



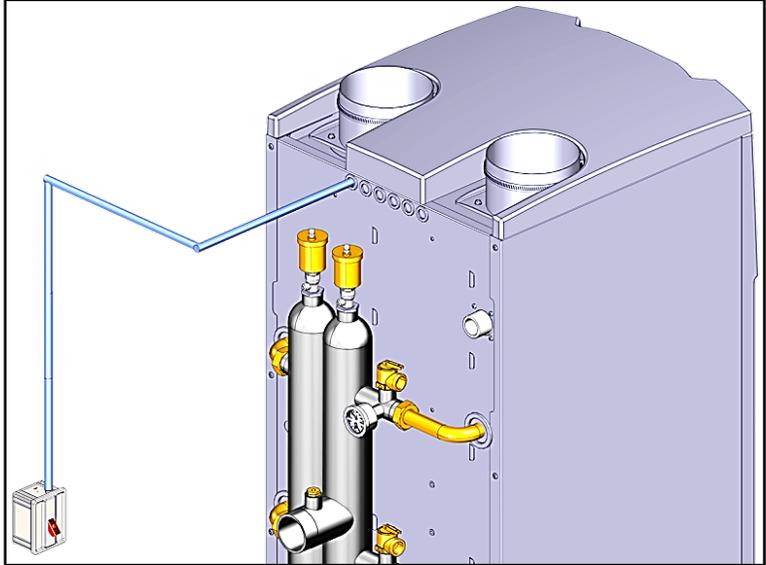
# ELECTRICAL Application Guide

## AM Series Natural Gas & Propane Modulating Condensing Boilers & Water Heaters

Applies to the following AM Series models:

AM Boilers

- AM 399B
- AM 500B
- AM 750B
- AM 1000B



AM Water Heaters

<b>Standard Models:</b>	<b>Rapid Recovery:</b>
• AM 399W	• AM 199R
• AM 500W	• AM 250R
• AM 750W	• AM 399R
• AM 1000W	• AM 500R
	• AM 750R
	• AM 1000R

# AM Series

**Latest Update: 12/01/2016**

**Technical Support**  
**1-800-526-0288**  
 (Mon-Fri, 8am-5pm EST)  
[www.aerco.com](http://www.aerco.com)

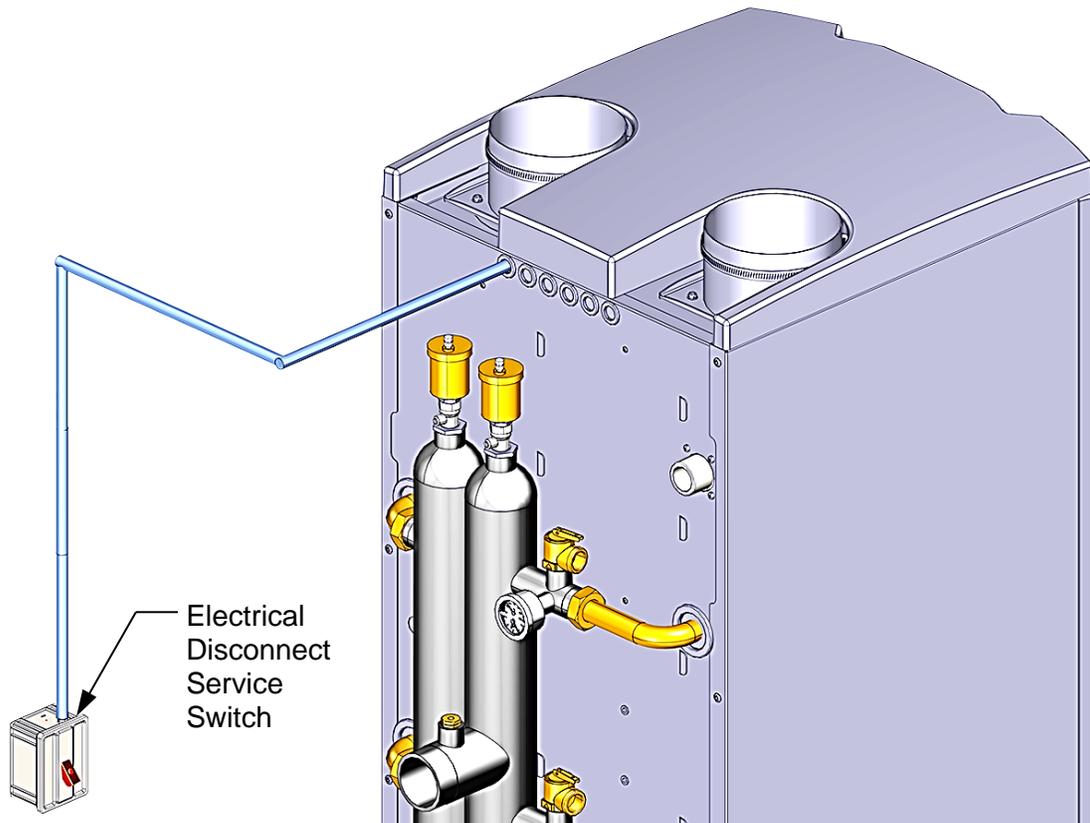


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## SEC 1: PROVISIONS FOR SERVICE

