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Q7055A
BUILDING NETWORK ADAPTERS BNA-1C, -2CS, -2DN

FEATURES

- **TCP/IP network capable.**
- **Offers wide range of network connectivity options.**
- **Easy configurable network interface.**
- **Online system diagnostic support.**
- **Optional wall and rack mounting.**
- **Cost effective replacement for dial-up connections.**
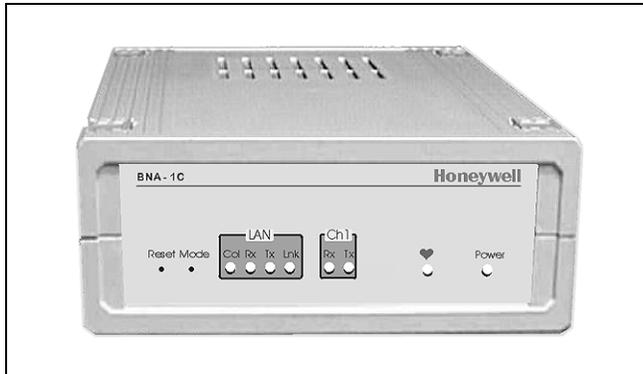
APPLICATION

The Building Network Adapter (BNA) delivers exceptional price/performance to meet the requirements of both building owners and service providers.

With its combination of scalable performance, density and low per-port pricing, the BNA allows network-layer capabilities to be extended to a much wider range of network configurations and environments. Customers can now gain the advantages of high-peformance network and services, including traffic management, to more locations throughout the network.

The BNA-1C supports a single RS-485 DC coupled C-Bus compatible communication channel for XL500 family devices with up to 76.8 kbps and single AUI, RS-232 and 10BaseT-interfaces.

The BNA-2CS supports two RS-485 DC coupled C/S/FS-90 Bus compatible communication channels for different applications as well as XL500 family devices with up to 76.8 kpbs and single AUI, RS-232 and 10BaseT-interfaces. Support for S-Bus and FS90 Bus varies by system type.

The BNA-2DN supports two RS-485 AC coupled Manchester encoded L1/L2-Bus compatible communication channels and single AUI, RS-232 and 10BaseT-interfaces.

The BNA uses the LAN connection to provide a seamless communication to the requesting device.

Status information, like *LAN communication activiity*, *field bus traffic communication* and *system heart beat* of the BNA is indicated by LEDs on the device front.

SPECIFICATIONS

Models:
Q7055A1007 Building Network Adapter BNA-1C.
Q7055A1015 Building Network Adapter BNA-2CS.
Q7055A1023 Building Network Adapter BNA-2DN.

Electrical Ratings:
Supply Voltage: 24 Vac, 50 to 60 Hz, 24 Vdc ± 10% (external power supply required).
Power Consumption: 5 VA (connected via 10BaseT, twisted pair), 12 VA (connected via 10Base5, AUI).

Temperature Ratings:
Operating: 32°F to 122°F (0°C to 50°C).
Storage: -31°F to +160°F (-35°C to +70°C).

Humidity Ratings: 5 to 95% RH, non-condensing.

System Data:
Processor: 25 MHz, MC68EN360, 32 bit microprocessor (4.5 MIPS).
Data Transfers: 10 Mbit/sec., 802.3 Ethernet.
LAN Interfaces: AUI or 10BaseT (RJ45).
Field Bus: RS-485 AC coupled Manchester encoded channels (L1/L2-Bus compatible).
Device Interface: Serial RS-232.
Memory: 4MB SRAM, 2 MB flash.
MTBF: > 100,000h.
Safety:
    Protection Standard: IP20 acc. to EN60529.
    Protection Class: II acc. to EN60730-1.
    Flame Retardant: V0 acc. to UL 94.

CE

Dimensions: 3 in. (76 mm) high x 6-1/4 in. (158 mm) wide x 7-5/16 in. (200 mm) deep.

Weight: 1.76 lb (.74 kg).

Approvals:
Electromagnetic Compatibility (EMC): EN50081-1 and EN50082-2.
Electromagnetic Emission (EME): FCC Class A.
Energy Management: UL 916.
Fire Protection and Smoke Control: UL 864 (pending).

Additional Equipment:
Power Supply: WM080-1950 Elpac Power Systems, 120 Vac/60 hz, 0.16A input, 24 Vdc, 0.33A output, wall mounted power cube (not included, purchase locally).

SYSTEM OVERVIEW

Fig. 1 shows an application example of the BNA family devices in a Building Management System.

Typical characteristics of the BNA components are as follows (see Fig. 2):

BNA: The BNA contains a high-speed state-of-the-art Motorola 32-bit microprocesor including a communication coprocessor designed for maximum performance. It is designed for reliable and robust operation under a wide range of operating conditions.

AUI: 15-pin AUI female Ethernet LAN connector for coaxial and fiber optic linkage (with transceiver).

10BaseT: 10BaseT RJ-485 Ethernet LAN connector meets the requirements of ANSI/TIA/EIA 586 Category 5 for unshielded twisted pair connections.

RS-232: 9-pin SUB-D male RS-232 connector, electrically isolated, PC pin compatible, protected against spikes.

Field Bus: 3-pin connectors for field bus connection (channels 1 and 2) electrically isolated, meets the EMC and FCC requirements.

Power: 2-pole Phoenix power connector for 24 Vac/dc power supplies. Suitable for use with off-the-shelf power supplies.
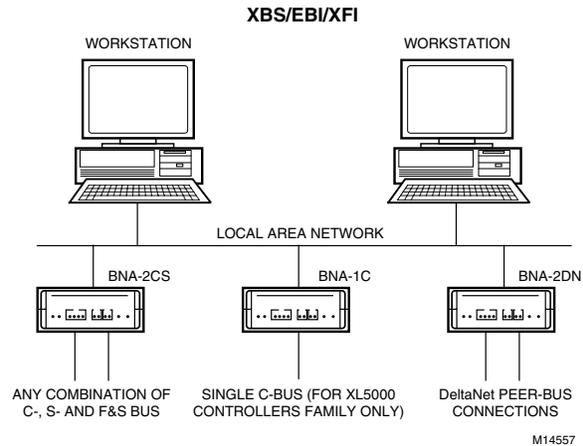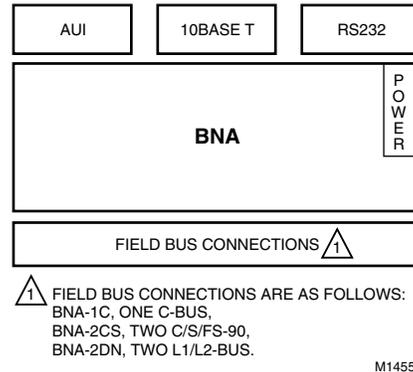

Fig. 1. Application block diagram.

Fig. 2. BNA Components.

ORDERING INFORMATION

Model No.	Description	Shipping Weight lb (kg)
Q7055A1007	BNA-1C Building Network Adapter supporting a single RS-485 DC coupled C-Bus.	1.76 (.74 kg)
Q7055A1015	BNA-2CS Building Network Adapter supporting two RS-485 C/S/FS90 compatible buses.	
Q7055A1023	BNA-2DN Building Network Adapter supporting two RS-485 AC coupled L1/L2 compatible buses.	

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