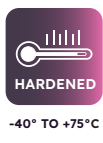




The Comnet CNFE3FX1TX2C[M] series is an industrially hardened three-port intelligent switch with light management functionality and an integrated contact closure server. The 100BASE-FX port supports conventional CAT-5e/CAT-6 copper or optical transmission media by selection of the appropriate Comnet SFP\* module. A summary fault alarm provides indication via a form c relay in the event of loss of optical link or operating power. The 10/100BASE-(T)X ports support both auto-negotiation and automatic MDI/MDI-X crossover for full and half- duplex operation; manual MDI/MDI-X switching is not required. The integrated contact closure server is available with 4 or 8 channels and supports individual user selectable wet or dry inputs. Form A relay outputs feature individual user selection of normally open or normally closed operation via the built-in web GUI. The contact server supports 4 modes of operation including one-to-one, one-to-many, many-to-one and stand-alone use through JSON frames for integration into third party systems.

The CNFE3FX1TX2C/M models are DIN-rail or panel-mountable with an internal/self-contained 9 to 36 VDC or 24 VAC power supply and features redundant power inputs for the highest possible reliability.



## Key Features

- ✓ Full duplex transmission of 10/100 Mbps Ethernet:
  - (2) 10/100BASE-(T)X ports and
  - (1) 100BASE-FX SFP port
- ✓ Extended ambient operating temperature range of -40° to +75° C, for use in virtually any environment. Optional conformal coating available for humidity with condensation or airborne particulate matter environments
- ✓ Uses customer-installed ComNet SFPs for compatibility with a wide range of optical fibers, optical connector types, and optical transmission distances of up to 120 km
- ✓ Integrated contact closure server supports wet/dry inputs and user selectable normally open or normally closed form A relay outputs.
- ✓ SNMP v1/v2c support allow for monitoring and control of device and contact closure status.
- ✓ Redundant power inputs for extremely high levels of reliability and availability
- ✓ No fans or forced-air cooling required; cooling via natural convection eliminates unreliable and troublesome fans/moving parts for improved reliability
- ✓ Indicating LEDs confirm operating status of the switch, link and contacts for ease in troubleshooting
- ✓ Summary fault alarm provides a local or remote indication via dry contact closure in the event of loss of optical link or operating power
- ✓ Rugged 19-gauge galvanized & powder-coated steel enclosure may be DIN-rail or panel-mounted
- ✓ Made in the USA
- ✓ Limited Lifetime Warranty

## Applications

- ✓ Perimeter security, surveillance monitoring, and controlled access to electrical substations and power generating facilities, and other high-value, mission-critical sites
- ✓ Industrial/Factory Automation & Process Control SCADA Networks
- ✓ Chemical and petrochemical refining and processing facilities, oil and gas pipelines/transmission systems, and mining installations
- ✓ Food processing operations
- ✓ Wastewater treatment plants
- ✓ ITS/Transportation Traffic Signalization & Surveillance/Incident Detection Networks
- ✓ Railway/trackside control and monitoring systems
- ✓ Integrated IP-Video, VOIP, and Data Transmission Networks
- ✓ Cellular telephony and wireless backhaul networks

\* SFP = Small Form-Factor Pluggable Module

## Specifications

### DATA

<b>DATA INTERFACE</b>	<b>ETHERNET</b>
<b>DATA RATE</b>	<b>10/100 MBPS</b> <b>IEEE 802.3 COMPLIANT</b> <b>FULL DUPLEX OR HALF DUPLEX ELECTRICAL PORTS/FULL DUPLEX OPTICAL PORT</b>

### CONTACTS

<b>RESPONSE TIME</b>	<b>60MS WHEN PAIRED ONE-TO-ONE (NETWORK DEPENDENT)</b>
<b>INPUT/OUTPUT CHANNELS</b>	<b>4 OR 8 (MODEL DEPENDENT)</b>
<b>INPUTS</b>	<b>4 OR 8 OPTO-ISOLATED WET OR DRY (MODEL DEPENDENT)</b>
<b>WET INPUT VOLTAGE</b>	<b>9-50 VDC</b>
<b>INPUT ISOLATION</b>	<b>3000 VRMS</b>
<b>OUTPUTS</b>	<b>4 OR 8 FORM A CONTACTS USER SELECTABLE NORMALLY OPEN OR NORMALLY CLOSED (MODEL DEPENDENT)</b>
<b>OUTPUT RATING</b>	<b>60W @ 220 VDC OR 250 VAC, NON-RESISTIVE LOADS</b>
<b>OUTPUT ISOLATION</b>	<b>2500 VRMS</b>

