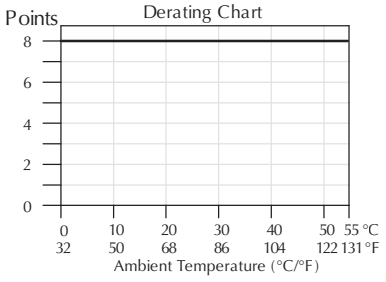
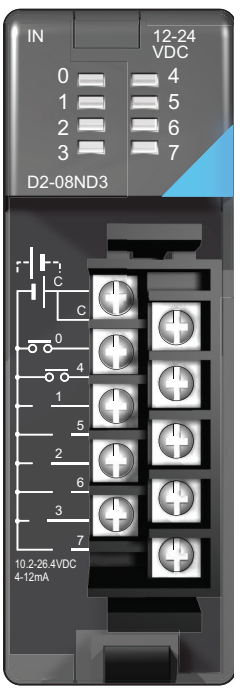
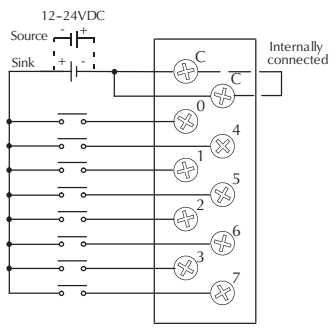
DC Input Modules

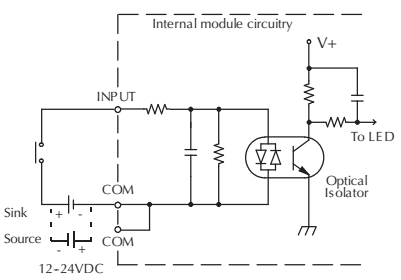
D2-08ND3 DC Input $55.00	
Inputs per Module	8 (sink/source)
Commons per Module	1 (2 I/O terminal points)
Input Voltage Range	10.2-26.4 VDC
Peak Voltage	26.4 VDC
ON Voltage Level	9.5 VDC minimum
OFF Voltage Level	3.5 VDC maximum
AC Frequency	N/A
Input Impedance	2.7 kΩ
Input Current	4.0 mA @ 12VDC 8.5 mA @ 24VDC
Minimum ON Current	3.5 mA
Maximum OFF Current	1.5 mA
Base Power Required 5VDC	50mA
OFF to ON Response	1 to 8 ms
ON to OFF Response	1 to 8 ms
Terminal Type (included)	Removable, D2-8IOCON
Status Indicator	Logic side
Weight	2.3 oz. (65g)

See Wiring Solutions for part numbers of *ZIP*Link cables and connection modules compatible with this I/O module.





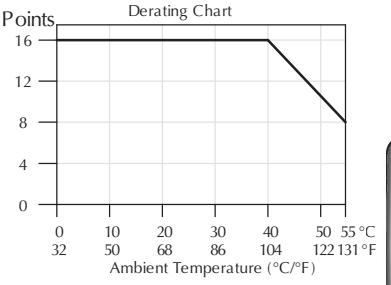


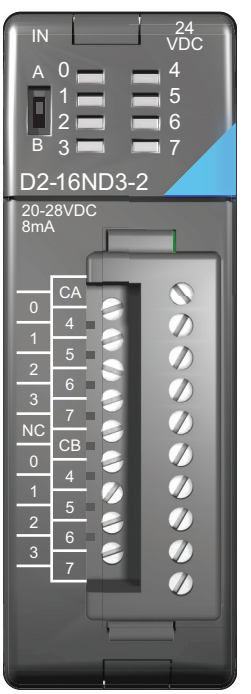


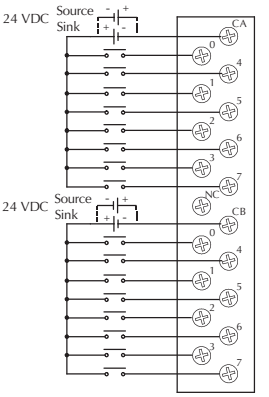
For "Sinking and Sourcing Concepts", see the Appendix section.

