AUTOMATEDLOGIC CORPORATION

TECHNICAL INSTRUCTIONS

DIAG485

Using the DIAG485 2
Specifications 2
Mounting 2
Power Wiring 2
Communications Wiring 2
Diagnosing Network Problems 3
Protection 3

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Using the DIAG485

The DIAG485 (see Figure 1) is a diagnostic board that shows the communication signal levels on the network segment. The DIAG485 can also reduce the effects of noise on the CMnet by adding bias.

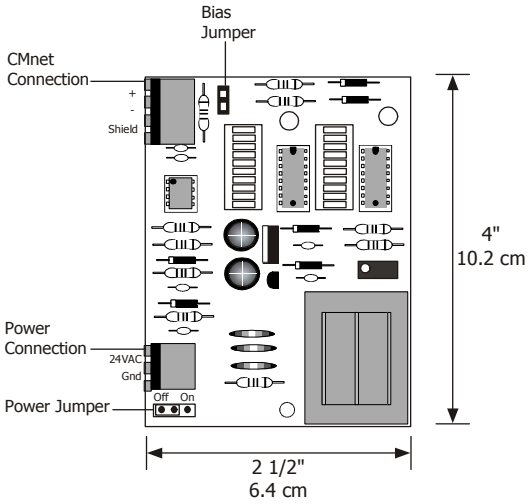


Figure 1. DIAG485

Specifications

Power 24VAC, 0.3A, 50-60Hz, 7.2VA (Single Class 2 Source Only, 100VA or less).

Temperature Range 0 to 130 °F (-17.8 to 54.4 °C).

Operating Humidity Range 10-90% relative humidity, non-condensing.

Mounting

WARNING If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Provide at least 1.5 inches (3.8 cm) of clearance from each edge of the DIAG485 for wiring.

1. Remove DIAG485 from the snap-track.
2. Mount the snap-track using self-drilling screws. Drill directly into the plastic near the edges of the snap-track so that the screws will be visible when the DIAG485 is installed. This prevents loose screws from shorting out the back of the board.
3. Mount the DIAG485 on the snap-track by pushing it firmly into the grooves.

Power Wiring

CAUTION The DIAG485 is a Class 2 device (less than 30VAC, 100VA). Take appropriate isolation measures when mounting it in a control panel where non-Class 2 devices (120VAC or greater) are present.

1. Make sure that the power source is off.
2. Connect the two power wires to the connector labelled 24VAC on the DIAG485.
3. Turn the power source on.
4. The LED labelled POWER should light when the ON/OFF jumper is set to ON.

Communications Wiring

Two 120 Ohm terminators are included with each DIAG485. These terminators should be placed at each end of the segment to prevent signal distortions (see Figure 2 on page 3).

1. Remove the DIAG485's power jumper or place it in the off position.
2. Check the communication wiring for shorts and grounds.
3. Connect the communication wires to the CMnet port on the DIAG485. Be sure to follow the same polarity as used throughout the rest of the CMnet.
4. Replace the DIAG485's power jumper or place it in the on position.
5. Verify communication with the network by viewing module status reports on a SuperVision workstation.

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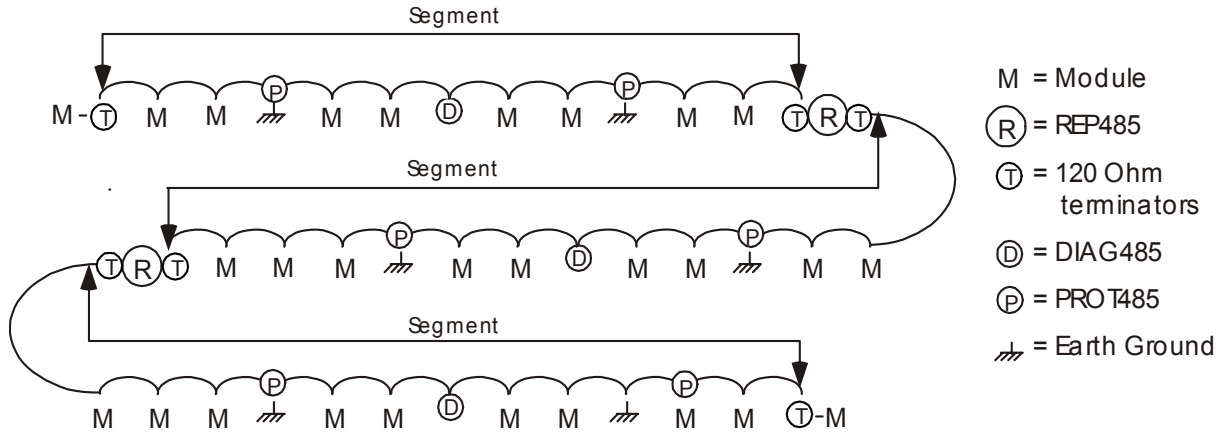


FIGURE 2. SAMPLE CMNET CONFIGURATION

DIAGNOSING NETWORK PROBLEMS

Figure 3 explains the meaning of some of the signals you may see on the DIAG485. The length of the network segment affects these displays; on a lengthy segment, fewer LEDs in each column may be illuminated. Likewise, on a short segment, more LEDs may be illuminated.

Adding Bias

The Bias jumper on the DIAG485 board (see Figure 1) determines whether network bias is added. Only one DIAG485 per network segment can have the Bias jumper in place. The DIAG485 with the Bias jumper should be placed in the middle of the segment.

Additional DIAG485s with the Bias jumper removed may be used on a segment for monitoring the network communications.

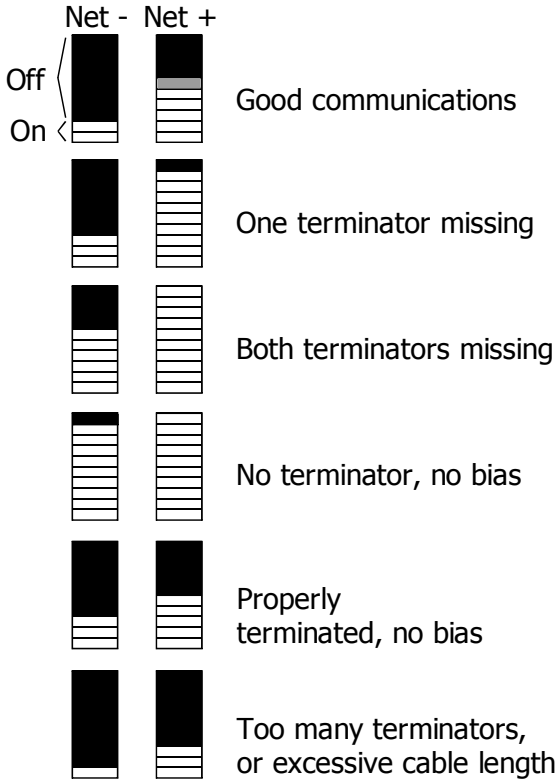


FIGURE 3. READING DIAG485 LED SIGNALS

PROTECTION

The DIAG485 is protected by an internal solid state Polyswitch on the CMnet. This Polyswitch is not replaceable and will reset itself if the condition that caused the fault returns to normal.

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