WeNC
Web Enabled Network Controller

Install Manual

National Time & Signal

WeNC Network Controller

Internet/LAN Clock System/Auxiliary Control

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1. Introduction

The WeNC is an Internet/LAN based clock system and auxiliary circuit controller. The WeNC comes equipped with two 120VAC 500W solid state outputs. These outputs can be configured to control National Time & Signal clocks as well as most popular clocks of other manufacturers. The outputs can also be used for auxiliary devices such as bells, chimes, tones etc. typically found in schools. The WeNC operates on any TCP/IP-based Ethernet network, and automatically synchronizes the clock system with any standard NTP or SNTP time server or with the official United States atomic clock time source in Boulder, Colorado.

The WeNC automatically corrects for daylight savings time and power outages. The WeNC can be configured, programmed, and monitored from any PC on the LAN network through a standard web browser interface and a dedicated PC is not required during normal operation. Multiple WeNCs can be utilized to synchronize multiple clock systems throughout a campus, city, district, and beyond.

This document describes the wiring and connections specific to the WeNC module. For more details regarding the programming of the device, please refer to cutsheet 475, the *WeCAN User Guide*

2. Support Information

Should some problem arise, please contact National Time & Signal technical support for assistance:

Mail:
National Time and Signal Corporation
28045 Oakland Oaks Ct.
Wixom, MI 48393-3342

Phone:	**Fax:**	**Email:**
(248) 380-6264	(248) 380-6268	support@natsco.net

3. Installation

The WeNC requires a connection to 120 VAC building power. This 120V connection powers the WeNC control boards as well as any clocks and bells connected to its outputs. For larger applications, you can also connect PS-3, PS-6, or PS-12 external booster power supplies.

See Appendix A for typical wiring scenarios. All wiring should be performed by an electrician with experience in 120V applications.

Besides the 120V electrical connections, the WeNC requires one 10/100 Mbps Ethernet connection to the building's local area network (LAN). The WeNC can use DHCP dynamic addressing or static addressing, and it uses SNTP to acquire network time from a server in the building or on the Internet.

The network connection must be present at all times to maintain the system time. If the network connection is lost, the clocks will not be corrected until the time server is re-acquired. If disconnected timekeeping is desired, other National master clocks such as the MC3, MC100, or Wi-Fi clock systems may be better suited for the application.

