Honeywell

Q7055B1047
Open View Net Server (OVN)

INSTALLATION INSTRUCTIONS

⚠ WARNING

This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the Instructions Manual, may cause interference with radio communication. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 or FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case, users at their own expense will be required to take whatever measures may be required to correct the interference. Any unauthorized modification of this equipment may result in the revocation of the owner's authority to continue its operation.

The Q7055B1047 Open View Net Server (OVN) is a Web-enabled operator interface that facilitates secure and easy access to a Honeywell Building Management System (BMS) through the Internet. It provides a connection of a Honeywell XL5000 controller communication bus to an industry standard TCP/IP Ethernet LAN/WAN, delivering 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 OVN allows network-layer capabilities to be extended to a much wider range of network configurations and environments. OVN supports a full range of Building Management System (BMS) features such as commanding of points as well as performing complex functions like alarm and schedule management. Advanced features like graphics, trends and reports give enhanced flexibility and total control when accessing the Building Management System from a remote location. Customers can now gain the advantages of high-performance network and services, including traffic management, to more locations throughout the network.

This INSTALLATION INSTRUCTIONS document covers the following OVN server:

— Q7055B1047. Provides a single RS-485 DC coupled C-Bus compatible communication channel for as many as five Excel 5000™ family devices with up to 76.8 kbps and single RS-232 and 10/100BaseT interfaces.

Additionally, each OVN is equipped with a RJ-45 10/100BaseT connector, plus an RS-232 interface. (See Fig. 1).

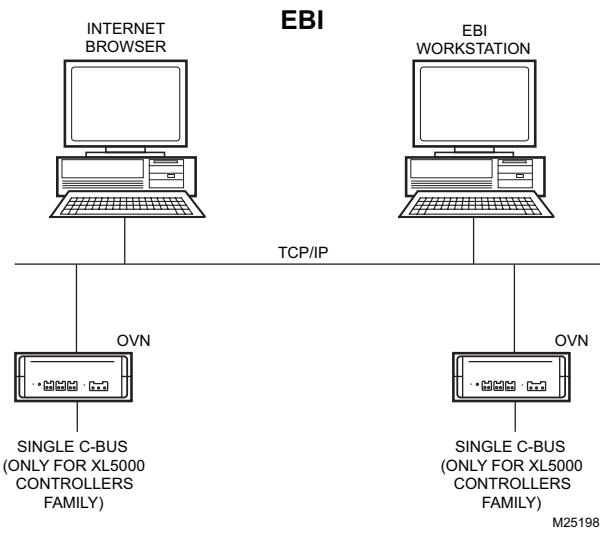


Fig. 1. OVN network.

The Q7055B1047 OVN Server is used in systems for signaling in energy management systems (UL 916). In addition, the following standards apply: requirements of Canadian province and local building codes; CEC 22.1 Canadian Code.

SPECIFICATIONS

Models: Q7055B1047 Open View Net Server (OVN).

Electrical Ratings:
Supply Voltage: 24 Vac, 50 to 60 Hz, 24 Vdc (external power supply required).
Power Consumption: 8 VA.

Temperature Ratings:
Operating: 32° F to 120° F (0° C to 49° C).
Storage: -13° F to +185° F (-25° C to +85° C).

Humidity Ratings: 5 to 93% RH, non-condensing.

System Data:
Processor: AMD SC2200, 266 MHz, 32 bit microprocessor.
Data Transfer: 10/100 Mbit/sec., 802.3 Ethernet.
LAN Interface: 10/100BaseT (RJ-45).
Field Bus: RS-485 DC coupled XL5000 C Bus.
Device Interface: Serial RS-232.
Memory: SODIMM, Compact Flash.
OVN supports a maximum of 2,000 points (access/subscription).
MTBF: 100,000 hours.

Safety:
Protection Standard: IP20 according to EN60529.
Protection Class: II according to EN60730-1.
Flame Retardant: V0 according to UL 94.

Dimensions (W x H x D): 2-13/16 in. (72 mm) x 8-13/16 in. (224 mm) x 7-13/16 in. (199 mm).

Weight: 3.0 lb (1.4 kg).

