HS-NCM-W, HS-NCM-MF, HS-NCM-SF, HS-NCM-WMF, HS-NCM-WSF, HS-NCM-MFSF

High-Speed Network Communications Modules

®

NOTIFIER

by Honeywell

Network Systems

General

The **High-Speed Network Communications Module (HS-NCM)** provides NOTIFIER's **NFS-320**, **NFS-640**, **NFS2-640**, **NFS-3030**, and **NFS2-3030** Fire Alarm Control Panels, **NCA** and **NCA-2** Network Control Annunciators, and **DVC** Digital Voice Command with a means to connect to **High-Speed NOTI•FIRE•NET™**. Six types of **HS-NCM** are available: **HS-NCM-W** for connecting nodes with twisted-pair wire, **HS-NCM-MF** for connecting nodes with multi-mode fiber-optic cable, **HS-NCM-SF** for connecting nodes with single-mode fiber-optic cable, **HS-NCM-WMF** for connecting wire and multi-mode fiber-optic medium on the same network, **HS-NCM-WSF** for connecting wire and single-mode fiber-optic mediums on the same network and **HS-NCM-MFSF** for connecting multi-mode and single-mode fiber optic mediums on the same network.

Each **HS-NCM** can accommodate up to two node addresses. For example, one **HS-NCM** can provide network communication for both an **NFS2-640** and an **NCA-2**.

When not connected to a fire alarm panel, the **HS-NCM** defaults to repeater mode and can be used to boost signal distances or to pass data transmissions between two differently configured network segments when wire and fiber co-exist on a network.


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HS-NCM

HS-NCM-W Features

- Supports twisted-pair wire medium.
- NFPA Style 4 (Class B) operation or NFPA Style 7 (Class A) operation.
- Transformer coupling provides electrical isolation between nodes.
- Pluggable terminal wiring with strain relief.
- Pluggable service connector (feeds signal directly through) in the event that power must be removed from a node.
- 12 Mb transmission rate.
- Data is regenerated at each node.
- Two network ports to allow simultaneous connection to fire alarm control panel and to programming computer.
- Enables software and database upload/download over **High-Speed NOTI•FIRE•NET™**.
- Up to 3,000 feet (914.4 m) between nodes in a point-to-point fashion (actual distance varies with wire quality).

HS-NCM-W Interconnections: When wiring consecutive HS-NCM-W boards, wiring may enter or exit at Port A or Port B. HS-NCM-W port-to-port wiring is polarity sensitive; use of Port A or Port B is not arbitrary. An **HS-NCM-W** may be connected to any of the following devices: **HS-NCM-W** (in another panel), **HS-NCM-WMF**, **HS-NCM-WSF**.

HS-NCM-W Switch Functions: The **HS-NCM-W** provides one set of switches to simplify network setup. Enable *ground fault detection* by setting "ON" switch SW4-1 (Channel A); switch SW4-2 (Channel B). *NOTE: Correct configuration is dependent on network design; refer to the* **High-Speed NOTI•FIRE•NET™** *manual, PN 54013).*

For further information and diagrams, refer to the *HS-NCM Installation Document*, 54014.
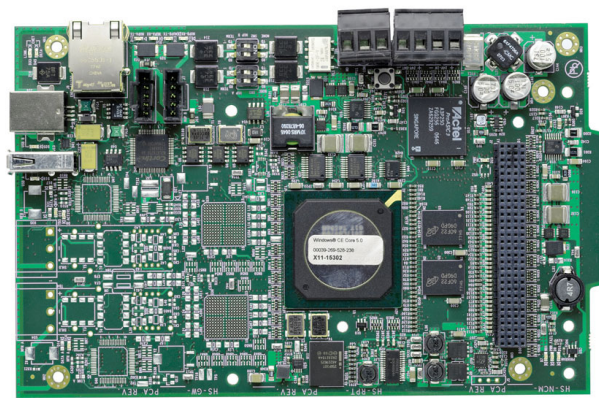
HS-NCM-MF and HS-NCM-SF Features

- Supports fiber-optic medium.
- NFPA Style 4 (Class B) or Style 7 (Class A) operation.
- Data is immune to all environmental noise.
- Optical isolation prevents ground loops.
- **High-Speed NOTI•FIRE•NET™** fiber-optic medium.
- Fiber type: 62.5/125 micrometers (multi-mode); 50/125 micrometers (multimode), or 9/125 micrometers (single-mode).
- Maximum attenuation is 10 dB with 62.5/125 µm cable, and 6.5 dB with 50/125 µm cable, and 30 dB with 9/125 µm cable.
- Wavelength (1): 1310 nanometers.
- Connectors: LC style.
- 100 Mb baud transmission rate.
- Data is regenerated at each node.
- Two network ports to allow simultaneous connection to fire alarm control panel and to programming computer.
- Enables software and database upload/download over **High-Speed NOTI•FIRE•NET™**.

