



PORT
GUARDIAN



DIN RAIL



-40° TO +75°



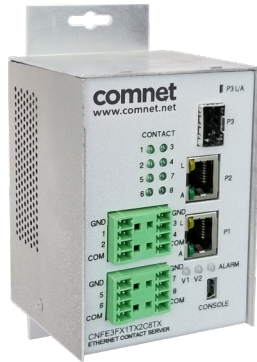
FLEXIBILITY
SFP



4 OR 8



2+1



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-TX 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.

The internal/self-contained 9 to 36 VDC or 24 VAC power supply features redundant power inputs, for the highest possible reliability. The simple to install, CNFE3FX1TX2C/M Series is DIN-rail or panel-mountable, and is ideal for mission-critical applications where very high levels of reliability and network availability are of the utmost importance.

FEATURES

- › Full duplex transmission of 10/100 Mbps Ethernet: (2) 10/100BASE-TX 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 and LLDP (Link Layer Discovery Protocol) 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
- › 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

Data Interface	Ethernet
Data Rate	10/100 Mbps
	IEEE 802.3 Compliant
	Full Duplex or Half Duplex Electrical Ports/Full Duplex Optical Port

Contacts

Response Time	25ms typical (network dependent)
Input/Output Channels	4 or 8 (model dependent)
Inputs	4 or 8 Opto-Isolated Wet or Dry (model dependent)
Wet Input Voltage	9-50 VDC
Input Isolation	3000 VRMS
Outputs	4 or 8 Form A Contacts User Selectable Normally Open or Normally Closed (model dependent)
Output Rating	60W @ 220 VDC or 250 VAC, non-resistive loads
Output Isolation	2500 VRMS

Fiber Connectors¹

Requires selection of sold-separately SFP modules. See ComNet data sheet for number, description, and compatibility of SFP modules

Connectors

Power	4-Position Screw Terminal Block
10/100BASE-TX	2 × RJ45
100BASE-FX	1 × SFP ¹ 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

Network Redundancy

STP / RSTP

Management

SNMP	SNMP V1/2c
HTTP	Web GUI Configuration Interface
CLI	Serial Command Line Interface

Switch Properties

Switching Latency	7 μs
Switching Bandwidth	600 Mbps
MAC Table	1K
Processing	Store-and-Forward
IGMP Multicast Groups	64

Software Features

Contact Outputs Normally Open or Normally Closed
Contact Mapping
RSTP (IEEE 802.1D/w)
Port Configuration, Status, Statistics
SNMP
Enable/Disable Ports
Port Guardian Physical Port Lockout
IGMP Snooping v2
SNMP Trap
LLDP
Static Multicast MAC Routing
Static MAC Lock Security
Active Ping Check with SNMP Trap, & Port Shutdown capability

Ethernet Standards

IEEE 802.3 for 10BASE-T
IEEE 802.3u for 100BASE-TX and 100BASE-FX
IEEE 802.1D for STP (Spanning Tree Protocol)
IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)
IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
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 LEDs	- 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	5.4 × 2.7 × 2.9 in (13.7 × 6.7 × 7.4 cm)
w/ DIN rail mount clips	3.9 × 2.7 × 3.6 in (9.9 × 6.7 × 9.1 cm)
Weight (unpacked)	1.5lbs (0.68kg)
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) ²
Contact Operations	1 × 10 ⁶ minimum

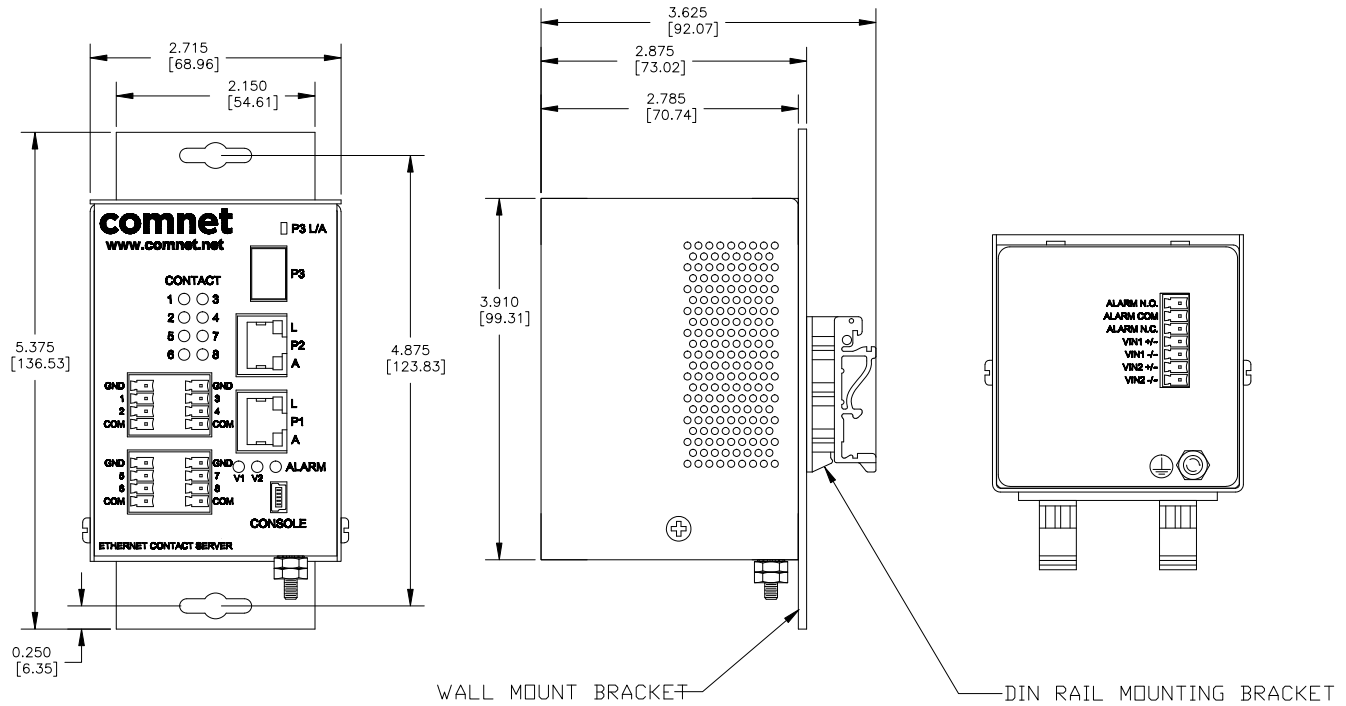
[1] Multimode fiber needs to meet or exceed fiber standard ITU-T G.651.
Single mode fiber needs to meet or exceed fiber standard ITU-T G.652