### FIBER CONNECTORS

<b>FIBER CONNECTORS</b>	<b>REQUIRES SELECTION OF SOLD-SEPARATELY SFP MODULES. SEE COMNET DATA SHEET FOR NUMBER, DESCRIPTION, AND COMPATIBILITY OF SFP MODULES</b>
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## CONNECTORS

POWER	4-POSITION SCREW TERMINAL BLOCK
10/100BASE-TX	2 × RJ45
100BASE-FX	1 × SFP PLUGGABLE OPTICS REQUIRES SELECTION OF SOLD-SEPARATELY SFP MODULES. SEE COMNET DATA SHEET FOR NUMBER, DESCRIPTION, AND COMPATIBILITY OF SFP MODULES
FAULT RELAY	3-POSITION SCREW TERMINAL BLOCK
CONTACT CLOSURE	SCREW TERMINAL BLOCK
CONSOLE	MINI USB

## SUMMARY FAULT ALARM

FORM C CONTACTS FOR LOCAL OR REMOTE INDICATION OF LOSS OF OPERATING POWER, OR LOSS OF OPTICAL LINK

RELAY CONTACTS	RATED AT 110 VDC @ 0.25A, NON-INDUCTIVE LOAD; OR 125 VAC @ 0.3A, NON-INDUCTIVE LOAD
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## MANAGEMENT

SNMP	SNMP V1/2C
HTTP	WEB GUI CONFIGURATION INTERFACE
CLI	SERIAL COMMAND LINE INTERFACE

## SWITCH PROPERTIES

SWITCHING LATENCY	7 $\mu$ S
SWITCHING BANDWIDTH	600 MBPS
MAC TABLE	1K
PROCESSING	STORE-AND-FORWARD

## SOFTWARE

FEATURES	CONTACT OUTPUTS NORMALLY OPEN OR NORMALLY CLOSED CONTACT MAPPING PORT CONFIGURATION, STATUS, STATISTICS SNMP ENABLE/DISABLE PORTS PORT GUARDIAN PHYSICAL PORT LOCKOUT IGMP HOST CAPABILITIES SNMP TRAP STATIC MULTICAST MAC ROUTING STATIC MAC LOCK SECURITY ACTIVE PING CHECK WITH SNMP TRAP, & PORT SHUTDOWN CAPABILITY
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## ETHERNET STANDARDS

IEEE 802.3 FOR 10BASE-T

IEEE 802.3U FOR 100BASE-TX AND 100BASE-FX

IEEE 802.3X FLOW CONTROL AND BACK PRESSURE

## POWER

POWER CONSUMPTION

5 W (MAX)

POWER INPUT

DUAL 9 TO 36 VDC OR 24 VAC

CURRENT PROTECTION

AUTOMATIC RESETTABLE SOLID-STATE CURRENT LIMITERS

## MECHANICAL

INDICATOR LEDES

OPERATING POWER  
CONTACT STATE  
FAULT  
RJ45 & SFP LINK / ACTIVITY

HOUSING

19-GAUGE GALVANIZED STEEL, POWER-COATED FINISH

INGRESS PROTECTION

IP-30 RATED

MOUNTING

STANDARD DIN-RAIL OR PANEL-MOUNT.  
PANEL- MOUNTING ADAPTER INCLUDED.

DIMENSIONS

w/ WALL MOUNT ADAPTER PLATE  
w/ DIN RAIL MOUNT CLIPS

5.4 × 2.7 × 2.9 IN (13.7 × 6.7 × 7.4 CM)  
3.9 × 2.7 × 3.6 IN (9.9 × 6.7 × 9.1 CM)

WEIGHT (UNPACKED)

