Honeywell

QS7800A
Network Interface ControlBus™ Module for 7800 SERIES Relay Modules

PRODUCT DATA

APPLICATION

The QS7800A Network Interface ControlBus™ Module allows remote monitoring and diagnostics of the 7800 SERIES Relay Modules.

FEATURES

- **Up to six ControlBus™ Modules per Network Interface Unit.**
- **Local and remote annunciation of 7800 SERIES Relay Module faults.**
- **Personal computer user interface.**
- **Modular construction.**
- **Microsoft Windows™ based Combustion System Manager® user interface.**

Contents

65-0092-4

SPECIFICATIONS

Models:
QS7800A1001 Network Interface ControlBus™ Module for use with the 7800 SERIES Relay Modules and Q7700A1014 and Q7700B1004 Network Interface Unit.
QS7800A1014 Network Interface ControlBus™ Module for use with the S7800 Series 1 Keyboard Display Module.

Electrical Ratings:
ControlBus™ Communication.
Current Draw: 75 mA.

Electrical Connectors (included):
200603 ControlBus™ Three-Prong Electrical Connector.
203541 5-Wire Connector for S7800 Keyboard Display Module

Environmental Ratings:
Ambient Temperature:
Operating: 32°F to 130°F (0°C to 54°C).
Storage: -30°F to +150°F (-34°C to +66°C).
Humidity: Operating 85 percent relative humidity, continuous, noncondensing.
Vibration: Continuous 0.5G.
Enclosure: NEMA 1.

Dimensions: See Fig. 1.

Weight: 8 oz (227 g), unpacked.

Accessories:
221237/1698 Cover Assembly, Q7700 Network Interface Unit.
221240/1698 Cover Assembly, Q7700 Electrical Enclosure, Network Interface Unit.
202433 Slot Inserts, ControlBus™ Slots Base Unit.
200603 ControlBus™ Electrical Connector.

Approvals:
Underwriters Laboratories Inc., File No. MP268, Guide No. MCCZ2.
Canadian Standards Association LR80141 .
Federal Communications Commission, Part 15, Class A Emissions, Part 68.
FCC Registration Number HS92SJ-10735-DT-E.
Canadian Department of Communication CS-03, Certification Number 573-3459A.

IMPORTANT

This equipment complies with the requirements in part 15 of FCC rules for a Class A computing device. Operation of this equipment in a residential area can cause unacceptable interference with radio and television reception that requires the operator to take whatever steps are necessary to correct interference.

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 of 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, user 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.

Canadian EMI: This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe A prescrites dans le Règlement sur le brouillage radioeléctrique édicté par le ministère des Communications du Canada.

ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Home and Building Control Sales Office (check white pages of your phone directory).
2. Home and Building Control Customer Relations
   Honeywell, 1885 Douglas Drive North
   Minneapolis, Minnesota 55422-4386

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Scarborough, Ontario M1V 4Z9.
International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

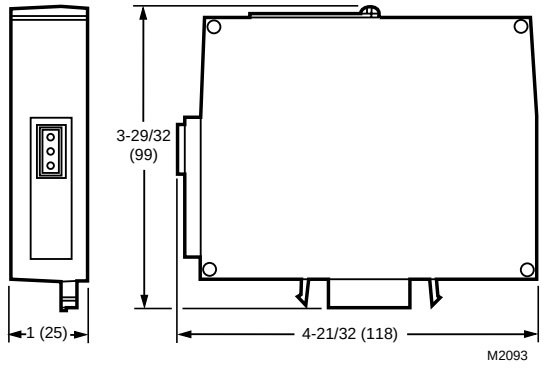

Fig. 1. QS7800A Network Interface ControlBus™ Module dimensions in in. (mm).

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. Check out the product after installation, as provided in the Q7700 Network Interface Unit instructions, form 63-2278.
5. Make sure that repairs are made only by the manufacturer.
6. If trouble develops, disconnect the equipment from the modem and determine the cause of the fault. Reconnect only when the problem is corrected.

⚠ WARNING

Electrical Shock Hazard.
Can cause severe injury, death or property damage.
Disconnect power supply before beginning installation to prevent electrical shock and equipment damage. More than one power supply disconnection can be involved.

Wiring must comply with all applicable codes, ordinances and regulations.

Refer to Fig. 6 for proper system wiring.

