



PHILIPS

Strand Lighting

Phase Loss Sense Panel

--- PHASE SENSE ---
TYPE 3AG 250 V AC SLO-BLO FUSES
REPLACE WITH SAME TYPE & RATING
1/4 A

NORMAL
TEST SWITCH

ØA

ØB

ØC

ØA

ØB

ØC

PHILIPS
Strand Lighting


EMERGENCY CIRCUITS



Industrial Control Equipment
Type 1 Enclosure
Electrical Rating: 208Y/120V_v, 3Ø, 20A, 50/60Hz
Short Circuit Rating: 10,000AIC
Panic and normal connection rating, 24 VDC, 100 mA
Use copper wiring only.
CAUTION: DISCONNECT POWER BEFORE SERVICING
CAUTION: No Field Serviceable Components.
CAUTION: For complete wiring instructions, refer to Installation Manual.
NOTICE - This equipment has not been evaluated for compliance with Article 700 of the National Electric Code, ANSI/NFPA 70.

Phase Loss Sense Panel
Model: 95250

1-800-4STRAND www.strandlighting.com

Manufacture Date: 01 02 03 04 05 06 07 08 09 10 11 12
2009 2010 2011 2012 2013 2014



95250

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Version as of: April 28, 2011

Phase Loss Sense Panel Installation and Operation Manual

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IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:



- a. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- b. Do not use outdoors.
- c. Do not mount near gas or electric heaters.
- d. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- e. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- f. Do not use this equipment for other than intended use.
- g. Refer service to qualified personnel.

SAVE THESE INSTRUCTIONS.



WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltage and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to persons.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for permanent installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

CAUTION: Wire openings **MUST** have fittings or lining to protect wires/cables from damage. Use 90° C copper wire only! Aluminum wire may not be used.

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PREFACE

1. About This Guide

The document provides installation and operation instructions for the following products:

- 95250 Phase Loss Sense Panel

Please read all instructions before installing or using this product. *Retain this guide for future reference.*

OVERVIEW

1. About Phase Loss Sense Panels

The Phase Loss Sense Panel monitors 3-phase feed power and provides two independent contact-closure outputs when any phase of the main power source is lost. During a power outage (e.g., one phase drops or power is out), the unit is able to instruct a transfer switch to go to auxiliary power (generator, battery system, etc.). The Phase Loss Sense Panel may be used with Strand Lighting A21, C21, or Contact Relay Panels, or any other compatible lighting control panel or dimmer rack.