<2 LB / 0.9 KG

CIRCUIT BOARD

MEETS IPC STANDARDS

## ENVIRONMENTAL

MTBF

>100,000 HOURS

OPERATING TEMPERATURE

-40° C TO +75° C

STORAGE TEMPERATURE

-40° C TO +85° C

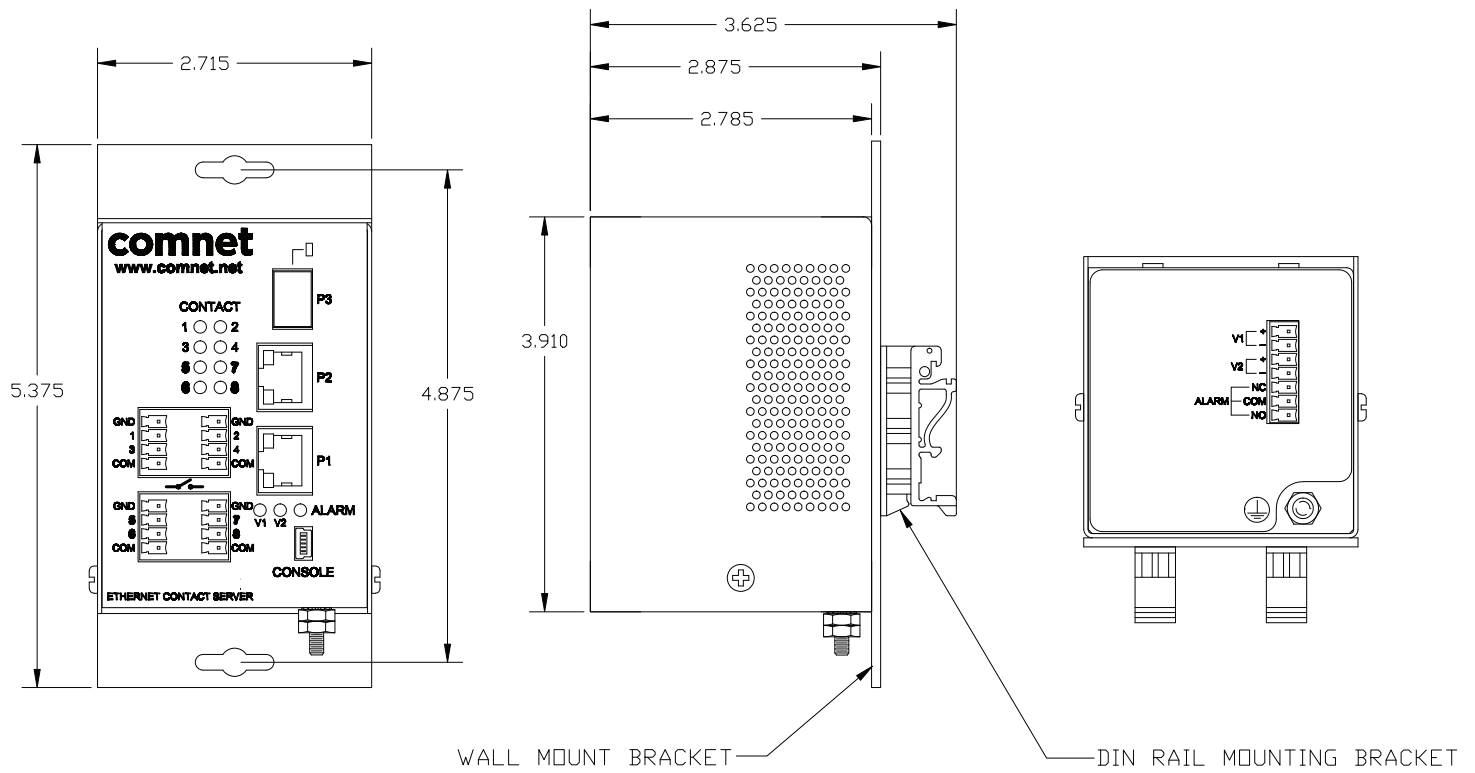
OPERATING HUMIDITY

5% TO 95% (NON-CONDENSING)

