# NX-ID/IA/OD/OC/MD

CSM NX-ID IA OD OC MD DS F 5 1

# A wide range of digital I/O units from general purpose use to high-speed synchronous control

- I/O modules on the NX CPU Unit or EtherCAT® Coupler Unit
- Connect to the NJ/NX/NY Controller via EtherCAT





### **Features**

- High-speed I/O refreshing using the EtherCAT coupler
- I/O refreshing synchronized with the control cycle of the controller (synchronous refreshing)
- Time-stamp inputs and outputs anywhere in the EtherCAT network can be independently controlled with sub-microsecond accuracy
- Detachable terminals for easy maintenance
- Screwless Push-In Plus terminal block or MIL/Fujitsu connector speeds up installation
- Compact with a width of 12 mm per unit (connector type: 30 mm)
- 4, 8, 16 or 32 inputs for flexible I/O configuration (NX-ID/IA)
- 2, 4, 8, 16 or 32 outputs for flexible I/O configuration (NX-OD/OC)
- Connect to the CJ PLC using the EtherNet/IP<sup>™</sup> bus coupler

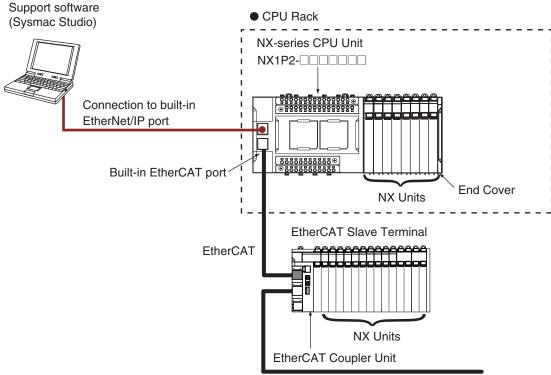
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### **System Configurations**

#### Connected to a CPU Unit

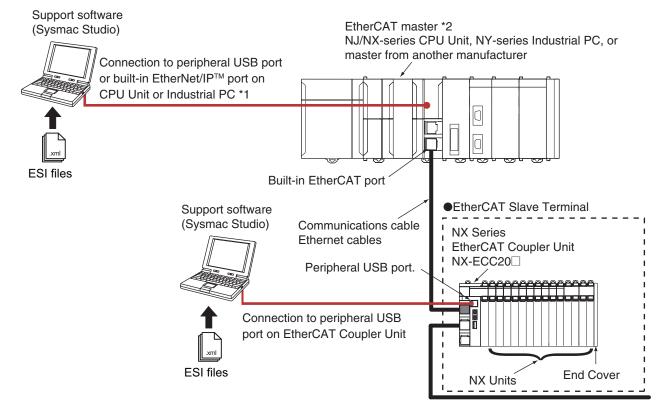
The following figure shows a system configuration when NX Units are connected to an NX-series CPU Unit.



Note: For whether an NX Unit can be connected to the CPU Unit, refer to the version information.

### Connected to an EtherCAT Coupler Unit

The following figure shows an example of the system configuration when an EtherCAT Coupler Unit is used as a Communications Coupler Unit.



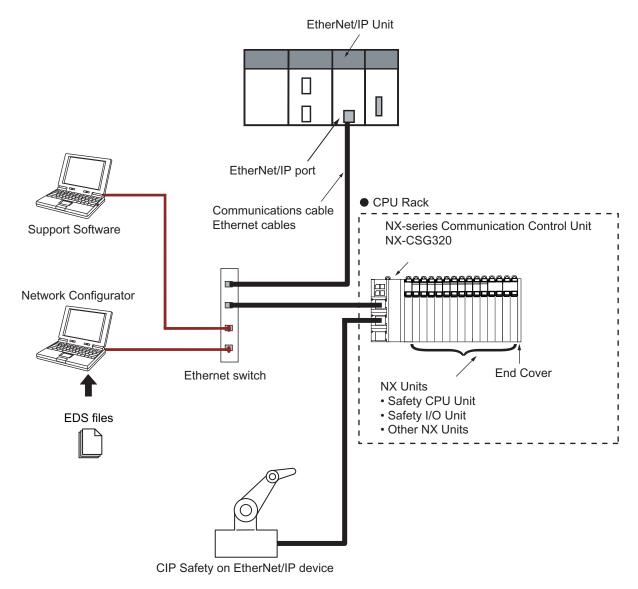
- \*1. The connection method for the Sysmac Studio depends on the model of the CPU Unit or Industrial PC.
- \*2. An EtherCAT Slave Terminal cannot be connected to any of the OMRON CJ1W-NC□81/□82 Position Control Units even though they can operate as EtherCAT masters.

Note: For whether an NX Unit can be connected to the Communications Coupler Unit, refer to the version information.

### System Configuration in the Case of a Communication Control Unit

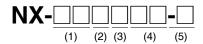
The following figure shows a system configuration when a group of NX Units is connected to an NX-series Communication Control Unit. To configure a Safety Network Controller, mount the Safety CPU Unit, which is one of the NX Units, to the CPU Rack of the Communication Control Unit

You cannot connect a Communication Control Unit with Digital I/O Units that support input refreshing with input changed time or output refreshing with specified time stamp.



Note: For whether an NX Unit can be connected to the Communication Control Unit, refer to the version information.

### **Model Number Structure**



### (1) Unit type

No.	Specification					
ID	DC input					
IA	AC input					
OD	Transistor output					
ОС	Relay output					
MD	DC input/Transistor output					

#### (2) Number of points

No.	Specification
2	2 points
3	4 points
4	8 points
5	16 points
6	32 points, or 16 points each for inputs and outputs

#### (3) I/O type

No.	Inputs	Outputs	Mixed I/O (Input, Output)
1	For both NPN/PNP	NPN	For both NPN/PNP, NPN
2		PNP	For both NPN/PNP, PNP
3	NPN		
4	PNP		
6		N.O.	
7		N.O.+N.C.	

#### (5) External connection terminals

No.	Specification					
None	Screwless clamping terminal block					
-1	M3 screw terminal block					
-5	MIL connector					
-6	Fujitsu connector					

## (4) Other specifications Digital Input Units

		ON/OFF res	ponse time	I/O refreshing method		
No.	Input voltage	Exceeds 1 μs 1 μs ma		Free-Run refreshing *1 only or Switching Synchronous I/O refreshing *2 and Free-Run refreshing	Input refreshing with input changed time only	
17	12 to 24 VDC or 240 VAC	Yes		Yes		
42		Yes		Yes		
43	24 VDC		Yes	Yes		
44			Yes		Yes	

#### **Digital Output Units**

			ON/OFF response time		I/O refreshing	I/O refreshing method										
No.	Rated voltage	Load current	Exceeds 1 μs	1 μs max.	Free-Run refreshing *1 only or Switching Synchronous I/O refreshing *2 and Free-Run refreshing	Output refreshing with specified time stamp only	Load short-circuit protection									
21	12 to 24 VDC	0.5 A	Yes		Yes											
33	or 240 VAC	2 A	Yes		Yes											
53												Yes	Yes			
54													,			
56	24 VDC	0.5 A	Yes		Yes		Yes									
57	24 VDC			Yes	Yes		Yes									
58				Yes		Yes	Yes									
68		2 A	Yes		Yes		Yes									

#### Digital Mixed I/O Units

2.9										
	Input section	Output section								
No.	Rated input voltage		1 1	ON/OFF res	ponse time		Other functions			
110.		Rated voltage Load current		Exceeds 1 μs	1 μs max.	I/O refreshing method	Load short-circuit protection			
21	21 24 VDC	12 to24 VDC	0.5 A	Yes		Switching Synchronous	Yes			
		24 VDC	U.5 A	Yes		I/O refreshing and Free-Run refreshing				

<sup>\*1</sup> Free-Run refreshing
\*2 Synchronous I/O refreshing

<sup>\*1</sup> Free-Run refreshing
\*2 Synchronous I/O refreshing

### **Ordering Information**

### **Applicable standards**

Refer to the OMRON website (www.ia.omron.com) or ask your OMRON representative for the most recent applicable standards for each model.