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

Additional Equipment:
DC Power Supply: Jameco® Model No. DDU240050, 24 Vdc, 0.500 mA output, wall mounted power cube, Class 2.
AC Power Supply: 120 Vac/50 to 60 Hz input, 24 Vac output,14507287 series, or 14507350-002, listed.
Mounting: 14006090-555151 series communication panels. 50013930-001 Mounting Bracket

BEFORE INSTALLATION

Perform the following steps prior to installing the OVN server:

1. Verify that the product has been received without damage.
2. Verify that the correct OVN server has been delivered.
3. Check the package contents. The following items are included in each product package:
   - Building Network Adapter device.
   - Building Network Adapter driver software CD.
   - Building Network Adapter Installation Instructions.
   - Bag of installation materials as follows: one 3-pole Phoenix power connector, two 2-pole Phoenix controller bus channel connectors, four optional wall mounting clips, four small inserts and four screws.
4. Read the CONNECTIONS section carefully prior to connecting power and data interface cables to the OVN.
5. Refer to the INSTALLATION INSTRUCTIONS for each component connected to the OVN:
   - Form no. 95-7481, Excel 100, 500, 600 Series. Controller Subpanel Installation Instructions.
   - Form no. 95-7524, Excel 500/600 Control System Installation Instructions.
   - Form no. 95-7705, EBI™ LAN Interface Installation Instructions.

WIRING

⚠ CAUTION

Shock Hazard.
Removal of the OVN cover can result in electrical shock.

Do not remove cover. There are no user serviceable parts inside.

Location and Mounting

The OVN server can be mounted in several ways; as a single server or wall/cabinet mounted.

Single Server

Fig. 2 shows the single OVN server operating position; for example, on a desk.

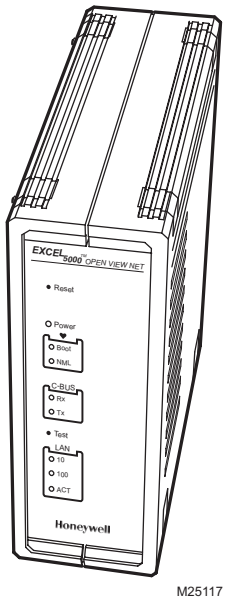


Fig. 2. Single server operating position.

Wall Mounting

It is also possible to mount the OVN server to a wall. The following sequence describes how the server should be prepared prior to mounting it on a wall (see Fig. 3).

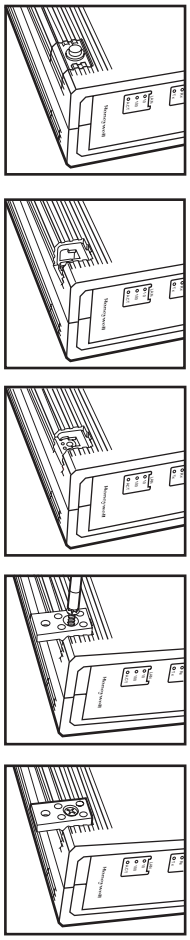
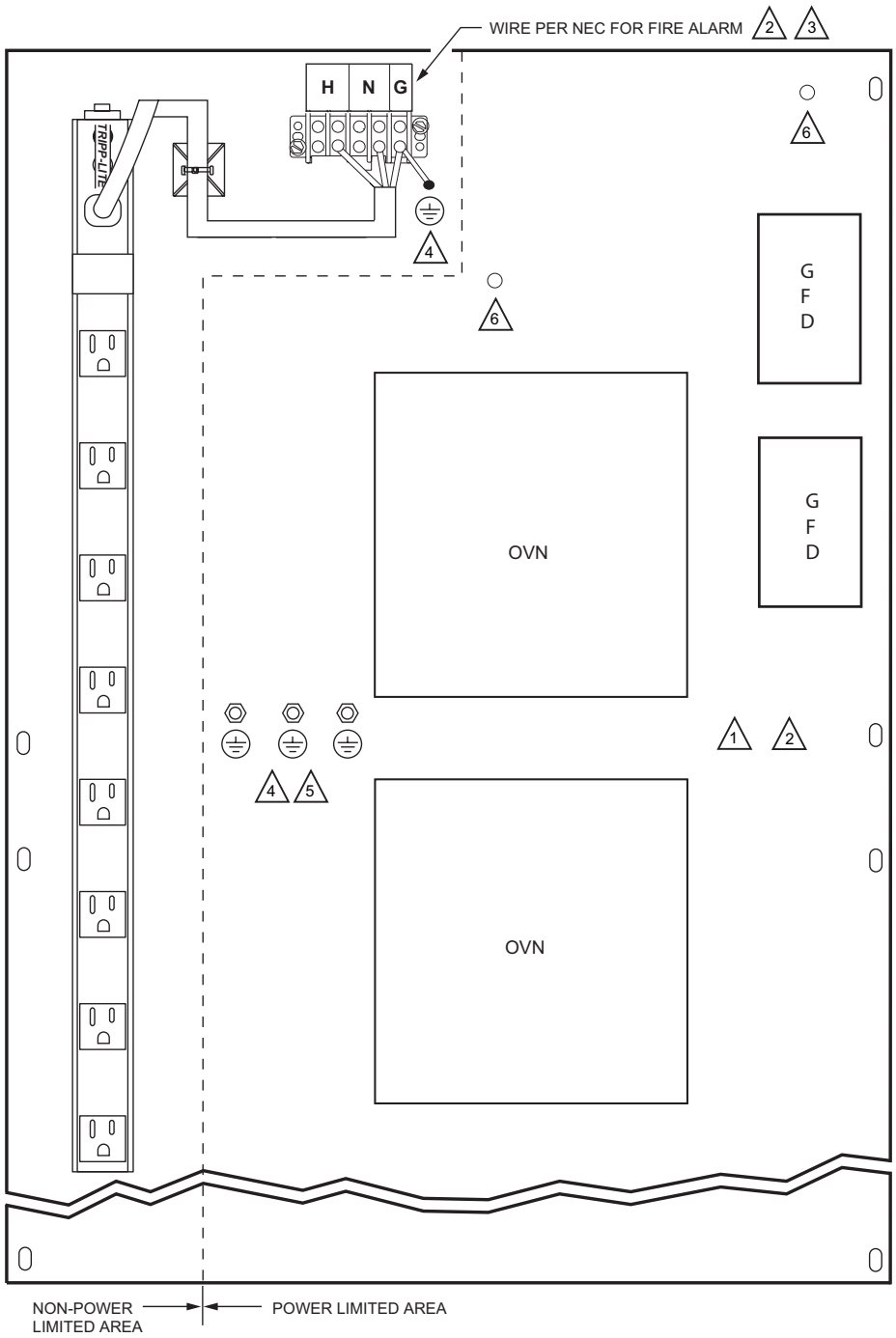