CONTACT OPERATIONS

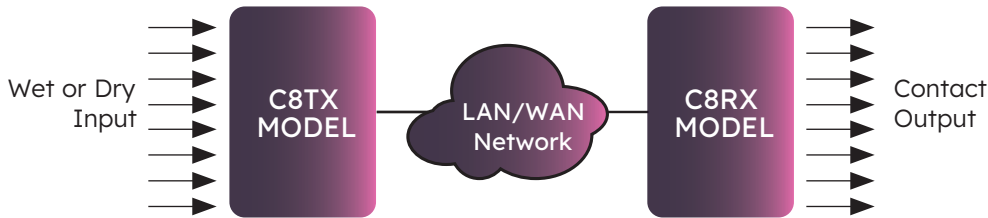
1 × 10<sup>-6</sup> MINIMUM

# DIN MOUNT OUTLINE AND INSTALLATION DRAWING



## Typical Applications

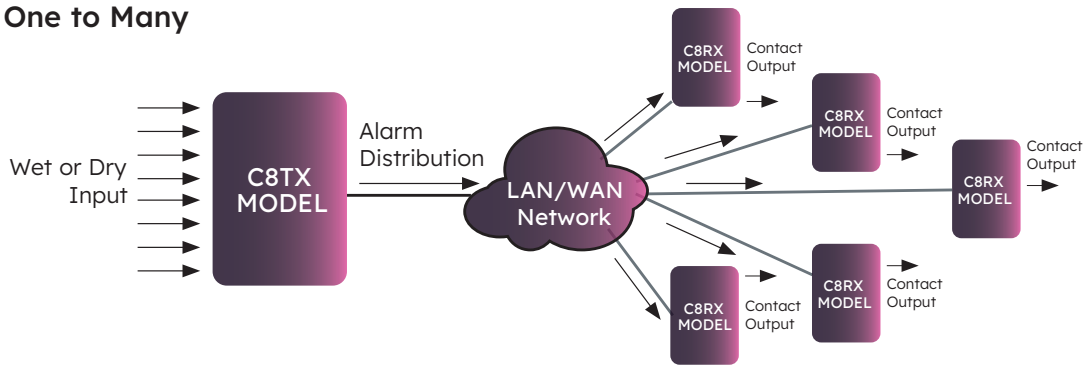
### Device to Device (8 CH Simplex)



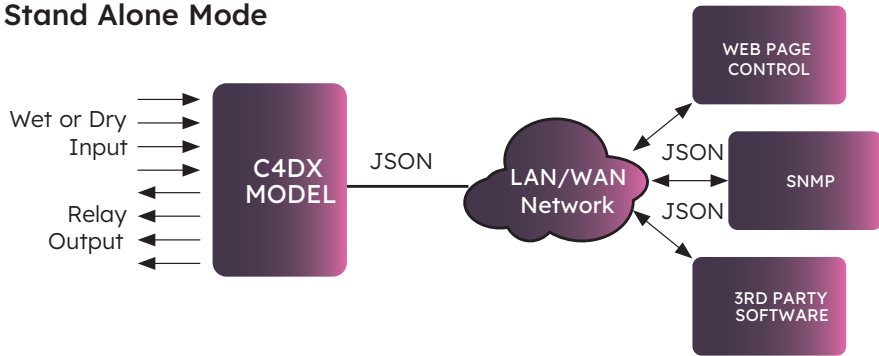
### Device to Device (4 CH Duplex)



