

Metasys® Network Automation Engine (NAE)



Network Automation Engine (NAE)

Description

The Network Automation Engine (NAE) brings an entirely new generation of technology into the Metasys® Building Automation System (BAS). The NAE is a Web-enabled network controller that communicates using Information Technology (IT) and Internet languages. At the same time, the NAE uses the communication technology of the building automation industry, including BACnet™ protocol, LONWORKS® network, and the N2 Bus. Using this technology, the NAE monitors and supervises Heating, Ventilating, and

Air-Conditioning (HVAC) equipment, lighting, security, and access control.

A single NAE or a network of multiple NAE devices within a building provides monitoring and control, alarm and event management, data exchange, trending, energy management, scheduling, and data storage. The NAE supports a single or multiple Web browser user interface with password access control and the security protection technology of the IT industry.

Features

- communication using commonly accepted IT standards at the automation and enterprise level
- Web browser-based user interface
- Site Director function in one NAE or in an Application and Data Server (ADS) for large installations
- user interface and on-line system configuration software embedded in NAE
- supervision of field controller networks including N2 Bus, LONWORKS network, and BACnet enabled devices.
- multiple connection options for data access.

Applications

The NAE is specifically designed to efficiently monitor and control mechanical and electrical systems in a building such as:

- heating, ventilation, and air conditioning units
- central equipment including chillers and boilers
- lighting and electrical distribution
- power generation and energy monitoring equipment
- interfaces to security and fire detection systems

The NAE gathers monitored equipment data from the field control devices. The NAE coordinates commands and sends them to the equipment at the required priority for the safe operation of the building.

To Order

Specify the code number in the following selection chart.

Selection Chart

Code Number	Description
MS-NAE5510-0	NAE with N2 Bus
MS-NAE5511-0	NAE with N2 Bus, modem
MS-NAE5520-0	NAE with N2 Bus, LONWORKS compatible card
MS-NAE5521-0	NAE with N2 Bus, modem, LONWORKS compatible card

Note: All models are also available in a Buy American version (add a G after the code number). For the European version, add an E after the code number.

Repair Parts

Code Number	Description
MS-NAE5510-700	NAE with N2 Bus, Repair Part
MS-NAE5511-700	NAE with N2 Bus, modem, Repair Part
MS-NAE5520-700	NAE with N2 Bus, LONWORKS compatible card, Repair Part
MS-NAE5521-700	NAE with N2 Bus, modem, LONWORKS compatible card, Repair Part

Specifications

Metasys® Network Automation Engine (NAE)	
Power	Nominal 24 VAC at 50/60 Hz (min. 20 VAC to max. 30 VAC)
Power Consumption	50 VA maximum
Ambient Operating Temperature	0 to 50°C (32 to 122°F)
Ambient Operating Conditions	10 to 90% RH; 30°C (86°F) maximum dew point
Ambient Storage Temperature	-40 to 70°C (-40 to 158°F)
Ambient Storage Conditions	5 to 95% RH; 30°C (86°F) maximum dew point
Data Protection Battery	Data protection on power failure. Rechargeable gel cell battery; 12V 1.2Ah, typical life 3 to 5 years at 21°C (70°F). Order code MS-BAT1010-0.
Clock Battery	Maintains real-time clock through a power failure. On board cell; typical life 10 years at 21°C (70°F)
Processor	300 MHz Pentium® class Geode GX1 MMX enhanced processor (32 bit)
Memory	256 MB Flash card EPROM (non-volatile memory for operating system, configuration data and data storage and backup) 256 MB Synchronous DRAM (Dynamic Random Access Memory) for system data dynamic memory
Operating System	Microsoft® Windows® XP embedded operating system
Network and Serial Interfaces	One Ethernet port; 10/100 Mb; 8-pin RJ-45 connector Two optically isolated RS-485 interfaces for N2 Bus; 9600 baud; pluggable and keyed 4 position terminal blocks Two RS-232-C serial ports; all standard baud rates supported; standard 9-pin sub-D connectors Two USB serial ports, standard USB connectors Options: One LONWORKS compatible port, FTT10; pluggable and keyed 3 position terminal block One telephone port for internal modem; up to 56 KBaud; 6-pin RJ-11 connector

Metasys® Network Automation Engine (NAE) (Continued)

Specifications (Continued)

Metasys® Network Automation Engine (NAE)	
Dimensions (L x W x H)	332 x 226 x 96.5 mm (13.1 x 8.9 x 3.8 in.) (including mounting feet). Area required for mounting the NAE (minimum): 408 x 303 mm (16.1 x 12.0 in.) with 148 mm (5.8 in.) free depth.
Housing	Plastic housing with internal metal shield. Plastic material: ABS + polycarbonate UL94 5VB; Protection: IP30 (IEC529)
Mounting	On flat surface with screws on four mounting feet or on dual DIN rail.
Shipping Weight	2.9 kg (6.4 lb.)
Agency Listings	UL Listed, CSA Certified, UL 916 Energy Management Listing, CSA C22.2 No. 205, CFR47 FCC Part 15 Class A, CE Mark, and C-Tick Directive CE Directive 89/336/EEC (EN50081-1, EN50082-2) (order -E models)