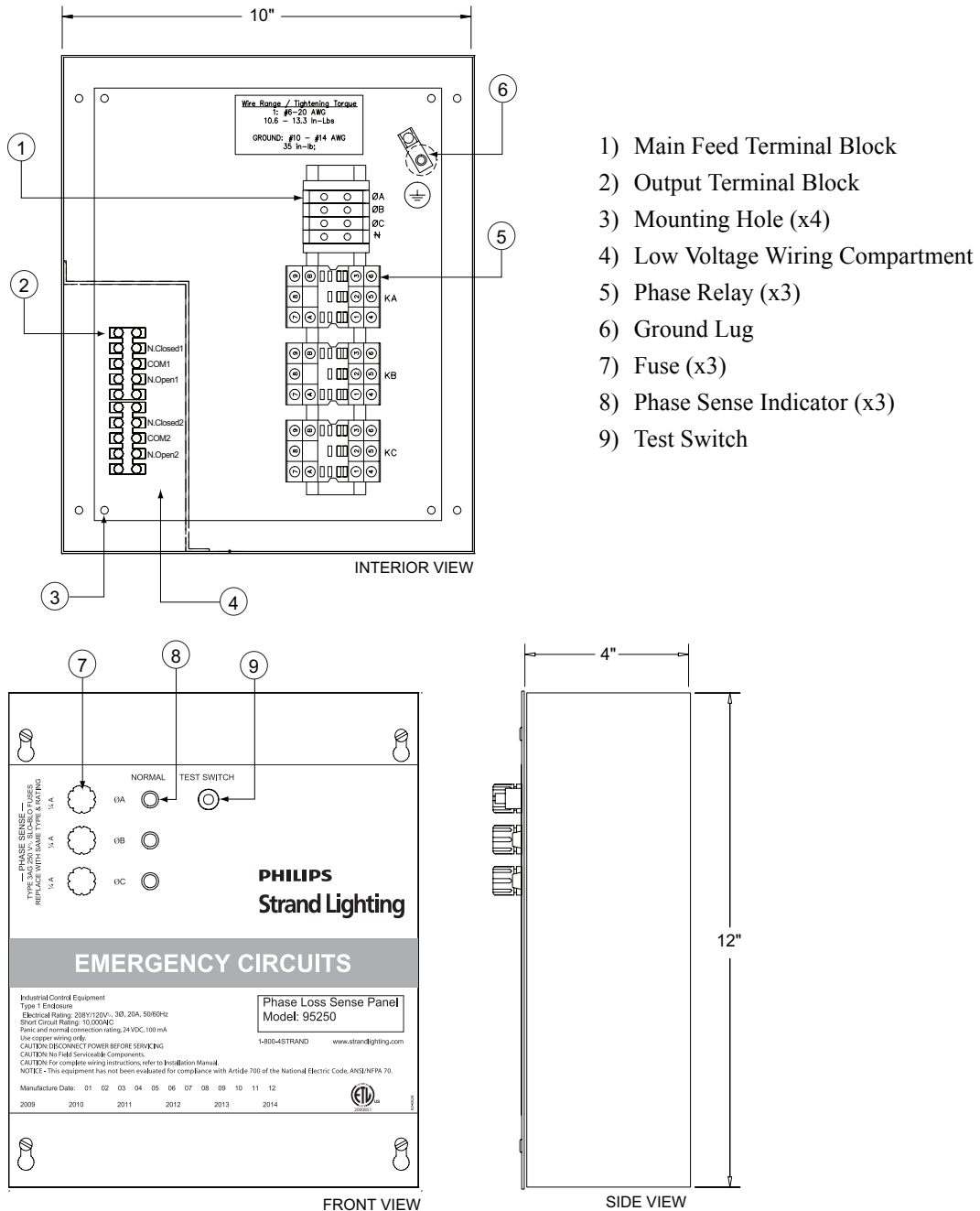


Figure 1: Phase Loss Sense Panel Overview

2. Installation Overview

The following steps are required to successfully install this product:

- 1) Review this document completely before starting the installation.
- 2) Unpack and inspect equipment. Compare the equipment you received with your packing list. If these do not match, contact Strand Lighting Customer Service at: 1-800-4STRAND (U.S.) or 1-214-647-7880.
- 3) Gather tools. (Refer to Tools List below.)
- 4) Chose an appropriate location for installation. The unit should be installed in an area of "office" level cleanliness. The room in which it is installed should have sufficient volume to allow exhaust air to circulate and cool. (For more details and clearance requirements, refer to Location and Clearances below.)
- 5) Plan the wire routings and connection order. Decide where the Feed, Load, and Control wiring will enter the unit(s).
- 6) Remove access panels and knockouts in the unit as required for conduit or busway entry. Perform all conduit connections to the unit before it is permanently installed. Be sure to remove all knockout debris.
- 7) Securely mount the unit and terminate all Feed, Load, and Control wiring following the directions in this manual. Clean up the work site and unit(s) for checkout by Strand Lighting Technical Services (see ["Notice To Contractor" on page 11](#)).
- 8) Contact Strand Lighting when ready for checkout.

