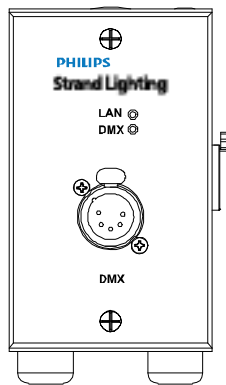


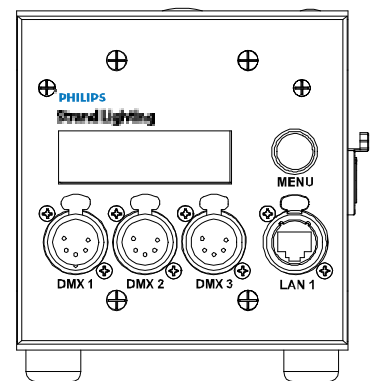
PHILIPS

Strand Lighting

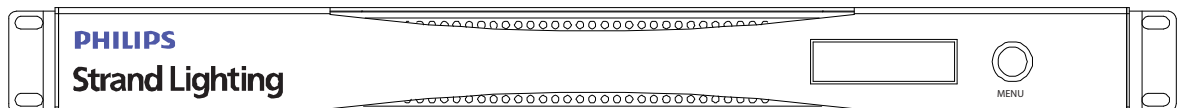
DMX512 Networking Nodes



**65161 - Single Port
DMX512 Network Node**



**65163 - Three Port
DMX512 Network Node**



65168 & 65168-1 - Eight Port DMX512 Network Nodes

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Version as of: **27 June 2016**

DMX512 Networking Node QuickStart Guide

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IMPORTANT INFORMATION

Warnings and Notices

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



- a. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- b. For indoor, dry locations use only. 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. Not for residential use. Do not use this equipment for other than its 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 voltages 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 personnel.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for 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.

Additional Resources for DMX512

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522). USITT Contact Information:

USITT
6443 Ridings Road
Syracuse, NY 13206-1111 USA
1-800-93USITT
www.usitt.org

Philips Strand Lighting Limited Two-Year Warranty

Philips Strand Lighting offers a two-year limited warranty of its products against defects in materials or workmanship from the date of delivery. A copy of Philips Strand Lighting two-year limited warranty containing specific terms and conditions can be obtained from the Philips Strand Lighting web site at www.strandlighting.com or by contacting your local Philips Strand Lighting office.

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PREFACE

1. About this Manual

The document is intended for experienced and trained installers and provides installation and operation instructions for the following products:

- DMX512 Network Node, POE, Single-Port, 1-Gang (Catalog Number 65161)
- DMX512 Network Node, POE, Three-Port, 2-Gang (Catalog Number 65163)
- DMX512 Network Node, 8-Port, Phoenix Connectors, 1U Rackmount Enclosure (Catalog Number 65168)
- DMX512 Network Node, 8-Port, 5-Pin XLR Connectors, 1U Rackmount Enclosure (Catalog Number 65168-1)

Please read all instructions before installing or using this product. *Retain this manual for future reference.* Additional product information and descriptions may be downloaded at www.strandlighting.com.

2. Getting Started

Unpack DMX512 Network Node

Unpack the node from the packaging and check that all components are contained within. If any parts are missing, or damaged, please contact the carrier and your nearest Philips Strand Lighting office.

DMX512 Network Node - Single Port (catalog number 65161):

- DMX512 Networking Node, 1 Port, POE, 1-Gang
- QuickStart Guide (*this document*)
- Single Gang Back Box with RJ45 connector
- Truss hook and mounting bolt (for truss mounting)
- Four rubber, screw-in feet (for tabletop)
- Two hole plugs (if surface or flush mounted)

DMX512 Network Node - Three Port (catalog number 65163):

- DMX512 Networking Node, 3 Port, POE, 2-Gang
- QuickStart Guide (*this document*)
- Double Gang Back Box with RJ45 connector
- Truss hook and mounting bolt (for truss mounting)
- Four rubber, screw-in feet (for tabletop)
- Two hole plugs (if surface or flush mounted)

DMX512 Network Node - Eight Port (catalog number 65168):

- DMX512 Networking Node, 8 Port, Phoenix Connectors, 1U Rackmount Enclosure with Internal Power Supply
- QuickStart Guide (*this document*)
- Input power cable (IEC type - 1 each - US, UK, and EU)