### **Digital Input Units**

	Specifications						
Product Name	Number of points Internal I/O common Rated input volt		Rated input voltage	I/O refreshing method	ON/OFF response time	Model	
			12 to 24 VDC	Switching Synchronous I/O re-	20 μs max./400 μs max.	NX-ID3317	
		NPN		freshing and Free-Run refreshing		NX-ID3343	
DC Input Unit		TW TV	24 VDC	Input refreshing with input changed time only *1	100 ns max./100 ns max.	NX-ID3344	
	4 points		12 to 24 VDC	Switching Synchronous I/O re-	20 μs max./400 μs max.	NX-ID3417	
		PNP		freshing and Free-Run refreshing		NX-ID3443	
		1141		Input refreshing with input changed time only *1	100 ns max./100 ns max.	NX-ID3444	
Screwless Clamping	0	NPN	24 VDC			NX-ID4342	
Terminal Block, 12 mm Width)	8 points	PNP		Switching Synchronous I/O re-	00	NX-ID4442	
widii)	40	NPN		freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID5342	
	16 points	PNP				NX-ID5442	
DC Input Unit  (M3 Screw Terminal Block, 30 mm Width)	16 points	For both NPN/PNP	24 VDC	Switching Synchronous I/O re- freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID5142-1	
DC Input Unit	16 points  For both NPN/PNP		24 VDC	Switching Synchronous I/O re- freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID5142-5	
(MIL Connector, 30 mm Width)	32 points	NEWENE		neshing and rice-numericaning		NX-ID6142-5	
DC Input Unit  (Fujitsu Connector, 30 mm Width)	32 points	For both NPN/PNP	24 VDC	Switching Synchronous I/O re- freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID6142-6	
AC Input Unit  (Screwless Clamping Terminal Block, 12 mm Width)	4 points	200 to 240 VAC, 50/60 Hz (170 to 264 VAC, ±3 Hz)		Free-Run refreshing	10 ms max./40 ms max.	NX-IA3117	

<sup>\*1.</sup> To use input refreshing with input changed time, the EtherCAT Coupler Unit with unit version 1.1 or later and the Sysmac Studio version 1.07 or higher are required.

### **Digital Output Units**

				Specifications			
Product Name	Number of points	Internal I/O common	Maximum value of load current	Rated voltage	I/O refreshing method	ON/OFF response time	Model
	2	NPN	0.5 A/point, 1 A/Unit	24 VDC	Output refreshing with speci-	300 ns max./	NX-OD2154
		PNP	0.5 A point, 1 A ornit	24 100	fied time stamp only *1	300 ns max.	NX-OD2258
		NPN		12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD3121
ransistor Output Unit			0.5 A/point, 2 A/Unit			300 ns max./ 300 ns max.	NX-OD3153
	4		0.0 7 v point, 2 7 v o int	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD3256
		PNP		24 VDO		300 ns max./ 300 ns max.	NX-OD3257
			2 A/point, 8 A/Unit		Switching Synchronous I/O re- freshing and Free- Run refresh- ing	0.5 ms max./ 1.0 ms max.	NX-OD3268
Screwless Clamping erminal Block, 12 mm Vidth)	0	NPN		12 to 24 VDC	9	0.1 ms max./ 0.8 ms max.	NX-OD4121
ridai)	8	PNP	O.F. A/n sint 4 A/l Init	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD4256
	40	NPN	0.5 A/point, 4 A/Unit	12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD5121
	16	PNP		24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD5256
Transistor Output Unit  (M3 Screw Terminal Block, 30 mm Width)	16	NPN	0.5 A/point, 5 A/Unit	12 to 24 VDC  Switching Synchronous I/O refreshing and Free- Run refresh		0.1 ms max./ 0.8 ms max.	NX-OD5121-1
		PNP	o.s Apoint, S Avoint	24 VDC	ing	0.5 ms max./ 1.0 ms max.	NX-OD5256-1
ransistor Output Unit	40	NPN	0.5.4/	12 to 24 VDC	Switching Synchronous I/O re- freshing and Free- Run refresh- ing	0.1 ms max./ 0.8 ms max.	NX-OD5121-5
	16	PNP	0.5 A/point, 2 A/Unit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD5256-5
	32 -	NPN	0.5 A/point, 2 A/	12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD6121-5
MIL Connector, 30 mm Vidth)		PNP	common, 4 A/Unit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD6256-5
Fujitsu Connector, 30 nm Width)	32	NPN	0.5 A/point, 2 A/ common, 4 A/Unit	12 to 24 VDC	Switching Synchronous I/O re- freshing and Free- Run refresh- ing	0.1 ms max./ 0.8 ms max.	NX-OD6121-6
Relay Output Unit		Relay type: N.O.	250 VAC/2 A (coso=1	). 250 VAC/		15 ms max./	NX-OC2633
	2	Relay type: N.O.+N.C.	2 A (cosφ=0.4), 24 VE		Free-Run refreshing	15 ms max.	NX-OC2733
Screwless Clamping Ferminal Block, 12 mm Width/24 mm Width)	8	Relay type: N.O.	250 VAC/2 A (cosφ=1), 250 VAC/ 2 A (cosφ=0.4), 24 VDC/2 A, 8 A/Unit		Free-Run refreshing	15 ms max./ 15 ms max.	NX-OC4633

<sup>\*1.</sup> To use input refreshing with input changed time, the EtherCAT Coupler Unit with unit version 1.1 or later and the Sysmac Studio version 1.07 or higher are required.

### **Digital Mixed I/O Units**

	Specifications							
Product Name	Number of points	Internal I/O Maximum value of load common current		I/O refreshing method	ON/OFF response time	Model		
DC Input/Transistor Output Unit	Outputs: 16 points	Outputs: NPN Inputs: For both NPN/PNP	Outputs: 12 to 24 VDC Inputs: 24 VDC	Switching Synchronous I/	Outputs: 0.1 ms max./ 0.8 ms max. Inputs: 20 μs max./ 400 μs max.	NX-MD6121-5		
(MIL Connector, 30 mm Width)	Inputs: 16 points	Outputs: PNP Inputs: For both NPN/PNP	Outputs: 24 VDC Inputs: 24 VDC	O refreshing and Free- Run refreshing	Outputs: 0.5 ms max./ 1.0 ms max. Inputs: 20 μs max./ 400 μs max.	NX-MD6256-5		
DC Input/Transistor Output Unit  (Fujitsu Connector, 30 mm Width)	Outputs: 16 points Inputs: 16 points	Outputs: NPN Inputs: For both NPN/PNP	Outputs: 12 to 24 VDC Inputs: 24 VDC	Switching Synchronous I/ O refreshing and Free- Run refreshing	Outputs: 0.1 ms max./ 0.8 ms max. Inputs: 20 μs max./ 400 μs max.	NX-MD6121-6		

### **Optional Products**

Product name		Specif		Model	Standards	
Unit/Terminal Block Coding Pins	For 10 Units (Terminal Block:	30 pins, Unit: 30 p	NX-AUX02			
	Specification					
Product name	No. of terminals	Terminal number indications	Ground terminal mark	Terminal current capacity	Model	Standards
	8				NX-TBA082	
Terminal Block	12	A/B	None	10 A	NX-TBA122	
	16				NX-TBA162	

### **Accessories**

Not included.

### **Connection Patterns for Connector-Terminal Block Conversion Units**

Pattern	Configuration	Number of connectors	Branching
Α	Connecting Cable Connector-Terminal Block Conversion Unit 20 or 40 terminals	1	None
В	Connecting Cable with two branches  Connector-Terminal Block Conversion Unit  20 terminals 20 terminals	-	2 branches
С	Connecting Cable Connector-Terminal Block Conversion Unit 20 terminals 20 terminals	2	None

### **Connections to Connector-Terminal Block Conversion Units**

Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *1	Connector-Terminal Block Conversion Unit	Wiring method	Common terminal	
NX-ID5142-5	16 inputs	1 MIL			XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None	
		connector	PNP		XW2Z-□□□X	XW2D-20G6	Phillips screw	None	
				А	XW2Z-□□□K	XW2R-□34GD-C2	Depends on model *3	None	
				Α	XW2Z-□□□K	XW2D-40G6	Phillips screw	None	
				В	XW2Z-□□□N	XW2R-□20GD-T (2 Units)	Depends on model *3	None	
NX-ID6142-5	32 inputs	1 MIL connector	NPN/ PNP	В	XW2Z-□□□N	XW2C-20G5-IN16 (2 Units) *2	Phillips screw	Yes	
				В	XW2Z-□□□N	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes	
				В	XW2Z-□□□N	XW2D-20G6 (2 Units)	Phillips screw	None	
				В	XW2Z-□□□N	XW2E-20G5-IN16 (2 Units) *2	Phillips screw	Yes	
					А	XW2Z-□□□B	XW2R-□34GD-C1	Depends on model *3	None
				Α	XW2Z-□□□B	XW2D-40G6	Phillips screw	None	
			NPN/ PNP	В	XW2Z-□□□D	XW2R-□20GD-T (2 Units)	Depends on model *3	None	
NX-ID6142-6	32 inputs	1 Fujitsu connector		В	XW2Z-□□□D	XW2C-20G5-IN16 (2 Units) *2	Phillips screw	Yes	
				В	XW2Z-□□□D	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes	
				В	XW2Z-□□□D	XW2D-20G6 (2 Units)	Phillips screw	None	
				В	XW2Z-□□□D	XW2E-20G5-IN16 (2 Units) *2	Phillips screw	Yes	
NX-OD5121-5	16 outputs	utputs 1 MIL connector	NPN	А	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None	
				Α	XW2Z-□□□X	XW2D-20G6	Phillips screw	None	
NX-OD5256-5	16 outputs	puts 1 MIL connector	- I PNP		XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None	
				Α	XW2Z-□□□X	XW2D-20G6	Phillips screw	None	

