comnet
Communication Networks

CNMC[2]SFP[POE][/M] Series
10/100/1000MBPS ETHERNET MEDIA CONVERTERS WITH 100FX AND 1000FX SUPPORT

This manual serves the following ComNet Model Numbers:

CNMCSFP/M

CNMCSFPPOE/M

CNMCSFP

CNMC2SFP

The ComNet™ CNMC[2]SFP[POE][/M] Series products convert one or two Ethernet signals from electrical to optical and optical to electrical. The devices accept a 10/100 or 1000Mbps electrical input and convert this to a 100/1000Mbps optical output and the 100/1000Mbps optical input back to the 10/100/1000Mbps electrical output. The products in this series use either one or two optical fibers, depending upon the selection of sold-separately SFP optical module. The CNMCSFPPOE/M additionally supplies IEEE802.3at (30W) compliant Power over Ethernet (PoE) to the remote end.

The CNMC[2]SFP[POE][/M] Series is designed to operate in harsh industrial environments with no electrical or optical adjustments required (Plug and Play).

The optical data rate of 100FX or 1000FX is selected by a dip switch. See **Figure 9** on **Page 6** for dip switch settings. "Auto-Negotiating" is supported on the copper interface side.

LED indicators are provided for confirming equipment operating status. See **Figure 10** on **Page 6** for LED indicator descriptions.

See **Figures 1 – 11** for complete installation details.

The CNMCSFP/M and CNMCSFPPOE/M are supplied in a surface mount "Mini" package. The ComFit units in this series can be surface mounted or installed in the ComNet card cages. See **Figures A** and **B** on **Page 7** for mounting instructions.

FIGURE 1 – CNMCSFP/M SMALL SIZE UNIT

OPTICAL FIBER DETERMINED BY SELECTION OF SFP MODULE

FIBER

CNMCSFP/M
MULTI RATE
MEDIA CONVERTER

LINK/ACT

← 1000 FX

100 FX →

comnet ™

COMMUNICATION NETWORKS

POWER

CAT5e/6

COPPER

www.comnet.net

203-796-5300

~/-

~/+

BLACK

BLACK WITH WHITE STRIPE

Surface Mount Power:

9 – 24 VDC @ 200mA max.