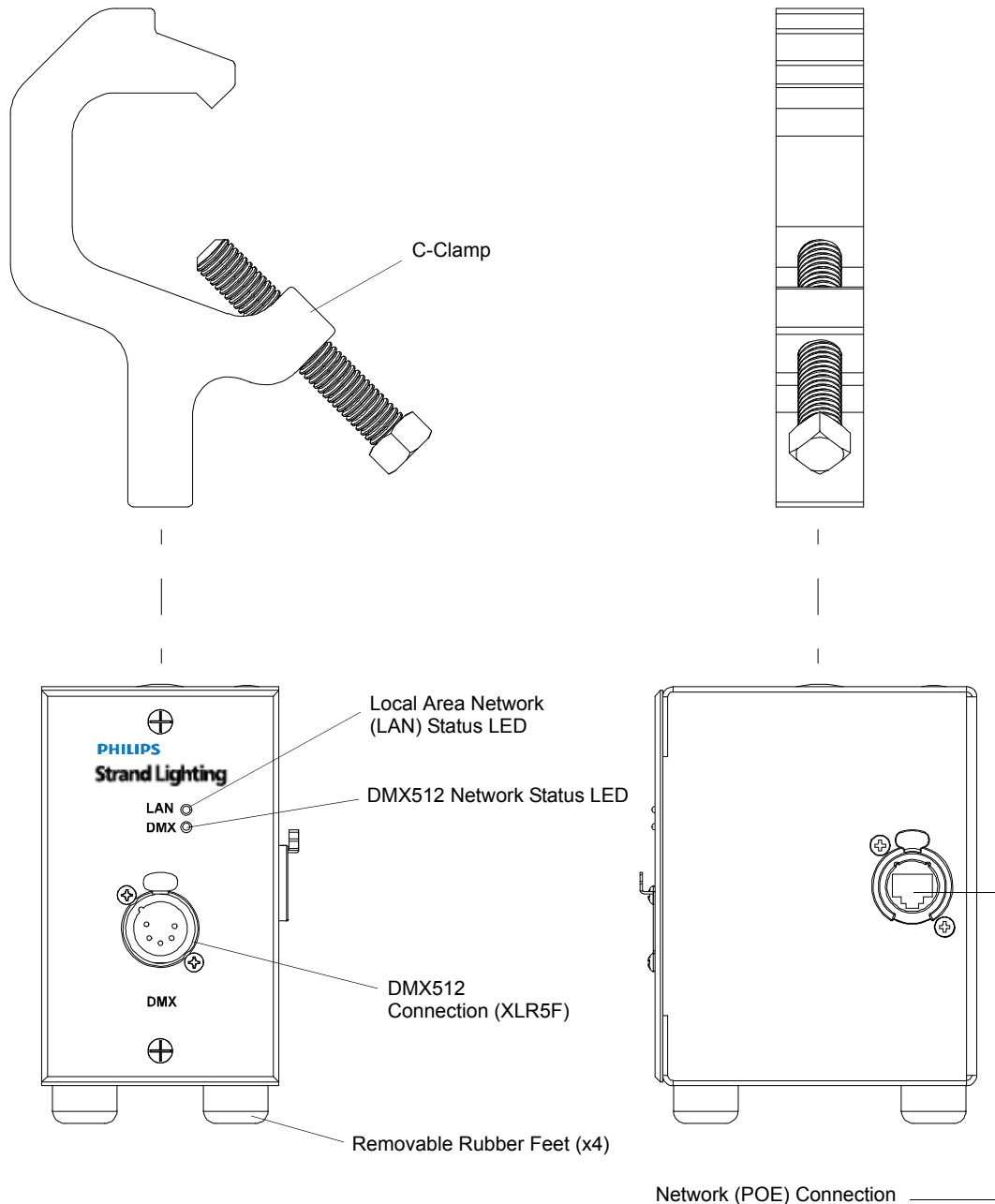
DMX512 Network Node - Eight Port (catalog number 65168-1):

- DMX512 Networking Node, 8 Port, 5-Pin XLR Connectors, 1U Rackmount Enclosure with Internal Power Supply
- QuickStart Guide (*this document*)
- Input power cable ((IEC type - 1 each - US, UK, and EU)