⚠ CAUTION

Equipment Damage Hazard.
Can cause damage to equipment circuits.
Do not plug or unplug any Network Interface Unit ControlBus™ Module or electrical connectors with the power on. Make sure that power is off to protect against equipment damage.

Humidity

Install the Network Interface Unit where the relative humidity never reaches the saturation point. The Network Interface Unit is designed to operate in an 85 percent relative humidity continuous noncondensing moisture environment. Condensing moisture can result in improper operation.

Vibration

Do not install the Network Interface Unit where it can be subjected to excessive vibration in excess of 0.5G continuous maximum vibration.

Weather

The Network Interface Unit is not designed to be weather tight. If installed outdoors, provide protection for the Network Interface Unit.

Mounting the Network Interface Plug-in Card

NOTE: For installation dimensions, see Fig. 1.

1. Mount the ControlBus™ Module in the Network Interface Unit (see Fig. 2). Do not mount the Network Interface Unit with the Interface ControlBus™ Module edge connector slots facing down.
2. Insert the ControlBus™ Module with the electrical connector facing out from the Network Interface Unit.
3. Grasp the ControlBus™ Module and align the plug-in edge card with the connector in the bottom of the Network Interface Unit.
4. Firmly insert the ControlBus™ Module into the Network Interface Unit.
5. Select a location that can support the Network Interface Unit. Be sure to allow clearances for servicing, installing and removing the wiring compartment cover, Network Interface Unit cover, electrical connectors and ControlBus™ Modules.
   a. Allow for an additional 2-1/2 inches (64 mm) minimum below the Network Interface Unit for electrical connector installation.
   b. Allow for an additional 1-1/2 inches (38 mm) minimum on each side for electrical housing cover insertion and wiring.
6. Remove the ControlBus™ Module using the wire loop and grasping the ControlBus™ Module firmly and pulling the module from the Network Interface Unit.

Wiring

Wiring Requirements

1. All wiring must comply with all applicable electrical codes, ordinances, and regulations.
2. Recommended wire size and type for ControlBus™ communication is unshielded 22 AWG two-wire twisted cable and one wire for ground, or Belden 8771 or equivalent. Terminal identification numbers and letters are noted within brackets:
   a. 1 [A] Data
   b. 2 [B] Data
   c. 3 [C] Ground

3. Recommended wiring for ControlBus™ Module for communications routing purposes is unshielded 22 AWG, two-wire twisted cable and one wire for ground, if the leadwire run and noise conditions permit. If necessary, Belden 8771 shielded cable or equivalent can be used. The Keyboard Display Module, or Data ControlBus™ Module and Network Interface Unit must be wired in a daisy chain configuration with other devices (e.g. , Remote Keyboard Display Module or Expanded Annunciator Module) if used. Connect 1(a) to 1(a), 2(b) to 2(b) and 3(c) to 3(c).
   a. Do not route the ControlBus™ cable in conduit with line voltage circuits.
   b. Do not route the ControlBus™ cable close to the ignition transformer.
   c. Route the ControlBus™ cable outside of conduit if properly supported and protected from damage.
   d. Route the ControlBus[a] cable so that all devices are connected in a daisy chain configuration . Connect 1(a) to 1(a), 2(b) to 2(b) and 3(c) to 3(c). The interconnection of the devices is not important, except that the devices at the closest and farthest ends of the daisy chain configuration string require a 120 ohm, 1/4 watt termination resistor between terminals a and b of the electrical connector for any connection over 100 feet. See Fig. 6.
4. Maximum wire lengths can be 4000 ft (1219m) for the ControlBus™ RS-485 interface under ideal conditions.