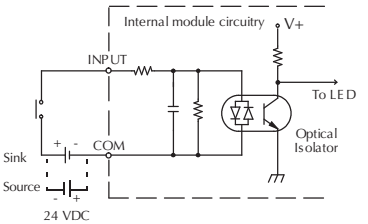
D2-16ND3-2 DC Input $93.00	
Inputs per Module	16 (sink/source)
Commons per Module	2 isolated (8 I/O terminal points / com)
Input Voltage Range	20-28 VDC
Peak Voltage	30VDC (10mA)
ON Voltage Level	19 VDC minimum
OFF Voltage Level	7VDC maximum
AC Frequency	N/A
Input Impedance	3.9 kq
Input Current	6mA @ 24VDC
Minimum ON Current	3.5 mA
Maximum OFF Current	1.5 mA
Base Power Required 5VDC	100mA
OFF to ON Response	3 to 9 ms
ON to OFF Response	3 to 9 ms
Terminal Type (included)	Removable, D2-16IOCON
Status Indicator	Logic side
Weight	2.3 oz. (65g)

See Wiring Solutions for part numbers of *ZIP*Link cables and connection modules compatible with this I/O module.









For "Sinking and Sourcing Concepts" see the Appendix section.

ZIPLink Wiring Solutions

Wiring Solutions using the *ZIP*Link Wiring System

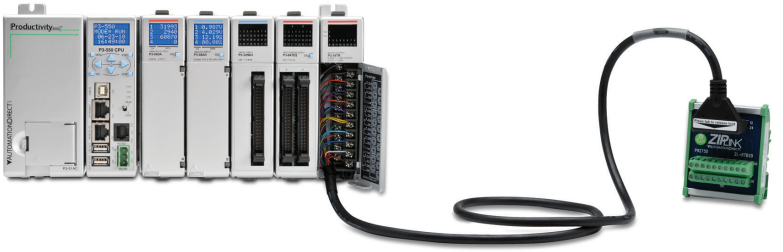
*ZIP*Links eliminate the normally tedious process of wiring between devices by utilizing prewired cables and DIN rail mount connector modules. It's as simple as plugging in a cable connector at either end or terminating wires at only one end. Prewired cables keep installation clean and efficient, using half the space at a fraction of the cost of standard terminal blocks. There are several wiring solutions available when using the *ZIP*Link System ranging from PLC I/O-to-*ZIP*Link Connector Modules that are ready for field termination, options for connecting to third party devices, GS, DuraPulse and SureServo Drives, as well as special relay, transorb and communications modules. Pre-printed I/O-specific adhesive label strips for quick marking of *ZIP*Link modules are provided with *ZIP*Link cables. See the following solutions to help determine the best *ZIP*Link system for your application.

Solution 1: Do-more, *Direct*LOGIC, CLICK and Productivity Series I/O Modules to *ZIP*Link Connector Modules

When looking for quick and easy I/O-to-field termination, a *ZIP*Link connector module used in conjunction with a prewired *ZIP*Link cable, consisting of an I/O terminal block at one end and a multi-pin connector at the other end, is the best solution.

Using the PLC I/O Modules to *ZIP*Link Connector Modules selector tables located in this section,

1. Locate your I/O module/PLC
2. Select a *ZIP*Link Module
3. Select a corresponding *ZIP*Link Cable.



Solution 2: Do-more, *Direct*LOGIC, CLICK and Productivity Series I/O Modules to 3rd Party Devices

When wanting to connect I/O to another device within proximity of the I/O modules, no extra terminal blocks are necessary when using the *ZIP*Link Pigtail Cables. *ZIP*Link Pigtail Cables are prewired to an I/O terminal block with color-coded pigtail with soldered-tip wires on the other end.

Using the I/O Modules to 3rd Party Devices selector tables located in this section,

1. Locate your PLC I/O module
2. Select a *ZIP*Link Pigtail Cable that is compatible with your 3rd party device.

Solution 3: GS Series and DuraPulse Drives Communication Cables

Need to communicate via Modbus RTU to a drive or a network of drives?

*ZIP*Link cables are available in a wide range of configurations for connecting to PLCs and *Sure*Servo, *Sure*Step, Stellar Soft Starter and AC drives. Add a *ZIP*Link communications module to quickly and easily set up a multi-device network.

Using the Drives Communication selector tables located in this section,

1. Locate your Drive and type of communications
2. Select a *ZIP*Link cable and other associated hardware.

ZIPLink Wiring Solutions

Solution 4: Serial Communications Cables

*ZIP*Link offers communications cables for use with ***Direct***LOGIC, CLICK, and Productivity CPUs, that can also be used with other communications devices. Connections include a 6-pin RJ12 or 9-pin, 15-pin and 25-pin D-sub connectors which can be used in conjunction with the RJ12 or D-Sub feedthrough modules.