OR

24 VAC @ 200mA max.
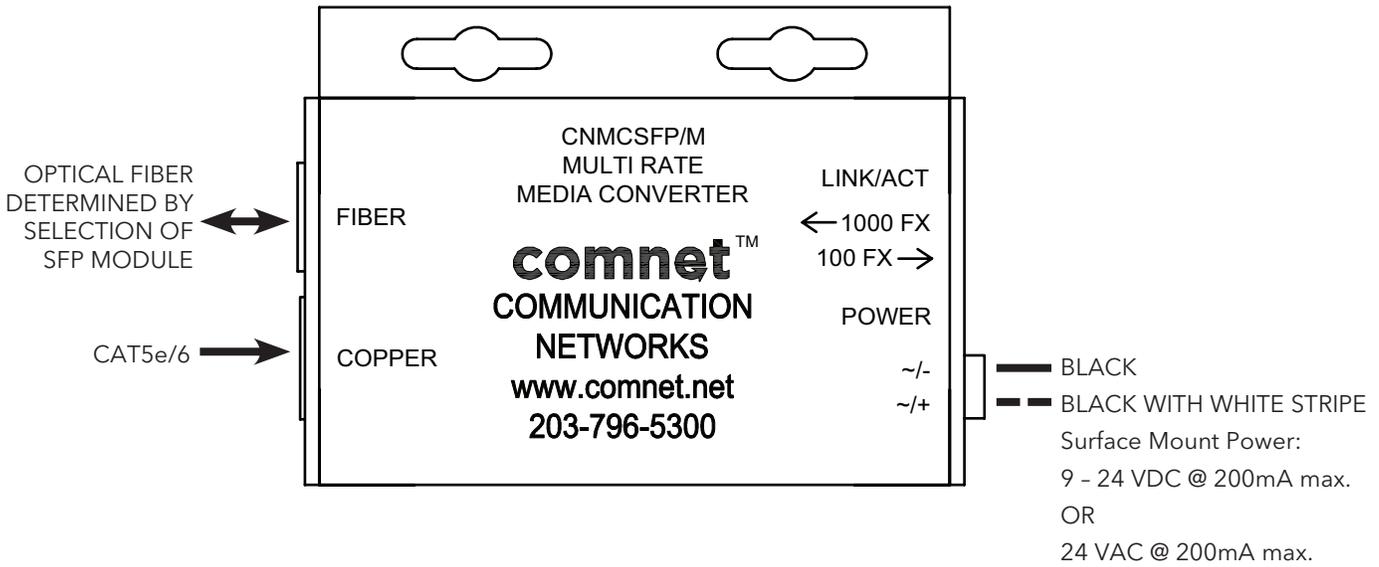
FIGURE 2 – CNMCSFP/M SMALL SIZE UNIT

FRONT PANEL
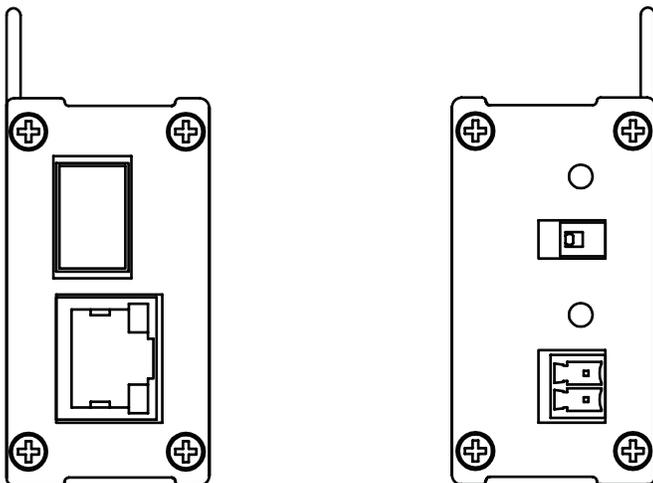
REAR PANEL

FIGURE 3 – CNMCSFPPOE/M SMALL SIZE UNIT

OPTICAL FIBER
DETERMINED BY
SELECTION OF
SFP MODULE

FIBER

CNMCSFPPOE/M
MULTI-RATE
MEDIA CONVERTER
WITH POE+

←1000FX
100FX→

LINK
POE

comnet™
www.comnet.net
1-203-796-5300
+ 44 (0)113 307 6400

CAT5e/6
IEEE802.3at
(30W) PoE

COPPER

POWER

POE -
POE +

BLACK
BLACK WITH WHITE STRIPE
Surface Mount Power:
48 – 57 VDC @ 0.85A
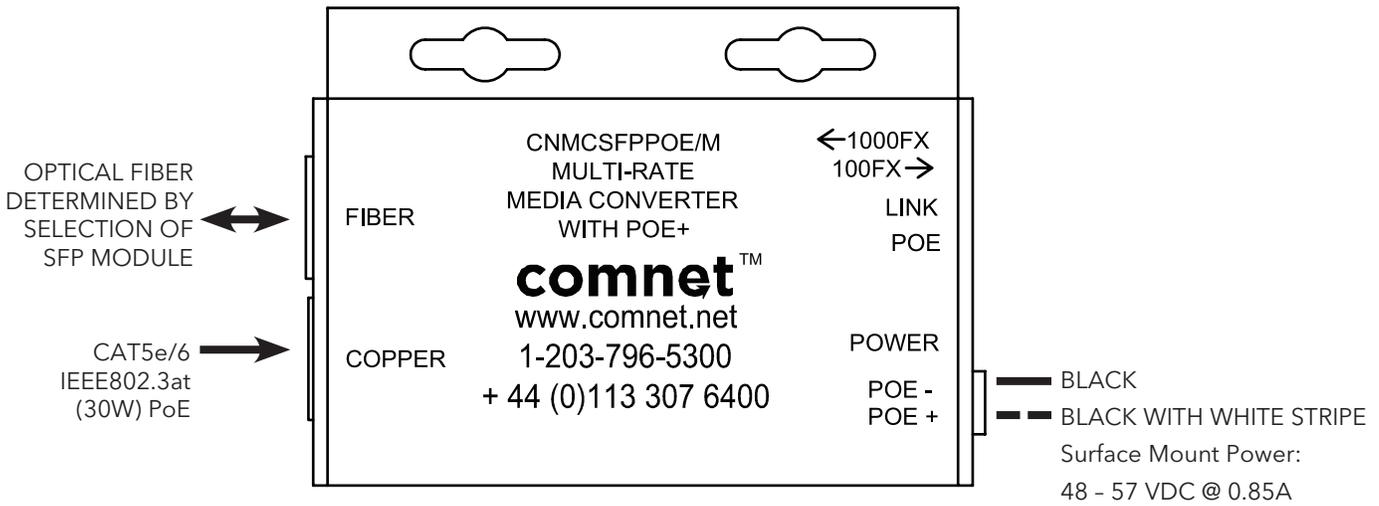
FIGURE 4 – CNMCSFPPOE/M SMALL SIZE UNIT