AGENCY COMPLIANCE



MADE IN THE
USA

OUTLINE AND INSTALLATION DRAWING



ORDERING INFORMATION

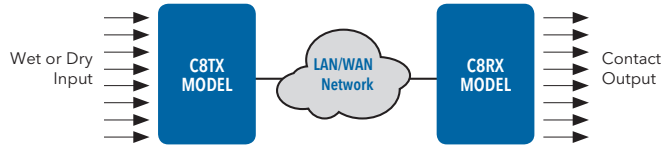
Part Number	Description
CNFE3FX1TX2C8TX/M	Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 8 Contact Inputs, 1 SFP FX + 2TX
CNFE3FX1TX2C8RX/M	Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 8 Contact Outputs, 1 SFP FX + 2TX
CNFE3FX1TX2C4DX/M	Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 4 Contact Inputs & Outputs, 1 SFP FX + 2TX
Included Accessories	Panel Mounting Adaptor Plate Kit with Mounting Hardware DIN Rail mounting Adaptor Clip Kit with Mounting Hardware
Options	DIN Rail Power supply (sold separately) User selection of ComNet SFP (see SFP Modules data sheet for product numbers and compatibility before ordering) [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)

Note: In a continuing effort to improve and advance technology, product specifications are subject to change without notice.



TYPICAL APPLICATIONS

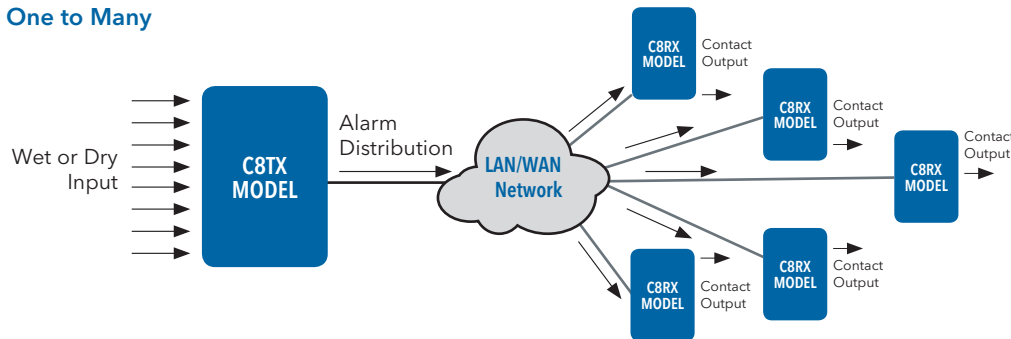
Device to Device (8 CH Simplex)



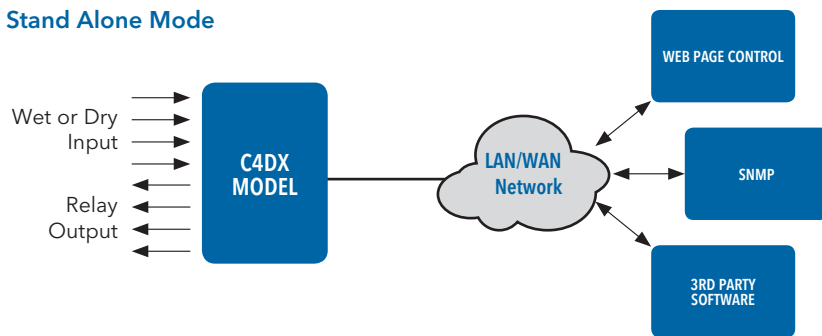
Device to Device (4 CH Duplex)



One to Many



Stand Alone Mode



Many to One