Fig. 3. OVN wall mount.

Communications Panel Mounting

It is also possible to mount the OVN Server in the 14006090-555151 series EBI Communications Panel (see Fig. 4).



1 TYPICAL MOUNTING LOCATIONS FOR 14005680-089582/592 FIBER OPTIC INTERFACE.

2 ALL WIRING MUST BE IN ACCORDANCE WITH NFPA 70, NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.

3 G = GROUNDING CONDUCTOR

4 ⏚ GROUND CONNECTION. 8-32 STUD WITH 8-32 KEPS NUT.

5 GROUND CONNECTION FOR 14507678 SERIES PNET PROTECTOR AND OTHER LOW VOLTAGE EQUIPMENT.

6 DRILLED MOUNTING HOLES FOR 14507719-001 8 PORT ETHERNET HUB (IF USED).

NOTE: SYSTEM WIRING IS CLASSIFIED AS EITHER POWER LIMITED OR NON-POWER LIMITED PER NEC ARTICLE 760. ALL POWER LIMITED WIRING MUST BE SEPARATED FROM ALL NON-POWER LIMITED WIRING BY A MINIMUM DISTANCE OF 1/4 IN. (6 MM).

M25120

Fig. 4. Typical mounting of Q7055B1047 OVN Assembly on 14006090-555151 series Communication Panel.

CONNECTIONS

This section describes how to connect power and the field bus to the OVN server. A supply pack with installation material containing the required connectors for power and the field bus are shipped with the server.

Power Connection

The OVN server requires an external power supply with the following specifications: 24 Vac, 50 Hz to 60 Hz, or 24 Vdc.

Typical power supplies include:
DC Power Supply: Jameco Model No. DDU240050, 24 Vdc, 0.500 mA output, wall mounted power cube, Class 2.
AC Power Supply: 120 Vac/50 to 60 Hz input, 24 Vac output,14507287 series, 14507350-002, listed.
Power consumption of the OVN server is 8 VA.
For the power connection, the 3-pole Phoenix connector is required (included).

Wire the power cable as follows:

1. Cut off the original connector at the end of the cable.
2. Strip the two power cable ends and insert each cable end into the openings of the 3-pole Phoenix connectors that are marked for power.
3. Fasten them with a screwdriver.
4. Connect a chassis ground to the third position on this connector as marked.

NOTE: The polarity (+/-) of the 3-pole Phoenix power connector for DC power supplies is **don't care**.

Field Bus Connection

The 2-pole Phoenix connector (included) is used to connect to the field bus (see Fig. 12).

Consult form no. 74-4022, Q7055B1047 Open View Net Server Checkout & Test for additional information on field bus wiring.

CABLES AND CONNECTORS

DB9F Null-Modem Connector

See Fig. 5 for serial connectors.

