

## W8735A Enviracom™ Serial Adapter

### INSTALLATION INSTRUCTIONS

#### APPLICATION

The W8735A Enviracom™ Serial Adapter provides a host computer, gateway, or controller, with an RS-232 port, local access to an Enviracom™ HVAC System. The host

provides the application to control the W8735A. The W8735A Enviracom™ Serial Adapter is powered through the Enviracom™ connection and is optically isolated for universal compatibility. The W8735A uses the Enviracom™, a low-cost, wired communications protocol.

Table 1. W8735A Description.

Model	Application	Terminals	Comment
W8735A	Local control of Enviracom™ HVAC system using host computer, gateway or controller with RS-232 serial port.  Host provides application.	1, 2, 3 – Enviracom™  DB9 – RS-232	W8735A used with host.  Host provides application software and user interface. W8735A provides means to move data from Enviracom™ Bus to RS-232 port.

#### INSTALLATION

##### When installing this product...

1. Read these instructions carefully. Failure to follow these instructions can 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. After completing installation, use these instructions to check out the product operation.

#### CAUTION

**Electrical Hazard.**  
**Can cause electrical shock or equipment damage.**

Disconnect power before beginning installation.

##### Selecting Location

Locate the W8735A near the host or near the HVAC system, as determined most suitable for the application.

##### Mounting W8735A Enviracom™ Serial Adapter



#### CAUTION

**Equipment Mounting Damage Hazard.**  
**Mounting W8735A inside HVAC can damage equipment.**

Mount W8735A outside HVAC equipment.

Mounting the W8735A is optional. When mounting is desired, use the sheet of two-sided adhesive tape (provided).

1. Ensure the device is clean and dry and free of any oil or dirt.
2. Peel the protective lining from one side of the tape and press it to the back of the W8735A.



3. Remove the protective lining from the second surface of the tape and press the W8735A to the mounting surface at the desired mounting location.

## Wiring

### CAUTION

**Electrical Hazard.**  
**Can cause electrical shock or equipment damage.**  
 Disconnect power before beginning installation.

1. Refer to Fig. 1 for wiring diagram.
  2. Loosen terminal screws on W8735A and connect system wires. See Fig. 2.
1. Securely tighten each terminal screw.
  2. Connect serial cable to W8735A DB9 RS-232 connector to the host RS-232 connector (see host installation instructions for details), using a serial cable (not provided with W8735A).

NOTE: Maximum distance between W8735A DB9 RS-232 connector and the host RS-232 connector is 25 feet.

3. Restore power to HVAC systems and host.

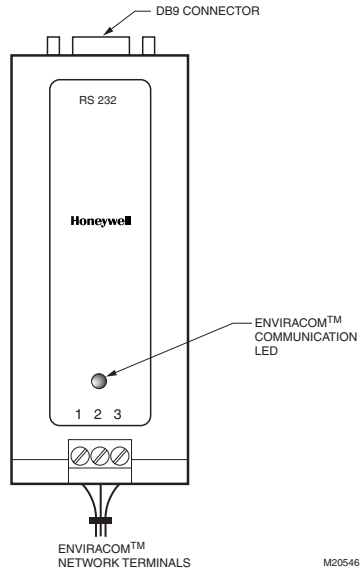


Fig. 1. Wiring W8735A.

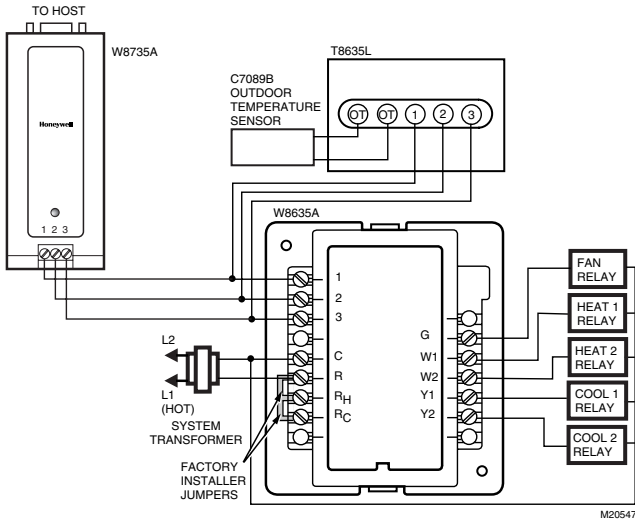


Fig. 2. Connecting single-zone Enviracom™ to RS-232 to host.

Table 2. Terminal Designations.

W8735A Terminal Designations	Function
1	To Enviracom™ network terminal 1 (data).
2	To Enviracom™ network terminal 2 (24 Vac).
3	To Enviracom™ network terminal 3 (24 Vac).
Serial	Connect W8735A DB9 connector to host RS-232 serial port using serial cable (not provided with W8735A).

## Host Port Configuration

The configuration of the host:

Baud rate: 19200 bps.

Parity: none.

Data bits: 8.

Stop bits: 1.

## LED Description

The green Light Emitting Diode (LED) on the front of W8735A is used to show Enviracom™ Bus activity as follows:

**LED blinks rapidly**—indicates device is currently transmitting information on communications bus.

**LED blinks once**—indicates device received and acknowledged a message.

**LED on constantly**—indicates device failure. Replace device.

**LED off constantly**—indicates a wiring problem if device is not functioning correctly and there is no LED activity at least once a minute. Check wiring to communications bus terminals 1, 2 and 3.

**NOTE:** It is normal for LED to blink continuously during-startup and discovery.

**LED blinks continuously**—indicates a wiring problem if device is not functioning correctly and there is a continuous series of LED blinks. Check wiring to communications bus terminals 1, 2 and 3.

## Glossary of Terms

**RS-232** – Long-established standard that describes the physical interface and protocol for relatively low-speed serial data communication between computers and related devices. Originally defined by industry trade group, the Electronic Industries Association (EIA), for teletype devices.

**Serial** – Only one event occurring at a time, contrasted with *parallel*, which means more than one event happening at a time.

**DB9** – Standard 9-pin connector. DB9 used on W8735A is a female configuration.

**Enviracom™** – Three-wire communications protocol used in HVAC products.

**Host** – Supports the application software. Devices such as a computer, gateway, controller are examples of a host.

**HVAC** – Heating, Ventilation and Air Conditioning.

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