

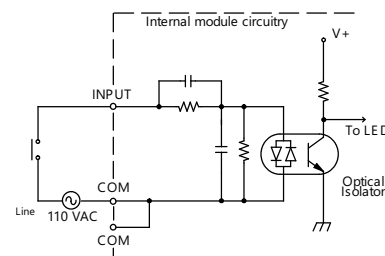
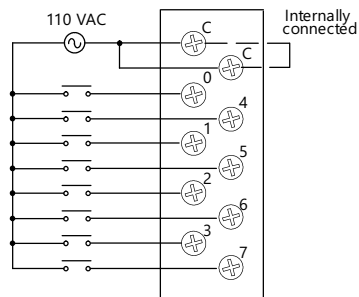
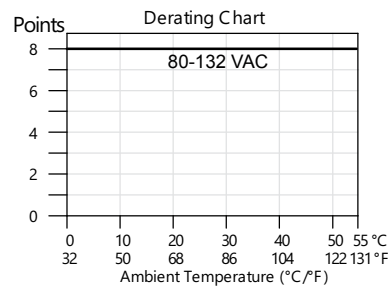
# Simulator/AC Input Modules

F2-08SIM Input Simulator \$107.00	
<b>Inputs per Module</b>	8
<b>Base Power Required 5VDC</b>	50mA
<b>Terminal Type</b>	None
<b>Status Indicator</b>	Switch side
<b>Weight</b>	2.65 oz. (75g)



D2-08NA-1 AC Input \$116.00	
<b>Inputs per Module</b>	8
<b>Commons per Module</b>	1 (2 I/O terminal points)
<b>Input Voltage Range</b>	80-132 VAC
<b>Peak Voltage</b>	132 VAC
<b>ON Voltage Level</b>	75VAC minimum
<b>OFF Voltage Level</b>	20VAC maximum
<b>AC Frequency</b>	47-63 Hz
<b>Input Impedance</b>	12kΩ @ 60Hz
<b>Input Current</b>	13mA @ 100VAC, 60Hz 11mA @ 100VAC, 50Hz
<b>Minimum ON Current</b>	5mA
<b>Maximum OFF Current</b>	2mA
<b>Base Power Required 5VDC</b>	50mA
<b>OFF to ON Response</b>	5 to 30 ms
<b>ON to OFF Response</b>	10 to 50 ms
<b>Terminal Type (included)</b>	Removable; D2-8IOCON
<b>Status Indicator</b>	Logic side
<b>Weight</b>	2.5 oz. (70g)

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



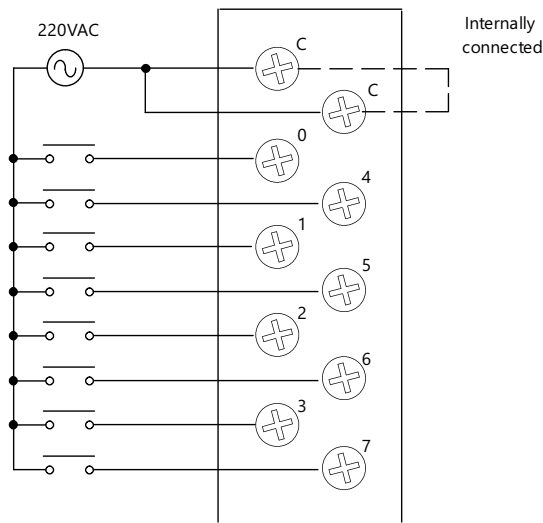
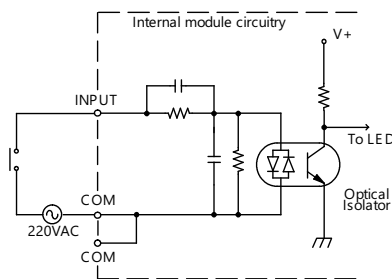
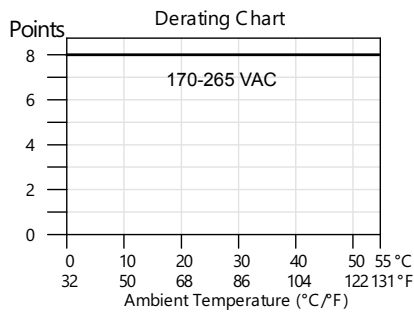
# AC Input Modules