Using the Serial Communications Cables selector table located in this section,

1. **Locate your connector type**
2. **Select a cable.**

Solution 5: Specialty *ZIP*Link Modules

For additional application solutions, *ZIP*Link modules are available in a variety of configurations including stand-alone relays, 24VDC and 120VAC transorb modules, D-sub, RJ12 and RJ45 feedthrough modules, communication port adapter and distribution modules, and *Sure*Servo 50-pin I/O interface connection.

Using the *ZIP*Link Specialty Modules selector table located in this section,

1. **Locate the type of application**
2. **Select a *ZIP*Link module.**

Solution 6: *ZIP*Link Connector Modules to 3rd Party Devices

If you need a way to connect your device to terminal blocks without all that wiring time, then our pigtail cables with color-coded soldered-tip wires are a good solution. Used in conjunction with any compatible *ZIP*Link Connector Modules, a pigtail cable keeps wiring clean and easy and reduces troubleshooting time.

Using the Universal Connector Modules and Pigtail Cables table located in this section,

1. **Select module type**
2. **Select the number of pins**
3. **Select cable.**

PLC I/O Modules to *ZIP*Link Connector Modules – Do-more!/DL205

Do-more / DL205 PLC Input Module ZIPLink Selector				
PLC	***ZIP*Link**			
Input Module	***# of Terms***	***Component***	***Module Part No.***	***Cable Part No. †***
D2-08ND3	10	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL10 *
D2-16ND3-2	19	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL19 ZL-D2-CBL19-1 ZL-D2-CBL19-2
		Sensor	ZL-LTB16-24-1	
D2-32ND3 [1]	40	Feedthrough	ZL-RTB40 (-1)	180 deg conn: ZL-D24-CBL40 ZL-D24-CBL40-1 ZL-D24-CBL40-2
		Sensor	ZL-LTB32-24-1	
D2-32ND3-2 [1]	40	Feedthrough	ZL-RTB40 (-1)	45 deg conn: ZL-D24-CBL40-X ZL-D24-CBL40-1X ZL-D24-CBL40-2X
		Sensor	ZL-LTB32-24-1	
D2-08NA-1	10	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL10 ZL-D2-CBL10-1 ZL-D2-CBL10-2
D2-08NA-2	10			
D2-16NA	19	Feedthrough		ZL-D2-CBL19 *

† *X in the part number represents a 45° angle.*

Do-more/DL205 PLC Combo In/Out Module ZIPLink Selector				
PLC	***ZIP*Link**			
Combo Module	***# of Terms***	***Component***	***Module Part No.***	***Cable Part No.***
D2-08CDR	10	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL10 *

Do-more/DL205 PLC Analog Module ZIPLink Selector				
PLC	***ZIP*Link**			
Analog Module	***# of Terms***	***Component***	***Module***	***Cable***
F2-04AD-1	10	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL10 ZL-D2-CBL10-1 ZL-D2-CBL10-2
F2-04AD-1L				
F2-08AD-1				
F2-04AD-2				
F2-04AD-2L				
F2-08AD-2				
F2-02DA-1				
F2-02DA-1L				
F2-02DAS-1				
F2-08DA-1				ZL-D2-CBL19 ZL-D2-CBL19-1 ZL-D2-CBL19-2
F2-02DA-2				
F2-02DA-2L				ZL-D2-CBL10 ZL-D2-CBL10-1 ZL-D2-CBL10-2
F2-02DAS-2				
F2-08DA-2				
F2-4AD2DA				
F2-8AD4DA-1	19			ZL-D2-CBL19 ZL-D2-CBL19-1 ZL-D2-CBL19-2
F2-8AD4DA-2				
F2-04RTD	Matched Only	*These modules are not supported by the ZIPLink wiring system*		
F2-04THM				