DMX512 NETWORKING NODES - OVERVIEW

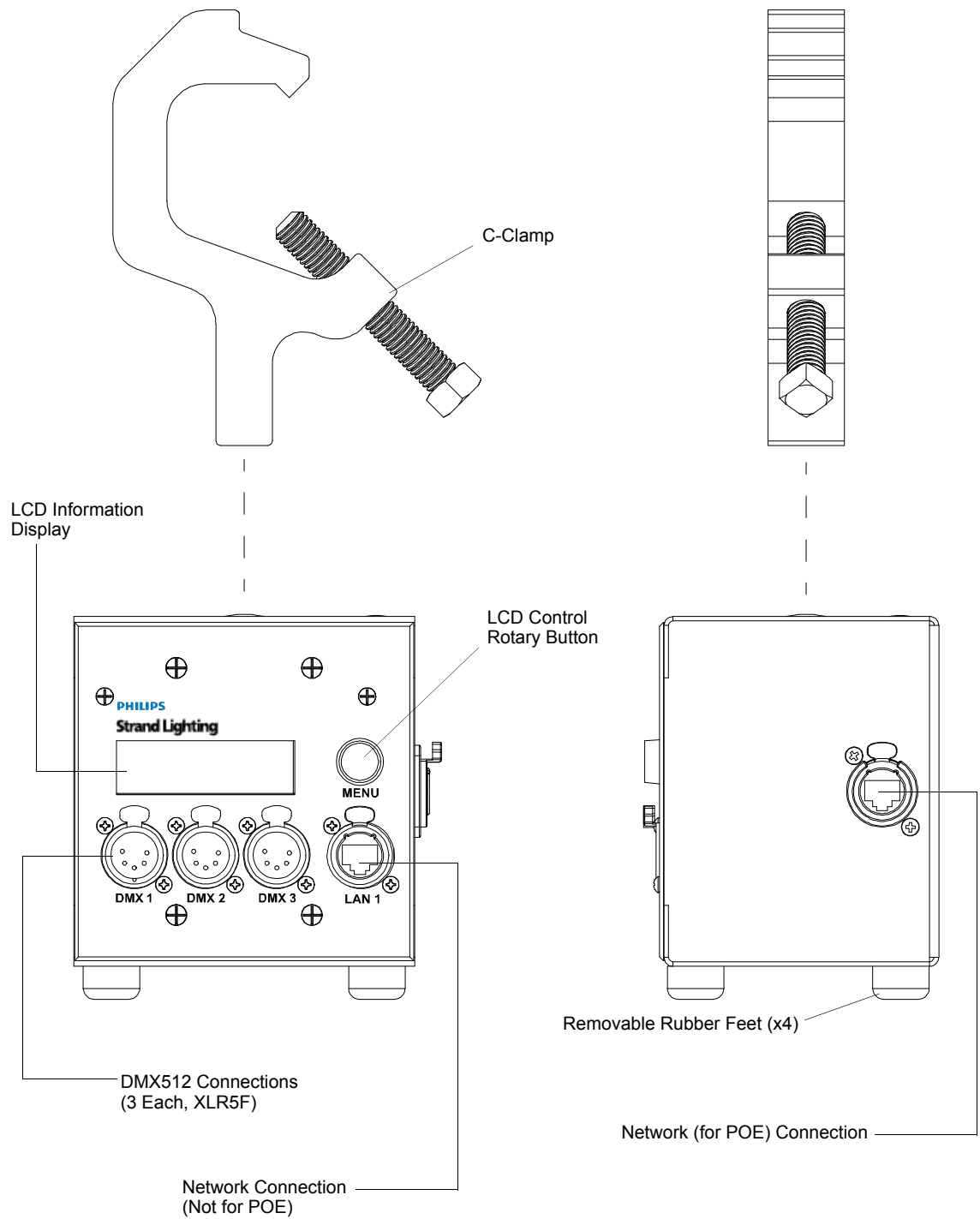
1. DMX512 Network Node Components

65161 - Single Port Node



NOTE: Unit can be flush mounted, surface mounted, or hung in truss.