D2-08NA-2 AC Input \$148.00	
<b>Inputs per Module</b>	8
<b>Commons per Module</b>	1 (2 I/O terminal points)
<b>Input Voltage Range</b>	170-265 VAC
<b>Peak Voltage</b>	265VAC
<b>ON Voltage Level</b>	150VAC minimum
<b>OFF Voltage Level</b>	40VAC maximum
<b>AC Frequency</b>	47-63 Hz
<b>Input Impedance</b>	18kΩ @ 60Hz
<b>Input Current</b>	9mA @ 220VAC, 50Hz 11mA @ 265VAC, 50Hz 10mA @ 220VAC, 60Hz 12mA @ 265VAC, 60Hz
<b>Minimum ON Current</b>	10mA
<b>Maximum OFF Current</b>	2mA
<b>Base Power Required 5VDC</b>	100mA
<b>OFF to ON Response</b>	5 to 30 ms
<b>ON to OFF Response</b>	10 to 50 ms
<b>Terminal Type (included)</b>	Removable; D2-8IOCON
<b>Status Indicator</b>	Logic side
<b>Weight</b>	2.5 oz. (70g)

<b>Operating Temperature</b>	32°F to 131°F (0° to 55°C)
<b>Storage Temperature</b>	-4°F to 158°F (-20°C to 70°C)
<b>Humidity</b>	35% to 95% (non-condensing)
<b>Atmosphere</b>	No corrosive gases permitted
<b>Vibration</b>	MIL STD 810C 514.2
<b>Shock</b>	MIL STD 810C 516.2
<b>Insulation Withstand Voltage</b>	1,500VAC 1 minute (COM-GND)
<b>Insulation Resistance</b>	10M ≈ @ 500VDC
<b>Noise Immunity</b>	NEMA 1,500V 1 minute SANKI 1,000V 1 minute
<b>RFI</b>	150MHz, 430MHz

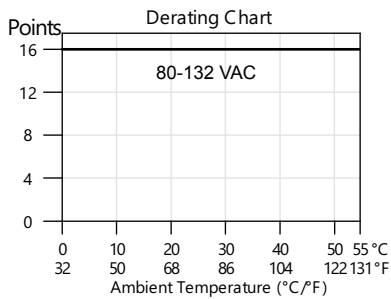


See Wiring Solutions for part numbers of **ZIP**Link cables and connection modules compatible with this I/O module.



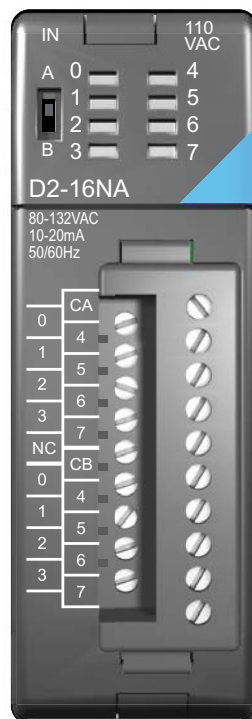
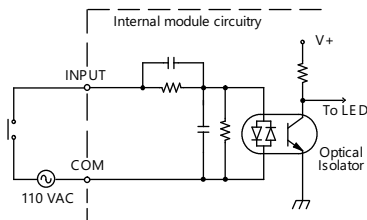
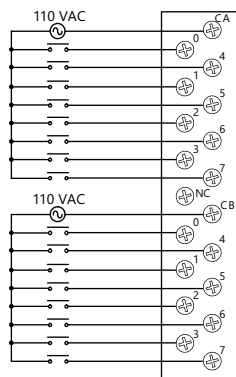
# AC Input Modules

D2-16NA AC Input \$204.00	
<b>Inputs per Module</b>	16
<b>Commons per Module</b>	2 (isolated)
<b>Input Voltage Range</b>	80-132 VAC
<b>Peak Voltage</b>	132VAC
<b>ON Voltage Level</b>	70VAC minimum
<b>OFF Voltage Level</b>	20VAC maximum
<b>AC Frequency</b>	47-63 Hz
<b>Input Impedance</b>	12 kΩ @ 60 Hz
<b>Input Current</b>	11mA @ 100VAC, 50Hz 13mA @ 100VAC, 60Hz 15mA @ 132VAC, 60Hz
<b>Minimum ON Current</b>	5mA
<b>Maximum OFF Current</b>	2mA
<b>Base Power Required 5VDC</b>	100mA
<b>OFF to ON Response</b>	5 to 30 ms
<b>ON to OFF Response</b>	10 to 50 ms
<b>Terminal Type (included)</b>	Removable; D2-16IOCON
<b>Status Indicator</b>	Logic side
<b>Weight</b>	2.4 oz. (68g)