Do-more/ DL205 PLC Output Module ZIPLink Selector				
PLC	***ZIP*Link**			
Output Module	***# of Terms***	***Component***	***Module Part No.***	***Cable Part No. †***
D2-04TD1 [2]	10	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL10 ZL-D2-CBL10-1 ZL-D2-CBL10-2
D2-08TD1				
D2-08TD2				
D2-16TD1-2	19	Feedthrough		ZL-D2-CBL19 ZL-D2-CBL19-1 ZL-D2-CBL19-2
		Fuse	ZL-RFU20 [4]	
D2-16TD2-2		Feedthrough	ZL-RTB20 (-1)	
		Fuse	ZL-RFU20 [4]	
		Relay	ZL-RRL16-24-2 ZL-RRL16W-24-2 ZL-RRL16F-24-2 ZL-RRL16HDF-24-2	
F2-16TD1P		Feedthrough	ZL-RTB20 (-1)	
F2-16TD2P				
D2-32TD1 [1]	40	Feedthrough	ZL-RTB40 (-1)	180 deg conn: ZL-D24-CBL40 ZL-D24-CBL40-1 ZL-D24-CBL40-2 45 deg conn: ZL-D24-CBL40-X ZL-D24-CBL40-1X ZL-D24-CBL40-2X
		Fuse	ZL-RFU40 [4]	
D2-32TD2 [1]		Feedthrough	ZL-RTB40 (-1)	
		Fuse	ZL-RFU40 [4]	
D2-08TA	10	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL10 ZL-D2-CBL10-1 ZL-D2-CBL10-2
F2-08TA				
D2-12TA	19	Feedthrough		ZL-D2-CBL19 ZL-D2-CBL19-1 ZL-D2-CBL19-2
		Fuse	ZL-RFU20 [4]	
D2-04TRS [2]	10	Feedthrough	ZL-RTB20 (-1)	ZL-D2-CBL10 ZL-D2-CBL10-1 ZL-D2-CBL10-2
D2-08TR				
F2-08TRS [2]	19	Feedthrough		ZL-D2-CBL19 *
F2-08TR [3]	10			ZL-D2-CBL10 *
D2-12TR	19	Feedthrough		ZL-D2-CBL19 ZL-D2-CBL19-1 ZL-D2-CBL19-2
		Fuse	ZL-RFU20 [4]	

† *X in the part number represents a 45° angle plug*

* *Select the cable length by replacing the * with: Blank = 0.5 m, -1 = 1.0 m, or -2 = 2.0 m.*

1 To make a custom cable for the 32-point modules, use: Ribbon-style Connector ZL-D24-CON-R, Solder-style 180° connector ZL-D24-CON or Solder-style 45° connector ZL-D24-CON-X

2 Caution: The D2-04TD1, D2-04TRS, and F2-08TRS outputs are derated not to exceed module specs 2A per point and 2A per common when used with the ZIPLink wiring system.

3 The F2-08TR outputs are derated not to exceed 2A per point and 4A per common when used with the ZIPLink wiring system.

4 Fuses (5 x 20 mm) are not included. See Edison Electronic Fuse section for (5 x 20 mm) fuse. S500 and GMA electronic circuit protection for fast-acting maximum protection. S506 and GMC electronic circuit protection for time-delay performance. Ideal for inductive circuits.
To ensure proper operation, do not exceed the voltage and current rating of ZIPLink module. ZL-RFU20 = 2A per circuit; ZL-RFU40 = 400mA per circuit.

Note: ZIPLink Connector Module specifications follow the Compatibility Matrix tables. ZIPLink Cables specifications are at the end of this ZIPLink section.

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		
DV-1000	150	0
C-more Micro-Graphic	210	0

Power Supplied			
Device	**Price**	**5V(mA)**	**24V Auxiliary**
Bases			
D2-03B-1	$134.00	2600	300
D2-03BDC1-1	$152.00	2600	None
D2-04B-1	$146.00	2600	300
D2-04BDC1-1	$173.00	2600	None
D2-06B-1	$179.00	2600	300

Power Consumed		
Device	**5V(mA)**	**24V Auxiliary**
CPUs		
D2-250-1	330	0
D2-260	330	0
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	$197.00	2600	None
D2-06BDC2-1	$187.00	2600	300
D2-09B-1	$223.00	2600	300
D2-09BDC1-1	$243.00	2600	None
D2-09BDC2-1	$243.00	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-1L	40	70 @ 12V (note 1)
F2-02DA-2	40	60
F2-02DA-2L	40	70 @ 12V
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-EBC-F	640	0
H2-ECOM100	300	0
H2-ECOM-F	640	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.