of output LEDs acts as an activity indicator for a pair of output ports on the back of the converter box. This means that once the converter box is powered and receiving the time data, the left LED will blink and the right LED will be solid.

OVERCURRENT LED - Indicates the Overcurrent Status. The converter box maximum capacity is 5.5 Amps which can be drawn from either one output for one clock run or all three together. Each blink will indicate 1 Amp draw. 4 blinks will indicate a 4 Amp draw.

OVERHEAT LED - Indicates the temperature status. Each blink indicates internal 10 degrees Celsius. For example three blinks indicates an internal temperature of 30 degrees Celsius.

Sapling Converter Box Back Panel



POWER & TIME DATA OUTPUT PORTS - The converter box has three output ports used to feed the clock run(s) with both power and time data utilizing a pair of wires. The converter box max output is 5.5 Amps in total, which can be drawn from one output or up to all three of the outputs together.

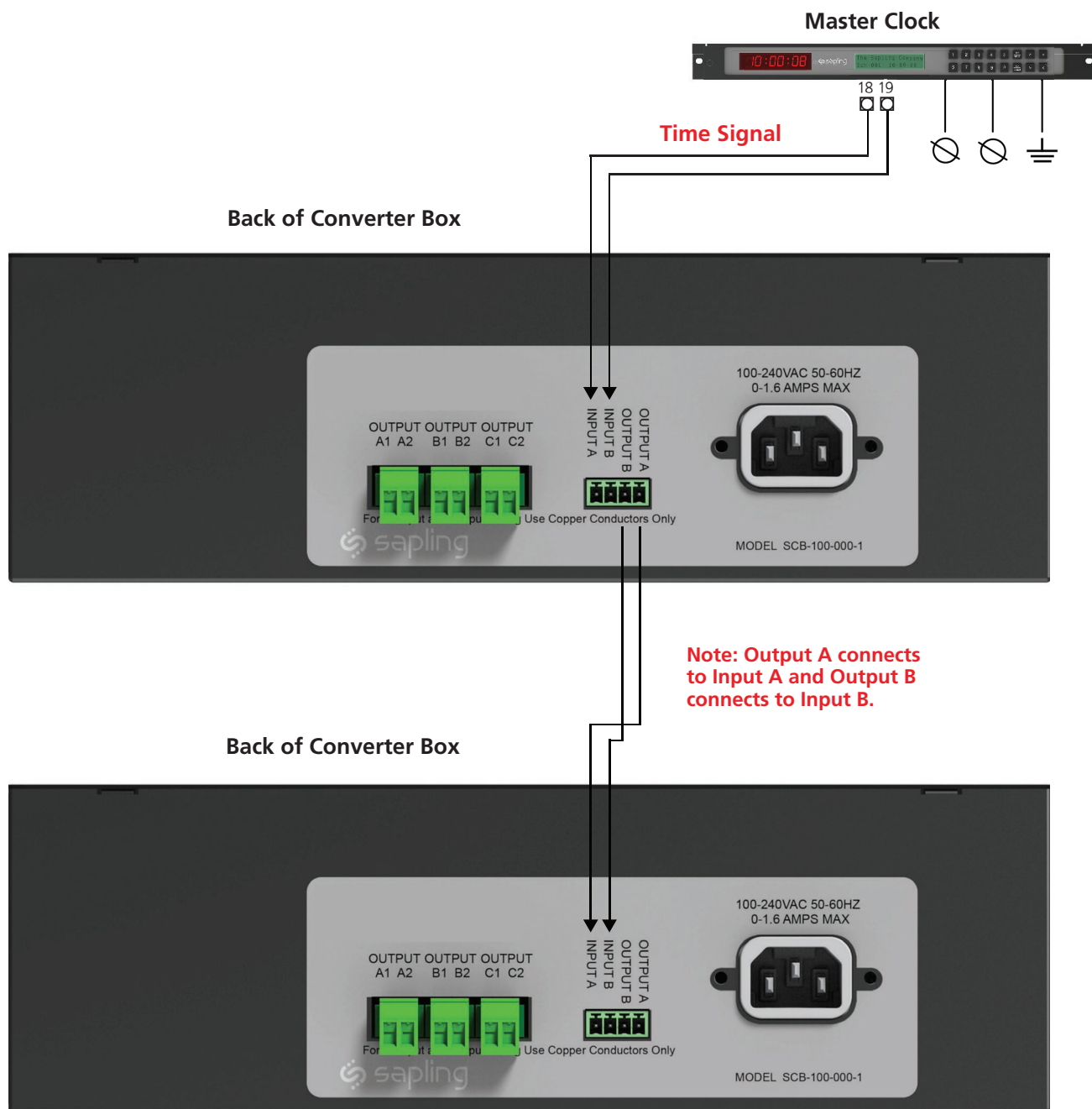
TIME DATA INPUT & OUTPUT PORTS - The converter box has a dedicated time input port. The time data input is provided either by the master clock, from another converter in the run, or the converter box can be placed between two secondary clocks in the run. The converter box can also output the time data to other converter box(es) in the run as shown in the drawing.

LOCAL POWER INPUT - The converter box is provided with a power cable. The converter box voltage input is 100 - 240 VAC.

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The number of secondary clocks that can be powered by one converter box will depend on the type of clock and its current consumption, the thickness of the electrical wires used in the facility, and the length of the run from the converter box to the last secondary clock in the run. In order to determine how many converter boxes are needed for a specific project, please use our online converter box calculator available at: <https://sapling-inc.com/converterboxcalculator/>

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