FRONT PANEL   REAR PANEL
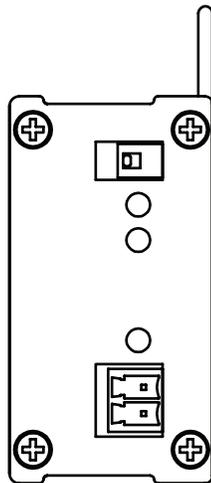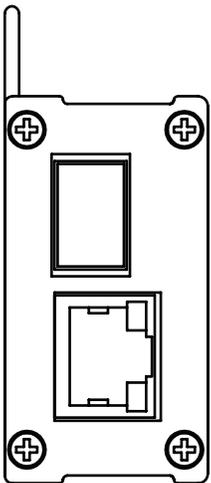
FIGURE 5 – CNMCSFP COMFIT UNIT

OPTICAL FIBER
DETERMINED BY
SELECTION OF
SFP MODULE

CAT5e/6

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BLACK
BLACK WITH WHITE STRIPE
Surface Mount Power:
9 – 24 VDC @ 200mA max.
OR 24 VAC @ 200mA max.
Rack power: Supplied by Rack
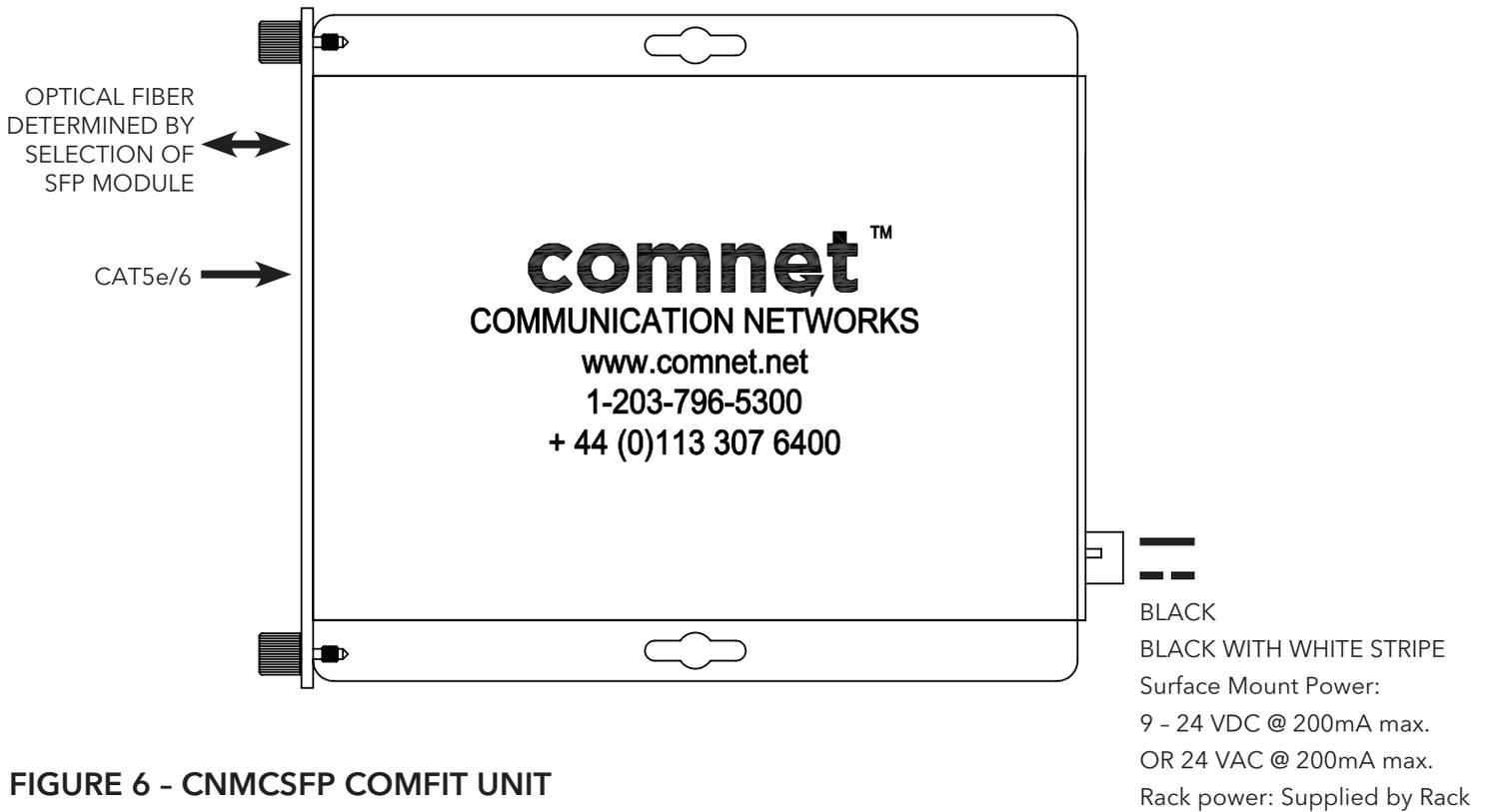
FIGURE 6 – CNMCSFP COMFIT UNIT