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

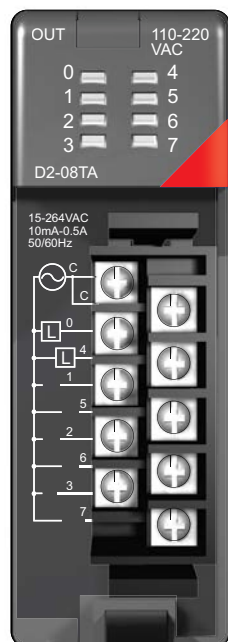
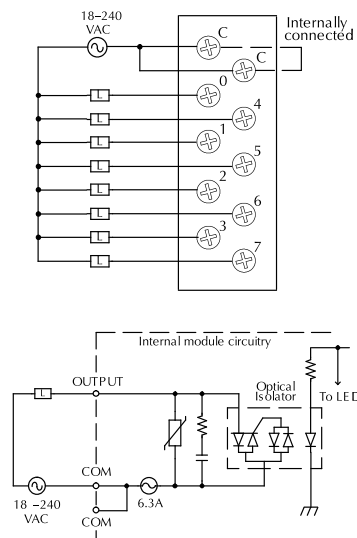
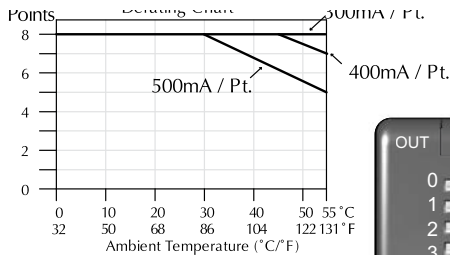
*Note: When used with the ZIPLink wiring system, relay outputs are derated not to exceed 2 Amps per point max.*



# AC Output Modules

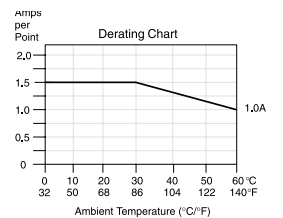
D2-08TA AC Output \$165.00	
<b>Outputs per Module</b>	8
<b>Commons per Module</b>	1 (2 I/O terminal points)
<b>Output Type</b>	SSR (Triac)
<b>Operating Voltage</b>	15-264 VAC
<b>Peak Voltage</b>	264VAC
<b>ON Voltage Drop</b>	< 1.5 VAC (>0.1 A) < 3.0 VAC (<0.1 A)
<b>AC Frequency</b>	47 to 63 Hz
<b>Minimum Load Current</b>	10mA
<b>Max Load Current</b>	0.5 A/point; 4A/common
<b>Max Leakage Current</b>	4mA (264VAC, 60Hz) 1.2 mA (100VAC, 60Hz) 0.9 mA (100VAC, 50Hz)
<b>Max Inrush Current</b>	10A for 10ms
<b>Base Power Required 5VDC</b>	250mA
<b>OFF to ON Response</b>	1ms
<b>ON to OFF Response</b>	1ms + 1/2 cycle
<b>Terminal Type (included)</b>	Removable; D2-8IOCON
<b>Status Indicator</b>	Logic side
<b>Weight</b>	2.8 oz. (80g)
<b>Fuses</b>	1 per common, 6.3 A slow blow, non-replaceable

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

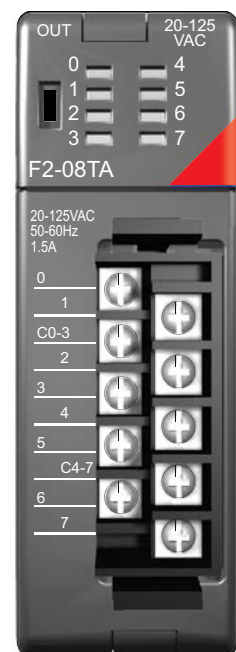
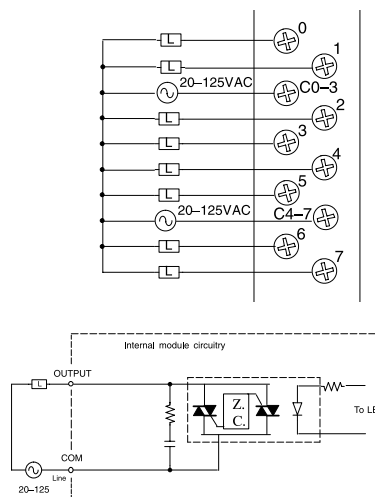