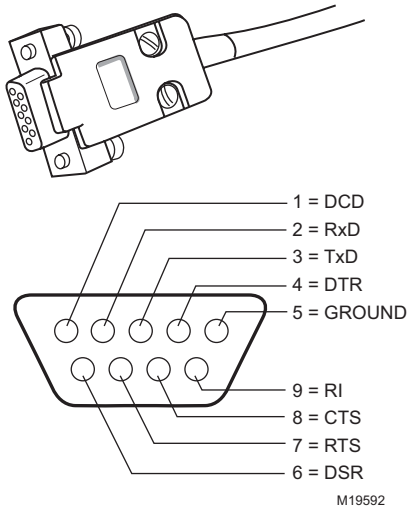


Fig. 5. Serial connector (female connector is numbered as shown).

Fig. 6 shows how to configure a DB9F Null-Modem Cable.

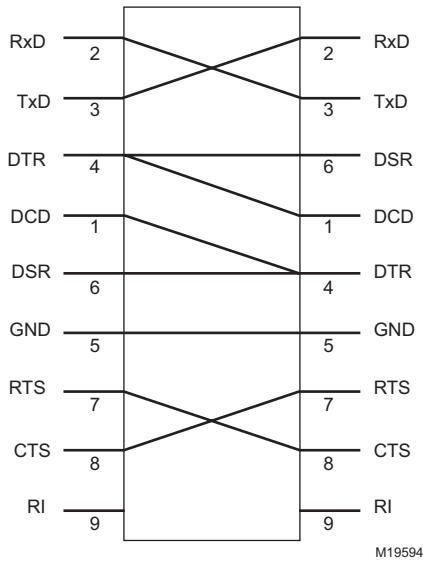


Fig. 6. Signal connections for DB9F Null-Modem Cable.

Ethernet Connection

See Fig. 7 for OVN Ethernet connection.

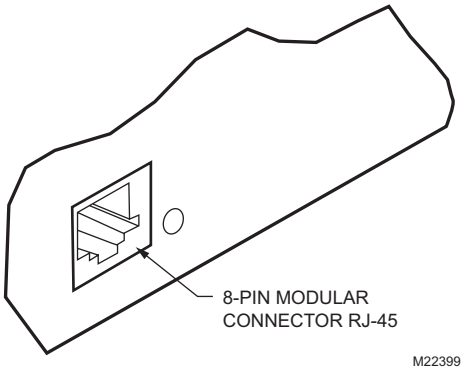


Fig. 7. OVN Ethernet connector.

RJ-45 LAN Connector

The OVN provides a standard RJ-45 connector for 10/100BaseT Ethernet LAN connection. This section describes the pin layout for the RJ-45 connector. Most Ethernet local area networks use twisted pair wiring. 10/100BaseT networks are physically laid out in a star topology, where each piece of equipment on the network is connected to a central hub. The wiring is connected to devices using a plug that resembles a phone jack called RJ-45. See Table 1 for RJ-45 signals.

Table 1. RJ-45 Signals.

Pin Number	Signal Name
1	Transmit (TX) +
2	Transmit (TX) -
3	Receive (RCV) +
4	Reserved
5	Reserved
6	Receive (RCV) -
7	Reserved
8	Reserved

Connect OVN to HUB

To connect a OVN Server to a LAN via an Ethernet Hub, the required cable should be configured as shown in Fig. 8.

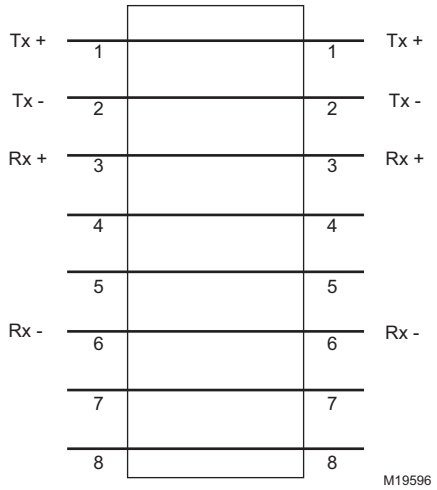


Fig. 8. Straight-through pinning for OVN to Ethernet Hub connections.

Connect OVN to Workstation

When an OVN needs a direct connection to a workstation without using an Ethernet Hub, a crossover cable is required. Fig. 9 shows how the different signals should be connected.

