

DATA SHEET

Combined Solenoid Points Control and Signal Module SD-005

The SD-005 combined solenoid actuated points and signal control module provides connection to one set of points and one two aspect signal from the SD-001 central control unit. It is designed to work with points that are solenoid operated. It requires separate power supply for operation. This gives a choice of operating voltage, independent of other components, to give reliable points switching. It is also designed to work with signals that have Light Emitting Diode (LED) lamps fitted.

Specifications:

- Controls one sets of solenoid actuated points
- Input Voltage – 12-16 Volts DC from separate source
- Input Signal – Branch or Straight for each set of points from decoder module
- Switching uses the capacitor/resistor timing to protect solenoid coils from burn-out
- Controls two, two aspect signal
- Input Voltage – 5 Volts DC from Decoder Module
- Input Signal – On/Off switching for each lamp
- Maximum Output Current – Red LED 9 mA, Green LED 16 mA

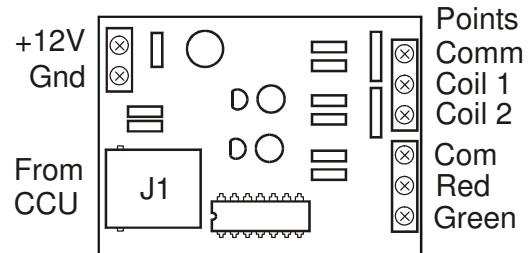


Figure 1 Points/Signal Control Module

INSTALLATION

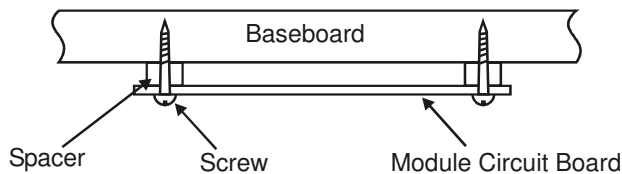


Figure 2 Module Mounting

Mount the Module in a position central to the points to be controlled. Use the screw holes provided in the board to mount it but do not fix the screws too tightly or the board may be damaged.

The use of spacers as shown in Figure 2 is recommended.

Connect the points control module J1 to the required output of central control unit, using

telephone style connectors and cable. The type of connector and cable is described later in this data sheet.

Connect power (12-16 V DC) to the positive (+) and ground terminals, as shown in Figure 1.

Connect one end of each solenoid to the common output terminal, and the other end of each coil to the Coil 1 and Coil 2 connections, as shown in Figure 1, for each of the two sets of points.

The points will switch to a default position when power is applied to the control system. This provides a known starting position each time the layout is powered up. If this position is not as desired, swap the Coil 1 and Coil 2 wires for that set of points and the default position will be changed to the opposite switching.

Connect the wire from the positive (anode) of the green LED for each signal to the respective terminal designated Green, as shown in Figure 1. Also refer to Figure 5.

Connect the wire from the positive (anode) of the red LED for each signal to the terminal designated Red, as shown in Figure 1. Also refer to Figure 5.

Connect the negative (cathode) wires of all of the LEDs to the terminal designated Common, as shown in Figure 1. Also refer to Figure 5

CONNECTING TO CENTRAL CONTROL UNIT

Connecting from the central control unit to the combined solenoid points and signal control module is done by using four core telephone cable fitted with RJ11 connectors. Cables of the correct length and orientation are required.

The signals assigned to the pins of the RJ11 connector are detailed in Figure 3.

As the connector pins have the same orientation on both the decoder and the control modules, it is necessary to reverse the connectors on the cable, as shown in Figure 4.

Cables can be made with the use of a crimping tool or purchased, in either case ensure that they are the cross over type.

To make the connection, simply plug one end of the cable into the decoder and the other into the signal module.

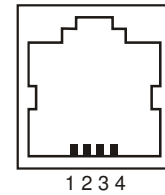
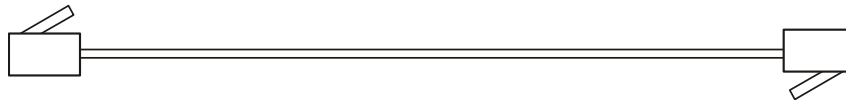


Figure 3 RJ11 Pins



The plugs are reversed

Figure 4 Cable Orientation

SIGNAL WIRING

The accessory decoder and signal module are designed to operate with signals that are fitted with LEDs wired with common cathode. Figure 5 shows the required method of wiring.

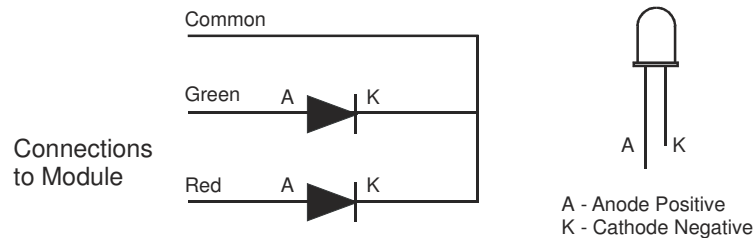


Figure 5 Signal Wiring

On some commercial signals, separate ground wires are provided for each LED. In this case connect both ground wires to the common terminal. If the signals fail to operate it may be because they are wired as common anode. In this case the signals will have to be rewired.