Honeywell

7800 SERIES Combustion System Manager

Q7700
Communication Interface
Base Unit

The Q7700 Communication Interface Base Unit provides monitoring and diagnostics of the BCS 7700 and 7800 SERIES devices with an IBM® equivalent personal computer. The Q7700 also provides local and remote configuration and control of a BCS 7700 System.

- Access control, password protection.
- Light Emitting Diode (LED) status interface.
- 1200 baud modem.
- 9600 baud personal computer interface.
- 300 or 1200 selectable baud ASCII device.
- Fault date and time stamping internal software clock.
- Dial-out override for maintenance induced alarms.
- Connect up to six BCS 7700, 7800 SERIES or combination of both systems.
- Local and remote annunciation of BCS 7700, 7800 SERIES safety shutdowns.
- Auto-dial out on BCS 7700, 7800 SERIES faults for up to three telephone numbers.
- User friendly, menu driven, user interfaces with personal computer.
- On-line data logging.
- Internal modem.
- Modular construction.

QS7800
Communication Interface
ControlBus Module

The 7800 SERIES Communication Interface allows remote monitoring and diagnostics of the 7800 SERIES Relay Modules with an IBM® equivalent personal computer.

- Up to six ControlBus Modules per Communication Interface Base Unit.
- Local and remote annunciation of 7800 SERIES Relay Module faults.
- User interfaced to personal computer.
- Modular construction.

ZM7850
Combustion System
Manager™ Software

The ZM7850 is support software for connecting BCS 7700 and 7800 SERIES controls with an IBM® or equivalent personal computer running Microsoft® Windows™, version 3.0 or greater. It is a graphical, mouse-driven software package that is easy to use and understand.

- Data logging.
- Remote interrogation.
- Remote setpoint adjustment of nonsafety parameters (BCS 7700 only).
- History.
- Real-time graphics.
- Control point trending.
- Fault reporting for up to 6,000 individual burner/boiler controls.

Q7700 COMMUNICATIONS INTERFACE UNIT

MODELS:
Q7700A1010 Communication Interface Base Unit for:
QS7700A1011 ControlBus Module for BCS 7700.
QS7800A1001 ControlBus Module for 7800 SERIES.

ELECTRICAL RATINGS:
Voltage and Frequency:
120 Vac (+10%/-15%)
60 Hz (+/-10%)
ControlBus Communications: RS-485.

ELECTRICAL CONNECTORS:
RS-232C port, 25D pin connector:
Local communications.
RJ11 6 position, 2-wire standard telephone jack:
Remote communications.
Signal Characteristics:
Telephone:
Phase Shift Keying (PSK): 1200 baud.
Direct Terminal Hookup:
RS-232C connection:
Pin 1: Ground (protective).
Pin 2: Transmit data (TD).
Pin 3: Receive data (RD).
Pin 7: Ground (signal).

ACCESSORIES:
Cover Assembly, Base Unit: part no. 221237/1698
Cover Assembly, Electrical Enclosure: part no. 221240/1698
Slot Inserts, ControlBus Slots: part no. 202433
ControlBus Module Electrical Connector: part no. 200603
ControlBus Module for:
BCS 7700: QS7700A1011
7800 SERIES: QS7800A1001

ENVIRONMENTAL RATINGS:
Ambient Temperature:
Operating: 32° F to 130° F [0° C to 54° C].
Storage: -30° F to 150° F [-34° C to 65° C].
Humidity: Operating, 85% RH continuous, noncondensing.
Vibration: Continuous, 0.5G.
Enclosure: NEMA-1.
Dimensions: See Fig. 1.
Weight: 4 lb. 10 oz. (unpacked, without ControlBus Module).

APPROVAL BODIES:
Underwriters Laboratories Inc.: File No. MP268, Guide No. MCCZ2.
Canadian Standards Association: LR95329.
Federal Communications Commission: Part 15, Class A, Emissions. FCC Registration No. HS92SJ-10735-DT-E, Part 68.
Canadian Department of Communications: CS-03, Certification No. 573 3459A.
Factory Mutual: J.I. 2Q2A5.AF.

NOTE: The Federal Communication Commission (FCC) has established rules that permit this device to be connected directly to the telephone network. A standardized jack is used for this connection. This type of equipment is not for use with party lines or coin lines.

