Honeywell

ADEMCO 4100SM
Serial Interface Module

INSTALLATION AND SETUP GUIDE

GENERAL INFORMATION

The 4100SM Serial Interface Module can be used as any of the following:

- A direct-wire downloading device that is used in conjunction with the Compass downloading software to program compatible control panels without having to use a modem or telephone line. This is done by either connecting the 4100SM to the serial port of a PC or to a GSM communicating unit.
- An interface device that is used to connect a serial printer or a PC using the Honeywell Navigator Reporter software to control panels that feature event logging with printer output capabilities.
- An interface device that is used to connect a control panel to 3rd party Home/Facility Automation hardware and software.

The downloading function is applicable in UL listed installations only when someone is present at the site while the downloading. However, the 4100SM is UL Listed for use as an interface to an event logging printer.

The 4100SM is packaged with everything that is needed to connect the RS-232 serial port of most IBM-compatible fixed or portable PCs to the control panel. This includes:

- 1.5-foot alligator clip leads (4)
- 4142TR voltage trigger cable (9 pos.)
- 10-foot DB25 male to DB25 male RS-232 serial cable
- DB25 female to DB25 female RS-232 gender changer
- DB25 male to DB25 female null modem adapter
- DB25 female to DB9 female adapter
- Bracket and insulator

Important: Check your control panel's installation instructions to verify that your software supports the feature and any programming options that may need to be set for proper operation. Also, verify that you have downloading software that supports direct-wire downloading for the control panel you are programming.

INSTALLATION AND OPERATION INSTRUCTIONS

Direct-Wire Downloading Connections to a PC

Direct-wire downloading can be accomplished either by connecting the 4100SM to the serial port of a PC or to the programmer port of an IP or GSM type module.

Connections to a PC

Direct-wire downloading connections are made to a header on the control panel's circuit board via the supplied 4142TR voltage trigger cable.

As shown in Figures 1 and 2, terminals 3, 6, 7, and 8 on the 4100SM are used. The three colored terminals (red, blue, and white) must be left uncut for direct-wire downloading applications. Most IBM-compatible PCs have two RS-232 serial ports (COM1 and COM2).

You must decide which serial port you want to use, and then determine which type of connector (DB25 female, DB25 male, DB9 male, or USB) is provided for that port.

Refer to the following table for instructions on how to connect each type of PC connector.

Type of PC Connector	Connection Instructions
DB25 female connector	Use the RS-232 cable to make connections between the serial module and the PC serial port.
DB25 male connector	Use the RS-232 cable and gender changer to make connections.
DB9 male connector	Use the RS-232 cable and DB9/DB25 adapter to make connections.
USB Port	Use a USB to serial converter to make connections.

NULL MODEM NOTE: The 4100SM requires that your PC have a DTE pinout in order to communicate properly. Check the documentation supplied with your PC to determine if the connector for the serial port you have chosen has a DTE pinout (meaning that your PC transmits data on pin 2 and receives data on pin 3) or a DCE pinout (meaning that your PC transmits data on pin 3 and receives data on pin 2). If your PC connector has a DCE pinout, you must attach the supplied null modem adapter to the RS-232 cable to ensure proper pin connections.