3. Tools List

The following is a basic list of tools required for this installation:

- Drill (for mounting holes)
- Hammer (for removing knockouts)
- Phillips screwdriver
- Small flat screwdriver
- Adjustable wrench
- Wire stripper
- Heatshrink tubing
- Pencil
- Knife
- Wire cutter
- Ratchet and assorted sockets
- Conduit and fittings
- Digital voltmeter/RMS

4. Location and Clearances

When installing this product, the location site **MUST** meet the following requirements:

- Wall must be capable of supporting the weight of the unit.
- Allow 4 inches above and below the unit to ease cover removal and installation.
- All units require 12 inches of ventilation space above and below.
- Indoor Use Only: The unit **MUST** be installed indoors.
- Dry Locations Only: The unit can only be installed in an "office clean" area that is never exposed to moisture of any kind. Strand Lighting is not responsible for damage to equipment caused by moisture, paint, dust, solvents or cleaning supplies.
- Refer to National Electrical Code® and local codes to determine whether additional requirements must be met.

INSTALLATION

1. Mounting

Phase Loss Sense Panels are intended for wall mounting.

To install panel:

- Step 1. Locate suitable location for mounting Phase Loss Sense Panel. (Refer to "Location and Clearances" on page 5.)
- Step 2. As shown in **Figure 2**, loosen, but do not remove, screws securing cover.
- Step 3. Slide cover upward and remove. Be careful not to break or disconnect any wiring.
- Step 4. Install conduit (not supplied) in accordance to local and national codes (as applicable).
- Step 5. Secure Phase Loss Sense Panel to a permanent structure using suitable mounting hardware (not supplied) in accordance to local and national codes (as applicable). Refer to **Figure 3** for mounting hole locations.