### NX-ID/IA/OD/OC/MD

Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *1	Connector-Terminal Block Conversion Unit	Wiring method	Common terminal	
				А	XW2Z-□□□K	XW2R-□34GD-C4	Depends on model *3	None	
	NX-OD6121-5 32 inputs	4.8411		Α	XW2Z-□□□K	XW2D-40G6	Phillips screw	None	
NX-OD6121-5		1 MIL connector	NPN	В	XW2Z-□□N	XW2R-□20GD-T (2 Units)	Depends on model *3	None	
				В	XW2Z-□□□N	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes	
				В	XW2Z-□□□N	XW2D-20G6 (2 Units)	Phillips screw	None	
				А	XW2Z-□□B	XW2R-□34GD-C3	Depends on model *3	None	
		1 Fujitsu		Α	XW2Z-□□□B	XW2D-40G6	Phillips screw	None	
NX-OD6121-6	32 inputs	connector	NPN	В	XW2Z-□□□L	XW2R-□20GD-T (2 Units)	Depends on model *3	None	
				В	XW2Z-□□□L	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes	
				В	XW2Z-□□□L	XW2D-20G6 (2 Units)	Phillips screw	None	
				А	XW2Z-□□□K	XW2R-□34GD-C4	Depends on model *3	None	
		1 MIL connector		Α	XW2Z-□□□K	XW2D-40G6	Phillips screw	None	
NX-OD6256-5 32 inp	32 inputs		PNP	В	XW2Z-□□□N	XW2R-□20GD-T (2 Units)	Depends on model *3	None	
				В	XW2Z-□□□N	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes	
				В	XW2Z-□□□N	XW2D-20G6 (2 Units)	Phillips screw	None	
	16 outputs	1 MIL connector		NPN/ PNP	С	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None
NX-MD6121-5			I IVI	С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None	
TOX MIDOTET O	16 outputs	1 MIL connector	NPN	С	XW2Z-□□X	XW2R-□20GD-T	Depends on model *3	None	
		COTTICCTO		С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None	
				С	XW2Z-□□□A	XW2R-□20GD-T	Depends on model *3	None	
	40	1 Fujitsu	NPN/	С	XW2Z-□□□A	XW2C-20G5-IN16 *2	Phillips screw	Yes	
	16 outputs	connector	PNP	С	XW2Z-□□□A	XW2C-20G6-IO16	Phillips screw	Yes	
NX-MD6121-6				С	XW2Z-□□□A	XW2D-20G6	Phillips screw	None	
NX-WIDO121-0				С	XW2Z-□□□A	XW2E-20G5-IN16 *2	Phillips screw	Yes	
	40	1 Fujitsu	NEN	С	XW2Z-□□□A	XW2R-□20GD-T	Depends on model *3	None	
	16 outputs	connector	NPN	С	XW2Z-□□□A	XW2C-20G6-IO16	Phillips screw	Yes	
				С	XW2Z-□□□A	XW2D-20G6	Phillips screw	None	
	16 outputs	1 MIL connector	NPN/ PNP	С	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None	
NX-MD6256-5		CONTROCTO	HNH	С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None	
14X MD0230-3	16 outputs	1 MIL connector	PNP	С	XW2Z-□□X	XW2R-□20GD-T	Depends on model *3	None	
		COLLIGOTOL		С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None	

Note: For other models and specifications that are not listed above, refer to the XW2R Series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) and XW2R Datasheets.

<sup>\*1 □□□</sup> in the model number indicates the cable length. Refer to the *XW2Z Datasheet* for details.
\*2 The inputs are NPN. For PNP inputs, reverse the polarity of the external power supply connections to the power supply terminals on the Connector-Terminal Block Conversion Unit.

The wiring methods vary depending on the Connector-Terminal Block Conversion Unit.  $\square$  in the model number indicates the wiring method. J = Phillips screw

E = Slotted screw (rise up)

P= Push-in spring

### **Connection Patterns for I/O Relay Terminals**

Pattern	Configuration	Number of connectors	Branching
Α	Connecting Cable  I/O Relay Terminal	1	2 branches
E	I/O Relay Terminal  Connecting Cable	2	None
F	Connecting Cable  I/O Relay Terminal	1	

### Connections to I/O Relay Terminals

Unit	I/O capacity	Number of connectors	Polarity	Connectio n pattern	Number of branches	Connecting Cable *1	I/O Relay Terminal	Wiring method
				F	None	XW2Z-RO□C	G7TC-ID16	Phillips screw
			NIDNI	F	None	XW2Z-RO□C	G7TC-IA16	Phillips screw
NIV IDE4 40 E	40: 1	1 MIL	NPN	F	None	XW2Z-RO□C	G70V-SID16P	Push-in spring
NX-ID5142-5	16 inputs	connector		F	None	XW2Z-RO□C	G70V-SID16P-C16	Push-in spring
			PNP	F	None	XW2Z-RO□C	G70V-SID16P-1	Push-in spring
			PNP	F	None	XW2Z-RO□C	G70V-SID16P-1-C16	Push-in spring
				Α	2	XW2Z-RO□-□-D1	G7TC-ID16	Phillips screw
			NPN	Α	2	XW2Z-RO□-□-D1	G7TC-IA16	Phillips screw
NX-ID6142-5	00 :	1 MIL	INPIN	Α	2	XW2Z-RO□-□-D1	G70V-SID16P	Push-in spring
NX-ID6142-5	32 inputs	connector		Α	2	XW2Z-RO□-□-D1	G70V-SID16P-C16	Push-in spring
			PNP	Α	2	XW2Z-RO□-□-D1	G70V-SID16P-1	Push-in spring
			PINP	Α	2	XW2Z-RO□-□-D1	G70V-SID16P-1-C16	Push-in spring
				Α	2	XW2Z-RI□C-□	G7TC-ID16	Phillips screw
			NPN	Α	2	XW2Z-RI□C-□	G7TC-IA16	Phillips screw
NX-ID6142-6	32 inputs	1 Fujitsu connector	INPIN	Α	2	XW2Z-RI□C-□	G70V-SID16P	Push-in spring
NX-1D0142-0	32 inpuis			Α	2	XW2Z-RI□C-□	G70V-SID16P-C16	Push-in spring
			PNP	Α	2	XW2Z-RI□C-□	G70V-SID16P-1	Push-in spring
			FINE	Α	2	XW2Z-RI□C-□	G70V-SID16P-1-C16	Push-in spring
				F	None	XW2Z-RO□C	G7TC-OC08	Phillips screw
				F	None	XW2Z-RO□C	G70D-SOC08	Phillips screw
				F	None	XW2Z-RO□C	G70R-SOC08 *2	Phillips screw
				F	None	XW2Z-RO□C	G7TC-OC16	Phillips screw
				F	None	XW2Z-RO□C	G70D-SOC16	Phillips screw
NX-OD5121-5	16 outputs	1 MIL connector	NPN	F	None	XW2Z-RO□C	G70D-VSOC16	Phillips screw
		2311100101		F	None	XW2Z-RO□C	G70D-FOM16	Phillips screw
				F	None	XW2Z-RO□C	G70D-VFOM16	Phillips screw
				F	None	XW2Z-RO□C	G70A-ZOC16-3	Phillips screw
				F	None	XW2Z-RO□C	G70V-SOC16P	Push-in spring
				F	None	XW2Z-RO□C	G70V-SOC16P-C4	Push-in spring