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 may cause unacceptable interference to radio and TV reception, requiring the operator to take whatever steps are necessary to correct interference.*

Fig. 1—Q7700 Base unit dimensions in in. [mm].

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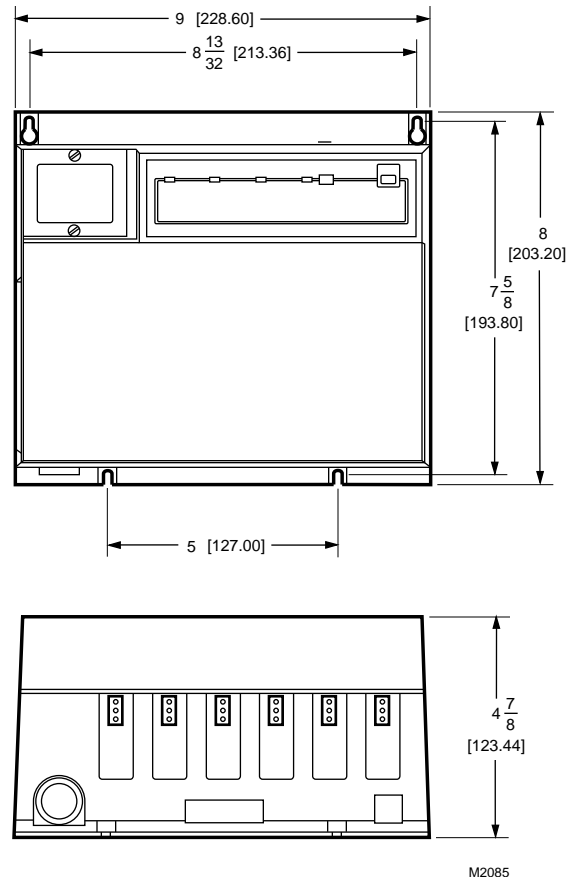
QS7800 CONTROLBUS MODULE

MODELS: QS7800A1001 Communication Interface ControlBus Module for use with the 7800 SERIES Relay Module and Q7700A1014 Series 1 Communication Interface Base Unit.

ELECTRICAL RATINGS:
ControlBus Communication.
Current Draw: 75 mA.

ELECTRICAL CONNECTORS (included):
ControlBus 3-Prong Electrical Connector: part no. 200603.
ControlBus 5-Wire Electrical Connector: part no. 203541.

ENVIRONMENTAL RATINGS:
Ambient Temperature:
Operating: 32° F to 130° F.
Storage: -30° F to 150° F.
Humidity: Operating, 85% RH continuous, noncondensing.
Vibration: Continuous 0.5G environment.
Enclosure: NEMA 1.
Dimensions: See Fig. 2.
Weight: 8 ounces (unpacked).

ACCESSORIES:
Cover Assembly:
Base Unit, part no. 221237/1698.
Electrical Enclosure Base Unit, part no. 221240/1698.
Slot Inserts, ControlBus Slots, part no. 202433.
ControlBus Module Electrical Connector, part no. 200603.

APPROVAL BODIES:
Underwriter Laboratories Inc.: component recognized, File no. MP268, Guide no. MCCZ2.
Canadian Standards Association: LR80141.
Federal Communications Commission: Part 15, Class A Emissions, Part 68.
FCC Registration no.: HS92SJ-10735-DT-E.
Canadian Department of Communications: CS-03, Certification no. 573-3459A.

IMPORTANT: *This equipment complies with the requirements in Part 15, FCC rules, Class A computing device. Operation of this equipment in a residential area may cause unacceptable interference to radio and TV reception, requiring the operator to take whatever steps are necessary to correct the interference.*

Fig. 2—ControlBus dimensions in in. [mm].
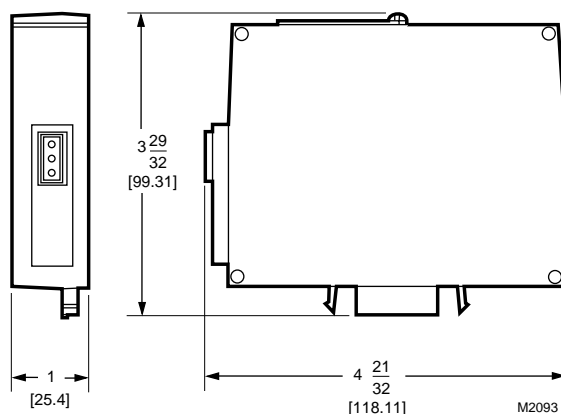
ZM7850 COMBUSTION SYSTEM MANAGER (CSM)

