

# Serial Module for WinPLC and EBC Systems

## Serial Communications Module for WinPLCs & EBCs

**H2-SERIO** <--->  
**H2-SERIO-4** <--->



### Serial I/O modules for WinPLCs

Add serial ports to your WinPLC system by simply plugging the H2-SERIO or H2-SERIO-4 modules into the DL205 I/O base. These serial modules are used exclusively with the WinPLC. The WinPLC communicates with the H2-SERIO(-4) module across the DL205 backplane.

The H2-SERIO module has three RS-232C ports, while the H2-SERIO-4 module has two RS-232C ports and one RS-422/485 port.



H2-SERIO

H2-SERIO-4

H2-SERIO / H2-SERIO-4 Specifications		
	H2-SERIO	H2-SERIO-4
<b>Module Type</b>	Intelligent module for use with H2-WPLC-xx or H2-EBC(100)	
<b>Approvals</b>	cUL Listed, file number E185989	
<b>Number of Serial Ports per Module</b>	3 ports: all RS-232 (RJ12 jack)	3 ports: 2 RS-232 ports (RJ12 jack), and 1 RS-422/485 (5 position terminal strip)
<b>Signals</b>	RS-232: CTS, RXD, TXD RTS, GND RTS transmission delay times: 5, 50, 250 and 500 ms	RS-232: CTS, RXD, TXD RTS, GND RTS transmission delay times: 5, 50, 250 and 500 ms RS-422 (4 wire): TX+, TX-, RX-, RX+, GND RS-485 (2 wire): Data+, Data-, GND
<b>Number of Modules Supported per H2-WinPLC-xx</b>	3	
<b>Number of Modules Supported per H2-EBC(100)</b>	8	
<b>Recommended Cables</b>	Belden 9729 or equivalent	RS-232 ports: Belden 9729 or equivalent RS-422/RS-485 terminal: 16-28 AWG solid or stranded conductor (1.5mm <sup>2</sup> ) Wire strip length: 0.24-0.27 inches (6-7 mm); Screw torque: 1.7 in-lbs (0.2 Nm)
<b>Protocols Supported</b>	Serial ASCII and Modbus RTU slave	
<b>Power Consumption</b>	80 mA @ 5 VDC	
<b>Baud Rates</b>	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	
<b>Parity</b>	None, odd, even	
<b>Start and Stop Bits</b>	1, 2	
<b>Operating Environment</b>	0 to 60°C (32°F to 140°F), 5% to 95% RH (non-condensing); No corrosive gases, Pollution level 2; Vibration: MIL STD 810C 514.2; Shock: MIL STD 810C 516.2	
<b>Storage Temperature</b>	-20 to 70°C (-4°F to 158°F)	
<b>Firmware Note</b>	The H2-EBC requires firmware version v2.1383 or later to support the H2-SERIO or H2-SERIO-4.	



WinPLC

H2-SERIO

### Up to ten serial ports on a WinPLC system

The WinPLC has one built-in serial port. You can add as many as nine additional serial ports for Think & Do Studio or Think & Do Live! applications requiring multiple serial devices, such as barcode scanners. Connect to just about any serial device that communicates ASCII protocol. The H2-SERIO(-4) can also serve as a Modbus RTU slave.

### Processing large amounts of serial data with a WinPLC

While the H2-SERIO(-4) module will support virtually any serial device, processing large amounts of serial data will increase the system response time. This is important to consider when using multiple H2-SERIO(-4) modules, especially in a WinPLC local base with an H2-ERM or H2-CTRIO.

# Serial Modules for WinPLC and EBC Systems

## Separate communications parameters for each port

Use Think & Do software packages to set baud rate, parity, data bits, and stop bits for each serial port. Choose from 300 baud to 57.6K baud communication speeds. Think & Do or Think & Do Live! allows each port to be designated as a Modbus slave or a generic serial device. Each port on the H2-SERIO(-4) module is capable of full hardware handshaking.

## Easy serial communications

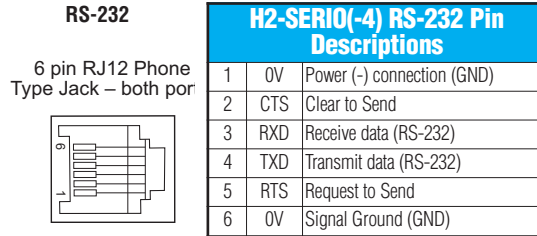
All Think & Do PC control software products include advanced string and array functions that make transmitting, receiving and manipulating serial data a snap.

## Using H2-SERIO(-4) in a PC-based control EBC system

Think & Do versions 6.5 and later support the use of up to eight H2-SERIO(-4) modules per EBC node in a PC-based control system. The master must be a PC running Think & Do 6.5 or later. This does not apply to a WinPLC system with an ERM module used for remote I/O.

The Think & Do features described here for the WinPLC (receiving and manipulating data) also apply to a PC running the Think & Do software.

## H2-SERIO(-4) Wiring: RS-232



## H2-SERIO-4 Wiring: RS-422/485

Set DIP switch S2 on the H2-SERIO-4 to:

1. Activate or deactivate the internal 120Ω termination resistor.
2. Select RS-422 or RS-485 operation.