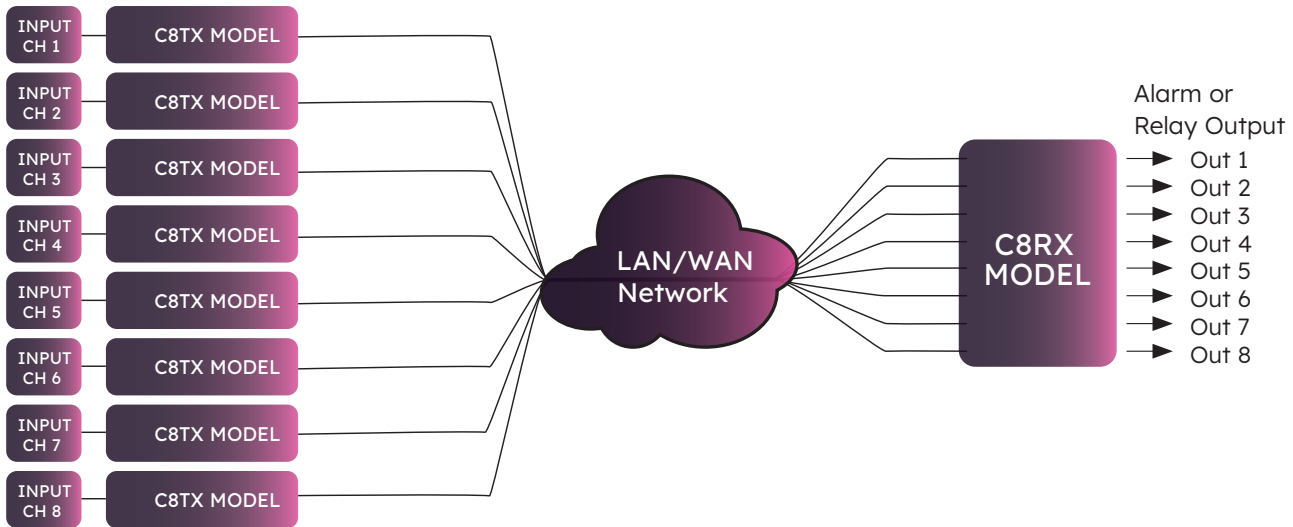
## One to Many



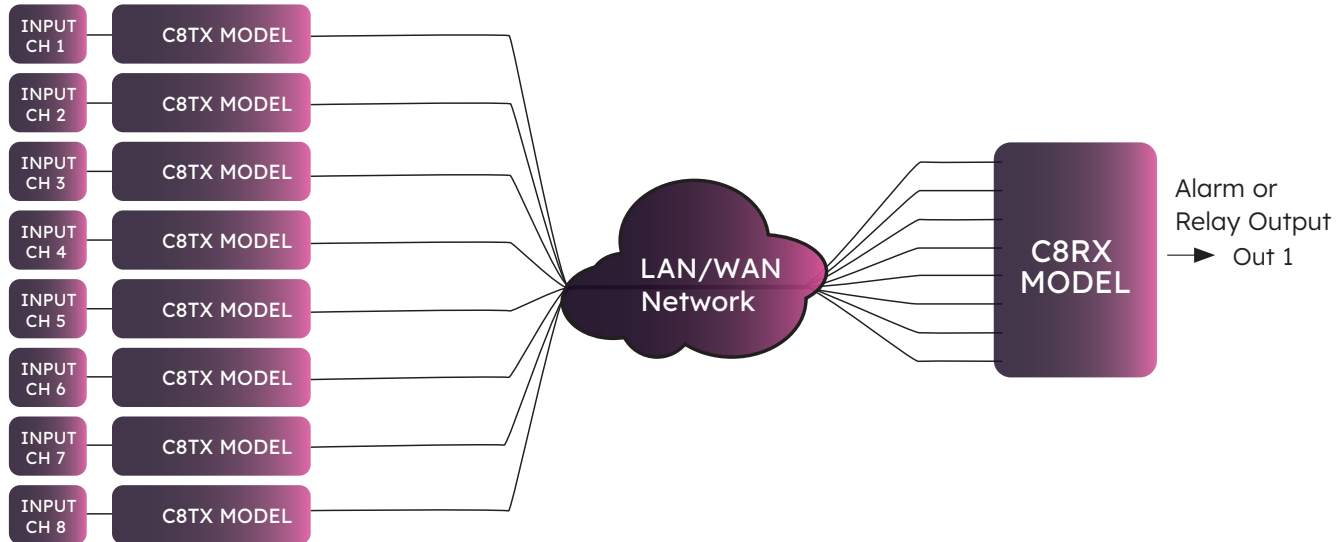
## Stand Alone Mode



## Many Devices to One Device



## Many Inputs to One Output



## Ordering Information

PART NUMBER	DESCRIPTION
CNFE3FX1TX2C8TX/M	DIN MOUNT INDUSTRIALLY HARDENED 10/100 MBPS 3-PORT INTELLIGENT ETHERNET SWITCH WITH CONTACT SERVER, 8 CONTACT INPUTS, 1 SFP FX + 2TX
CNFE3FX1TX2C8RX/M	DIN MOUNT INDUSTRIALLY HARDENED 10/100 MBPS 3-PORT INTELLIGENT ETHERNET SWITCH WITH CONTACT SERVER, 8 CONTACT OUTPUTS, 1 SFP FX + 2TX
CNFE3FX1TX2C4DX/M	DIN MOUNT INDUSTRIALLY HARDENED 10/100 MBPS 3-PORT INTELLIGENT ETHERNET SWITCH WITH CONTACT SERVER, 4 CONTACT INPUTS & OUTPUTS, 1 SFP FX + 2TX
INCLUDED ACCESSORIES	<p>Panel Mounting Adaptor Plate Kit with Mounting Hardware</p> <p>DIN Rail mounting Adaptor Clip Kit with Mounting Hardware</p>
OPTIONS	<p>DIN Rail Power supply (sold separately)</p> <p>User selection of Comnet SFP (see SFP Modules data sheet for product numbers and compatibility before ordering)</p> <p>[2] Add suffix '/C' for Conformally Coated Circuit Boards to extend to humidity-with-condensation and airborne particulate matter environments conditions (Extra charge, consult factory)</p>