### NX-ID/IA/OD/OC/MD

Unit	I/O capacity	Number of connectors	Polarity	Connectio n pattern	Number of branches	Connecting Cable *1	I/O Relay Terminal	Wiring method						
				F	None	XW2Z-RI□C	G7TC-OC16-1	Phillips screw						
				F	None	XW2Z-RO□C	G70D-SOC16-1	Phillips screw						
NY ODEREC E	1C outpute	1 MIL	DND	F	None	XW2Z-RO□C	G70D-FOM16-1 *2	Phillips screw						
NX-OD5256-5	16 outputs	connector	PNP	F	None	XW2Z-RO□C	G70A-ZOC16-4	Phillips screw						
				F	None	XW2Z-RO□C	G70V-SOC16P-1	Push-in spring						
				F	None	XW2Z-RO□C	G70V-SOC16P-1-C4	Push-in spring						
				Α	2	XW2Z-RO□-□-D1	G7TC-OC16	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G7TC-OC08	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G70D-SOC16	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G70D-FOM16	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G70D-VSOC16	Phillips screw						
NX-OD6121-5	32 outputs	1 MIL connector	NPN	Α	2	XW2Z-RO□-□-D1	G70D-VFOM16	Phillips screw						
		Commodor		Α	2	XW2Z-RO□-□-D1	G70A-ZOC16-3 and Relay	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G70R-SOC08 *2	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G70D-SOC08	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G70V-SOC16P	Push-in spring						
				Α	2	XW2Z-RO□-□-D1	G70V-SOC16P-C4	Push-in spring						
										Α	2	XW2Z-RO□C-□	G7TC-OC16	Phillips screw
				Α	2	XW2Z-RO□C-□	G7TC-OC08	Phillips screw						
		s 1 Fujitsu connector	NPN	Α	2	XW2Z-RO□C-□	G70D-SOC16	Phillips screw						
				Α	2	XW2Z-RO□C-□	G70D-FOM16	Phillips screw						
				Α	2	XW2Z-RO□C-□	G70D-VSOC16	Phillips screw						
NX-OD6121-6	32 outputs			Α	2	XW2Z-RO□C-□	G70D-VFOM16	Phillips screw						
				Α	2	XW2Z-RO□C-□	G70A-ZOC16-3 and Relay	Phillips screw						
				Α	2	XW2Z-RO□C-□	G70R-SOC08 *2	Phillips screw						
				Α	2	XW2Z-RO□C-□	G70D-SOC08	Phillips screw						
				Α	2	XW2Z-RO□C-□	G70V-SOC16P	Push-in spring						
				Α	2	XW2Z-RO□C-□	G70V-SOC16P-C4	Push-in spring						
				Α	2	XW2Z-RI□-□-D1	G7TC-OC16-1	Phillips screw						
NY ODGGEG E	20 autouta	1 MIL	DND	Α	2	XW2Z-RO□-□-D1	G70D-SOC16-1	Phillips screw						
NX-OD6256-5	32 outputs	connector	PNP	Α	2	XW2Z-RO□-□-D1	G70D-FOM16-1 *2	Phillips screw						
				Α	2	XW2Z-RO□-□-D1	G70A-ZOC16-4 and Relay	Phillips screw						
				E	None	XW2Z-RO□C	G7TC-ID16	Phillips screw						
	1C innuts	1 MIL	NDN	E	None	XW2Z-RO□C	G7TC-IA16	Phillips screw						
	16 inputs	connector	NPN	E	None	XW2Z-RO□C	G70V-SID16P	Push-in spring						
				Е	None	XW2Z-RO□C	G70V-SID16P-C16	Push-in spring						
				Е	None	XW2Z-RO□C	G7TC-OC16	Phillips screw						
				Е	None	XW2Z-RO□C	G7TC-OC08	Phillips screw						
				Е	None	XW2Z-RO□C	G70D-SOC16	Phillips screw						
NX-MD6121-5				Е	None	XW2Z-RO□C	G70D-FOM16	Phillips screw						
				Е	None	XW2Z-RO□C	G70D-VSOC16	Phillips screw						
	16 outputs	1 MIL connector	NPN	Е	None	XW2Z-RO□C	G70D-VFOM16	Phillips screw						
		COMMEDIO		Е	None	XW2Z-RO□C	G70A-ZOC16-3 and Relay	Phillips screw						
				Е	None	XW2Z-RO□C	G70R-SOC08 *2	Phillips screw						
				Е	None	XW2Z-RO□C	G70D-SOC08	Phillips screw						
				Е	None	XW2Z-RO□C	G70V-SOC16P	Push-in spring						
				Е	None	XW2Z-RO□C	G70V-SOC16P-C4	Push-in spring						

### NX-ID/IA/OD/OC/MD

Unit	I/O capacity	Number of connectors	Polarity	Connectio n pattern	Number of branches	Connecting Cable *1	I/O Relay Terminal	Wiring method
				Е	None	XW2Z-R□C	G7TC-ID16	Phillips screw
	40 in	1 Fujitsu	NPN	Е	None	XW2Z-R□C	G7TC-IA16	Phillips screw
	16 inputs	connector	NPN	Е	None	XW2Z-R□C	G70V-SID16P	Push-in spring
				E	None	XW2Z-R□C	G70V-SID16P-C16	Push-in spring
				E	None	XW2Z-R□C	G7TC-OC16	Phillips screw
				E	None	XW2Z-R□C	G7TC-OC08	Phillips screw
				E	None	XW2Z-R□C	G70D-SOC16	Phillips screw
NX-MD6121-6			NPN	E	None	XW2Z-R□C	G70D-FOM16	Phillips screw
		1 Fujitsu connector		E	None	XW2Z-R□C	G70D-VSOC16	Phillips screw
	16 outputs			E	None	XW2Z-R□C	G70D-VFOM16	Phillips screw
				E	None	XW2Z-R□C	G70A-ZOC16-3 and Relay	Phillips screw
				E	None	XW2Z-R□C	G70R-SOC08 *2	Phillips screw
				E	None	XW2Z-R□C	G70D-SOC08	Phillips screw
				E	None	XW2Z-R□C	G70V-SOC16P	Push-in spring
				E	None	XW2Z-R□C	G70V-SOC16P-C4	Push-in spring
	16 inputs	1 MIL	PNP	E	None	XW2Z-RO□C	G70V-SID16P-1	Push-in spring
	16 iriputs	connector	FINE	Е	None	XW2Z-RO□C	G70V-SID16P-1-C16	Push-in spring
				E	None	XW2Z-RO□C	G7TC-OC16-1	Phillips screw
NX-MD6256-5				Е	None	XW2Z-RI□C	G70D-SOC16-1	Phillips screw
IAV-INID0520-2	16 outputs	1 MIL	PNP	E	None	XW2Z-RI□C	G70D-FOM16-1 *2	Phillips screw
	16 outputs	connector	FINE	Е	None	XW2Z-RI□C	G70A-ZOC16-4 and Relay	Phillips screw
				Е	None	XW2Z-RI□C	G70V-SOC16P-1	Push-in spring
				Е	None	XW2Z-RI□C	G70V-SOC16P-1-C4	Push-in spring

Note: 1. For other models and specifications that are not listed above, refer to the datasheets.

2. The G70V Series includes models that provide internal connections. Refer to the *G70V Datasheet* (Cat. No. J215) for details.

3. The G70A is a socket only. Mountable relays and timers are sold separately.

<sup>\*1.</sup>  $\square$  in the model number indicates the cable length. Refer to the XW2Z-R Datasheet (Cat. No. G126) for details.

<sup>\*2.</sup> Product no longer available to order.

### **General Specifications**

	Item	Specification		
Enclosure		Mounted in a panel		
Grounding n	nethod	Ground to 100 $\Omega$ or less		
	Ambient operating temperature	0 to 55°C		
	Ambient operating humidity	10% to 95% (with no condensation or icing)		
	Atmosphere	Must be free from corrosive gases.		
	Ambient storage temperature	-25 to 70°C (with no condensation or icing)		
	Altitude	2,000 m max.		
	Pollution degree	2 or less: Meets IEC 61010-2-201.		
Operating environment	Noise immunity	2 kV on power supply line (Conforms to IEC61000-4-4.)		
CHVIIOIIIICH	Overvoltage category	Category II: Meets IEC 61010-2-201.		
	EMC immunity level	Zone B		
	Vibration resistance *1	Conforms to IEC 60068-2-6. 5 to 8.4 Hz with 3.5-mm amplitude, 8.4 to 150 Hz, acceleration of 9.8 m/s², 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)		
	Shock resistance *1	Conforms to IEC 60068-2-27. 147 m/s², 3 times each in X, Y, and Z directions		
Applicable standards *2		cULus: Listed (UL508) or Listed (UL 61010-2-201), ANSI/ISA 12.12.01, EU: EN 61131-2 or EN 61010-2-201, C-Tick or RCM, KC: KC Registration, NK, LR		

<sup>\*1.</sup> For the Relay Output Unit, refer to the Digital Input Unit Specifications.
\*2. Refer to the OMRON website (http://www.ia.omron.com/) or consult your OMRON representative for the most recent applicable standards for

### **Digital Input Unit Specifications**

# ● DC Input Unit (Screwless Clamping Terminal Block, 12 mm Width) NX-ID3317

Unit name	DC Input Unit	Model	NX-ID3317
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or I	_	
	TS indicator, input indicator	Internal I/O common	NPN
	ID3317	Rated input voltage	12 to 24 VDC (9 to 28.8 VDC)
	0 1	Input current	6 mA typical (at 24 VDC), rated current 9 VDC min./3 mA min. (between IOV and
Indicators	2 3	ON voltage/ON current	each signal)
maioatoro		OFF voltage/OFF current	2 VDC max./1 mA max. (between IOV and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	No consumption
Weight	65 g max.	•	
Circuit layout		nt control reuit	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communications Coupled Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOG IOG  A8 B8	DC Input Unit NX-ID3317  Two- Ser  IN0 IN1  IOV0 IOV1 IOG0 IOG1 IN2 IN3  IOV2 IOV3  IOG2 IOG3  B8	-wire Isor Three-wire sensor
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