FRONT PANEL　　　　　　　　REAR PANEL

CNMCSFP   MULTI-RATE MEDIA CONVERTER

LINK A

LINK A

POWER

ON→
100/1000FX
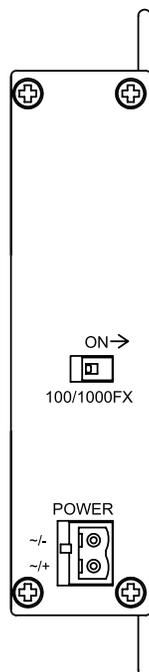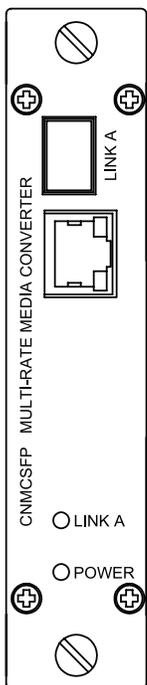
POWER
~/-
~/+

FIGURE 7 – CNMC2SFP COMFIT UNIT

OPTICAL FIBER
DETERMINED BY
SELECTION OF
SFP MODULE

CAT5e/6

OPTICAL FIBER
DETERMINED BY
SELECTION OF
SFP MODULE

CAT5e/6

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BLACK
BLACK WITH WHITE STRIPE
Surface Mount Power:
9 – 24 VDC @ 200mA max.
OR 24 VAC @ 200mA max.
Rack power: Supplied by Rack
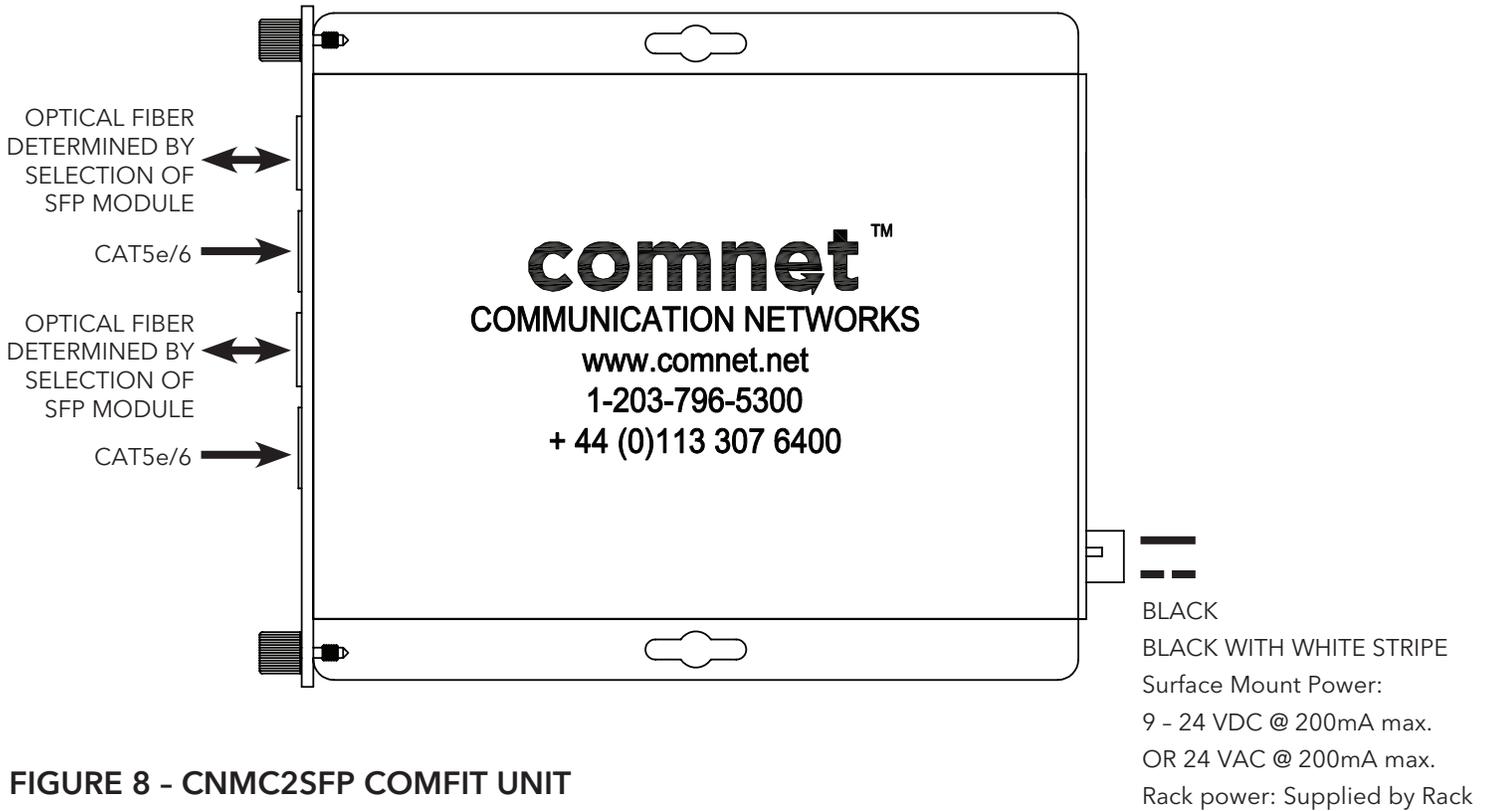
FIGURE 8 – CNMC2SFP COMFIT UNIT

