Serial Module for EBC Systems

Serial Communications Module for EBCs

H2-SERIO $252.00

H2-SERIO-4 $252.00

H2-SERIO

H2-SERIO-4

H2-SERIO / H2-SERIO-4 Specifications		
	H2-SERIO	***H2-SERIO-4***
Module Type	Intelligent module for use with H2-DM1, H2-DM1E or H2-EBC100 with PC application	
Approvals	cUL Listed, file number E185989	
Number of Serial Ports per Module	3 ports: all RS-232 (RJ12 jack)	3 ports: 2 RS-232 ports (RJ12 jack) and 1 RS-422/485 (5 position terminal strip)
Signals	RS-232: CTS, RXD, TXD RTS, GND RTS transmision delay times: 5, 50, 250 and 500 ms	RS-232: CTS, RXD, TXD RTS, GND RTS transmision delay times: 5, 50, 250 and 500 ms
		RS-422 (4 wire) : TX+, TX-, RX-, RX+, GND RS-485 (2 wire): Data+, Data-, GND
Number of Modules Supported	8 per H2-DM1, H2-DM1E or H2-EBC100	
Recommended Cables	Belden 9729 or equivalent	RS-232 ports: Belden 9729 or equivalent RS-422/RS-485 terminal: 16-28 AWG solid or stranded conductor (1.5 mm^2) Wire strip length: 0.24-0.27 inches (6-7 mm); Screw torque: 1.7 in·lbs (0.2 N·m)
Protocols Supported	Serial ASCII (full-duplex) and Modbus RTU Server	
Power Consumption	80mA @ 5VDC	
Baud Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	
Parity	None, odd, even	
Start and Stop Bits	1, 2	
Operating Environment	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	
Storage Temperature	-20 to 70°C (-4°F to 158°F)	
Firmware Note	The H2-EBC100 requires firmware version v2.1383 or later to support the H2-SERIO or H2-SERIO-4.	

Serial I/O modules for PC-based control

Add serial ports to your EBC-based rack system by simply plugging the H2-SERIO or H2-SERIO-4 modules into the DL205 I/O base.

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

Processing large amounts of serial data

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.

Serial Modules for EBC Systems

Separate communications parameters for each port

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

Easy serial communications

Do-More software includes advanced string and array functions that make transmitting, receiving and manipulating serial data a snap.

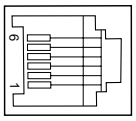
Using H2-SERIO(-4) in an EBC system

Do-More versions 2.3 and later support the use of up to eight H2-SERIO(-4) modules per EBC node in a PC-based control system. The Client must be a CPU running Do-More v2.3 or later.

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

RS-232

6 pin RJ12 Phone Type Jack – both por

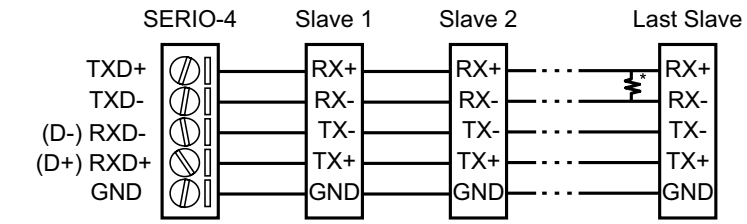


H2-SERIO(-4) RS-232 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	CTS	Clear to Send
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	RTS	Request to Send
6	0V	Signal Ground (GND)

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.

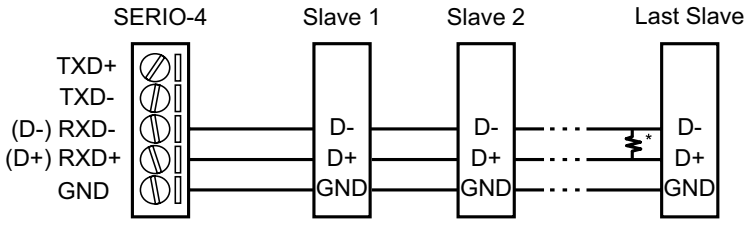
RS-422



(H2-SERIO-4 contains an optional 120Ω termination resistor between RX+ and RX-; use DIP switch S2 to activate or deactivate resistor.)