11-24	DO Los ALLOS	M1-1	NIV IDO040
Unit name	DC Input Unit	Model External connection	NX-ID3343 Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	1	LNDN
	TS indicator, input indicator ID3343	Internal I/O common	NPN
	ID3343 DTS	Rated input voltage	24 VDC (15 to 28.8 VDC)
	0 1 2 3	Input current	3.5 mA typical (at 24 VDC), rated current 15 VDC min./3 mA min. (between IOV and
Indicators	2 3	ON voltage/ON current	each signal)
		OFF voltage/OFF current	5 VDC max./1 mA max. (between IOV and each signal)
		ON/OFF response time	100 ns max./100 ns max.
		Input filter time	Without filter, 1 μs, 2 μs, 4 μs, 8 μs (factory setting), 16 μs, 32 μs, 64 μs, 128 μs, 256 μs
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	30 mA max.
Weight	65 g max.		
Circuit layout		ent control circuit timo:	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1  B1  OIOV IOV  IOV  IOV  IOG IOG  A8  B8	DC Input Unit NX-ID3343  Two- Ser  IN0 IN1  IOV0 IOV1 IOG0 IOG1 IN2 IN3  IOV2 IOV3 IOG3 IOG3  A8 B8	Three-wire sensor
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	DC Input Unit	Model	NX-ID3344
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
/O refreshing method	Input refreshing with input changed time		
	TS indicator, input indicators	Internal I/O common	NPN
	ID3344	Rated input voltage	24 VDC (15 to 28.8 VDC)
	₽TS	Input current	3.5 mA typical (at 24 VDC), rated current
Indicators	0 1 2 3	ON voltage/ON current	15 VDC min./3 mA min. (between IOV and each signal)
		OFF voltage/OFF current	5 VDC max./1 mA max. (between IOV and each signal)
		ON/OFF response time	100 ns max./100 ns max.
		Input filter time	No filter *
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 MΩ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	30 mA max.
Weight	65 g max.		
Circuit layout	Terminal block IN0 to IN3  NX bus connector (left)  I/O power supply + I/O power supply -	Power supply  irrent control circuit	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Connected to a CPU Unit: Possible in up     Connected to a Communications Couple Restrictions: No restrictions		ions.
Terminal connection diagram	Additional I/O Power Supply Unit  A1  OIOV  IOV  IOV  IOG  IOG  A8  B8		o-wire nsor Three-wire sensor
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

<sup>\*</sup> This model does not support the input filter. If the Unit is susceptible to noise, take countermeasures such as separating or shielding the Unit and signal lines from the noise source. Refer to NX-series Digital I/O Unit User's Manual (W521) for information on countermeasures.

Unit name	DC Input Unit	Model	NX-ID3417
		External connection	Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F TS indicator, input indicator	ree-Run refreshing Internal I/O common	PNP
	ID3417	Rated input voltage	12 to 24 VDC (9 to 28.8 VDC)
	■TS	Input current	6 mA typical (at 24 VDC), rated current
	0 1 2 3	ON voltage/ON current	9 VDC min./3 mA min. (between IOG and each signal)
Indicators		OFF voltage/OFF current	2 VDC max./1 mA max. (between IOG and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $\mbox{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout	Terminal block  IN0 to IN3  Current circ  IOG0 to 3  NX bus connector (left)  I/O power supply +		I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1  IOS IOS IOS IOS IOS IOS IOS IOS IOS IO	DC Input Unit NX-ID3417  Two- Ser  IN0 IN1  IOV0 IOV1  IOG0 IOG1 IN2 IN3  IOV2 IOV3  IOG2 IOG3  A8 B8	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	DC Input Unit	Model	NX-ID3443
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		terrinas)
	TS indicator, input indicator	Internal I/O common	PNP
	ID3443	Rated input voltage	24 VDC (15 to 28.8 VDC)
	■TS 0 1	Input current	3.5 mA typical (at 24 VDC), rated current
Indicators	2 3	ON voltage/ON current	15 VDC min./3 mA min. (between IOG and each signal)
		OFF voltage/OFF current	5 VDC max./1 mA max. (between IOG and each signal)
		ON/OFF response time	100 ns max./100 ns max.
		Input filter time	Without filter, 1 $\mu$ s, 2 $\mu$ s, 4 $\mu$ s, 8 $\mu$ s (factory setting),16 $\mu$ s, 32 $\mu$ s, 64 $\mu$ s, 128 $\mu$ s, 256 $\mu$ s
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	30 mA max.
Weight	65 g max.		
Circuit layout		ower upply  Current control circuit  itinazio uojialos	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOG IOG  A8 B8	DC Input Unit NX-ID3443  Two- ser  IN0 IN1 • IOV0 IOV1 • IOG0 IOG1 IN2 IN3 • IOV2 IOV3 • IOG2 IOG3 •  A8 B8	Three-wire sensor
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	DC Input Unit	Model	NX-ID3444
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
I/O refreshing method	Input refreshing with input changed time		
	TS indicator, input indicators	Internal I/O common	PNP
	ID3444	Rated input voltage	24 VDC (15 to 28.8 VDC)
	₽TS	Input current	3.5 mA typical (at 24 VDC), rated current
Indicators	0 1 2 3	ON voltage/ON current	15 VDC min./3 mA min. (between IOG and each signal)
		OFF voltage/OFF current	5 VDC max./1 mA max. (between IOG and each signal)
		ON/OFF response time	100 ns max./100 ns max.
		Input filter time	No filter*
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	30 mA max.
Weight	65 g max.		
Circuit layout	Terminal block IN0 to IN3  NX bus connector (left) I/O power supply -	Current control circuit	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit: Possible in up Connected to a Communications Couple Restrictions: No restrictions		ions.
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  I I I I I I I I I I I I I I I I I I I	DC Input Unit NX-ID3444  A1 B1 IN0 IN1 IOV0 IOV1 IOG0 IOG1 IN2 IN3 IOV2 IOV3 IOG2 IOG3  A8 B8	****
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

<sup>\*</sup> This model does not support the input filter. If the Unit is susceptible to noise, take countermeasures such as separating or shielding the Unit and signal lines from the noise source. Refer to NX-series Digital I/O Unit User's Manual (W521) for information on countermeasures.

Unit name	DC Input Unit	Model	NX-ID4342
Number of points	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		Lugu
	TS indicator, input indicator	Internal I/O common	NPN
	ID4342 ■TS	Rated input voltage Input current	24 VDC (15 to 28.8 VDC) 3.5 mA typical (at 24 VDC), rated current
	0 1 2 3 4 5	ON voltage/ON current	15 VDC min./3 mA min. (between IOG and each signal)
Indicators	6 7	OFF voltage/OFF current	5 VDC max./1 mA max. (between IOG and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOG: 0.1 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout	Terminal block IN0 to IN7  NX bus connector (left)  I/O power supply + logonector (right)  I/O power supply - logonector (right)		
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions		
Terminal connection diagram	Power Supply Unit  A1  B1  A1  ICO  ICO  ICO  IOV  IOV  IOV  IOV  IOV	10G0   10V   10V   10G0   10V   10V   10V   10V   10V   10G4   10V   10G4   10V   10G4   10V   10G4   10V   10V	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	DC Input Unit	Model	NX-ID4442		
Number of points	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)		
I/O refreshing method	•	Selectable Synchronous I/O refreshing or Free-Run refreshing			
	TS indicator, input indicator	Internal I/O common	PNP		
	ID4442 • TS	Rated input voltage	24 VDC (15 to 28.8 VDC)		
	0 1	Input current	3.5 mA typical (at 24 VDC), rated current		
Indicators	2 3 4 5 6 7	ON voltage/ON current	15 VDC min./3 mA min. (between IOG and each signal)		
		OFF voltage/OFF current	5 VDC max./1 mA max. (between IOG and each signal)		
		ON/OFF response time	20 μs max./400 μs max.		
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms		
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation		
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.		
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max.		
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	No consumption		
Weight	65 g max.				
Circuit layout		nt control reuit strength of the strength of t	I/O power supply + NX bus connector (right)		
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions				
Terminal connection diagram	Power Supply Unit  A1  IOV  IOV  IOV  IOV  IOV  IOV  IOV  IO	OG			
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.		

