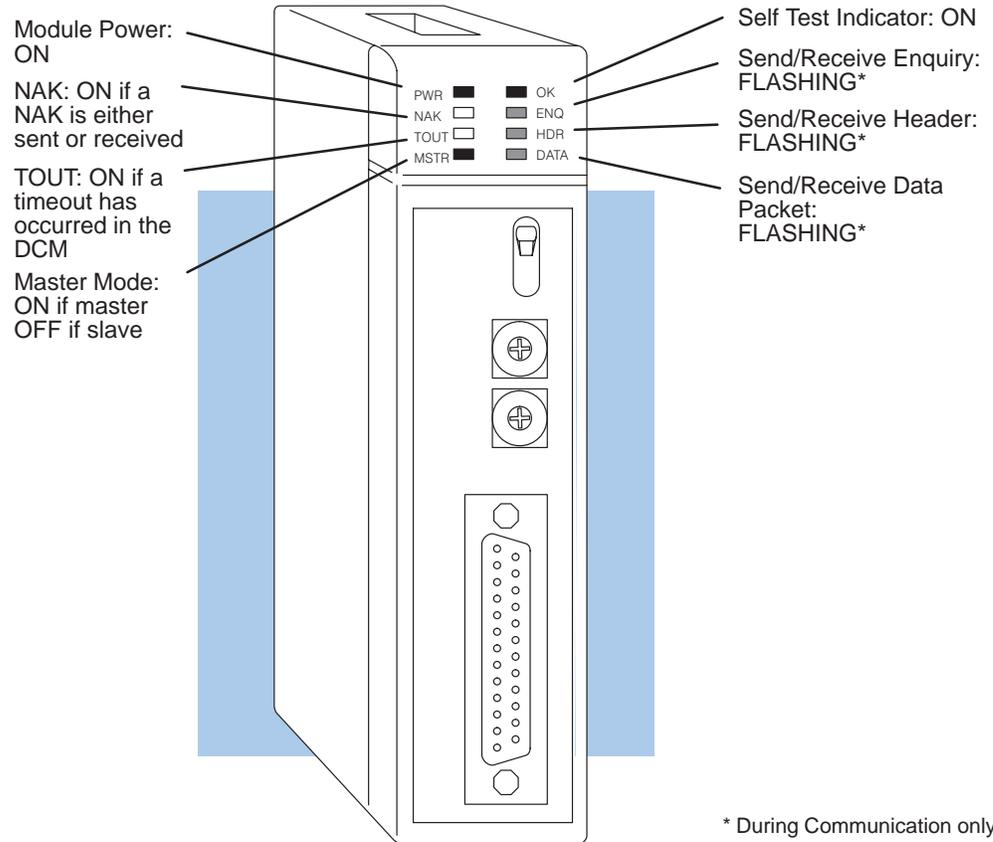


Verification and Troubleshooting

Check the DCM indicators to verify the DCM is operating correctly. The following diagram shows the proper indicator conditions.



**Troubleshooting
Quick Steps**

If the DCM does not seem to be working correctly, check the following items. These items represent the problems found most often.

1. Cable and connections. Incorrectly wired cables and loose connectors cause the majority of problems. Verify you've selected the proper cable configuration and check the cable making sure it is wired correctly.
2. Dipswitch settings. Make sure you've set the DCM to match the communication parameters required by the master station (DCM, operator interface or host computer).
3. Incorrect protocol. Make sure your operator interface or personal computer software can use the **DirectNET**, Hostlink, CCM2, or MODBUS® RTU protocol.
4. Communications program. Check the communications program for errors. Consult the **DirectNET** Manual or the manuals that came with your host computer software or operator interface for details.



NOTE: If you need more in depth troubleshooting, see the chart on the next page. It provides several different indicator patterns that may help identify your exact problem.

The following table provides additional troubleshooting details.

Indicator Status	Possible Cause	Corrective Action
PWR or OK off	PLC power is disconnected DCM is defective	Check the PLC source power. Replace the DCM.
MSTR off (and DCM is in a master station)	Switch setting is incorrect	Remove power from the PLC, remove the DCM and check positions 1 and 2 on SW5.
ENQ indicator does not come on when communications program is executed	The PLC master station is not in Run mode Online / Offline switch is in the Offline position Communications program is not correct	Place the PLC in Run mode. Set the switch to Online. Check the communications program. Verify the address, amount of data, and data type are correct. (See the <i>DirectNET</i> manual for details on the programs).
ENQ stays on, but NAK, TOUT, or HDR indicators do not come on at all	Communication timeout is disabled RTS and CTS signals are not looped back on the master station end of the cable	Remove power from the PLC, remove the DCM, and check position 3 on SW5. Remove master station connector, ensure RTS and CTS are connected according to the cable diagram.
ENQ comes on and TOUT indicator flashes	RLL communications program is not correct Modes are different Communication cable	Check the communications program. Verify the address is correct. (The address is set in hex, but the RLL uses BCD). Set baud rate, parity, and mode (HEX/ASCII) to match the master station. Verify the cable is wired according to the cable pinouts.
ENQ indicator comes on and NAK indicator flashes (slave responds, but the data is incorrect)	Modes are different Communication cable	Set baud rate, parity, and mode (HEX/ASCII) to match the master station. Make sure the + and – connections are correct (RS422). Check pin 7 (GND) if you're using RS232C.
ENQ and HDR indicators come on and the NAK indicator flashes	Communications program is not correct Modes are different	Check the amount of data being transferred. You must use the correct byte boundaries for the data type being used. Set baud rate, parity, and mode (HEX/ASCII) to match the master station.
DATA indicator is on, but the NAK indicator comes on intermittently	Electrical noise	Make sure the system has good earth grounds. Only one end of the cable shield should be grounded. If you're using RS232C, try using RS422.