

Controlling an AutoDome Fiber Optic Model via an RS232/RS422 Protocol

VG5 600 | VG4 | G3A | ENV Series



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1 Using an AutoDome® Fiber Optic Module with an RS232/RS422 Controller

This guide describes the procedures necessary to control a VG5 600, VG4, G3A, or an ENV series AutoDome fitted with a fiber optic kit using an RS232 controller or a Pelco® RS422 controller.

An AutoDome with a fiber optic module is prewired to operate with Biphase signals only. To operate a fiber optic-enabled AutoDome with an RS232/RS422 controller, you must perform a minor wiring change.

1.1 Controlling a VG5 600/VG4 Series AutoDome

To control a VG5 600/VG4 Series Autodome from an RS232 or from a Pelco RS422 controller you must run control wires from the controller to an LTC 4629 head-end fiber optic module.

1.1.1 Connecting to an LTC 4629 Head End Data/Video Transceiver

1. Connect the RS232 cable (Tx/D from the controller) to the RS232 Rx/D port (pin 1) of the LTC 4629.
2. Connect the ground wire of the controller to Pin 2 on the LTC 4629.

1.1.2 Configuring the VG5 600/VG4 AutoDome

1. Disconnect the power to the VG5 600/VG4 power supply unit; then open the unit.
2. Remove the green Serial Communications wire from the P106 connector.
3. Remove the 100 Ω resistor across the C+ and C- pins.
4. Cut the six wires from the green Serial Communications wire mating connector. Ensure that the insulation covers each wire to avoid wires from touching.
5. Cut back the insulation on the blue (ground) wire and on the green (Rx/D) wire enough to be able to connect these wires back into the P106 connector.
6. Connect the blue (ground) wire to the C- pin on the P106 connector.
7. Connect the green (Rx/D) wire to the C+ pin on the P106 connector.

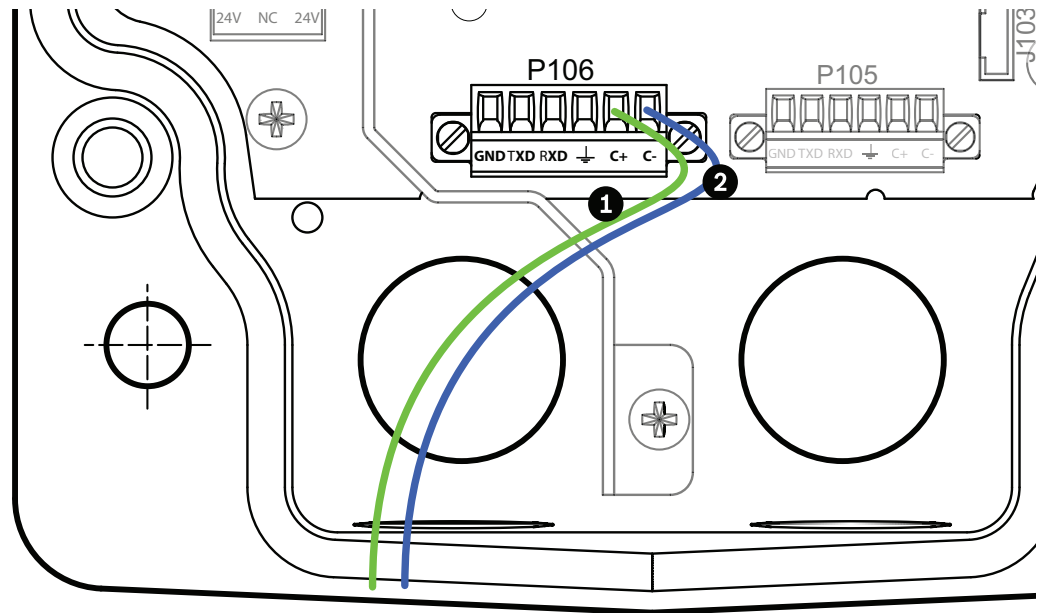


Figure 1.1 Detail of P106 Connections

1	Green Rx/D wire connected to C+
2	Blue Ground wire connected to C-

8. Connect the fiber optic cable from the AutoDome to the LTC 4629.
9. Close the power supply unit's door.
10. Ensure that the VG5 600/VG4 AutoDome is set to receive RS232 commands.
 - Remove the bubble from the VG5 600/VG4 AutoDome housing.
 - Locate the protocol switch on the CPU board.
 - Ensure that the protocol switch is in the left position for RS232 operation.

