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 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.

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 -40º to +75º 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

› 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
CNFE3FX1TX2C/M Series

Industrially Hardened 10/100 Mbps 3 Port Intelligent Ethernet Switch With Integrated Contact Closure Server

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: 60ms when paired one-to-one (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 × SFP¹ 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

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

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

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 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.
- ComFit Dimensions: 6.1 × 5.3 × 2.2 in (15.5 × 13.5 × 5.6 cm)
- Mini 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): <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)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

[2] Operating Humidity: 5% to 95% (Non-condensing)²
CNFE3FX1TX2C/M Series

Industrially Hardened 10/100 Mbps 3 Port Intelligent Ethernet Switch With Integrated Contact Closure Server

DIN MOUNT OUTLINE AND INSTALLATION DRAWING

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNFE3FX1TX2C8TX/M</td>
<td>DIN Mount Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 8 Contact Inputs, 1 SFP FX + 2TX</td>
</tr>
<tr>
<td>CNFE3FX1TX2C8RX/M</td>
<td>DIN Mount Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 8 Contact Outputs, 1 SFP FX + 2TX</td>
</tr>
<tr>
<td>CNFE3FX1TX2C4DX/M</td>
<td>DIN Mount Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 4 Contact Inputs &amp; Outputs, 1 SFP FX + 2TX</td>
</tr>
<tr>
<td>CNFE3FX1TX2C8TX</td>
<td>ComFit 2-slot Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 8 Contact Inputs, 1 SFP FX + 2TX</td>
</tr>
<tr>
<td>CNFE3FX1TX2C8RX</td>
<td>ComFit 2-slot Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 8 Contact Outputs, 1 SFP FX + 2TX</td>
</tr>
<tr>
<td>CNFE3FX1TX2C4DX</td>
<td>ComFit 2-slot Industrially hardened 10/100 Mbps 3-Port Intelligent Ethernet Switch With Contact Server, 4 Contact Inputs &amp; Outputs, 1 SFP FX + 2TX</td>
</tr>
</tbody>
</table>

Included Accessories
- Panel Mounting Adaptor Plate Kit with Mounting Hardware
- DIN Rail mounting Adaptor Clip Kit with Mounting Hardware (/M units only)

Options
- DIN Rail Power supply (sold separately)
- User selection of ComNet SFP (see SFP Modules data sheet for product numbers and compatibility before ordering)
- 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.
CNFE3FX1TX2C/M Series

Industrially Hardened 10/100 Mbps 3 Port Intelligent Ethernet Switch With Integrated Contact Closure Server

TYPICAL APPLICATIONS

Device to Device (8 CH Simplex)

Device to Device (4 CH Duplex)

One to Many

Stand Alone Mode - TX

Stand Alone Mode - RX
TYPICAL APPLICATIONS (cont’d)

Many Devices to One Device

Many Inputs to One Output

Low Power Consumption