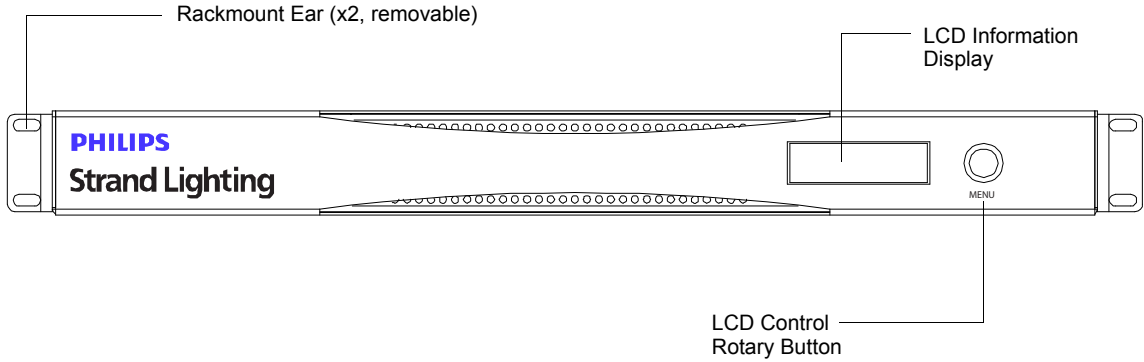
65163 - Three Port Node



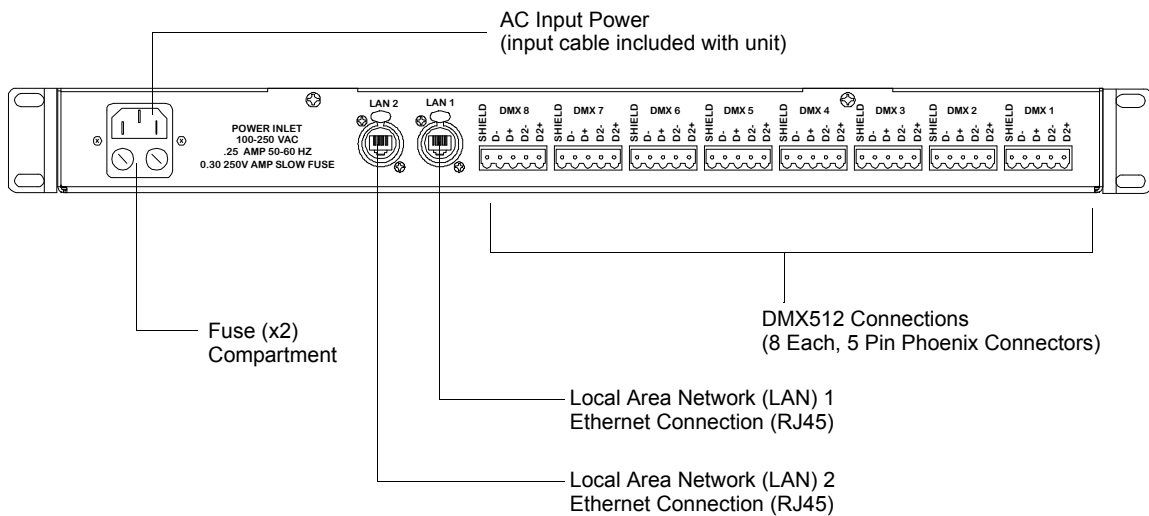
NOTE: Unit can be flush mounted, surface mounted, or hung in truss.

65168 - Eight Port Nodes

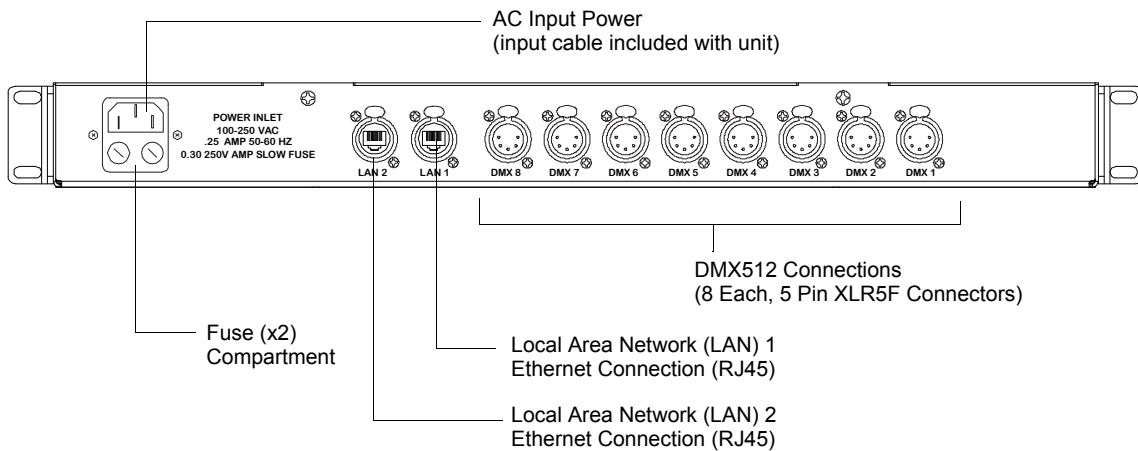
Front of Unit (All 8-Port Models)



Rear of Unit (5-Pin Phoenix Connector Models)



Rear of Unit (5-Pin XLR5F Connector Models)



INSTALLATION

1. Power Requirements

POE (Power Over Ethernet) Models (65161 or 65163)

All portable DMX512 Network Nodes are powered from a POE (Power Over Ethernet) compatible Ethernet Switch or midspan/endspan POE injector using IEEE P802.3af-2003 power. The POE should be +48vdc. The unit shall draw 45mA with LCD backlight at full (65163 models only).

Rackmount Models (65168 or 65168-1)

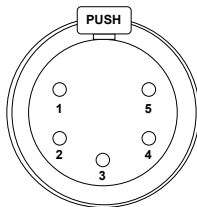
Rackmount DMX512 Network Nodes are powered from standard AC wall sockets through the provided AC input cable. The unit is auto-ranging from 100 - 240 VAC and the nominal current draw is 0.25 Amps with the LCD display backlight at full.

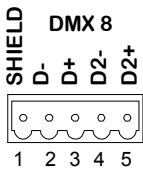
Note: For all rackmount models, the socket-outlet shall be installed near the equipment and shall be easily accessible. **WARNING: Double Pole/Neutral Fusing / AVERTISSEMENT: Double Pole / Fusing Neutre.**

2. Connecting a DMX512 Network

Basic DMX512 installation consists of connecting a DMX512 Network Node to a DMX512 controller in "daisy-chain" fashion. A cable runs from the DMX512 controller to a DMX512 Network Node and to other DMX512 devices in the system. Note, the DMX512 Network Node does not have to be first device in the DMX512 signal chain.