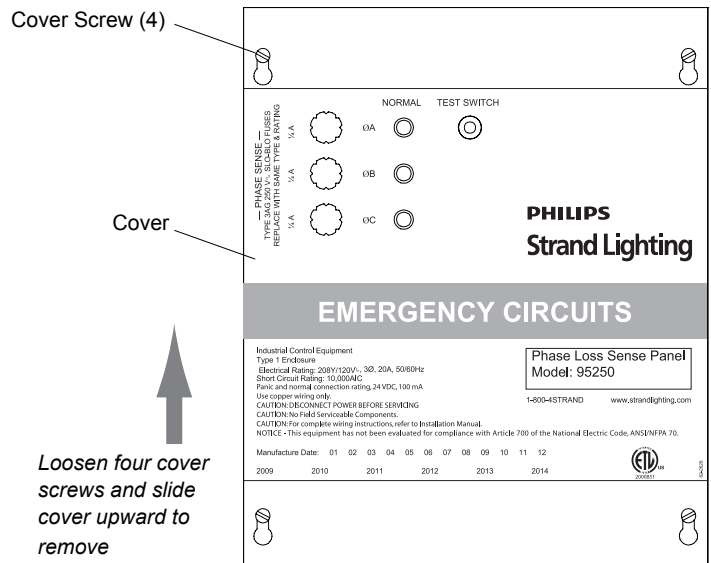


Figure 2: Removing Front Cover

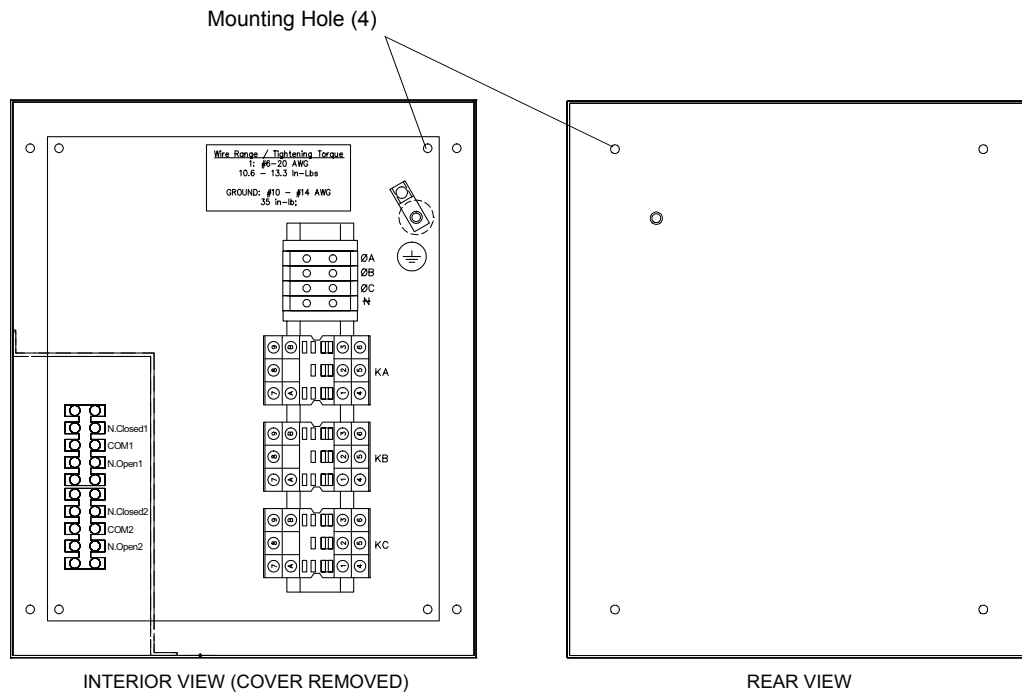


Figure 3: Mounting Holes

2. Wiring



WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltage and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to persons.

CAUTION: Wire openings **MUST** have fittings or lining to protect wires/cables from damage. Use 90° C copper wire only! Aluminum wire may not be used.

CAUTION: Failure to use the proper torque when tightening the set screws will cause premature failure of the equipment!

Connect wiring according to **Figure 4** on the next page.

Observe the following guidelines:

- For A21 Dimming and Contact Relay Panels, connect the dry contact output wiring to the Normally Closed (N. Closed) and Common (COM) connection points of the Phase Loss Sense Panel.
- For C21 Dimming Cabinets, connect dry contact output wiring to the Normally Open (N. Open) and Common (COM) connection points of the Phase Loss Sense Panel.

Use the following torque settings:

Main Phase Connections:	#6-20 AWG, 10.6 (min.) to 13.3 (max.) in-lbs.
Ground Wire Connection:	#10 - #14 AWG, 35 in-lbs.