Unit name	DC Input Unit	Model	NX-ID5342
Number of points	16 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		NDN
	TS indicator, input indicator ID5342	Internal I/O common Rated input voltage	NPN 24 VDC (15 to 28.8 VDC)
	DTS	Input current	2.5 mA typical (at 24 VDC), rated current
	0 1 2 3 4 5 6 7 8 9 10 11	ON voltage/ON current	15 VDC min./2 mA min. (between IOG and each signal)
Indicators	12 13 14 15	OFF voltage/OFF current	5 VDC max./0.5 mA max. (between IOG and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout		ent control circuit	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions		
Terminal connection diagram	IOV   IOV		DC Input Unit NX-ID5342  B1
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	DC Input Unit	Model	NX-ID5442
Number of points	16 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or I	ree-Run refreshing	
	TS indicator, input indicator	Internal I/O common	PNP
	ID5442	Rated input voltage	24 VDC (15 to 28.8 VDC)
	0 1 2 3 4 5 6 7 8 9 10 11	ON voltage/ON current	2.5 mA typical (at 24 VDC), rated current 15 VDC min./2 mA min. (between IOG and each signal)
Indicators	12 13 14 15	OFF voltage/OFF current	5 VDC max./0.5 mA max. (between IOG and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout		t control cuit   Internal circuits	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communications Couple Restrictions: No restrictions		
Terminal connection diagram	10V		DC Input Unit NX-ID5442  B1 Two-wire sensor  IN0 IN1
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

# ● DC Input Unit (M3 Screw Terminal Block, 30 mm Width) NX-ID5142-1

Unit name	DC Input Unit	Model	NX-ID5142-1
Number of points	16 points	External connection terminals	M3 screw terminal block (18 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	
	TS indicator, input indicators	Internal I/O common	For both NPN/PNP
		Rated input voltage	24 VDC (15 to 28.8 VDC)
	ID5142-1	Input current	7 mA typical (at 24 VDC)
Indicators	DTS 0 1 2 3 4 5 6 7	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)
	8 9 10 11 12 13 14 15	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.85 W max.     Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	No consumption
Weight	125 g max.		
Circuit layout	Terminal block  NX bus connector (left)  NO power supply + I/O power supply - I/O power	supply +	IX bus onnector right)

#### Installation orientation: Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 45°C 16 12 points at 55°C 12 8 I/O power supply voltage 4 28.8 V 0 Installation orientation and 0 40 45 50 55 60 10 20 30 restrictions Ambient temperature (°C) · For any installation other than upright Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic -16 points at 40°C 16 points at 45°C 16 12 12 points at 55°C I/O power supply voltage 8 ----24 V 7 points at 55°C 4 28.8 V 0 40 45 50 55 60 0 10 20 30 Ambient temperature (°C) Terminal Signal Name Signal Name IN0 A0 о́-B0 ● IN1 IN2 A1 B1 . IN3 • A2 IN4 IN5 B2 • IN6 • A3 60 IN7 В3 🕳 **Terminal connection** ● A4 IN8 √o-B4 **●** IN9 diagram IN10 • A5 B5 🌲 IN11 60 •A6 IN12 √o IN13 B6 **●** IN14 ■ A7 24 VDC 60 IN15 B7 **●** COM A8 B8 COM • The polarity of the input power supply can be connected in either direction. Disconnection/ Not supported. **Protective function** Not supported.

**Short-circuit detection** 

# ● DC Input Unit (MIL Connector, 30 mm Width) NX-ID5142-5

Unit name	DC Input Unit	Model	NX-ID5142-5
Number of points	16 points	External connection terminals	MIL connector (20 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	
	TS indicator, input indicators	Internal I/O common	For both NPN/PNP
	ID5142-5	Rated input voltage	24 VDC (15 to 28.8 VDC)
	∎TS	Input current	7 mA typical (at 24 VDC)
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)
Indicators		OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit     O.85 W max.     Connected to a Communications Coupler Unit     O.55 W max.		
Weight	85 g max.	•	
Circuit layout	Connector INO to IN15 COM		

#### Installation orientation: Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 45°C 16 12 points at 55°C 12 8 I/O power supply voltage 4 28.8 V 0 Installation orientation and 0 10 20 40 45 50 55 60 restrictions Ambient temperature (°C) · For any installation other than upright Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 40°C 16 points at 45°C 12 12 points at 45°C I/O power supply voltage 8 ----24 V 7 points at 55°C 4 **-**28.8 V 0 0 10 20 30 40 45 50 55 60 Ambient temperature (°C) Signal Connector name pin Signal name 24 VDC NC NC COM 3 4 COM 6 IN07 IN15 **IN14** 8 **IN06 Terminal connection** IN13 9 10 IN05 diagram 11 12 IN12 IN04 IN11 13 14 IN03 IN10 15 16 IN02 IN09 17 18 IN01 20 **IN08** 19 IN00 The polarity of the input power supply can be connected in either direction. Be sure to wire both pins 3 and 4 (COM), and set the same polarity for both pins. Disconnection/ **Protective function** Not supported. Not supported. **Short-circuit detection**

### NX-ID6142-5

Unit name	DC Input Unit	Model	NX-ID6142-5
Number of points	32 points	External connection terminals	MIL connector (40 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	
	TS indicator, input indicators	Internal I/O common	For both NPN/PNP
	ID6142-5	Rated input voltage	24 VDC (19 to 28.8 VDC)
	₽TS	Input current	4.1 mA typical (24 VDC)
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	ON voltage/ON current	19 VDC min./3 mA min. (between COM and each signal)
Indicators	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max.     Connected to a Communications Coupler Unit 0.60 W max.	Current consumption from I/O power supply	No consumption
Weight	90 g max.		
Circuit layout	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	I/O power supply + I/O power supply - Supply - I/O power supply - I/O	

Installation orientation: • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points vs. points Ambient temperature characteristic 35 32 points at 45°C of simultaneously ON input 30 32 points at 40°C 13 points/common at 55°C 25 20 10 points/common at 55°C 15 10 I/O power supply voltage ---24 V Number 28.8 V 0 Installation orientation and 0 20 30 40 45 50 55 60 10 restrictions Ambient temperature (°C) · For any installation other than upright Number of simultaneously ON input points vs. Ambient temperature characteristic points 32 points at 35°C 35 32 points at 50°C Number of simultaneously ON input 30 13 points/common at 55°C 32 points at 30°C -25 20 8 points/common at 55°C 15 I/O power supply voltage 10 ----19 V 5 points/common at 55°C 5 ---24 V 28.8 V 0 0 10 40 45 50 55 60 30 Ambient temperature (°C) Signal Connector Signal 24 VDC pin NC NC COM1 COM<sub>1</sub> IN31 6 IN23 IN30 8 IN22 IN29 9 10 IN21 IN28 11 12 IN20 IN27 14 IN19 **IN26** 15 | 16 | IN18 IN25 IN17 18 19 20 24 VDC **Terminal connection** COMO COM0 diagram **IN15** IN07 26 IN14 28 IN06 IN13 IN05 29 30 IN12 IN04 IN11 IN03 IN10 35 36 IN02 38 IN01 IN09 37 IN08 39 40 IN00 The polarity of the input power supply can be connected in either direction.
Be sure to wire both pins 23 and 24 (COM0), and set the same polarity for both pins.
Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins. Disconnection/ Short-circuit detection Protective function Not supported. Not supported.

# ● DC Input Unit (Fujitsu Connector, 30 mm Width) NX-ID6142-6

Unit name	DC Input Unit	Model	NX-ID6142-6
Number of points	32 points	External connection terminals	Fujitsu connector (40 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	
	TS indicator, input indicators	Internal I/O common	For both NPN/PNP
	ID6142-6	Rated input voltage	24 VDC (19 to 28.8 VDC)
	₽TS	Input current	4.1 mA typical (24 VDC)
Indicators	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	ON voltage/ON current	19 VDC min./3 mA min. (between COM and each signal)
	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.95 W max.     Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	No consumption
Weight	90 g max.		
Circuit layout	Connector  Connector  IN0 IN15 COM0 COM0 IN16 IN31 COM1 COM1 COM1 COM1 COM1 COM1 COM1 COM	I/O power supply + I/O power supply - NX bus connector (right)	

Installation orientation: • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points vs. Number of simultaneously ON input points Ambient temperature characteristic 35 32 points at 45°C 30 32 points at 40°C 13 points/common at 55°C 25 20 10 points/common at 55°C 15 I/O power supply voltage 10 5 28.8 V 0 Installation orientation and 0 10 20 30 40 45 50 55 60 restrictions Ambient temperature (°C) · For any installation other than upright Number of simultaneously ON input points vs. Ambient temperature characteristic 32 points at 35°C Number of simultaneously ON input points 32 points at 50°C 30 13 points/common at 55°C 32 points at 30°C 20 8 points/common at 55°C 15 10 I/O power supply voltage ----19 V 5 points/common at 55°C 5 ---24 V -28.8 V 0 0 40 45 50 55 60 10 20 30 Ambient temperature (°C) Connector Signal name Signal name pin INO A1 B1 IN1 A2 B2 IN17 IN2 A3 B3 IN18 IN3 IN19 В4 A4 IN4 A5 B5 IN20 IN5 A6 B6 IN21 IN22 A7 B7 IN7 A8 B8 IN23 СОМО A9 В9 COM1 IN8 A10 B10 1N24 Terminal connection IN9 A11 B11 IN25 diagram IN10 A12 B12 IN26 IN11 A13 B13 IN27 IN12 A14 B14 IN28 A15 B15 IN29 IN13 A16 B16 IN30 IN15 A17 B17 IN31 COM0 A18 B18 COM1 A19 B19 NC NC NC A20 B20 NC The polarity of the input power supply can be connected in either direction.
Be sure to wire both pins A9 and A18 (COM0), and set the same polarity for both pins.
Be sure to wire both pins B9 and B18 (COM1), and set the same polarity for both pins. Disconnection/ Not supported. **Protective function** Not supported. Short-circuit detection