For more information on DMX512 networking and systems, refer to ["Additional Resources for DMX512" on page 1.](#)

XLR5F Type Connectors		DMX512 Connections	
		DMX512 Signal	XLR Pin
		Common (Drain)	1
	DMX512 -	2	
	DMX512 +	3	
	No Connection	4	
	No Connection	5	

5-Pin Phoenix Type Connectors		DMX512 Connections	
		DMX512 Signal	Phoenix Pin
		Common (Drain)	1
	DMX512 - (LAN1)	2	
	DMX512 + (LAN1)	3	
	No Connection	4	
	No Connection	5	

3. Mounting - 65161 / 65163 Models

The 65161 DMX512 Network Node includes the faceplate, electronics, and a single-gang back box. This unit is suitable for flush or surface wall mounting, sitting on a flat surface or hung in a truss (truss hook and mounting bolt are included).

The 65163 DMX512 Network Node includes the faceplate, electronics, and a two-gang back box. This unit is suitable for flush or surface wall mounting, sitting on a flat surface or hung in a truss (truss hook and mounting bolt are included).

Note: Installation should be done in full compliance of local and national codes.

Installation - 65161 or 65163 Flush Wall Mounting

To flush mount a 65151 or 65163 DMX512 Network Node:

- Step 1. Determine a suitable location for unit to be installed.
- Step 2. Prepare the wall by cutting an appropriate sized hole for the unit's back box.



CAUTION: Before continuing, note that faceplate electronics is connected to a short internal Ethernet cable. Do not damage cable in next step.

- Step 3. If installed, remove faceplate with electronics from back box. Disconnect internal Ethernet cable from rear of faceplate electronics. Set aside so faceplate and its electronics are safe from damage.
- Step 4. Insert two supplied hole plugs into top of unit.
- Step 5. Insert the back box in the wall and secure back box to structure using suitable hardware (by others).
- Step 6. Connect network Ethernet cable to RJ45 connector on side of back box.
- Step 7. Reconnect internal Ethernet cable to faceplate electronics.
- Step 8. Reinstall faceplate.

Installation - 65161 or 65163 Surface Mounting

To surface mount a 65151 or 65163 DMX512 Network Node:

- Step 1. Determine a suitable location for unit to be installed.



CAUTION: Before continuing, note that faceplate electronics is connected to a short internal Ethernet cable. Do not damage cable in next step.

- Step 2. If installed, remove faceplate with electronics from back box. Disconnect internal Ethernet cable from rear of faceplate electronics. Set aside so faceplate and its electronics are safe from damage.
- Step 3. Ensure that the back box is level by placing a spirit level on top of the box and mark the four mounting holes.
- Step 4. Drill four (4) holes in the wall and secure the back box to the wall using screws and suitable hardware (by others).
- Step 5. Reconnect internal Ethernet cable to faceplate electronics.
- Step 6. Insert two supplied hole plugs into top of unit.
- Step 7. Reinstall faceplate.
- Step 8. The unit is ready for connection to network.

Installation - 65161 or 65163 Truss Mounting

To truss mount a 65151 or 65163 DMX512 Network Node:



CAUTION: Before proceeding, note that faceplate electronics is connected to a short internal Ethernet cable. Do not damage cable in next step.

- Step 1. If installed, remove faceplate with electronics from back box. Disconnect internal Ethernet cable from rear of faceplate electronics. Set aside so faceplate and its electronics are safe from damage.
- Step 2. Using supplied bolt, slide Belleville washer over bolt so washer will compress against back box when tightened.
- Step 3. Working inside of back box, insert bolt with washer through hole in top of back box.

- Step 4. Thread bolt into truss hook. Tighten bolt.
- Step 5. The unit is ready for connection to network.

4. Mounting - 65158 or 65158-1 Models

To rack mount a 65168 DMX512 Network Node:

Note: Before installing, you will need four (4) rack screws that fit your specific rack (by others), at least 1U of rack space available in the rack, and a place to connect the AC input cable. Do not connect to AC supply source at this time.

- Step 1. If rackmount ears are not attached, attach them to unit.
- Step 2. If unit has rubber feet installed, unscrew them from unit. Keep for future use.
- Step 3. Slide 65158 (or 65158-1) DMX512 Network Node into rack.
- Step 4. Make data connections for LAN1, LAN2, and DMX networks (as applicable).
- Step 5. Secure node into rack with four rack screws.
- Step 6. Connect unit to AC power source.

Note: For all rackmount models, the socket-outlet shall be installed near the equipment and shall be easily accessible. **WARNING: Double Pole/Neutral Fusing / AVERTISSEMENT: Double Pole / Fusing Neutre.**

OPERATION

1. Overview

The DMX512 Network Nodes described in this guide provides compact and cost effective networking solutions for lighting facilities of any size.

The DMX512 Network Node is available in three basic configurations. For available models, refer to "[About this Manual](#)" on page 3.

2. Node Configuration

Pre-Configuring DMX512 Network Nodes

DMX512 Network Nodes are configured at the factory with common default values. It is therefore necessary to change the network configuration for each node before it is installed onto the network. It is logical that the configuration of the DMX512 ports and the LCD setting should be done at the same time and each node labeled with its IP Address ready for installation in the appropriate back box, auxiliary rack or dimmer rack.