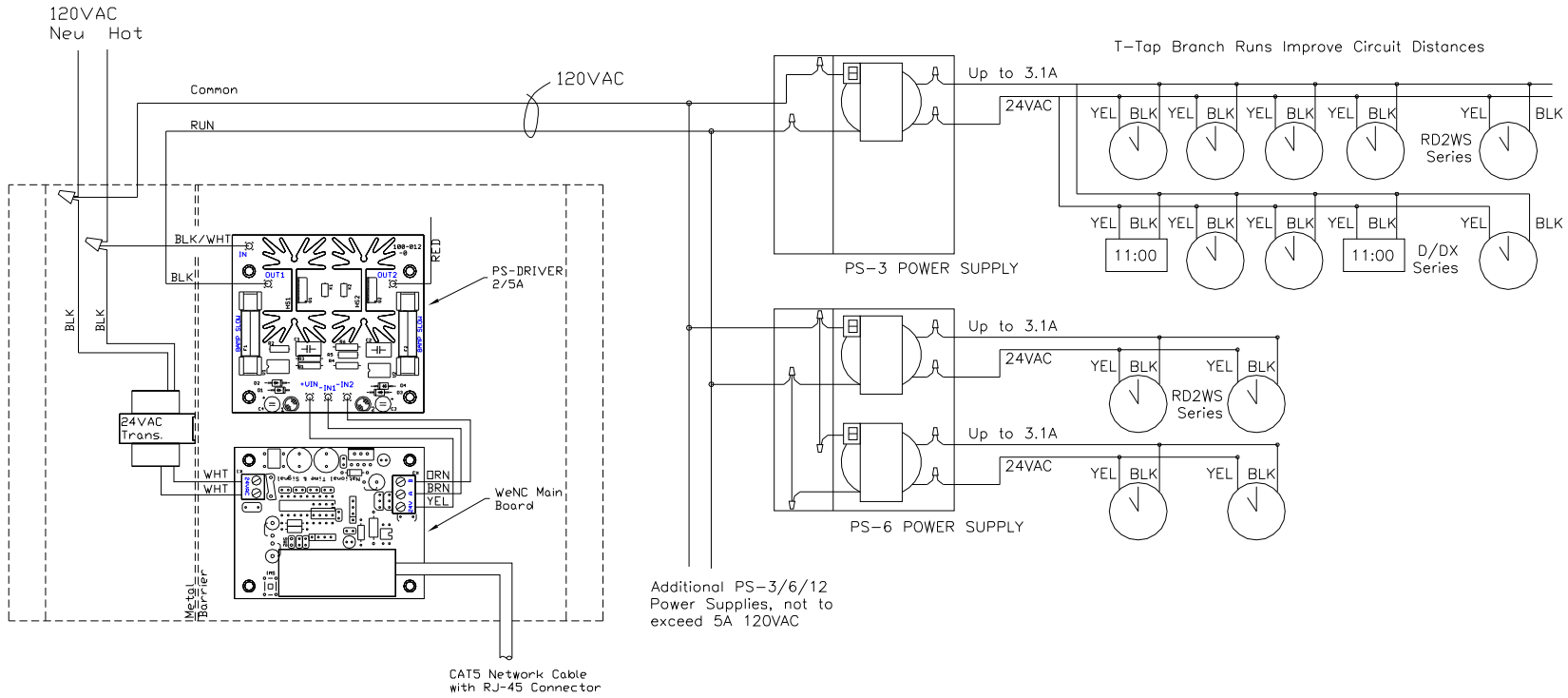
4. Configuration

All configuration of the WeNC is performed from the web interface. This includes selection of the clock circuit modes, setting time zone and time server, and programming bell schedules. Web-based configuration procedures are fully detailed in cutsheet 475*, WeCAN User Guide*. You can find this guide at our web site, http://www.natsco.net.

5. Typical WeNC Wiring Scenarios

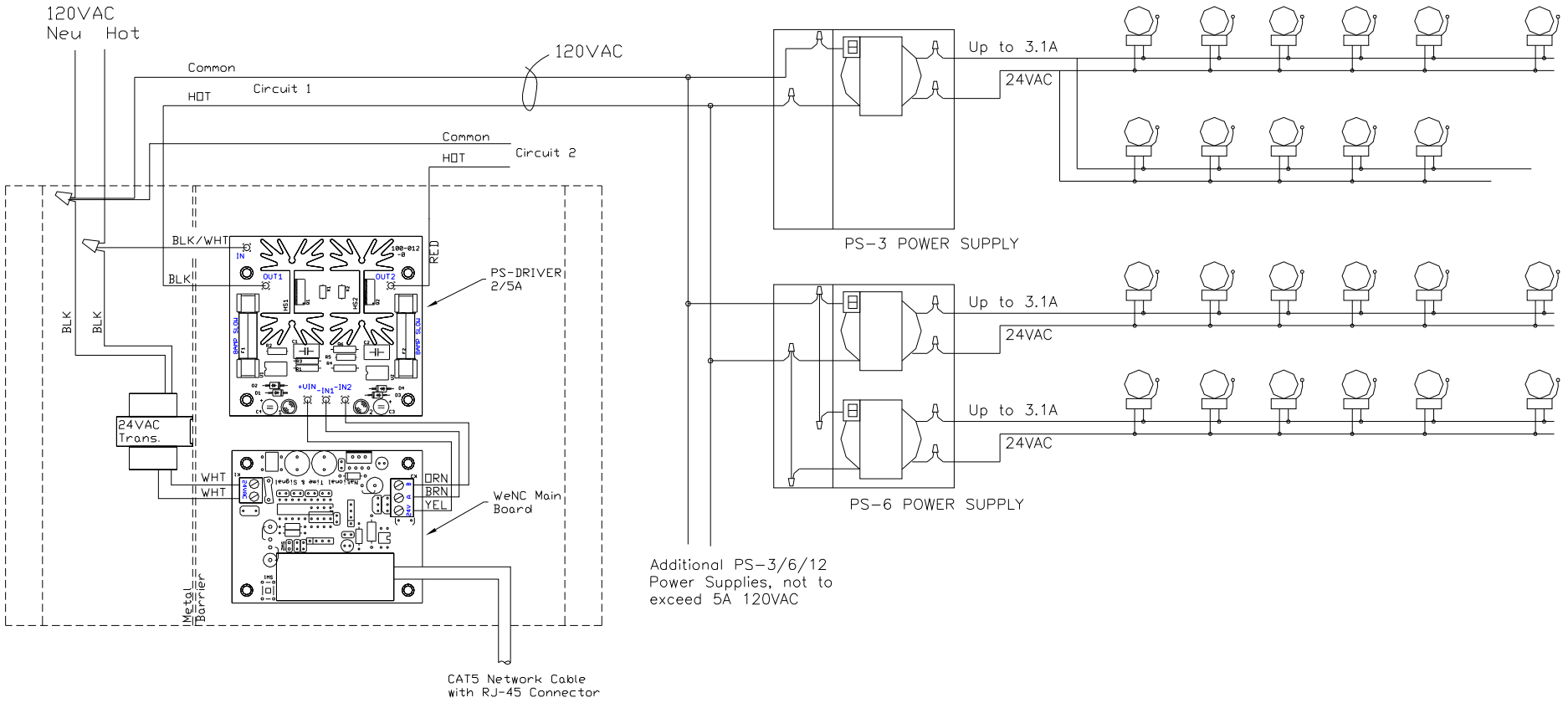
The WeNC can be wired several different ways, depending on the application. Below are some diagrams that will assist you in connecting your WeNC to your clocks or bells. Keep in mind that you will need to configure each of the two circuits using the WeNC's web interface.