SYSTEM OVERVIEW

About Combustion System
Combustion System consists of:
— Combustion unit such as a burner or boiler controller.
— Communications Interface Base Unit (type Q7700A).
— Plug-in cards (type QS7700 and QS7800) for up to six combustion units inserted into each Communications Interface Base Unit.
— Built-in or external modem to transfer information to and from remote devices such as phone pagers, printers, or computer.
— Remote and local devices including PCs, printers, phone pagers.
— CSM Software program

About the CSM Program
CSM performs these tasks:
— Monitors current condition, where applicable, of devices connected to a Communication Interface Unit.
— Sets nonsafety critical parameters of devices connected to a Communications Interface from a local or remote PC (BCS 7700 only).
— Sets up Communications Interface parameters including name, password, dial-out setup and phone numbers.
— Accepts local and remote fault annunciation from the Communications Interface with immediate notification.
— Data logs to read points at the determined time intervals and reports point values.

WHAT YOU NEED TO GET STARTED

To install and run CSM, see Fig. 3, you need:
IBM® or compatible 80386 or 80486 Computer—At a minimum, CSM will operate on an 80286 Computer.
4 MB RAM—At a minimum, CSM will operate with 640 kB of RAM.
80 MB of hard disk and one diskette drive—At a minimum, CSM will operate on 20 MB of hard disk. At least one diskette drive is required.
VGA graphic adapter—CSM will operate with CGA, EGA or VGA graphic adapter; however, VGA gives a clearer picture.
A mouse—CSM requires a bus or serial mouse. Check the PC setup when purchasing a mouse. A serial mouse uses one serial port; therefore, a bus mouse is recommended because it has its own port, leaving the serial port open.
Hayes® or compatible modem— Hayes® Smartmodem™ or equivalent is required if connecting from remote locations.
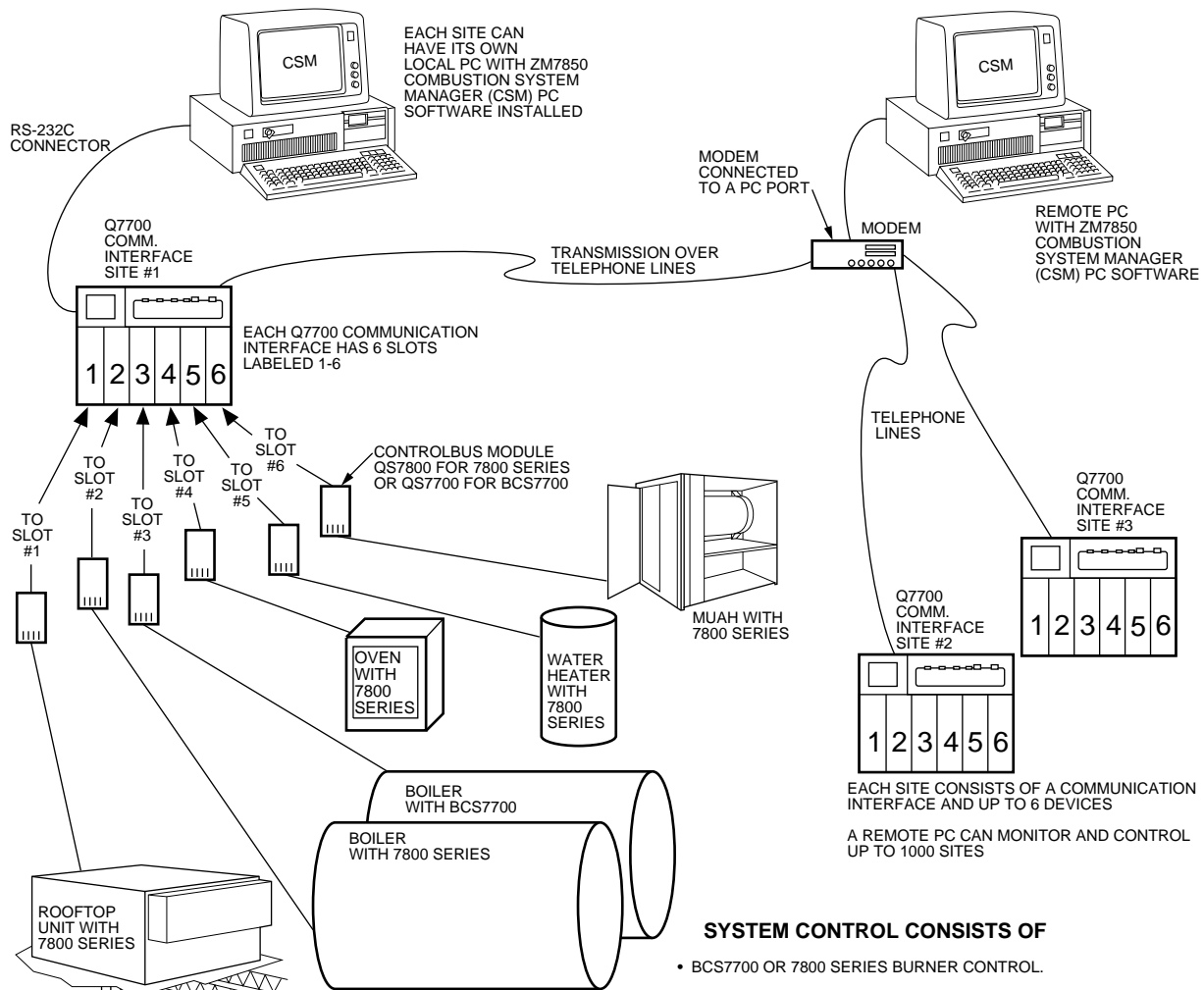Two serial ports—For a local connection, the RS-232C requires the use of one serial port. For a remote connection, the modem requires the use of one serial port. Therefore a serial mouse may be used if two ports exist. Otherwise, if only one serial port is available on your computer, a bus mouse is required.
One parallel port—A printer uses one parallel port.
DOS™ Operating System—MS-DOS™ or PC-DOS™ Operating System, version 3.1 or greater, is required.
Microsoft® Windows™—Microsoft® Windows™, version 3.0 or higher, is required.