If you are not sure whether your serial port is DTE or DCE, assume that it is DTE. If a problem occurs, refer to the "In Case of Difficulty" section of this document.
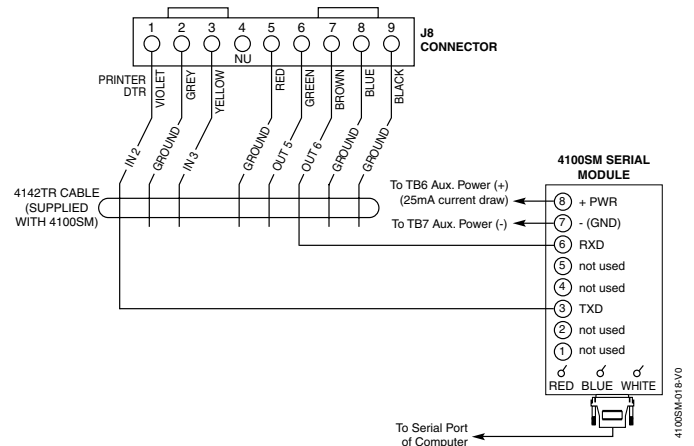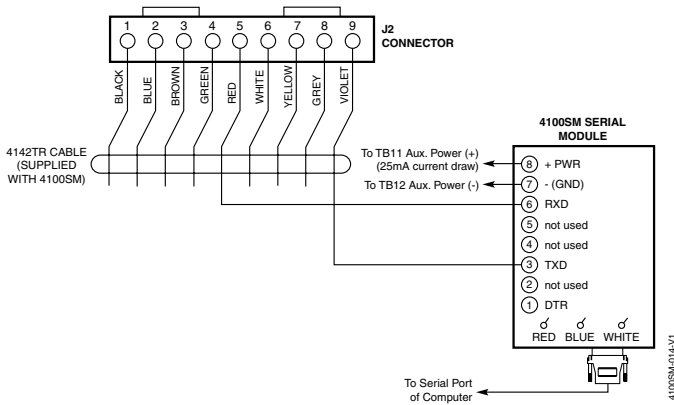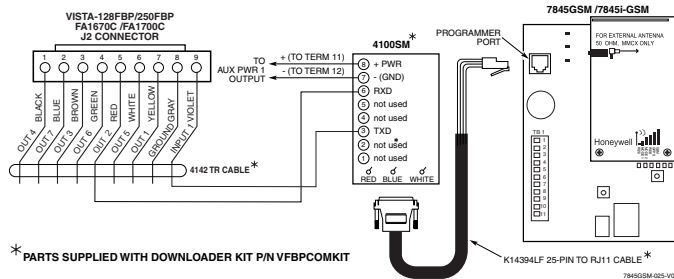

Figure 1. Direct-Wire Connections for VISTA-BP and FA1660C Control Panels

Figure 2. Direct-Wire Connections for VISTA-FBP, FA1670C and FA1700C Control Panels

Connections to an IP or GSM Type Module

The 4100SM is required to interface the VISTA-FBP, FA1670C or FA1700C control panel to an IP or GSM type communicating unit. The 4100SM connects to the control panel's circuit board via the supplied 4142TR voltage trigger cable. As shown in Figure 3, terminals 3, 6, 7, and 8 on the 4100SM are used. The 4100SM DB25 serial port connects to the Programmer Port of the GSM communication unit. The purchase of the VFBPCOMKIT is required.

Figure 3. Direct-Wire Connections for an IP or GSM Type Communication Units

Checking Your Downloading Software

Before using the 4100SM for direct-wire downloading, the downloading software must be checked to ensure it is configured to enable direct-wire operation. To check the software, proceed as follows:

1. Enter the SETUP screen on the PC (only the Master User can do this).
2. Click on COMM LINK, near the top of the screen.
3. Hit the [+] key until the screen displays "DIRECT WIRE/TELCO."
4. Check that the COMM PORT matches the port you intend to use. Hit the [ESC] key to exit the SETUP SCREEN.

Using the 4100SM for Direct-Wire Downloading

To use the 4100SM for direct-wire downloading, proceed as follows:

1. Make connections described previously in this document.

2. Apply power to the control panel and verify that the default message (typically "DISARMED – READY TO ARM") is displayed.

3. Start up the downloading software on your PC, and verify that the main menu is displayed.

4. Make sure that the downloading software is configured to operate using the serial port (COM1 or COM2) that you selected earlier.

If you have an internal modem, the serial port must be changed every time you change from modem to direct-wire operation.

NOTES: The control panel will not function as an alarm system while the direct-wire downloading mode is active unless you are using a Commercial Fire Alarm system.

5. At the downloading PC, select the file and control account information to be downloaded.

6. Select the DIRECT-WIRE option from the COMM menu and hit [Enter].

   If the selected panel type does not allow direct-wire operation, the DIRECT-WIRE option will not be displayed.

7. Select the FIRST COMMUNICATION option, if required. Then press the [Enter] key.

   The "START COMMUNICATION" message will begin to blink.

8. Go to the nearest control keypad and enter the Installer Code + [#] + [5].

   The letters "CC" should appear on the fixed-word keypad display ("MODEM COMM" on the alpha keypad display) to confirm that the direct-wire downloading mode is in effect.