Wiring to On-Demand Instant-Reset Clocks:



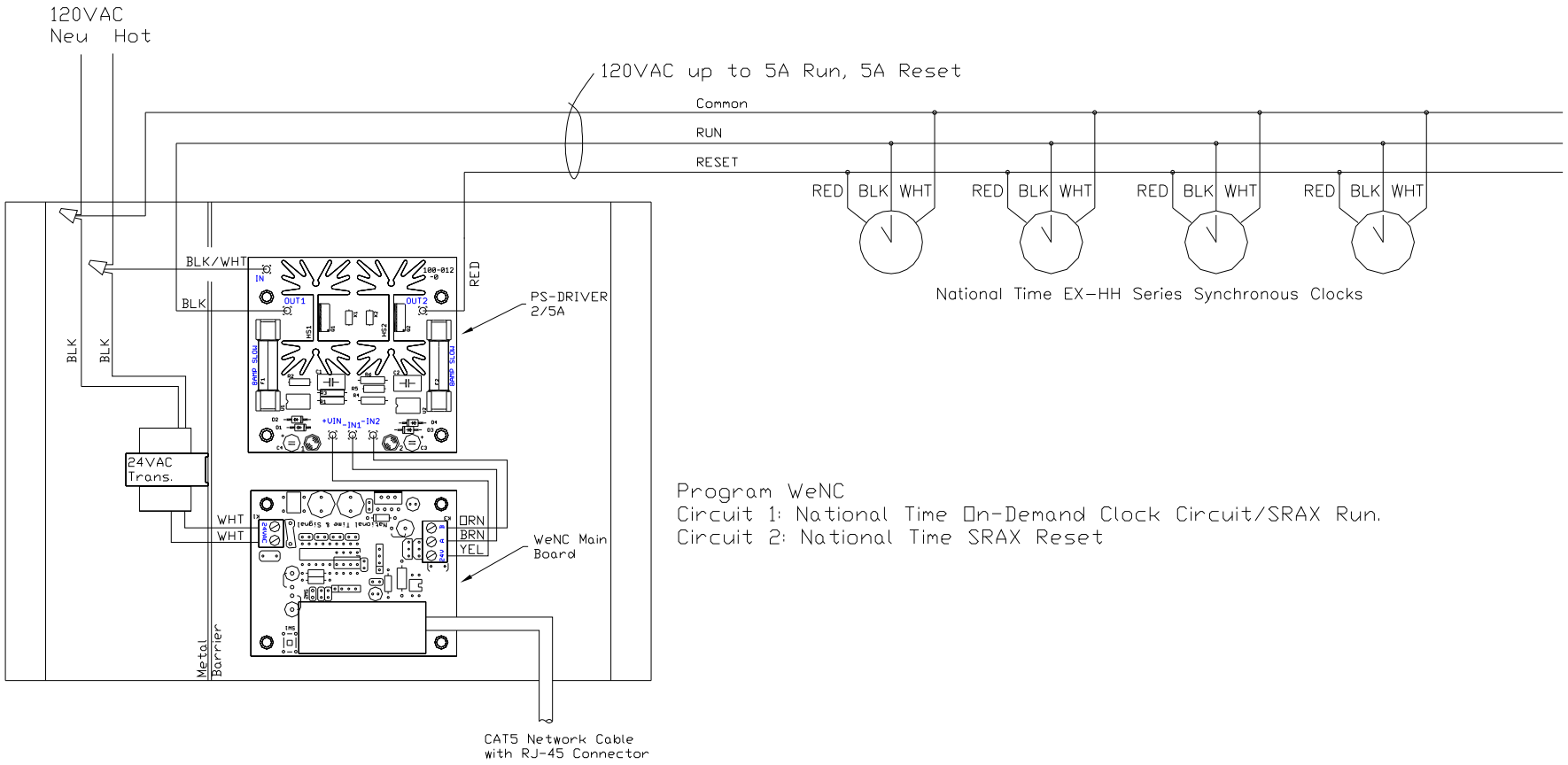
Program WeNC Circuit 1 as: National
Time On-Demand Clock Circuit/SRAX Run.
Circuit 2 unused.
Circuit 2 (Red wire) could be used
similarly if required. (not shown)