Fig. 3—ZM7850 Combustion System Manager configuration.

EACH SITE CAN HAVE ITS OWN LOCAL PC WITH ZM7850 COMBUSTION SYSTEM MANAGER (CSM) PC SOFTWARE INSTALLED

RS-232C CONNECTOR

MODEM CONNECTED TO A PC PORT

REMOTE PC WITH ZM7850 COMBUSTION SYSTEM MANAGER (CSM) PC SOFTWARE

Q7700 COMM. INTERFACE SITE #1

TRANSMISSION OVER TELEPHONE LINES

MODEM

EACH Q7700 COMMUNICATION INTERFACE HAS 6 SLOTS LABELED 1-6

TO SLOT #6

CONTROLBUS MODULE QS7800 FOR 7800 SERIES OR QS7700 FOR BCS7700

TELEPHONE LINES

Q7700 COMM. INTERFACE SITE #3

TO SLOT #2

TO SLOT #4

TO SLOT #5

TO SLOT #1

TO SLOT #3

MUAH WITH 7800 SERIES

Q7700 COMM. INTERFACE SITE #2

OVEN WITH 7800 SERIES

WATER HEATER WITH 7800 SERIES

EACH SITE CONSISTS OF A COMMUNICATION INTERFACE AND UP TO 6 DEVICES

A REMOTE PC CAN MONITOR AND CONTROL UP TO 1000 SITES

BOILER WITH BCS7700

BOILER WITH 7800 SERIES

ROOFTOP UNIT WITH 7800 SERIES

SYSTEM CONTROL CONSISTS OF

- BCS7700 OR 7800 SERIES BURNER CONTROL.
- Q7700 COMMUNICATION INTERFACE BASE UNIT.
- QS7800 FOR THE 7800 SERIES OR QS7700 FOR BCS7700 PLUG-IN CONTROLBUS MODULE FOR EACH DEVICE PLUGGED INTO COMMUNICATION INTERFACE.
- BUILT-IN OR EXTERNAL MODEM TO SEND AND RECEIVE INFORMATION TO AND FROM REMOTE DEVICES (IE PRINTERS, BEEPERS, COMPUTERS).
- PERSONAL COMPUTER FOR LOCAL OR REMOTE CONNECTIONS.
- COMBUSTION SYSTEM MANAGER PC SOFTWARE AND MANUAL.

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