F2-08TA AC Output \$208.00	
<b>Outputs per Module</b>	8
<b>Commons per Module</b>	2 (Isolated)
<b>Output Type</b>	SSR (Triac with zero crossover)
<b>Operating Voltage</b>	24-140 VAC
<b>Peak Voltage</b>	140VAC
<b>ON Voltage Drop</b>	1.6 V(rms) @ 1.5 A
<b>AC Frequency</b>	47 to 63 Hz
<b>Minimum Load Current</b>	50mA
<b>Max Load Current</b>	1.5 A / pt @ 30°C 1.0 A / pt @ 60°C 4.0 A / common; 8.0 A / module @ 60°C
<b>Max Leakage Current</b>	0.7 mA(rms)
<b>Peak One Cycle Surge Current</b>	15A
<b>Base Power Required 5VDC</b>	250mA
<b>OFF to ON Response</b>	0.5 ms - 1/2 cycle
<b>ON to OFF Response</b>	0.5 ms - 1/2 cycle
<b>Terminal Type (included)</b>	Removable; D2-8IOCON
<b>Status Indicator</b>	Logic side
<b>Weight</b>	3.5 oz. (99g)
<b>Fuses</b>	None

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



Derating Note: All outputs can be run at the current per point shown.



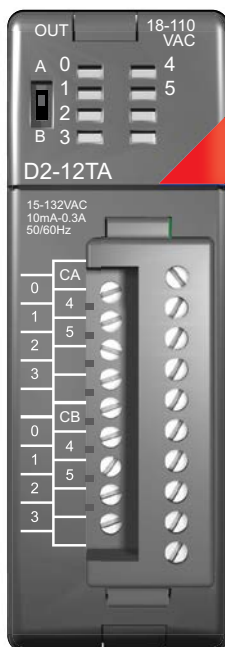
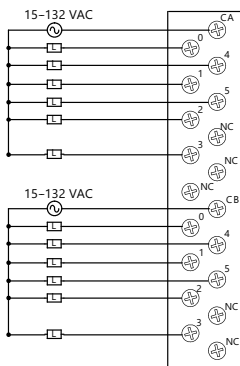
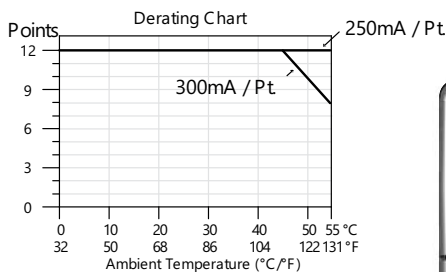
# AC Output Modules

D2-12TA AC Output \$204.00	
<b>Outputs per Module</b>	12
<b>Outputs Points Consumed</b>	16 (four unused, see chart below)
<b>Commons per Module</b>	2 (isolated)
<b>Output Type</b>	SSR (Triac)
<b>Operating Voltage</b>	15-132 VAC
<b>Peak Voltage</b>	132 VAC
<b>ON Voltage Drop</b>	< 1.5VAC (>50mA) < 4.0VAC (<50mA)
<b>AC Frequency</b>	47 to 63 Hz
<b>Minimum Load Current</b>	10mA
<b>Max Load Current</b>	0.3 A/point; 1.8 A/common
<b>Max Leakage Current</b>	2mA (132VAC, 60Hz)
<b>Max Inrush Current</b>	10A for 10ms
<b>Base Power Required 5VDC</b>	350mA
<b>OFF to ON Response</b>	1ms
<b>ON to OFF Response</b>	1ms + 1/2 cycle
<b>Terminal Type (included)</b>	Removable; D2-16IOCON
<b>Status Indicator</b>	Logic side
<b>Weight</b>	2.8 oz. (80g)
<b>Fuses</b>	(2) 1 per common 3.15 A slow blow, replaceable Order D2-FUSE-1 (5 per pack)