Wiring to Low Voltage Auxiliary Devices:

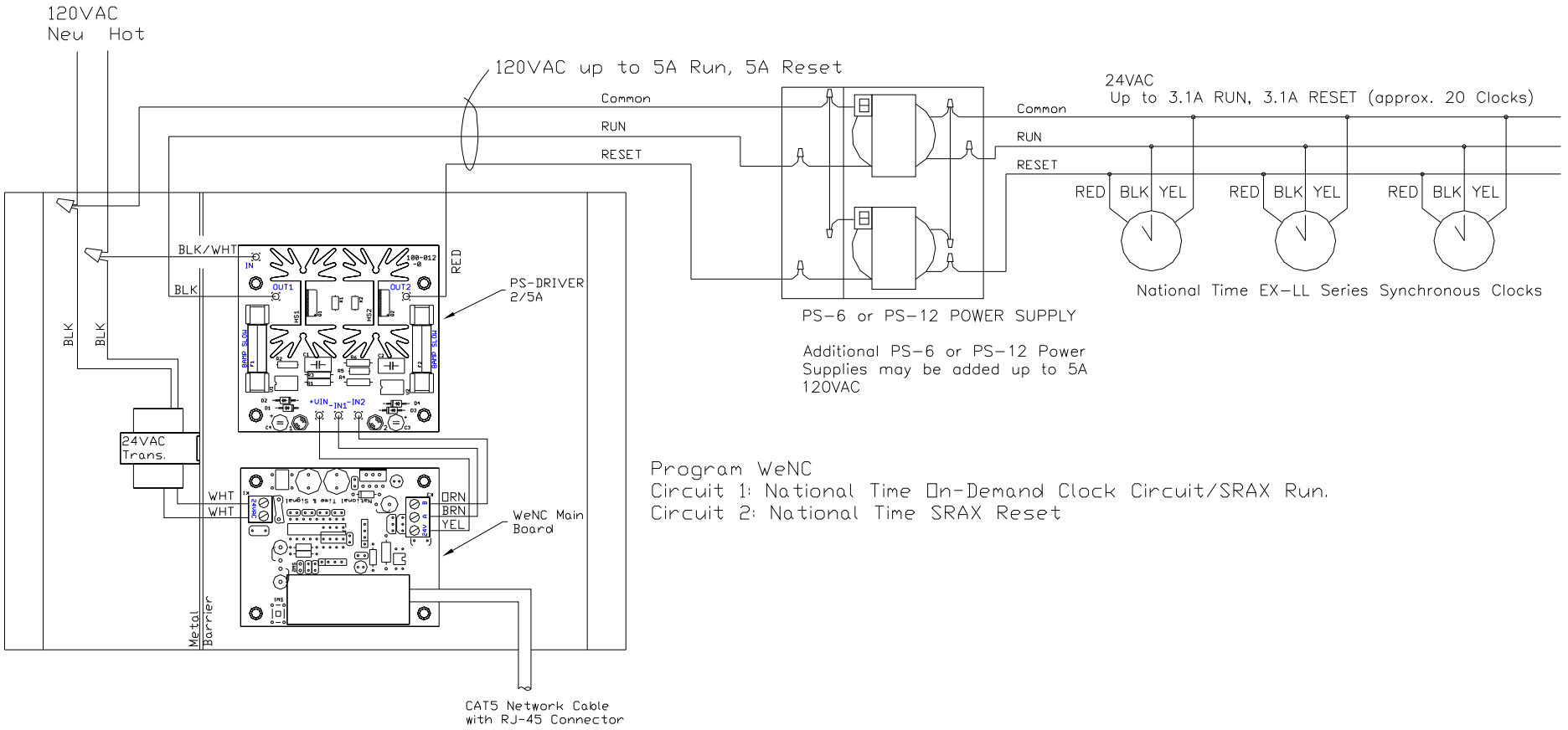


Program WeNC Circuit 1 as: Auxiliary.
Circuit 2 unused.
Circuit 2 (Red wire) could be used
similarly if required. (not shown)