# ● AC Input Unit (Screwless Clamping Terminal Block, 12 mm Width) NX-IA3117

Points   A points	Unit name	AC Input Unit	Model	NX-IA3117
Terminal Connection   Terminal Indicator   Termin	Number of points		External connection	Screwless clamping terminal block
Indicators    Indicators	<u> </u>		terminals	(8 terminals)
Indicators    A 3117	Сараспу	· · · · · · · · · · · · · · · · · · ·	Internal I/O common	No polarity
Indicators    Indicators			Rated input voltage	200 to 240 VAC, 50/60 Hz
Indicators    Movement   11 m A (specal (at 200 VAC, 60 Hg)				, ,
OFF vottage/OFF current   40 VAC max x / Am max x			•	11 mA typical (at 200 VAC, 60 Hz)
Dimensions   12 (W) × 100 (H) × 71 (D)   Isolation method   Photocoupler isolation   250 ms   50 ms   1 ms (adeaux)   2 ms, 4 ms, 9 ms, 16 ms, 32 ms, 64 ms, 128 ms, 25 ms   250 ms	Indicators			
Input filter time   No. filter. Q.S. ms. 0.5 ms. 1 ms. (detail.)				
Dimensions   12 (W) x 100 (H) x 71 (D)   Isolation method   Photocoupler isolation				No filter, 0.25 ms, 0.5 ms, 1 ms (default),
Between each AC input circuit: 20 MQ min. (at 500 VDC)  Solver to external terminals and the functional ground terminal: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuits: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuits: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuits: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuits: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuits: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuits: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuits: 20 MQ min. (at 500 VDC)  Between the external terminals and internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.  Between the external terminals and functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.  Circuit in a connection of the max.  Between the external terminals and functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.  Between the external terminals and internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.  Circuit in a connection of the max.  Circuit in a connec			Input filter time	
Insulation resistance   Insu	Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Supplied from external source.  NX Unit power consumption  NX Unit power consumption  On the consumption or communication or Communications  On B W max.  Connected to a Communications Coupler Unit  Ferminal block  Other or Country  INO to IN3  Installation orientation and restrictions  Installation orientation and restrictions  Terminal connection diagram  No consumption  Ourrent consumption from I/O power supply  No consumption  No consumpti	Insulation resistance	500 VDC) Between the external terminals and the functional ground terminal: 20 M $\Omega$ min. (at 500 VDC) Between the external terminals and internal circuits: 20 M $\Omega$ min. (at 500 VDC) Between the internal circuit and the functional ground terminal: 20 M $\Omega$ min.	_	for 1 min at a leakage current of 5 mA max. Between the external terminals and functional ground terminal: 2300 VAC for 1 min at a leakage current of 5 mA max.  Between the external terminals and internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max.  Between the internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage
NX Unit power consumption    Control Unit	I/O power supply method	Supplied from external source.		Without I/O power supply terminals
Circuit layout    NX bus   I/O power supply +   Connector (left)   I/O power supply -   Installation orientation and restrictions   NX bus connector (left)   I/O power supply -   Installation orientation and restrictions   Connected to a CPU ultior Communication Control Unit: Possible in upright installation.   Connected to a Communications Coupler Unit: Possible in 6 orientations.   Restrictions: No restrictions   AC Input Unit   NX-IA3117   NX-IA3117   Installation orientation	NX Unit power consumption	Control Unit 0.80 W max.  • Connected to a Communications Coupler Unit		No consumption
Installation orientation and restrictions  Installation orientation:  • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  • Connected to a CPU Unit or Communication Control Unit: Possible in 6 orientations.  Restrictions:  AC Input Unit  NX-IA3117  AND INPUT C2  INTUT C1  INTUT C	Weight	60 g max.		
Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.     Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions  AC Input Unit NX-IA3117  AC Input Unit NX-IA3117  INI C1  JOURNAL C2	Circuit layout	Terminal block  C0 to C3  NX bus connector		I/O power supply + NX bus connector
Terminal connection diagram  200 to 240 VAC  IN1 C1  VAC		Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.     Connected to a Communications Coupler Unit: Possible in 6 orientations.		
		NX-İA3117  A		
		Not supported.	Protective function	Not supported.

### **Digital Output Unit Specifications**

# ● Transistor Output Unit (Screwless Clamping Terminal Block, 12 mm Width) NX-OD2154

Unit name	Transistor Output Unit	Model	NX-OD2154
Number of points	2 points	External connection terminals	Screwless clamping terminal block (8 terminals)
I/O refreshing method	Output refreshing with specified time stamp	)	,
	TS indicator, output indicator	Internal I/O common	NPN
	OD2154	Rated voltage	24 VDC
	DTS 0 1	Operating load voltage range	15 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 1 A/Unit
		Maximum inrush current	1 /
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
<u> </u>	10 (10) 100 (11) 71 (7)	ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit 0.85 W max. Connected to a Communications Coupler Unit 0.45 W max.	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply - This unit uses a	push-pull output circuit.	OUT0 to OUT1  Terminal block  IOG0 to 1  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit: Possible in up Connected to a Communications Couple Restrictions: No restrictions		ions.
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOV IOV  IOG IOG  A8 B8	Transistor Output Unit NX-OD2154 B1 OUT0 OUT1 IOV IOV IOV IOV IOV IOV IOG NC	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

### **NX-OD2258**

Unit name	Translator Output Unit	Model	NX-OD2258
Unit name	Transistor Output Unit	External connection	Screwless clamping terminal block
Number of points	2 points	terminals	(8 terminals)
I/O refreshing method	Output refreshing with specified time stamp	)	
	TS indicator, output indicator	Internal I/O common	PNP
	OD2258	Rated voltage	24 VDC
	DTS 0 1	Operating load voltage range	15 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 1 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
	12 (10 122 (10 124 (2)	ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit     0.85 W max.     Connected to a Communications     Coupler Unit     0.50 W max.	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + Order Supply - Order S	push-pull output circuit.	OUT0 to OUT1  Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit: Possible in up Connected to a Communications Couple Restrictions: No restrictions		ions.
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOG IOG  24 VDC  IOV IOV  IOG IOG  A8 B8	Transistor Output Unit NX-OD2258  A OUTO OUT1 IOV IOV IOG IOG NC NC A8 B8	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

### NX-OD3121

Unit name	Transistor Output Unit	Model	NX-OD3121
		External connection	Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
/O refreshing method	Selectable Synchronous I/O refreshing or Free-Run refreshing		
	TS indicator, output indicator  OD3121	Internal I/O common Rated voltage	NPN 12 to 24 VDC
	DTS IZI	Operating load voltage	12 to 24 VDC
	0 1 2 3	range	10.2 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	I/O current consumption	10 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -		IOV0 to 3 OUT0 to OUT3  Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  Old IOV  IOV  IOV  IOV  IOG  IOG  IOG  A8 B8	Transistor Output Unit NX-OD3121  A1 B1 Two-wi OUT0 OUT1 IOV0 IOV1 IOG0 IOG1 OUT2 OUT3 IOV2 IOV3 IOG2 IOG3  A8 B8	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