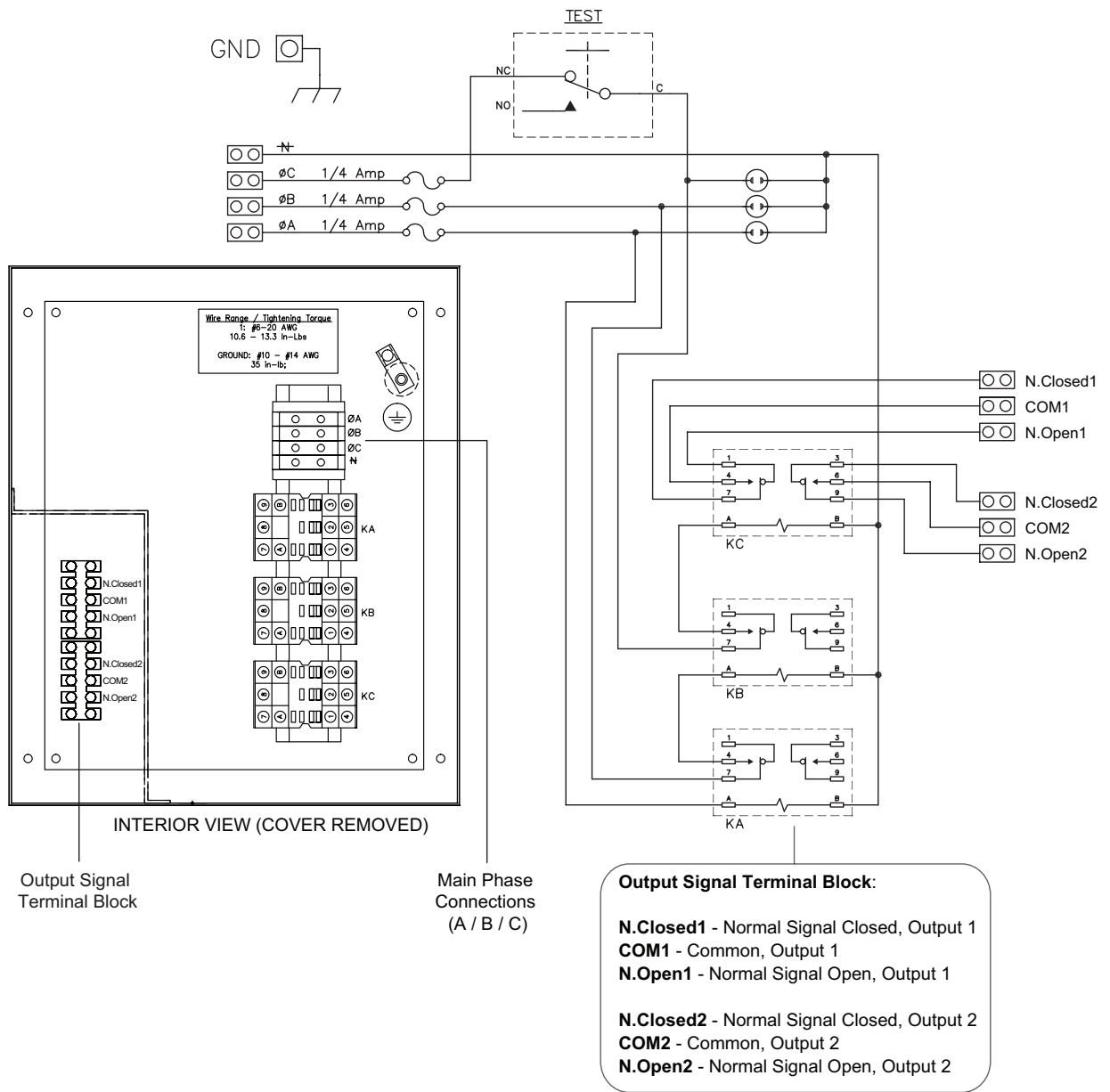


Figure 4: Wiring Diagram

OPERATION

1. Using with A21, Contact, or C21 Panels

When using the Phase Loss Sense Panel with Strand Lighting A21, Contact, or C21 lighting control panels, note the following conditions:

For A21 and Contact, the panels will be in either one of these two states...

- State one - the circuit (contact closure in the lighting control system) is closed everything is fine (no power issues).
- State two - the circuit (contact closure in the lighting control system) is open meaning power is out or one phase is out.

For C21, the panel will be in either one of these two states...

Opposite for the C21...

- State one - the circuit (contact closure in the lighting control system) is open meaning power is out or one phase is out.
- State two - the circuit (contact closure in the lighting control system) is closed everything is fine (no power issues).