FRONT PANEL   REAR PANEL

CNMC2SFP   DUAL MULTI-RATE MEDIA CONVERTER

LINK A

LINK B

○ LINK A
○ LINK B
○ POWER

LINK

A

B

100/1000FX
ON →

POWER

~/-
~/+
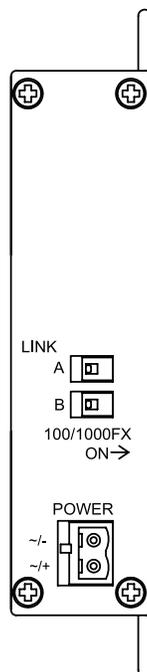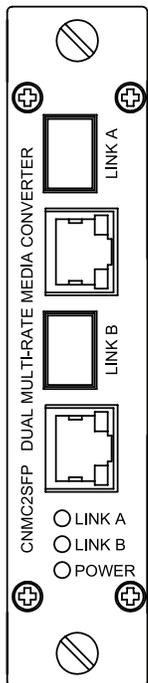
FIGURE 9 – DIP SWITCH SETTINGS

| Position	Resulting Data Rate
OFF	1000FX (requires use of Gigabit SFP module)
ON	100FX

NOTE: Select the Data Rate before powering on the unit. After a Data Rate change, re-cycle power to the unit.

FIGURE 10 – LED INDICATORS

	LINK	COPPER	POWER
GREEN	Solid – No Activity Blinking – Activity	Solid – No Activity Blinking – Activity	Unit powered up
YELLOW	–	Highest Data Rate	–
OFF	No Link	No Link	Unit powered down