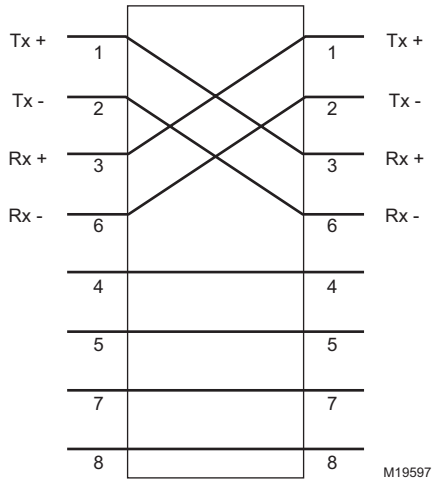


Fig. 9. Crossover pinning for OVN to workstation, direct connections.

COMMISSIONING

Finish the installation by commissioning the OVN in accordance with form no. 74-4022, Q7055B1047 Open View Net Server Checkout & Test.

OPERATION

For complete operating instructions, refer to form no. 74-4036, Open View Net User's Guide.

Location of Parts and Controls

Refer to Figures. 10 and 11 and the following descriptions for the location and function of parts and controls.

1—RESET

Hardware reset button. Located directly behind the small hole in the front panel. To reach this button, a pointed object like a sharp pen or an unfolded paper clip is necessary. Pressing this button resets the Excel 5000 Open View Net Server immediately.

2—POWER

Power indicator. This LED lights up when power is connected to the Excel 5000 Open View Net Server.

3—HEARTBEAT LEDS

The BOOT and NML LEDs indicate the status of the Excel 5000 Open View Net Server. The BOOT LED blinks (Red) during boot up. The NML LED lights (Green) during the normal operation.

4—C-BUS

C-Bus activity display. This display contains two green LEDs; one showing the Excel 5000 Open View Net Server receive activity (Rx), and the other showing the Excel 5000 Open View Net Server transmit activity (Tx).

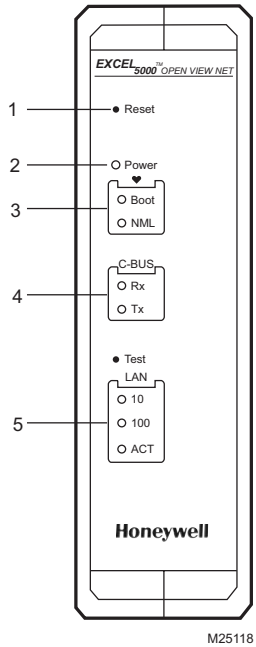


Fig. 10. Excel 5000 Open View Net Server front panel.

5—LAN

Local Area Network (LAN) activity display. Shows the actual LAN traffic status using three LEDs:

— **10LNK**. Ethernet speed of 10 mbps indicator (Green). If this LED is lit, then the Ethernet link is operating at 10 mbps.

— **100LNK.** Ethernet speed of 100 mbps indicator (Green). If this LED is lit, then the Ethernet link is operating at 100 mbps.

— **ACTIVITY.** Link activity indicator (Green) will blink if there is any activity (transmission/reception) on the LAN.

6—AC/DC IN 24 V

Power connector for 24 Vac (50 Hz to 60Hz) or 24 Vdc power supplies and chassis ground. Power consumption is 8 VA (connected via 10/100BaseT, cable). An external power supply is required.

7—10/100BASET

10/100BaseT RJ-45 Ethernet LAN-connector, meets the requirements of ANSI/TIA/EIA 586 Category 5, for unshielded twisted pair connections.

8—RS-232

9-pin SUB-D male RS-232 connector, electrically isolated, PC pin compatible, protected against spikes. This interface is used for initial server setup and requires a standard Null-Modem cable when interfacing to a PC.

9—C-BUS

2-pin connector for field bus channel 1 connection, electrically isolated, meets EMC and FCC requirements.

10—C-BUS TERMINATION SWITCH

This switch is used to select field bus termination and biasing.

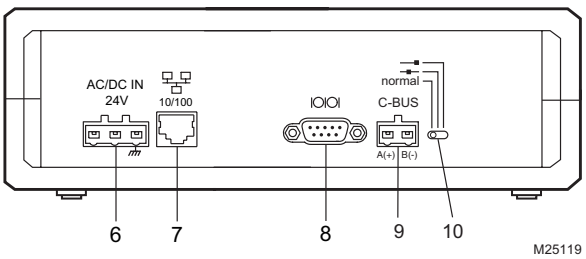


Fig. 11. Excel 5000 Open View Net Server rear panel.

The system must be maintained in accordance with the system documentation and procedures and practices contained in applicable standards. The Q7055B1047 OVN Server has no user replaceable fuses.

For service, contact your local Honeywell Automation & Control Solutions office as listed in the phone book, or contact a regional office as shown at the end of this document.

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