* User Supplied 120Ω Termination Resistor

RS-485



(H2-SERIO-4 contains an optional 120Ω termination resistor between RX+ and RX-; use DIP switch S2 to activate or deactivate resistor.)

* User Supplied 120Ω Termination Resistor

Power Requirements

These charts help determine your power requirements

This section shows the amount of power supplied by each of the base power supplies and the amount of power consumed by each DL205 device. The Power Consumed charts list how much INTERNAL power from each power source is required for the DL205 devices. Use this information when calculating the power budget for your system.

In addition to the internal power sources, the DL205 bases offer a 24 VDC auxiliary power supply with external power connections. This auxiliary power supply can power external devices.

Use *ZIP*Links to reduce power requirements

If your application requires a lot of relay outputs, consider using the ***ZIP***Link AC or DC relay output modules. These modules can switch high current (10A) loads without putting a load on your base power budget. Refer to the Terminal Blocks and Wiring Solutions section in this catalog for more information.

This logo is placed next to the I/O modules that are supported by the *ZIP*Link connection systems. See the I/O module specifications at the end of this section.

Power Consumed		
Device	***5V(mA)***	***24V Auxiliary***
Operator Interface		
C-more Micro-Graphic	210	0

Power Supplied			
Device	***Price***	***5V(mA)***	***24V Auxiliary***
Bases			
D2-03B-1	$200.00	2600	300
D2-03BDC1-1	$249.00	2600	None
D2-04B-1	$217.00	2600	300
D2-04BDC1-1	$274.00	2600	None
D2-06B-1	$268.00	2600	300

Power Consumed		
Device	***5V(mA)***	***24V Auxiliary***
CPUs		
D2-262	336	0
DC Input Modules		
D2-08ND3	50	0
D2-16ND3-2	100	0
D2-32ND3	25	0
D2-32ND3-2	25	0
AC Input Modules		
D2-08NA-1	50	0
D2-08NA-2	100	0
D2-16NA	100	0
Input Simulator Module		
F2-08SIM	50	0
DC Output Modules		
D2-04TD1	60	20
D2-08TD1	100	0
D2-08TD2	100	0
D2-16TD1-2	200	80
D2-16TD2-2	200	0
F2-16TD1P	70	50
F2-16TD2P	70	50
D2-32TD1	350	0
D2-32TD2	350	0
AC Output Modules		
D2-08TA	250	0
F2-08TA	250	0
D2-12TA	350	0
Relay Output Modules		
D2-04TRS	250	0
D2-08TR	250	0
F2-08TR(S)	670	0
D2-12TR	450	0
Combination In/Out Module		
D2-08CDR	200	0

Power Supplied			
Device	***Price***	***5V(mA)***	***24V Auxiliary***
Bases			
D2-06BDC1-1	$304.00	2600	None
D2-06BDC2-1	$279.00	2600	300
D2-09B-1	$333.00	2600	300
D2-09BDC1-1	$360.00	2600	None
D2-09BDC2-1	$359.00	2600	300

Power Consumed		
Device	***5V(mA)***	***24V Auxiliary***
Analog Modules		
F2-04AD-1	100	5
F2-04AD-2	110	5
F2-08AD-1	100	5
F2-08AD-2	100	5
F2-02DA-1	40	60 (note 1)
F2-02DA-2	40	60
F2-02DAS-1 F2-02DAS-2	100 100	50 / channel 60 / channel
F2-08DA-1	30	50 (note 1)
F2-08DA-2	60	140
F2-4AD2DA	60	80 (note 1)
F2-8AD4DA-1	35	100 (note 1)
F2-8AD4DA-2	35	80 (note 1)
F2-04RTD	90	0
F2-04THM	110	60
Specialty Modules		
D2-CTRINT	50*	0
D2-CM / D2-EM	100/130	0
H2-CTRIO2	275	0
D2-DCM	300	0
H2-EBC100	300	0
H2-ECOM100	300	0
F2-CP128	235	0
Remote I/O		
H2-ERM100, (-F)	300, (-F: 450)	0
Programming Devices		
D2-HPP	200	0

*** Requires external 5VDC for outputs**

Note 1: Add an additional 20 mA per output loop.