   The control panel will continuously and indefinitely monitor the keypad terminals for a handshake signal from the downloading PC. (This mode may be cancelled by entering an Installer Code + [OFF] sequence.)

9. Press the [Enter] key on the PC.

   The PC will display a "REQUESTING SESSION" message and commence a direct-wire downloading session. At this point, you may do an upload, download, or any other PC operation in the same manner that you would if a remote connection via the telephone line were used. The communications will take place at a much higher speed, however. The control will automatically return to normal alarm system function when the downloading session is completed.

## Serial Printer and Navigator Reporter Connections

The 4100SM can be used to connect the control panel to a serial printer or to a PC using the Honeywell Navigator Reporter software to print the Event Log. The 4100SM connects to the control panel's circuit board via the supplied 4142TR voltage trigger cable. As shown in Figures 4 and 5, terminals 1, 6, 7, and 8 on the 4100SM are used. The colored jumpers may need to be cut, depending on the serial printer being used. See note 3 below for details. The connections shown in Figures 4 and 5 are the same for the printer and the PC.

NOTES:

1. If Earth Ground Fault Sensing is enabled in the control panel you may get an earth ground fault indication if you use a printer (or PC) which has a 3 prong grounded power cord.

2. The 4100SM is supplied with a 10-foot RS-232 cable. A longer cable or extension cable can be used if the 4100SM and the printer are separated by more than 10 feet, but the total cable length should be less than 50 feet.

3. Most printers either ignore the CTS, DSR and CD signals, or require them to be high (i.e., 3-15VDC as measured on RS-232 DB25 connector pins 5, 6, & 8 respectively with respect to ground pin 7). The 4100SM Module sets these pins high. If the printer being used will not operate with these pins high, then clip the blue (CTS), white (DSR) or red (CD) jumpers on the 4100SM module to set the corresponding signal floating. Important pins on the RS-232 cable are pin 3 (data out), pin 7 (ground), and pin 20 (DTR - ready).
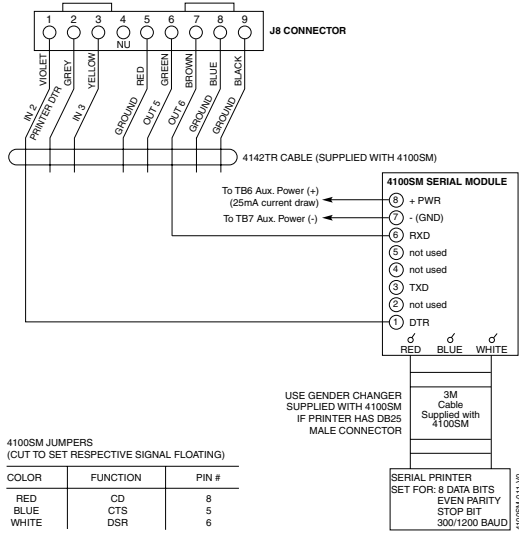
Figure 4. Printer Connections for VISTA-BP and FA1660C Control Panels
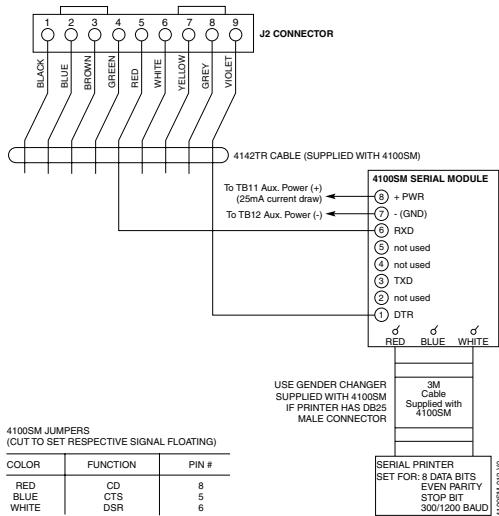
Figure 5. Printer Connections for VISTA-FBP, FA1670C and FA1700C Control Panels

Home/Facility Automation Connections

The 4100SM can be used to connect the control panel to 3rd party Home/Facility Automation hardware and software. The 4100SM connects to the control panel's circuit board via the supplied 4142TR voltage trigger cable. As shown in Figures 6 and 7, terminals 3, 6, 7, and 8 on the 4100SM are used.