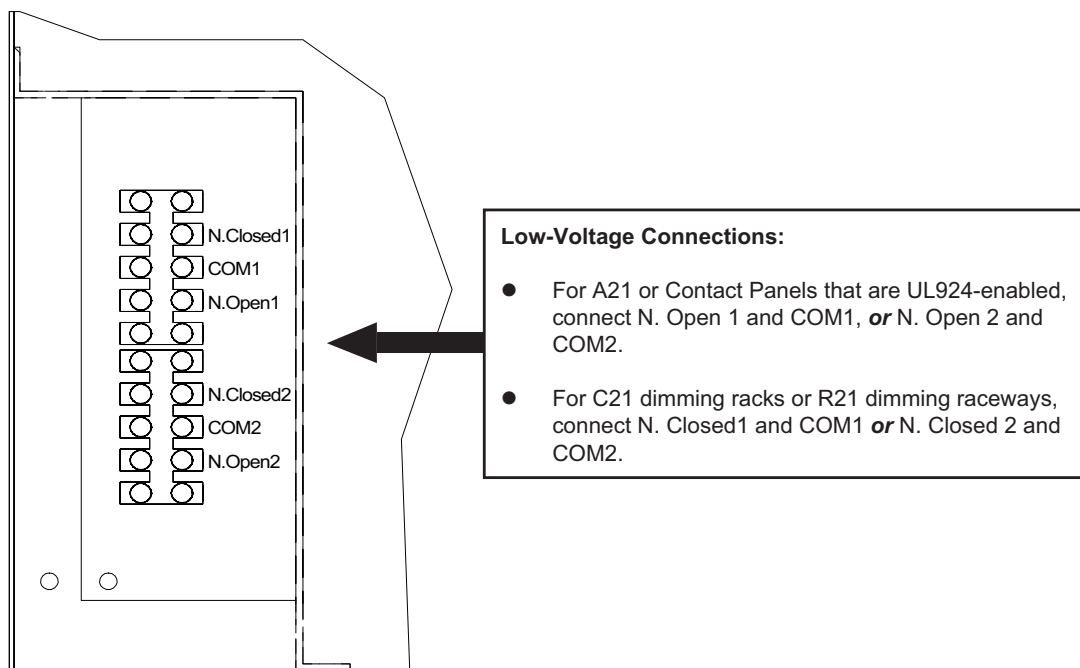


Figure 5: Low-Voltage Connections

APPENDIX A: SPECIFICATIONS

1. Phase Loss Sense Panel

Power Requirements:	3-Phase, 4-Wire with Ground, 208Y/120 VAC, 50/60Hz, 20A per Phase
Short Circuit Rating:	10,000 AIC
Compliance:	ETL listed to UL924
Operating Temperature:	32-104 degrees F (0-40 degrees C)
Operating Humidity:	5-95% non-condensing
Mounting:	Surface mount
Enclosure:	Type 1
Weight:	9.7lbs (4.4Kg)