The network default configuration for DMX512 Network Nodes is as follows:

Field	Value
IP Address	2.X.X.X
IP Netmask	255.0.0.0
DMX Universe	Art-NET 0.0

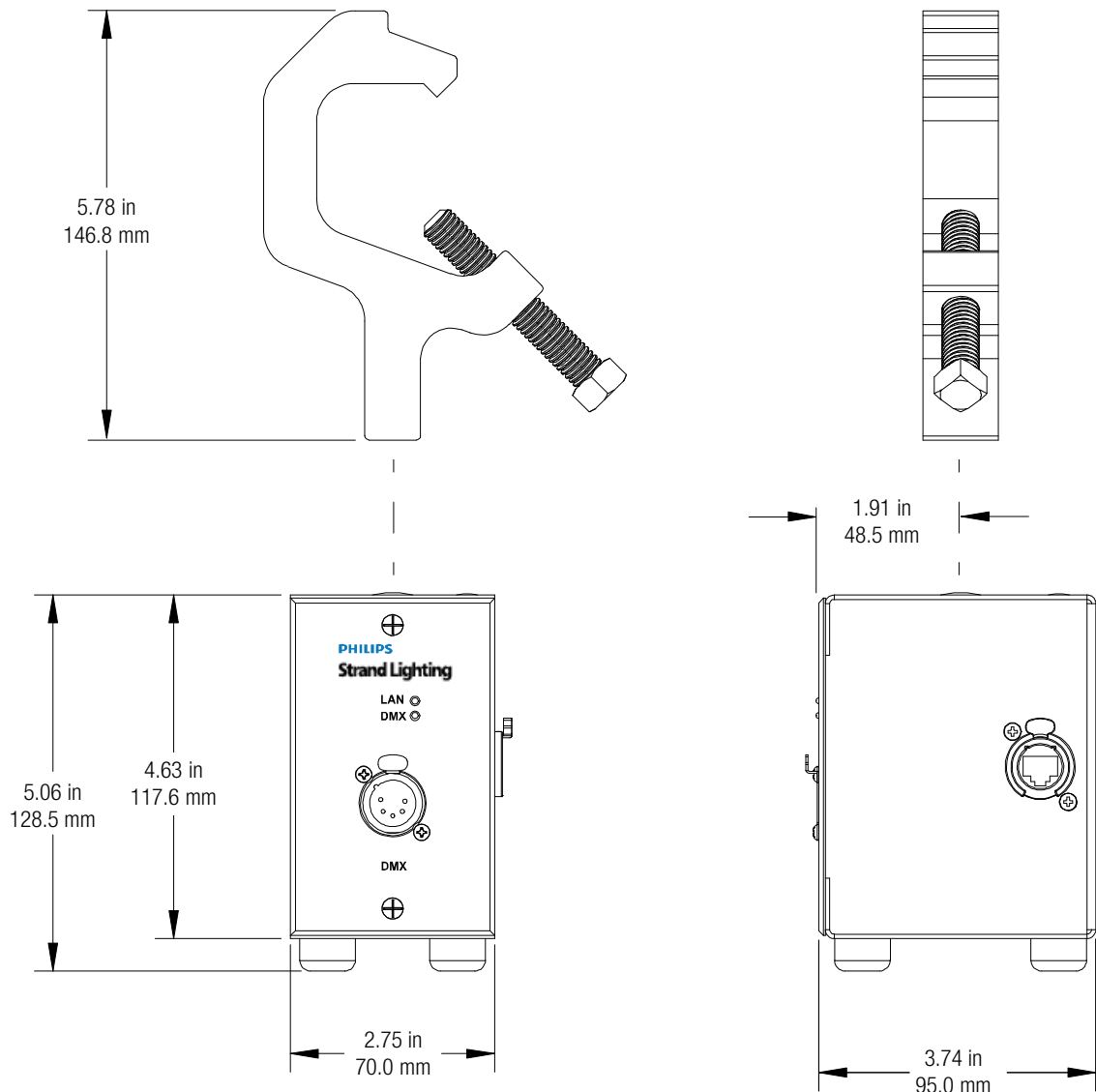
Note: For configuration information, please download the current version of the Philips Strand Net Software Operation Guide from the Strand Lighting web site at www.strandlighting.com.

PRODUCT SPECIFICATIONS

Note: Product specifications contained in this section are subject to change without prior notice. Refer to the product specification sheets on the Philips Strand Lighting web site for current information.