Dimensions and Installation

Understanding the installation requirements for your DL205 system will help ensure that the DL205 products operate within their environmental and electrical limits.

Plan for safety

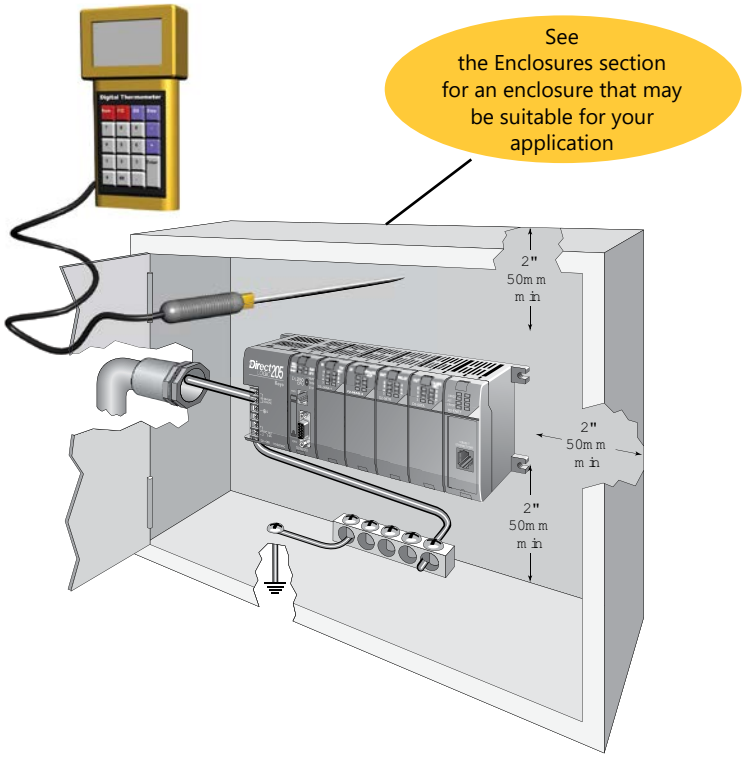
This catalog should never be used as a replacement for the user manual. The user manual, D2-USER-M (downloadable online), contains important safety information that must be followed. The system installation should comply with all appropriate electrical codes and standards.

Environmental specifications

The Environmental Specifications table at the right lists specifications that apply globally to the DL205 system (CPUs, bases, and I/O modules). Be sure that the DL205 system is operated within these environmental specifications.

Base dimensions and mounting

Use the diagrams below to make sure the DL205 system can be installed in your application. To ensure proper airflow for cooling purposes, DL205 bases must be mounted horizontally. It is important to check these dimensions against the conditions required for your application. For example, it is recommended that approximately 3" of space is left in front PLC surface for ease of access and cable clearances. Also, check the installation guidelines for recommended cabinet clearances.



Environmental Specification	Rating
Storage Temperature	-4°F to 158°F (-20°C to 70°C)
Ambient Operating Temperature	32°F to 131°F (0°C to 55°C)
Ambient Humidity	30% to 95% relative humidity (non-condensing)
Vibration Resistance	MIL STD 810C, Method 514.2
Shock Resistance	MIL STD 810C, Method 516.2
Noise Immunity	NEMA (ICS3-304)
Atmosphere	No corrosive gases

Base	A		B		C		D	
D2-03B-1, D2-03BDC1-1	6.77"	172mm	6.41"	163mm	5.8"	148mm	7.24"	184mm
D2-04B-1, D2-04BDC1-1	7.99"	203mm	7.63"	194mm	7.04"	179mm	8.46"	215mm
D2-06B-1, D2-06BDC1-1, D2-06BDC2-1	10.43"	265mm	10.07"	256mm	9.48"	241mm	10.90"	277mm
D2-09B-1, D2-09BDC1-1, D2-09BDC2-1	14.09"	358mm	13.74"	349mm	13.14"	334mm	14.56"	370mm