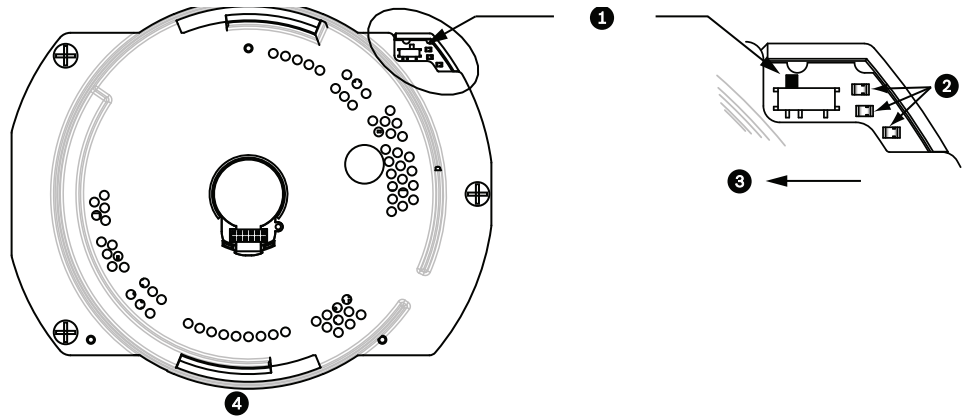


Figure 1.2 Position of CPU Switch for RS232 Operation

1	Switch Location
2	LEDs
3	Move Switch to the left for RS232 Operation
4	CPU Module

11. Return the bubble to the AutoDome housing.
12. Return power to the power supply box.

1.2 Controlling a G3A or ENV Series AutoDome

To control a G3A or ENV Series AutoDome from an RS232 or from a Pelco RS422 controller you must install the LTC 4629 head-end data/video transceiver and then adjust the G3A or ENV series AutoDome. The configuration steps for each protocol differ slightly, refer to appropriate section below your controller protocol.

1.2.1 Configuration for an RS232 Controller

The default baud rate for the AutoDome is 9600 and the default switch setting is for RS232. Ensure that the sending device is set to 9600 Baud.

Installing the LTC 4629 Head-end Data/Video Transceiver

1. Connect the TXD cable from the controller to the RS232 Data + input connector (pin 1).
2. Connect the RS-232 ground cable from the controller to the RS232 ground connector (pin 2).
3. Connect the single multimode fiber between the LTC 4629 and the fiber optic AutoDome.

Configuring the Fiber Optic G3A/ENV Series AutoDome

The AutoDome installed with the fiber optic module is prewired to operate only with Biphase signals. To enable the AutoDome to correctly detect the RS232 signal, change the connections on the 9-pin connector on the top of the AutoDome. The following figure illustrates the 9-pin connector and the function of each pin:

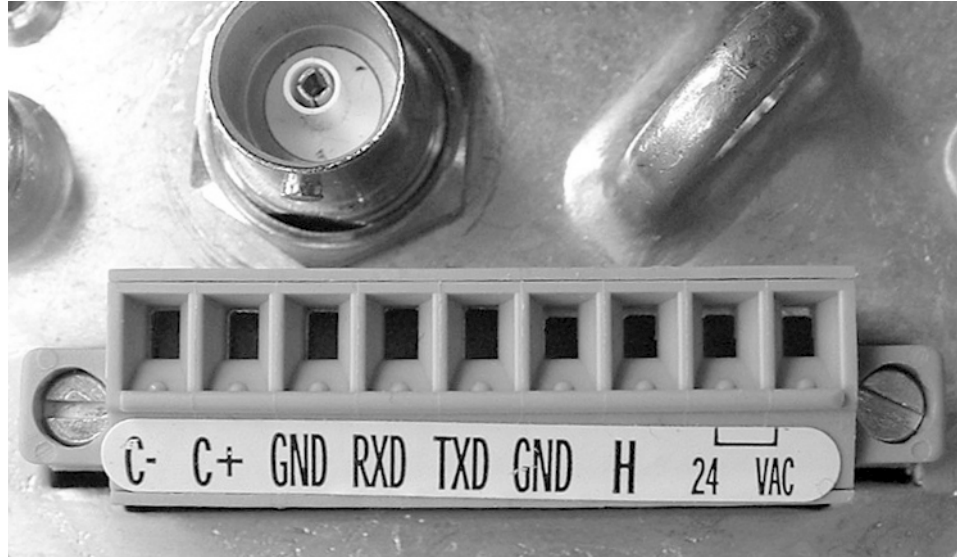


Figure 1.3 Detail of the 9-pin Connector

To change the connections use the following steps:

1. Remove the wire that is connected to the RXD connection (blue) on the prewired 9-pin connector on the top of the AutoDome.
2. Cut the end of this wire so that no bare wires are exposed. This wire is no longer required and will not be connected to anything.
3. Remove the wire that is connected to the C+ connection (red) on the 9-pin connector and move it to the RXD connection.

The AutoDome is now configured to be controlled by the RS232 signals through the fiber optic cable.

Troubleshooting

If the AutoDome does not respond to the RS232 controller, use an LTC 5136/60 keyboard to connect via Biphase directly to the AutoDome, bypassing the fiber connection. Ensure that the baud rate for the AutoDome is set to 9600 and check the internal switch to ensure that it is set to RS232 and has not been changed to RS485.