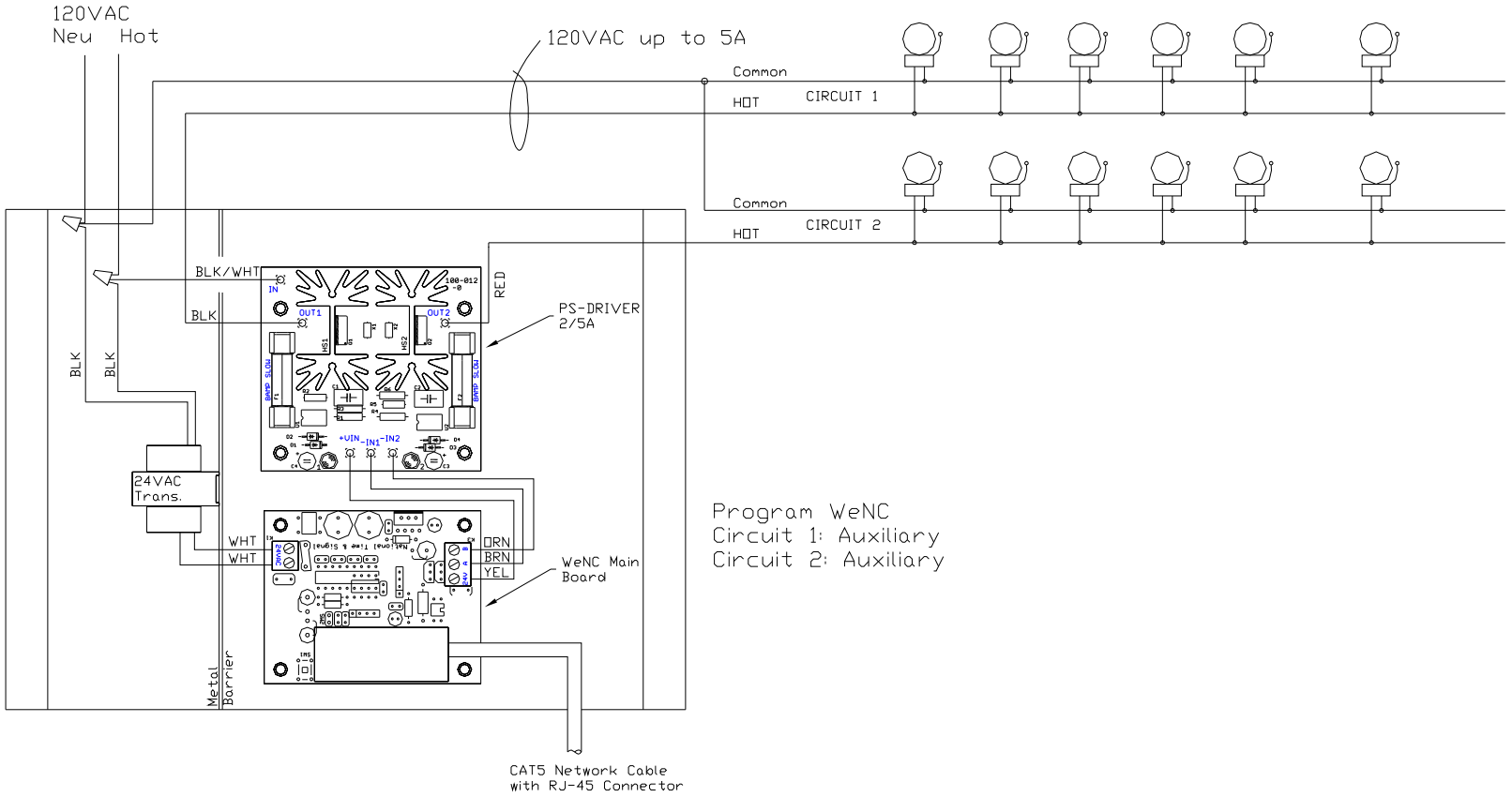
Wiring to National Time 120VAC EX Series (SRAX) Clocks:



Wiring to National Time 24VAC EX Series (SRAX) Clocks:



Wiring to 120VAC Auxiliary Devices:



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