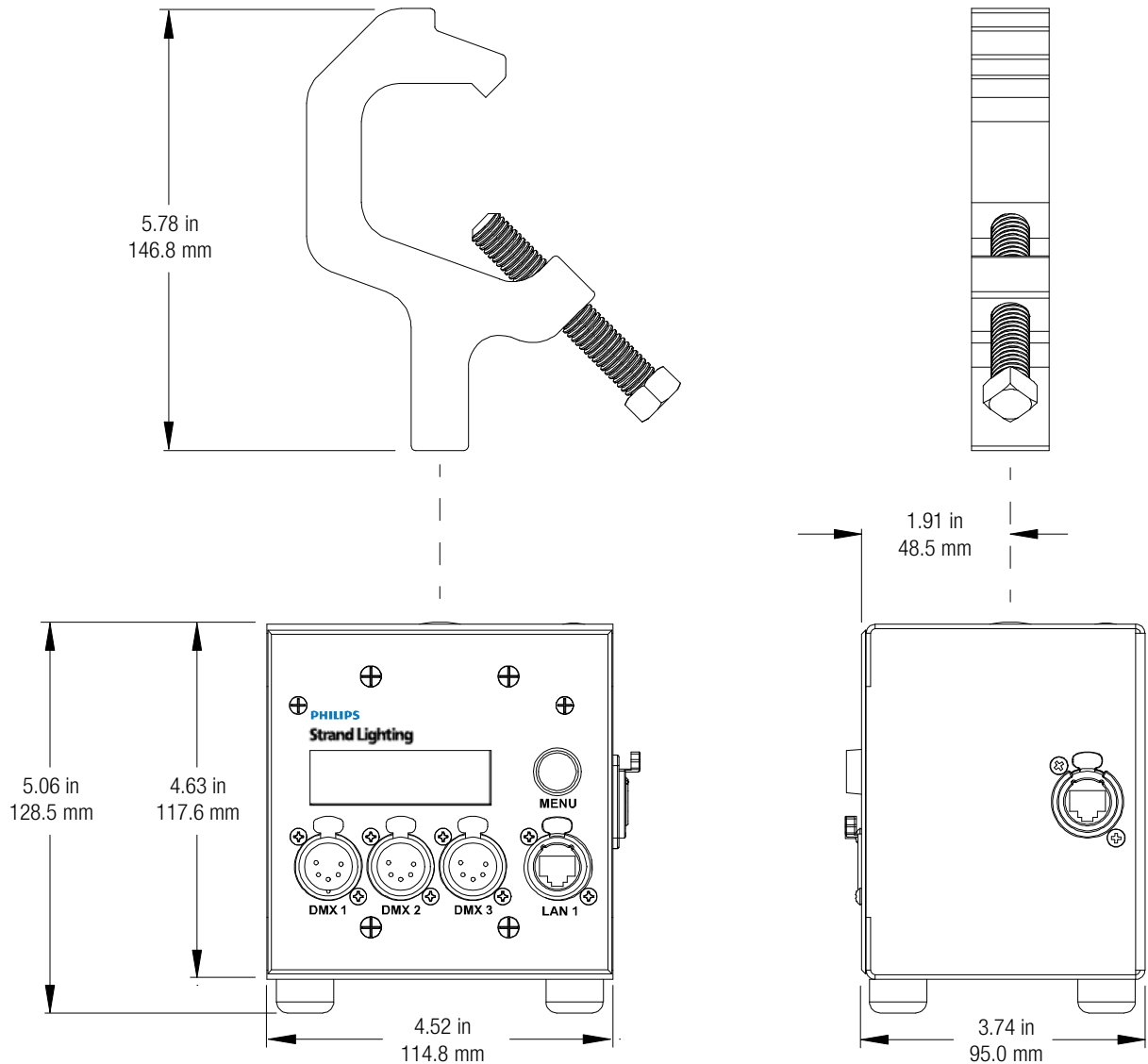
1. DMX512 Network Node - Single Port (catalog number 65161)

Input Power:	Power Over Ethernet (PoE) supplied at Ethernet Port
Connections:	DMX 5-Pin XLR Female Connector (bi-directional) - programmable DMX In or DMX out with RDM RJ45 (Ethernet) connector at side of back box
Communications:	DMX512A, RDM, ShowNet, Streaming ACN, Art-Net, Vision.Net
Compliance:	cETLus, CE, C-Tick, FCC, RoHS, IEEE (Ethernet)
Configuration:	Via PhilipsStrandNet.exe application
Weight:	Node Only: 1.55 Lbs / 0.7 Kgs (with back box and rubber feet - no hook) Truss Hook & Bolt: 0.95 Lbs / 0.45 Kgs