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

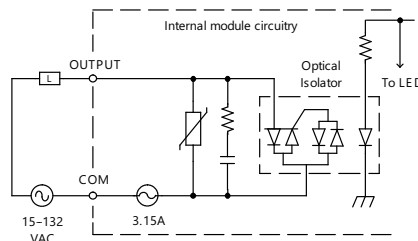


**Note:** When used with the ZIPLink wiring system, relay outputs are derated not to exceed 2 Amps per point max.



Addresses Used			
Points	Used?	Points	Used?
Yn+0	Yes	Yn+10	Yes
Yn+1	Yes	Yn+11	Yes
Yn+2	Yes	Yn+12	Yes
Yn+3	Yes	Yn+13	Yes
Yn+4	Yes	Yn+14	Yes
Yn+5	Yes	Yn+15	Yes
Yn+6	No	Yn+16	No
Yn+7	No	Yn+17	No

n is the starting address





# 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 ZIPLinks to reduce power requirements

If your application requires a lot of relay outputs, consider using the ZIPLink 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 ZIPLink connection systems. See the I/O module specifications at the end of this section.



Power Consumed		
Device	5V(mA)	24V Auxiliary
<b>Operator Interface</b>		
C-more Micro-Graphic	210	0

Power Supplied			
Device	Price	5V(mA)	24V Auxiliary
<b>Bases</b>			
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
<b>CPUs</b>		
D2-262	336	0
<b>DC Input Modules</b>		
D2-08ND3	50	0
D2-16ND3-2	100	0
D2-32ND3	25	0
D2-32ND3-2	25	0
<b>AC Input Modules</b>		
D2-08NA-1	50	0
D2-08NA-2	100	0
D2-16NA	100	0
<b>Input Simulator Module</b>		
F2-08SIM	50	0
<b>DC Output Modules</b>		
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
<b>AC Output Modules</b>		
D2-08TA	250	0
F2-08TA	250	0
D2-12TA	350	0
<b>Relay Output Modules</b>		
D2-04TRS	250	0
D2-08TR	250	0
F2-08TR(S)	670	0
D2-12TR	450	0
<b>Combination In/Out Module</b>		
D2-08CDR	200	0

Power Supplied			
Device	Price	5V(mA)	24V Auxiliary
<b>Bases</b>			
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
<b>Analog Modules</b>		
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	100	50 / channel
F2-02DAS-2	100	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
<b>Specialty Modules</b>		
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
<b>Remote I/O</b>		
H2-ERM100, (-F)	300, (-F: 450)	0
<b>Programming Devices</b>		
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

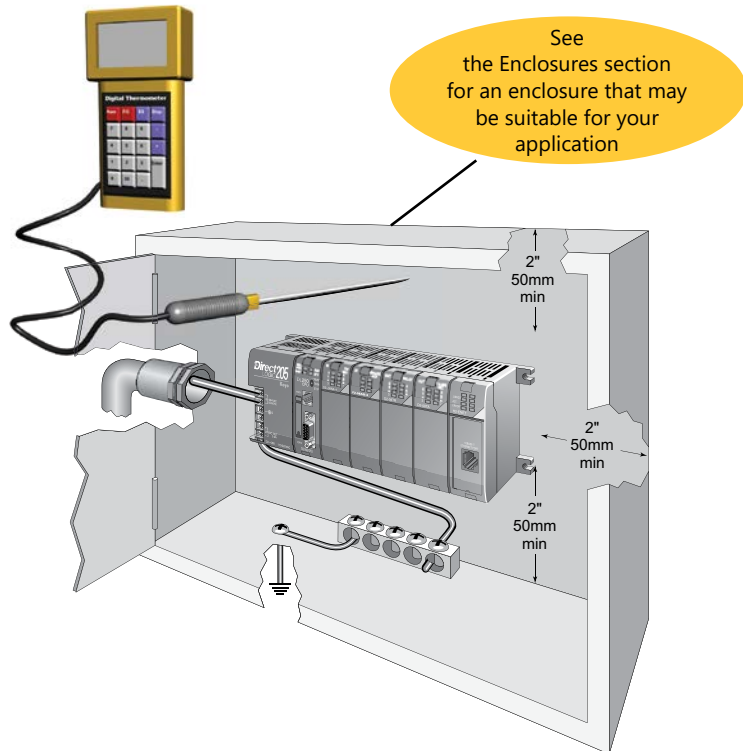
This catalog should never be used as a replacement for the user manual. The user manual, D2-USER-M (downloadable online), contains important safety information that must be followed. The system installation should comply with all appropriate electrical codes and standards.

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

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