FIGURE 11 – POSSIBLE ETHERNET CONFIGURATION

Ethernet IEEE 802.3 Network Element determined by user.
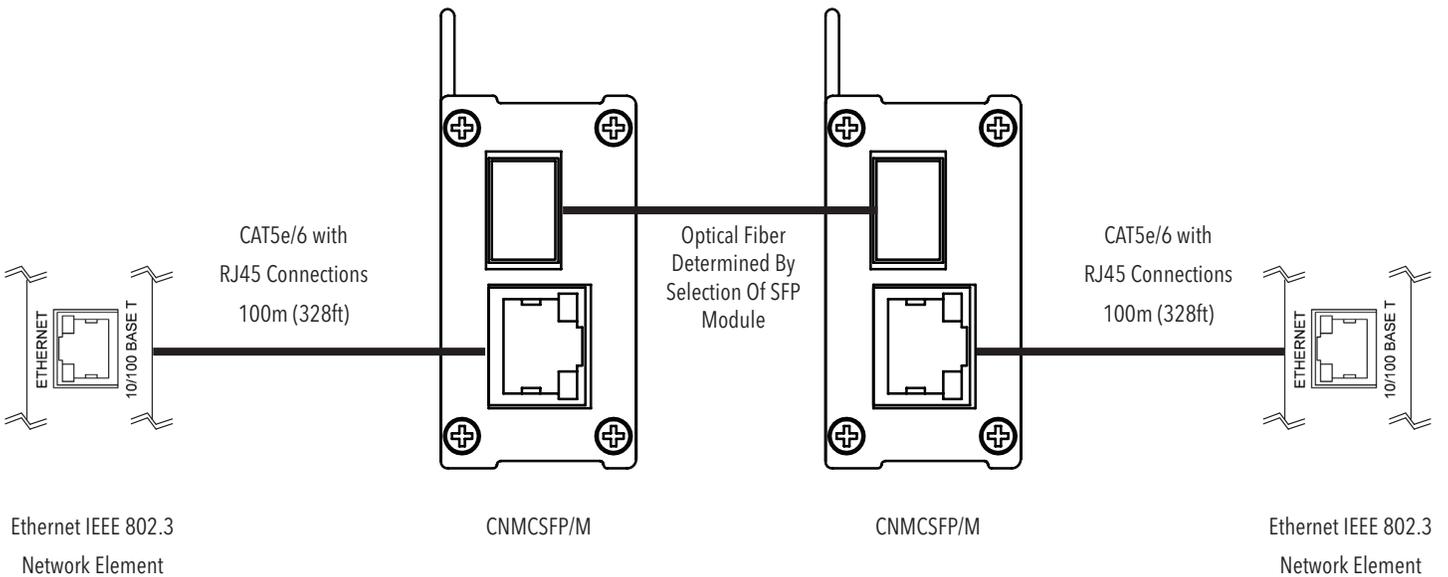
MECHANICAL INSTALLATION INSTRUCTIONS

INSTALLATION CONSIDERATIONS

This fiber-optic link is supplied as a Standalone/Rack module. Units should be installed in dry locations protected from extremes of temperature and humidity.

C1-US, C1-EU, C1-AU OR C1-CH CARD CAGE RACKS

CAUTION: Although the units are hot-swappable and may be installed without turning power off to the rack, ComNet recommends that the power supply be turned off and that the rack power supply is disconnected from any power source. Note: Remove electrical connector before installing in card cage rack.

1. Make sure that the card is oriented right side up, and slide it into the card guides in the rack until the edge connector at the back of the card seats in the corresponding slot in the rack's connector panel. Seating may require thumb pressure on the top and bottom of the card's front panel.

CAUTION: Take care not to press on any of the LEDs.

2. Tighten the two thumb screws on the card until the front panel of the card is seated against the front of the rack.

WARNING: Unit is to be used with a Listed Class 2 power supply.

IMPORTANT SAFEGUARDS:

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

FIGURE A

Dimensions are for a ComNet™ small size module
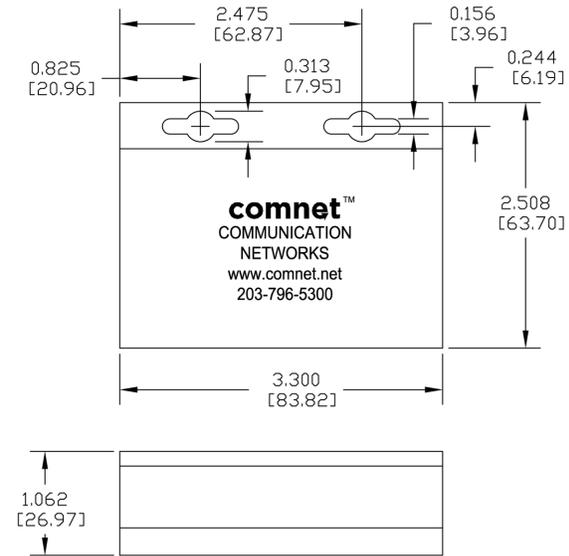
FIGURE B

*Dimensions are for a standard ComNet™ one slot module*

INS_CNMC[2]SFP[POE][/M]_REV–
06/06/12