

W5-JDC4 Quick Start Guide

Use this Quick Start Guide to quickly and easily install your W5-JDC4 in your system. Follow the instructions below.

1. How to Install and Establish DeviceNet™ Communications

1. Remove the W5-JDC4 from the box and connect your DeviceNet network cable to a 5-pin female (or male) micro-style connector according to DeviceNet cable wiring specifications.
2. Make sure that the DeviceNet network is terminated properly.
3. The W5-JDC4 Node Address (MacID) is set to 63 at the factory. Make sure no other device on the network is set to 63. When a new switch setting and MAC ID are desired, first remove power, then change the rotary switches to new settings, then reapply power. The address of the device will not change if the rotary switches are moved while the device is powered.
4. The W5-JDC4 baud rate is set to 125k baud operation at the factory. If a fixed baud rate is needed, set the baud rate rotary switch to the required baud rate.
5. Make sure that there is power on the DeviceNet network and plug the cable into the W5-JDC4.
6. The W5-JDC4 will undergo its initialization sequence, flashing both LED's red and green. After approximately 5 seconds, the Module Status LED (labeled "MS") will flash green. The Network Status LED (labeled "NS") will remain off. This condition occurs while the W5-JDC4 is attempting to synchronize to the network baud rate.
7. The Module Status LED ("MS") will go on solid after the Device successfully determines the network baud rate. This requires devices on the network attempting to communicate with each other. The Network Status LED (labeled "NS") will begin to flash green. If it turns solid red, check for a duplicate MacID on the network. It will remain off until the W5-JDC4 receives a valid DeviceNet message from which it will set its baud rate.
8. Once the Master recognizes the unit on the link and allocates the connection (initiates communications), The Network Status LED will be solid green. The device is now being actively scanned on the network.

2. How to Install a Serial Network

1. The communication between your serial device(s) and the W5-JDC4 is a RS232 3-wire network. Connect an appropriate cable to your device.
2. Connect the other end of the cable to the W5-JDC4 using the 9-pin DB9 connector.
3. Turn on power to the serial device and the W5-JDC4.
4. Set up the ASCII buffer sizes on the W5-JDC4. (The defaults are 20 and 20)

How to Read Serial Device Input Data from the W5-JDC4

1. Connect to the W5-JDC4 from your DeviceNet Configuration Manager tool such as DNspector.
2. Connect the serial side of the W5-JDC4 to your computer's serial port or another serial device.
3. Go to the device configuration screen in the Configuration Manager.
4. Set the baud rate and framing format of the serial port to the baud rate and framing format of the serial device that you are using.
5. Put the Configuration tool in to monitor mode.
6. Direct the device that you are communicating with to send data. For example, if you are connected to a computer terminal program, type a message into the terminal. When you hit enter, the module will update the data with the message that you typed, and increment the record number.
7. The default assembly format for 20 characters of ASCII data of a poll message is shown in Table 3-1.
8. Table 3-1 Default Input (Serial Receive) Assembly Format

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4 to 23
Record Number Channel 1	Status	Reserved	Length	ASCII Data
Byte 24	Byte 25	Byte 26	Byte 27	Byte 28 to 47
Record Number Channel 2	Status	Reserved	Length	ASCII Data
Byte 48	Byte 49	Byte 50	Byte 51	Byte 52 to 71
Record Number Channel 3	Status	Reserved	Length	ASCII Data
Byte 72	Byte 73	Byte 74	Byte 75	Byte 76 to 95
Record Number Channel 4	Status	Reserved	Length	ASCII Data

Note: The default data type is Short_String, which includes one length byte.

9. The Receive Max Character Length parameter is found in the Receive Record Object (Class **114**, Instance **ch**, Attribute **7**). Changing this parameter to zero (0) will eliminate only the data; the header will still be produced and sent to the master.
10. Every time a serial buffer is updated the record number is incremented. If the record number is the same as the previous response, the W5-JDC4 will not re-send the string.

3. How to Write Serial Output Data to the W5-JDC4

1. Do steps 1-6 of Section 3 above.
2. Enter the serial data that you wish to send in the transmit data parameter (each channel has a factory default of 20 characters maximum).
3. Change the Length of the data in the length byte to reflect the length you wish to send.
4. Change the Record Number. If the record number is the same as the previous response, the W5-JDC4 will not re-send the string.
5. The W5-JDC4 will generate the characters that you typed in on the computer screen.
6. The assembly formats of these messages are configurable and are covered in the User's Manual. An example assembly for serial transmit is shown in Table 4-1.

Table 4-1 Default Output (Serial Transmit) Assembly Format

Byte 0	Byte 1	Byte 2	Byte 3	Bytes 4 to 23
Reserved	Record Number Channel 1	Reserved	Length	ASCII Data
Byte 24	Byte 25	Byte 26	Byte 27	Bytes 28 to 47
Reserved	Record Number Channel 2	Reserved	Length	ASCII Data
Byte 48	Byte 49	Byte 50	Byte 51	Bytes 52 to 71
Reserved	Record Number Channel 3	Reserved	Length	ASCII Data
Byte 72	Byte 73	Byte 74	Byte 75	Bytes 76 to 95
Reserved	Record Number Channel 4	Reserved	Length	ASCII Data

Note: The default data type is Short_String, which includes one length byte. If using a delimiter, you must use the actual length of the string, including the delimiter, for the data size, whether or not it fills the entire data block. The Transmit Max Character Length parameter is found in the Transmit Record Object (Class **113**, Instance **ch**, Attribute **5**). Changing this parameter to zero (0) will eliminate only the data; the header will still be consumed and should be sent by the master.