NOTES:

1. The distance between the 4100SM and the control panel cannot exceed the length of the 4142TR Trigger Cable.

2. The maximum distance between the 4100SM and the 3rd party Home/Facility Automation hardware is 50'. If shielded wire, wire in conduit, or Cat 5 unshielded is used, the maximum distance is 25'.
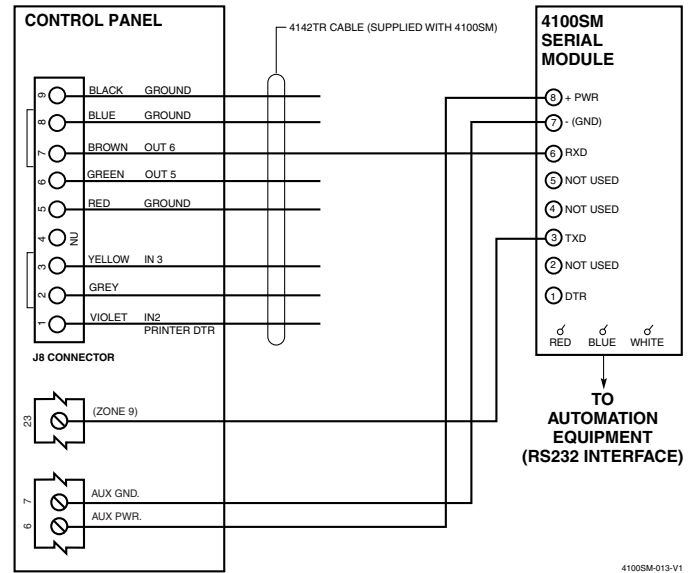
Figure 6. Home/Facility Automation Connections for VISTA-BP and FA1660C Control Panels
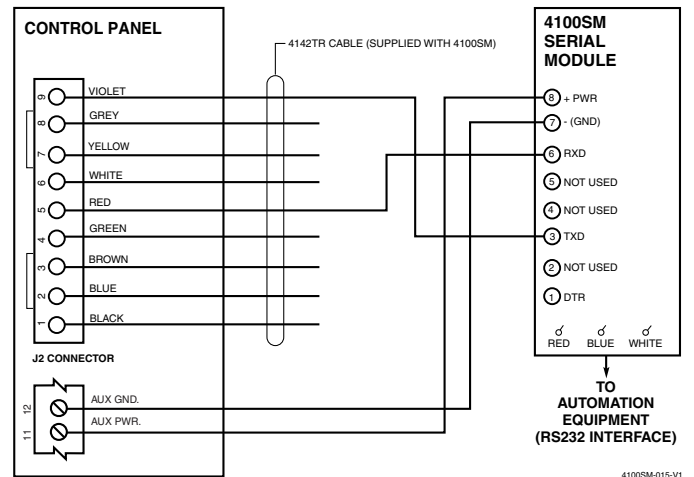
Figure 7. Home/Facility Automation Connections for VISTA-FBP, FA1670C and FA1700C Control Panels

In Case of Difficulty

Check that the COM port you are using matches the COM port selected in the SETUP screen.

The null modem adapter may be required to match the outputs of your computer's serial port to the 4100SM. To determine if this is necessary, proceed as follows:

1. Connect the 4100SM to the control panel and to your PC as described previously in this document. Do not attach the null modem adapter.

2. Connect a DC voltmeter, set to a 15-volt (or higher) range, across the black wire on 4100SM terminal 7(–), and the wire on terminal 3(+). No voltage should be seen at this time. If a voltage is found, check the connections between the control and the 4100SM.

3. Go to the COMM screen after selecting DIRECT WIRE and hit the [ENTER] key two times until the REQUESTING SESSION message appears. At this time, the meter reading should jump to approximately 12 volts for few seconds and then return to zero. If this does not occur, there is a possibility that the transmit and receive pins on the computer are reversed. Insert the Null Modem adapter supplied and try again.

SPECIFICATIONS

Physical

4" W x 2-3/4" H x 3/4" D (102mm x 70mm x 19mm) ...approximately

Electrical

Input Power: 12VDC, 25mA from control's keypad power (red wire) connection

RS-232 Interface:

DB25 female with DCE output

Honeywell