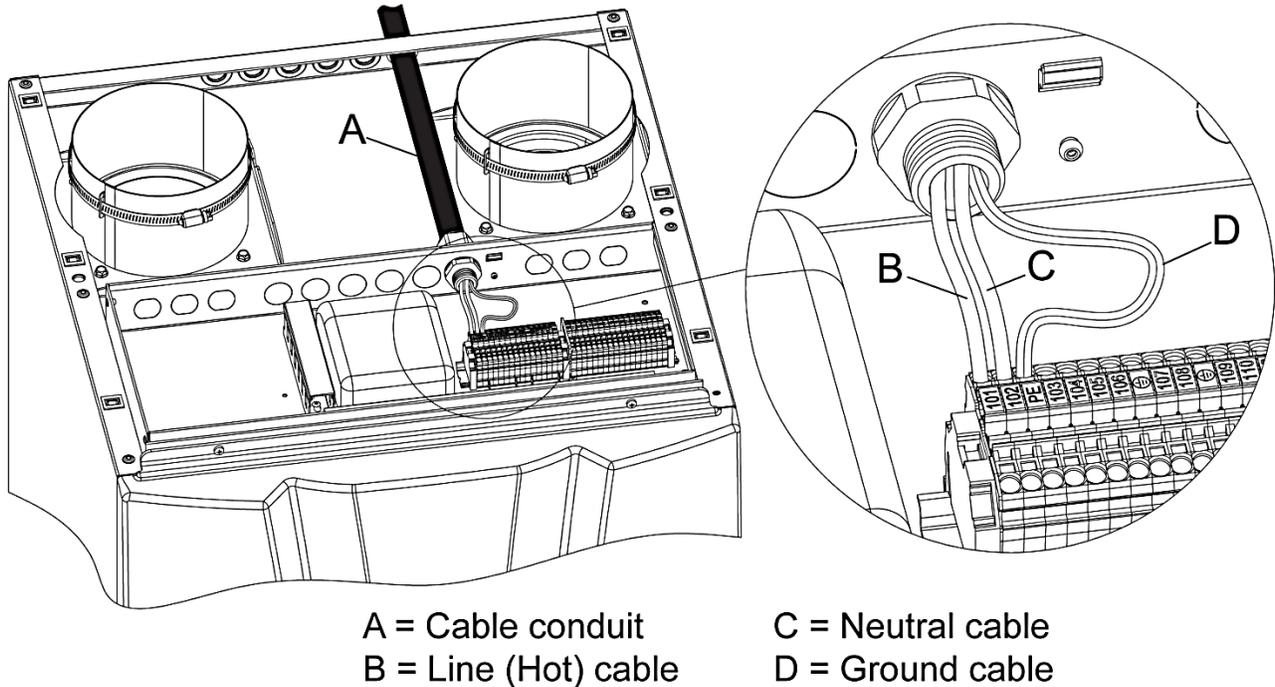
Designers must provide emergency shutoffs and other devices to satisfy electrical codes. It is also recommended to provide an electrical shutoff disconnect switch of suitable load carrying characteristics on or near **each** AM Series boiler or water heater. Recommended rating is 15A. No electrical boxes or field components should be mounted to the surface of the boiler or where they would interfere with the removal of the front or top panels for maintenance. The disconnect switch should be mounted near the unit as illustrated in Figure 1. Wiring conduit, EMT, or other wiring paths should not be secured to the unit, but supported externally. Electricians should be instructed as to where the wiring conduit should be located, such as away from the relief valve discharge, drains, etc. All electrical conduit and hardware should be installed so that it does not interfere with the removal of any cover, inhibit service or maintenance, or prevent access between the unit and walls or another unit.



**Figure 1: Electrical Disconnect Service Switch Typical Location**

## SEC 2: SINGLE UNIT WIRING

When a single AM Series boiler or water heater is to be installed, a dedicated protected circuit should be provided from the power source to the boiler. No other electrical devices should be permanently wired on the same circuit. An emergency switch (electrical shutoff) must be in series with the power to the unit. Refer to **Figure 2**.