Procedure

1. Refer to Fig. 6 for proper wiring.
2. Be sure that power is removed from the control panel by opening the main disconnect before beginning wiring to the electrical connectors. More than one disconnection can be involved.
3. Select the location of the Network Interface Unit to be mounted:
   a. Near a phone line.
   b. Within 4000 ft (1219m) of all Relay Modules that will be connected to the Network Interface Unit.
   c. Within 50 ft (15m) of the personal computer that will be connected to the 25-pin RS-232 port of the Network Interface Unit.
4. Mount the Network Interface Unit and insert the ControlBus™ Module into the Network Interface Unit slot, see Fig. 2 and 5.
5. Route the ControlBus™ cable so that all devices are connected in a daisy chain configuration, 1(a) to 1(a), 2(b) to 2(b), 3(c) to 3(c). The order of interconnection of all other devices is not important, except that the devices at the closest and farthest ends of the daisy chain configuration string require a 120 ohm, 1/4 watt termination resistor between terminals a and b of the electrical connector for any connection over 100 feet.
6. Connect L1, L2 and Ground (GND) to the pigtails (Q7700A only).
7. Insert the plug-in card slots into any open slots of the Network Interface Unit.
8. Install the covers, power wiring compartment and Network Interface Unit.
9. Connect the serial port of the modem to the 9-pin RS-232 connector of the Network Interface Unit (see Fig 4).
10. Connect the serial port of the personal computer to the 25-pin RS-232C port on the Network Interface Unit for local personal computer application, see Fig. 3.
11. Do not exceed 600 mA current draw, six card maximum, total capacity of the plug-in cards. Refer to the ControlBus™ Module device label and this specification for individual loads.
12. Recheck all wiring with Fig. 6.
13. Restore power to the Network Interface Unit.

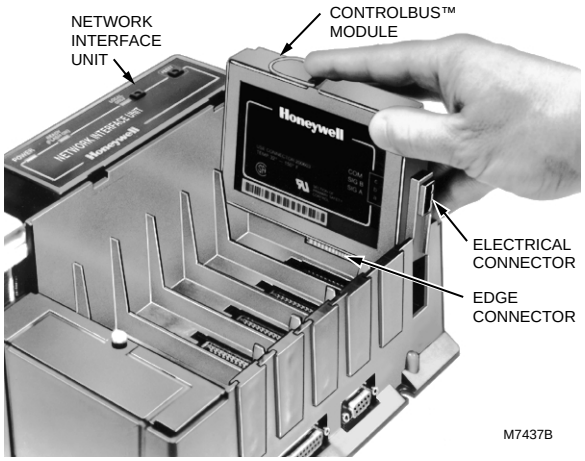

Fig. 2. ControlBus™ Module mounting.

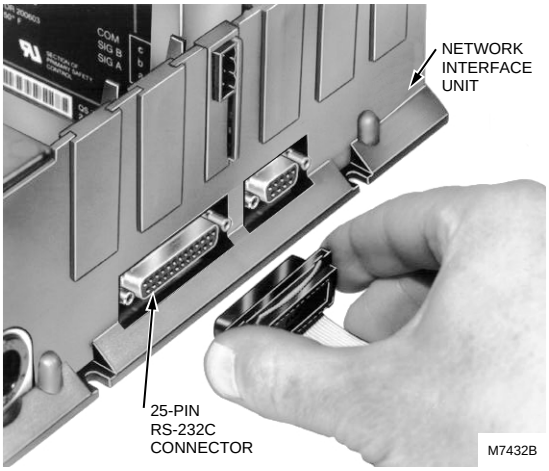

Fig. 3. RS-232 Interface insertion (serial communications).

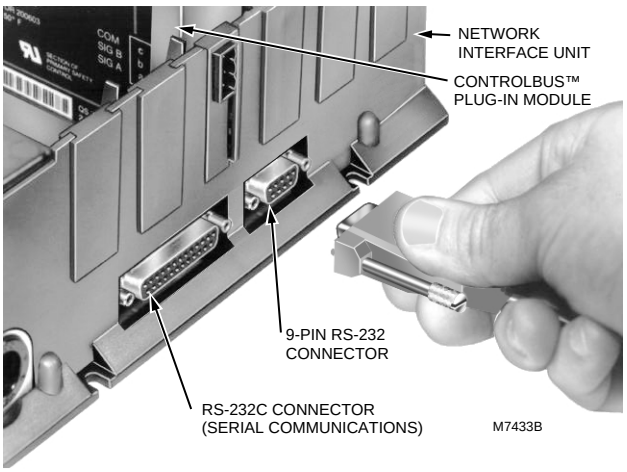

Fig. 4. Modem insertion, Network Interface Unit.