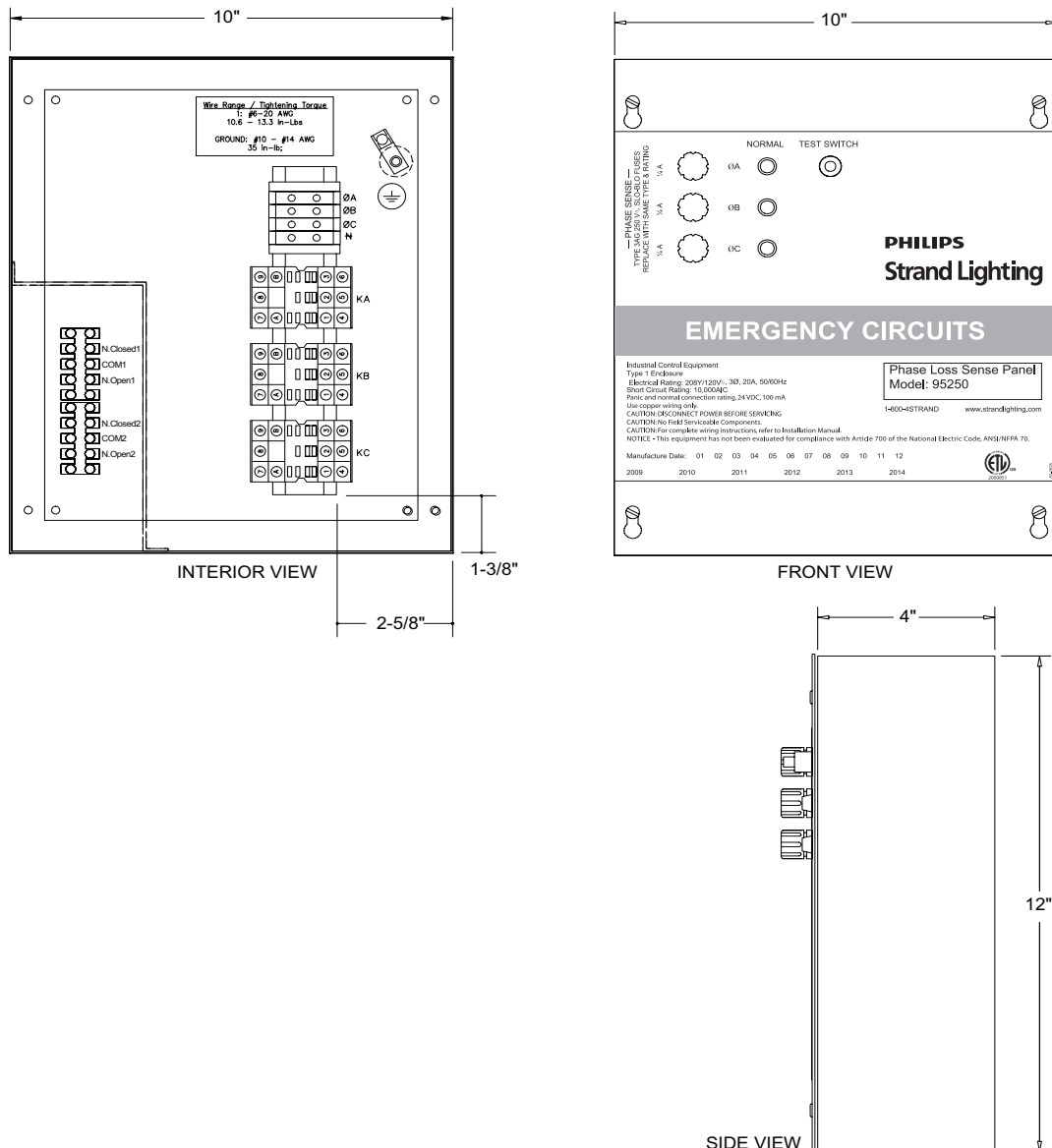


Figure 6: Dimensions

NOTICE TO CONTRACTOR

Technical Services Checkout Procedure



DO NOT APPLY POWER TO THE LIGHTING CONTROL SYSTEM!

No part of this system may be energized or operated until the installation has been approved by a Strand Lighting Technical Services Representative. Violation of this Requirement may damage components and therefore constitute misuse under standard warranty terms. Such misuse may relieve Strand Lighting of any and all further obligations under the terms of this warranty.

Equipment MUST be installed per the Strand Lighting drawings.

All installation and wire terminations MUST be completed per the Strand Lighting drawings *prior* to the arrival of the Technical Services Representative:

- 1) Input power must be connected to the system, but not energized.
- 2) All loads must be connected and all lighting instruments must be lamped.
- 3) All control wiring must be installed and terminated - including DMX512, Ethernet and Vision.net.
- 4) All equipment, including controllers, accessories, keys, cables and manuals must be in place.
- 5) Personnel for training (i.e. the users), as well as any other personnel required by contract and/or specification must be available for training at the completion of the Checkout and Energization.
- 6) An owner (or authorized representative), as well as any other personnel required by contract and/or specification will be present to accept the system.

The Technical Services Representative will only be able to:

- Ensure that the system is properly installed and functions correctly, including troubleshooting and providing guidance to the contractor to correct any problems.
- Train personnel in the operation of the Lighting Control System.

The Technical Services Representative will not be able to:

- Install equipment or make electrical connections required of the installing contractor, including DMX512, Ethernet, Vision.net, and/or any other connections that require a licensed electrician.
- Return to instruct any personnel who missed the original training session.

If the above requirements have not been met, the Technical Services Representative will be required to leave the job site. Return trips to complete the Technical Services Checkout require a separate Purchase Order and will be invoiced at the cost of travel (including per diem and travel time door-to-door), hourly labor, and a minimum daily on-site charge. Rescheduling will require 3 weeks notice, subject to Technical Services Representative availability.

Please feel free to contact Strand Lighting Technical Services (1-214-647-7880) should there be any questions regarding the installation of the equipment or requirements regarding the Technical Services Checkout.

When all requirements have been met and the system is ready for inspection, please download and complete the **Field Service/Commissioning Request Form** (PDF). This form can be found on the Main Support Page of the Strand Lighting website: www.strandlighting.com



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