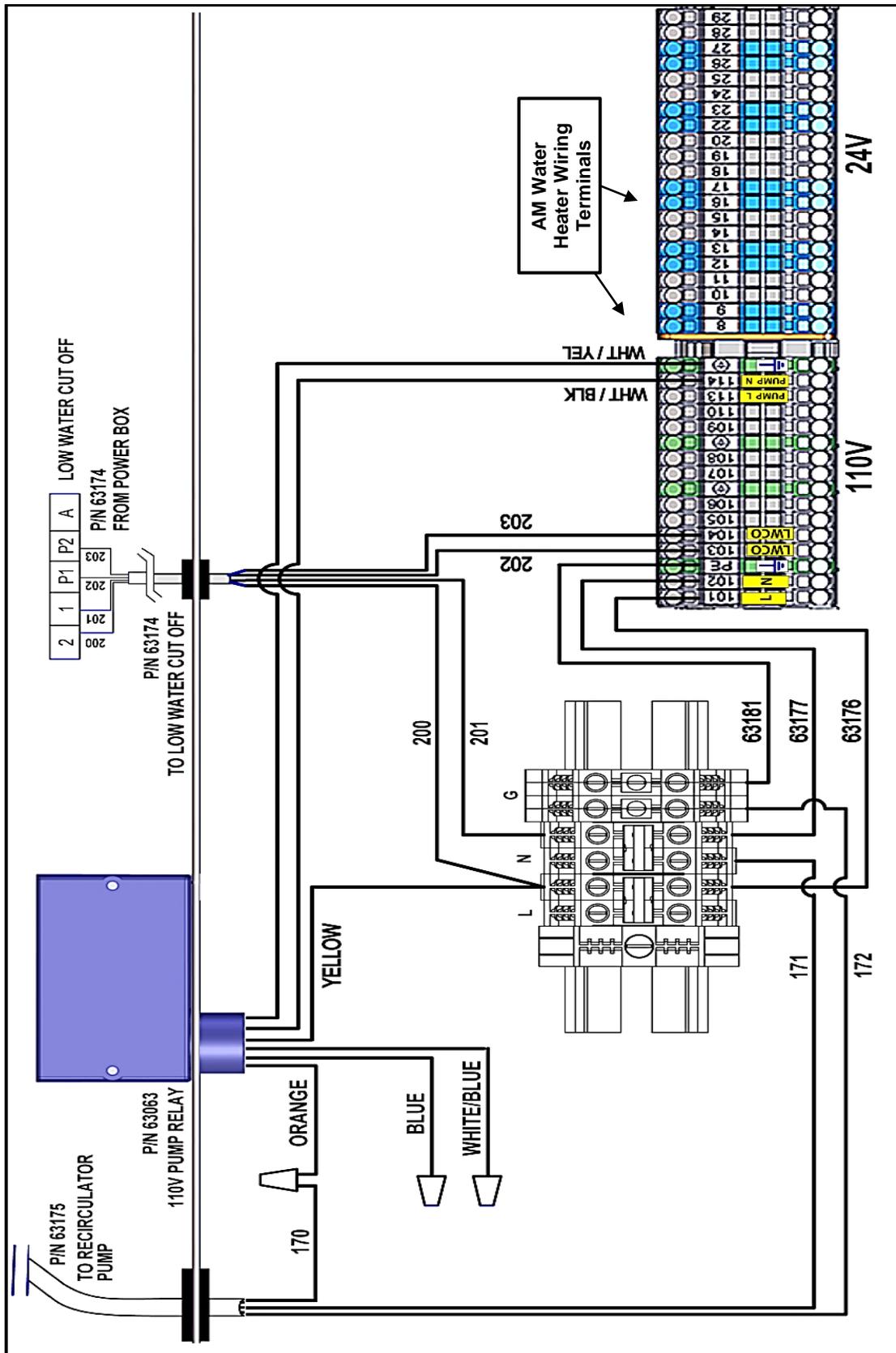
**Figure 2: AM Series Boiler and Water Heater Power Wiring**

### 2.1. AMR Rapid Recovery Option Wiring

If installing an AM water heater with the AM Rapid Recovery (AMR) option, the following electrical connections should be confirmed in addition to all connections previously described. The recirculation pump, pump relay, and LWCO are prewired into the AM water heater wiring terminals, as shown in Figure 3, and the 120V power supply is connected at labels “L1” and “NEUTRAL”, as shown in the diagram.

## SEC 3: MULTIPLE UNIT WIRING

Whenever multiple units are installed within the same mechanical spaces, electrical code requirements call for a single electrical shutoff for emergency use. It is the responsibility of the electrical designer to comply with local codes and regulations affecting an individual installation.



**Figure 3: AMR Recirculation Pump, Pump Relay, and LWCO Wiring**  
(Other Wiring Not Shown for Clarity)

# NOTES:

## Change Log:

Date	Description	Changed By
04/08/2014	Rev B: Release.	Curtis Harvey
05/15/2015	Rev C: Updated to support AM Series Rapid Recovery models	Curtis Harvey
12/01/2016	Rev D: Reformatted per new design and logo.	Curtis Harvey



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