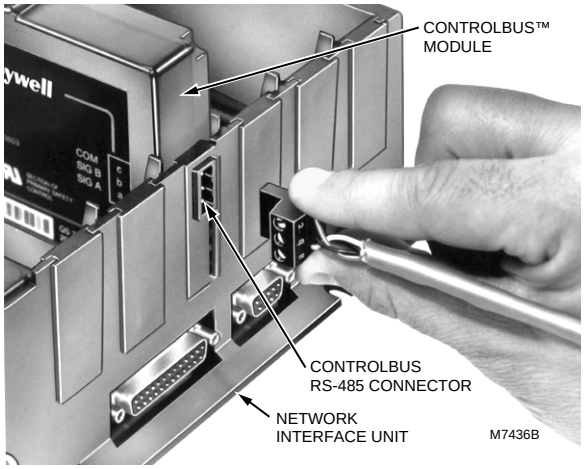

Fig. 5. ControlBus™ RS-485 interface insertion.

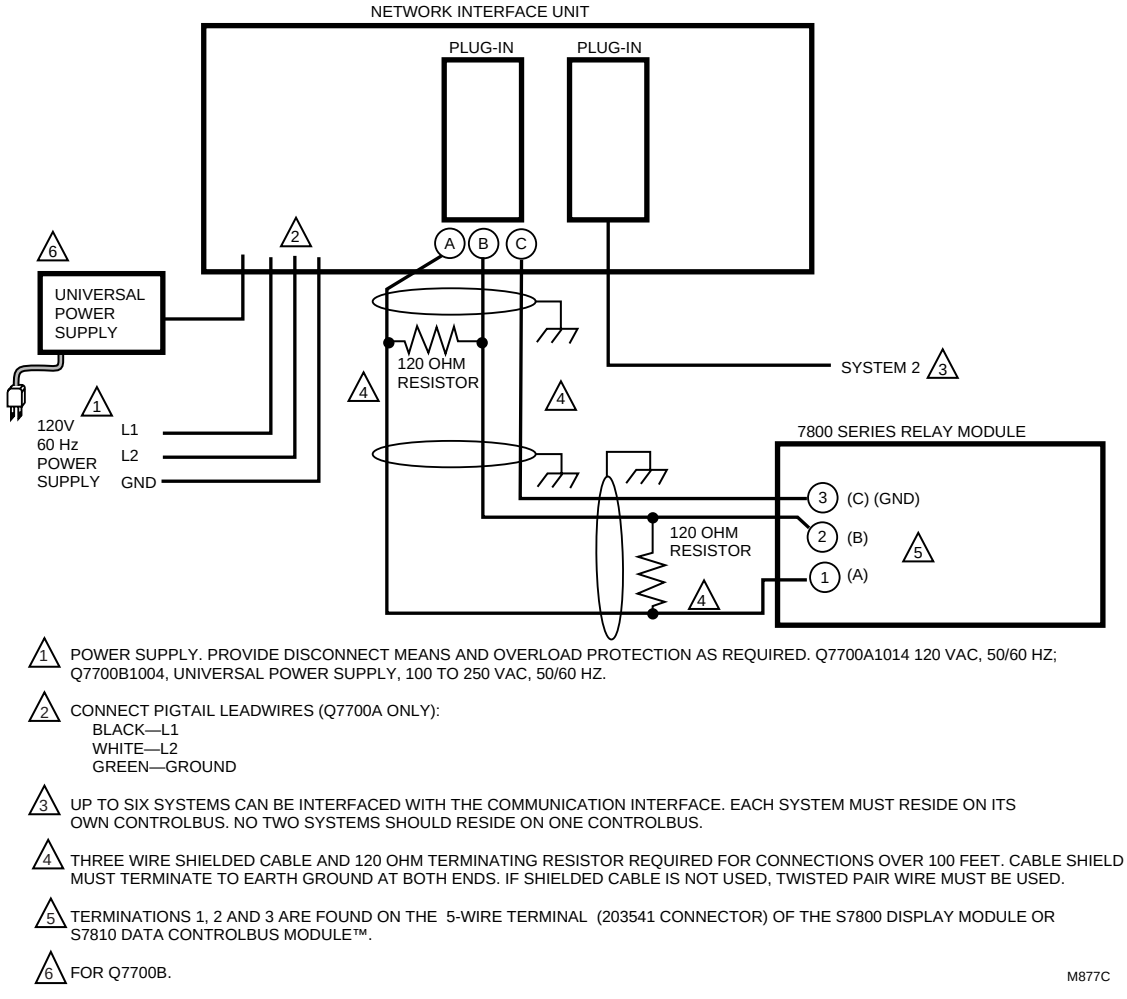

Fig. 6. Network Interface wiring.

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