1.2.2

Configuration for the Pelco RS422 Controller

Installing the LTC 4629 Head End Data/Video Transceiver

1. Connect the TX (+) cable from the controller to the Data (+) input connector (pin 1).
2. Connect the TX (-) cable from the controller to the Data (-) connector (pin 3).
3. Connect the multimode fiber between the LTC 4629 and the fiber optic AutoDome.

Configuring the Fiber Optic G3A/ENV Series AutoDome

The AutoDome with a fiber optic module is prewired to operate with Biphase signals only. To enable the AutoDome to correctly receive the Pelco signal, change the connections on the 9-pin connector on the top of the AutoDome as follows:

1. Disconnect the power from the AutoDome.
2. Carefully remove the pendant from its mount.
3. Remove the wire that is connected to the RXD connection (blue) on the prewired 9-pin connector on the top of the AutoDome. See *Figure 1.3* for a detailed view of the 9-pin connector and the function of each pin.
4. Cut the end of this wire so that no bare wires are exposed. This wire is no longer required and will not be connected to anything.
5. Remove the wire that is connected to the TXD connection (brown) on the prewired 9-pin connector on the top of the AutoDome.
6. Cut the end of this wire so that no bare wires are exposed. This wire is no longer required and will not be connected to anything.
7. Remove the wire that is connected to the C+ connection (red) on the 9-pin connector and move it to the RXD connection (blue).
8. Remove the wire that is connected to the C- connection (white) on the 9-pin connector and move it to the TXD connection (brown).
9. Remove the four (4) screws from the top of the AutoDome and carefully remove the plate.



Figure 1.4 Top Plate

10. Locate Dip Switch S105 inside the AutoDome.

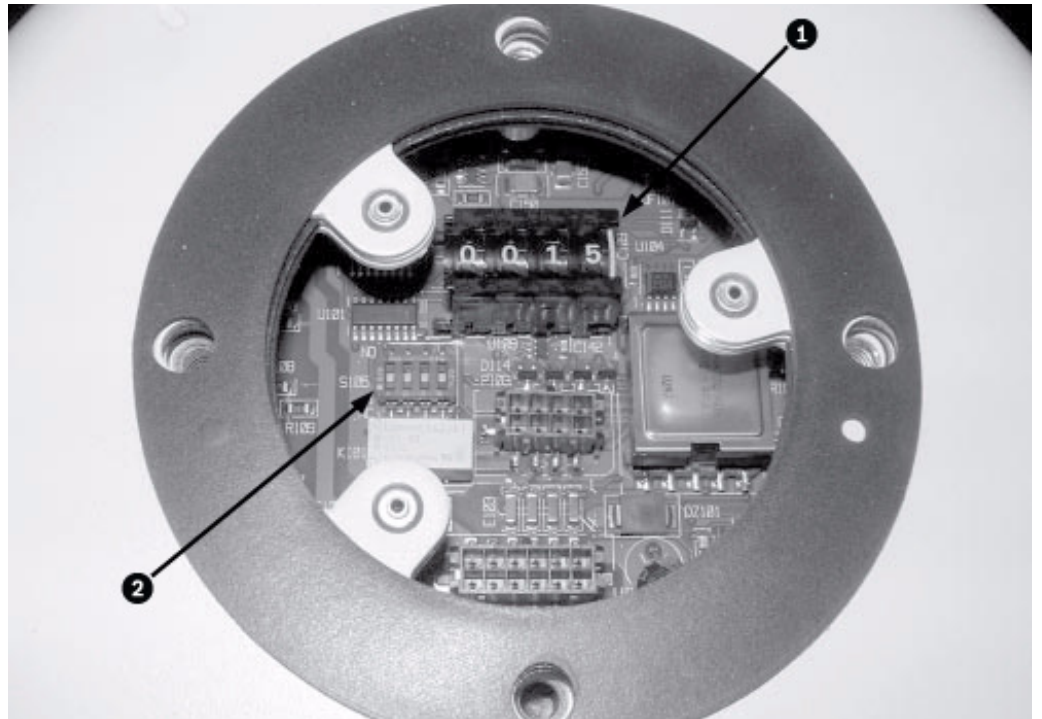


Figure 1.5 G3A/ENV Top View

1	Address Switch
2	S105 Dip Switch

11. Set switch 2 to ON to allow the AutoDome to accept RS422/RS485 signals. The table below summarizes the settings for Dip Switch S105:

Switch	Function	Position	Selection
1	Reserved		
2	Serial Mode Selection	On	RS485
		Off	RS232 (default)
3	Reserved		
4	Low Pressure Detection	On	Pressurized dome
		Off	Non-pressurized dome (default)

12. Replace the top plate and secure with the four screws.
13. Reconnect the AutoDome to its mount.
14. Return the power to the AutoDome.
You can now control the AutoDome with a Pelco RS422 controller through the fiber optic cable. The AutoDome automatically detects the Pelco protocol and selects the appropriate baud rate.

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