HS-NCM-MF/SF Interconnections: When wiring consecutive nodes/repeaters, fiber cable must exit one board on Transmit (TX) and enter the next node/repeater on Receive (RX). The fiber-optic pair (RX, TX) from Port A of one node/repeater connects to Port B of another node/repeater. A HS-NCM-MF/SF may be connected to any of the following devices: **HS-NCM-MF/SF** (respectively) on another panel, **HS-NCM-WMF**, **HS-NCM-WSF, HS-NCM-MFSF**.

HS-NCM-WMF, HS-NCM-WSF, and HS-NCM-MFSF Features

- Supports twisted-pair wire and fiber-optic medium.
- NFPA Style 4 (Class B) operation or NFPA Style 7 (Class A) operation.
- Allows wire and fiber optic nodes to communicate as one network.
- Fiber type: 62.5/125 micrometers (multi-mode); 50/125 micrometers (multimode), or 9/125 micrometers (single-mode).
- Maximum attenuation is 10 dB with 62.5/125 μm cable, and 6.5 dB with 50/125 μm cable, and 30 dB with 9/125 μm cable.
- Wavelength (1): 1310 nanometers.
- Pluggable service connector (feeds signal directly through) in the event that power must be removed from a node.
- Data is regenerated at each node.
- Two network ports to allow simultaneous connection to fire alarm control panel and to programming computer.
- Enables software and database upload/download over **High-Speed NOTI•FIRE•NET**™.
- Up to 3,000 feet (914.4 m) between nodes in a point-to-point fashion (actual distance varies with wire quality).

HS-NCM-WMF/WSF/MFSF Interconnections: When wiring consecutive nodes/repeaters, fiber cable must exit one board on Transmit (TX) and enter the next node/repeater on Receive (RX). The fiber-optic pair (RX, TX) from Port A of one node/repeater connects to Port B of another node/repeater. An **HS-NCM-WMF/WSF/MFSF** may be connected to any of the following devices: **HS-NCM-WMF, HS-NCM-WSF or HS-NCM-MFSF** on another panel, **HS-NCM-MF, HS-NCM-SF.**

Common Specifications

Temperature and humidity ranges: This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at a relative humidity (noncondensing) of 85% at 30°C (86°F) per NFPA, and 93% ± 2% at 32°C ± 2°C (89.6°F ± 1.1°F) per ULC. However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and all peripherals be installed in an environment with a nominal room temperature of 15°C to 27°C (60°F to 80°F).

Weight: 5.2 ounces (147.4 grams)

Power supply: 24 VDC @ 400 mA

Mounting

All models of the **HS-NCM** can be installed in any standard chassis such as the **CHS-4L**, **CHS-M2**, **CHS-M3**, **CHS-4N** or **CPU2-640 chassis** *(see panel sheets)*. Additionally, the HS-NCM-W can be door-mounted on the **ADP-4B** dress panel on a single-space blank plate (**BMP-1**) for mounting in an **CAB-4** Series cabinet.

Agency Listings and Approvals

The following listings and approvals apply to the **HS-NCM**. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S635
- **ULC Listed:** S635
- **CSFM**: 7300-0028:0257, 7165-0028:0224
- **FM Approved**
- **FDNY**: COA#6022

Product Line Information

HS-NCM-W: High-Speed Network Communications Module, twisted-pair wire interface.

HS-NCM-MF: High-Speed Network Communications Module, fiber-optic cable interface (multi-mode).

HS-NCM-SF: High-Speed Network Communications Module, fiber-optic cable interface (single-mode)

HS-NCM-WMF: High-Speed Network Communications Module, wire and fiber-optic cable interface (wire/multi-mode).

HS-NCM-WSF: High-Speed Network Communications Module, wire and fiber-optic cable interface (wire/single-mode).

HS-NCM-MFSF: High-Speed Network Communications Module, fiber-optic cable interface (multi-mode/single-mode).

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QUALITY SYSTEMS

This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

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