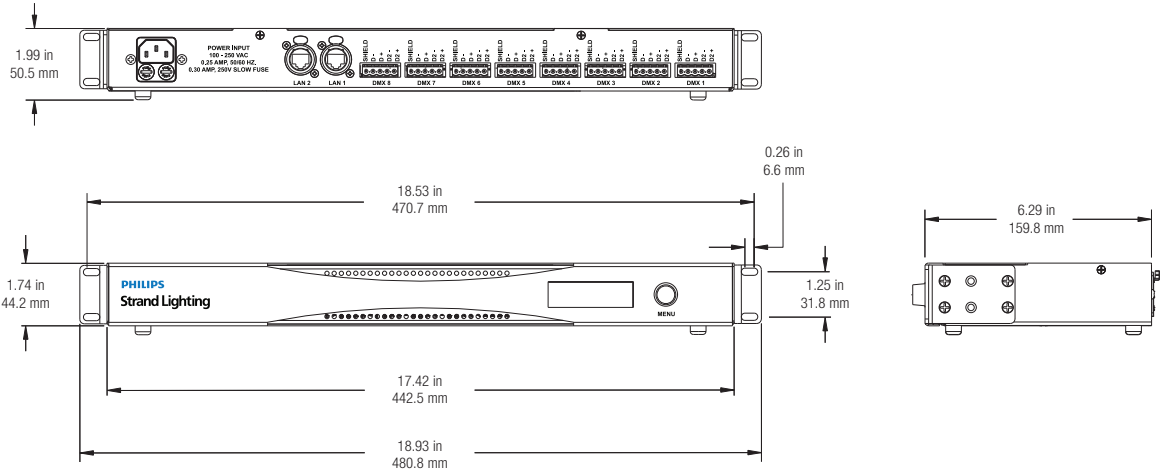
2. DMX512 Network Node - Three Port (catalog number 65163)

Input Power:	Power Over Ethernet (PoE) supplied at Rear Ethernet Port Only
Connections:	DMX 5-Pin XLR Female Connector (bi-directional) - programmable DMX In or DMX out with RDM RJ45 (Ethernet) connectors (x2 - one on front and one at side of back box)
Communications:	DMX512A, RDM, ShowNet, Streaming ACN, Art-Net, Vision.Net
Compliance:	cETLus, CE, C-Tick, FCC, RoHS, IEEE (Ethernet)
Configuration:	Via PhilipsStrandNet.exe application or LCD Display Menu
Weight:	Node Only: 1.90 Lbs / 0.86 Kgs (with back box and rubber feet - no hook) Truss Hook & Bolt: 0.95 Lbs / 0.45 Kgs



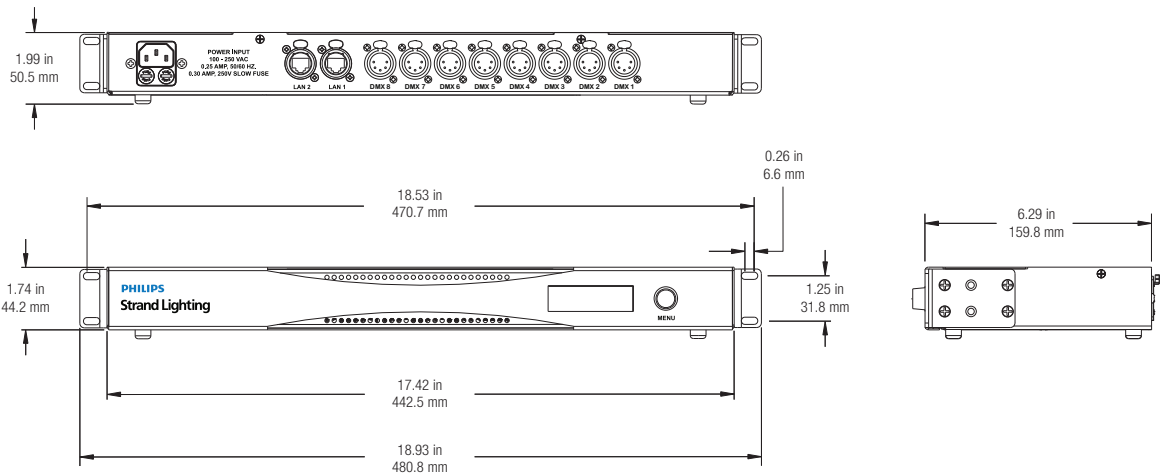
3. DMX512 Network Node - Eight Port (catalog number 65168)

- Input Power: 100 - 250VAC, 50/60 Hz, 0.25A (max)
- Connections: Eight DMX Phoenix Connectors (bi-directional) - programmable DMX In or DMX out with RDM
Two RJ45 (Ethernet) connectors at rear of unit
- Communications: DMX512A, RDM, ShowNet, Streaming ACN, Art-Net, Vision.Net
- Compliance: cETLus, CE, C-Tick, FCC, RoHS, IEEE (Ethernet)
- Configuration: Via PhilipsStrandNet.exe application or LCD Display Menu
- Weight: Node Only: 4.10 Lbs / 1.86 Kgs



4. DMX512 Network Node - Eight Port (catalog number 65168-1)

- Input Power: 100 - 250VAC, 50/60 Hz, 0.25A (max)
- Connections: Eight DMX 5-Pin XLR Female Connectors (bi-directional) - programmable DMX In or DMX out with RDM
Two RJ45 (Ethernet) connectors at rear of unit
- Communications: DMX512A, RDM, ShowNet, Streaming ACN, Art-Net, Vision.Net
- Compliance: cETLus, CE, C-Tick, FCC, RoHS, IEEE (Ethernet)
- Configuration: Via PhilipsStrandNet.exe application or LCD Display Menu
- Weight: Node Only: 4.12 Lbs / 1.87 Kgs



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