### NX-OD3153

Huit name	Transista Order della	Madal	NV ODO450
Unit name	Transistor Output Unit	Model External connection	NX-OD3153 Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or Free-Run refreshing		
	TS indicator, output indicator	Internal I/O common	NPN
	OD3153 ■TS	Rated voltage	24 VDC
	0 1 2 3	Operating load voltage range	15 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply -  This unit uses a push-	pull output circuit.	OUT0 to OUT3  Terminal block  I/O power supply +  I/O power supply -  I/O power supply -  I/O power supply -  I/O power supply -
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  OIOV IOV  IOG IOG  IOG IOG  A8 B8	Transistor Output Unit NX-OD3153  A1	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	Transistor Output Unit	Model	NX-OD3256
		External connection	Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		DND
	TS indicator, output indicator	Internal I/O common	PNP
	OD3256 ■TS	Rated voltage	24 VDC
	0 1 2 3	Operating load voltage range	15 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	I/O current consumption	20 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  NX bus connector (left)  NX bus connector (left)	Short-circuit protection	OUT0 to OUT3  IOG0 to 3  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica  Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  OIOV IOV  IOG IOG  A8 B8	Transistor Output Unit NX-OD3256  A1	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD3257
	·	External connection	Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or FTS indicator, output indicator	Internal I/O common	PNP
	OD3257	Rated voltage	24 VDC
	DTS	Operating load voltage	15 to 28.8 VDC
	0 1 2 3	range	15 to 26.6 VDC
Indicators		Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current Residual voltage	0.1 mA max. 1.5 V max.
		ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 $M\Omega$ min. between isolated circuits (at	Dielectric strength	510 VAC between isolated circuits for 1
I/O power supply	100 VDC)	Current capacity of I/O	minute at a leakage current of 5 mA max.  IOV: 0.5 A/terminal max.,
method	Supply from the NX bus	power supply terminal	IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.85 W max. Connected to a Communications Coupler Unit 0.50 W max.	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)   -pull output circuit.	IOV0 to 3  Terminal block  OUT0 to OUT3  I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Connected to a CPU Unit or Communica     Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOV IOV  IOG IOG  A8 B8 B8	Transistor Output Unit NX-OD3257  A1 B1 Two-wi	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD3268
Number of points	4 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and	Free-Run refreshing	
	TS indicator, output indicator	Internal I/O common	PNP
	OD3268	Rated voltage	24 VDC
	●TS 0 1	Operating load voltage range	15 to 28.8 VDC
Indicators	2 3	Maximum value of load current	2 A/point, 8 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	IOV: 2 A/terminal max., IOG: 2 A/terminal max., COM (+V): 4 A/terminal max., 0V: 4 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.85 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	20 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	Short-circuit Short-circuit No No No No No No No No No No No No No	Terminal block  UT 0 to OUT 3  G 0 to IOG 3  O power apply + O power apply - O power apply - O power apply - O power apply -
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Transistor Output Unit NX-OD3268  A1  B1  OUT0  OUT1  IOV0  IOV1  IOG0  OUT2  OUT3  IOV2  IOV3  IOG2  IOG3  COM (+V)  OV  A8  B8  OV has 2 terminals, so be sure to wire both tene COM (+V) has 2 terminals, so be sure to wire both tenes.		
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD4121
Number of points	8 points	External connection	Screwless clamping terminal block (16
<u> </u>	•	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F TS indicator, output indicator	Internal I/O common	NPN
	OD4121	Rated voltage	12 to 24 VDC
	DTS 0 1 2 3	Operating load voltage range	10.2 to 28.8 VDC
Indicators	4 5 6 7	Maximum value of load current	0.5 A/point, 4 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA
		Residual voltage	1.5 V max.
	10 (11) 100 (11) 71 (7)	ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 MΩ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	I/O current consumption	10 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -		I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOV IOV  IOG IOG  A8 B8	Connection Unit	2 OUT3 2 IOV3 4 OUT5 Three-wire type 4 IOV5 6 OUT7
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	Transistor Output Unit	Model	NX-OD4256
Number of points	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	
	TS indicator, output indicator	Internal I/O common	PNP
	<b>OD4256</b> ■TS	Rated voltage	24 VDC
	0 1 2 3	Operating load voltage range	15 to 28.8 VDC
Indicators	4 5 6 7	Maximum value of load current	0.5 A/point, 4 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA
		Residual voltage	1.5 V max.
Dimensions	12 (W) x 100 (H) x 71 (D)	ON/OFF response time Isolation method	0.5 ms max./1.0 ms max.  Photocoupler isolation
Insulation resistance	20 MΩ min. between isolated circuits (at	Dielectric strength	510 VAC between isolated circuits for 1
	100 VDC)	•	minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.00 W max. Connected to a Communications Coupler Unit 0.65 W max.	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	Short-circuit protection	OUT0 to OUT7  Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Power Supply Unit  A1  Floy  F	IOG0   ICO	JT1 Two-wire type  UT3  OG3  UT5  Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD5121
Number of points	16 points	External connection	Screwless clamping terminal block (16
<u> </u>	,	terminals	terminals)
/O refreshing method	Selectable Synchronous I/O refreshing or F TS indicator, output indicator	Internal I/O common	NPN
	OD5121	Rated voltage	12 to 24 VDC
	DTS	Operating load voltage	10.2 to 28.8 VDC
	0 1 2 3 4 5 6 7	range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 4 A/Unit
		Maximum inrush current	
		Leakage current	0.1 mA max.
		Residual voltage ON/OFF response time	1.5 V max.  0.1 ms max./0.8 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
nsulation resistance	20 MΩ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max
I/O power supply	,	Current capacity of I/O	-
method	Supply from the NX bus	power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.00 W max. Connected to a Communications Coupler Unit 0.65 W max.	I/O current consumption	20 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) //O power supply - //O powe		OUT0 to OUT15 Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Connected to a CPU Unit or Communica     Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram		/ IOV	Transistor Output
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	Transistor Output Unit	Model	NX-OD5256
Number of points	16 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	,
	TS indicator, output indicator	Internal I/O common	PNP
	OD5256	Rated voltage	24 VDC
	■TS 0 1 2 3 4 5 6 7	Operating load voltage range	15 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 4 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.10 W max. Connected to a Communications Coupler Unit 0.70 W max.	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply -	Short-circuit protection	OUT0 to OUT15 Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	10V   10V	DOV   DOG   DOG	Transistor Output Unit NX-OD5256  B1  Two-wire type  OUT2 OUT3  OUT4 OUT5  OUT6 OUT7  OUT8 OUT9  OUT10 OUT11  OUT12 OUT13  OUT14 OUT15  B8
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

## ● Transistor Output Unit (M3 Screw Terminal Block, 30 mm Width) NX-OD5121-1

Unit name	Transistor Output Unit	Model	NX-OD5121-1
Number of points	16 points	External connection terminals	M3 screw terminal block (18 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and	Free-Run refreshing	
	TS indicator, output indicator	Internal I/O common	NPN
	OD5121-1	Rated voltage	12 to 24 VDC
	●TS 0 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 5 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.60 W max.	Current consumption from I/O power supply	30 mA max.
Weight	125 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	COM  I/O powe supply -  I/O powe supply -	Terminal block  IT NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Signal name		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

### NX-OD5256-1

		T	1.0.4 and 1.0.4
Unit name	Transistor Output Unit	Model	NX-OD5256-1
Number of points	16 points	External connection terminals	M3 screw terminal block (18 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and	1	l DVD
	TS indicator, output indicator	Internal I/O common	PNP
	OD5256-1	Rated voltage	24 VDC
	●TS 0 1 2 3 4 5 6 7	Operating load voltage range	20.4 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 5 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $M\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.95 W max. Connected to a Communications Coupler Unit 0.65 W max.	Current consumption from I/O power supply	30 mA max.
Weight	125 g max.		
Circuit layout	NX bus connector (left)  NX bus connector (left)  NX bus connector supply + 1/O power supply - 1/O power sup	Short-circuit protection of the state of the	Terminal block  To to OUT15  Terminal block  NX bus connector (right)
Installation orientation and restrictions	<ul> <li>Installation orientation:</li> <li>Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.</li> <li>Connected to a Communications Coupler Unit: Possible in 6 orientations.</li> <li>Restrictions: No restrictions</li> </ul>		
Terminal connection diagram	Signal name		
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

## ● Transistor Output Unit (MIL Connector, 30 mm Width) NX-OD5121-5

Unit name	Transistor Output Unit	Model	NX-OD5121-5
Number of points	16 points	External connection terminals	MIL connector (20 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	
	TS indicator, output indicator	Internal I/O common	NPN
	OD5121-5	Rated voltage	12 to 24 VDC
	DTS 0 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 9.95 W max. Connected to a Communications Coupler Unit 0.60 W max.	Current consumption from I/O power supply	30 mA max.
Weight	80 g max.		
Circuit layout	NX bus connector (left)  Installation orientation:		Connector  COM COM I/O power supply + I/O power supply - I/O power sup
Installation orientation and restrictions	Connected to a CPU Unit or Communication C     Connected to a Communications Coupler Unit Restrictions: No restrictions	Control Unit: Possible in upright i : Possible in 6 orientations.	nstallation.
Terminal connection diagram	Signal name	Signal name +V COM OUT07 L OUT06 L OUT05 L OUT04 L OUT03 C OUT02 L OUT01 L OUT01 L OUT01 L OUT00 L	
Disconnection/Short-circuit detection	Be sure to wire both pins 1 and 2 (+v).  Not supported.	Protective function	Not supported.

### NX-OD5256-5

Unit name	Transistor Output Unit	Model	NX-OD5256-5
	·	External connection	
Number of points	16 points	terminals	MIL connector (20 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F		1
	TS indicator, output indicator	Internal I/O common	PNP 24 VDC
	OD5256-5	Rated voltage Operating load voltage	
	●TS 0 1 2 3 4 5 6 7	range	20.4 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
Dimensions	30 (W) x 100 (H) x 71 (D)	ON/OFF response time Isolation method	0.5 ms max./1.0 ms max.  Photocoupler isolation
	20 MΩ min. between isolated circuits (at 100		510 VAC between isolated circuits for 1 minute at
Insulation resistance	VDC)	Dielectric strength	a leakage current of 5 mA max.
I/O power supply method	Supplied from external source.	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit     1.00 W max.     Connected to a Communications Coupler Unit     0.70 W max.	Current consumption from I/O power supply	40 mA max.
Weight	85 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	Short-circuit	COM (+V) COM (+V)  COM (+V)  OUTO to OUT15  OV  OV  I/O power supply + I/O power supply -  I/O power supply -  I/O power supply -
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication C Connected to a Communications Coupler Unit Restrictions: No restrictions	Control Unit: Possible in upright t: Possible in 6 orientations.	installation.
Terminal connection diagram	Signal name	OUT05 L OUT03 L OUT02 L OUT01 L OUT05 L OUT04 L OUT03 L	
Disconnection/Short-circuit	Be sure to wire both pins 3 and 4 (0V).  Not supported.	Protective function	With load short-circuit protection.

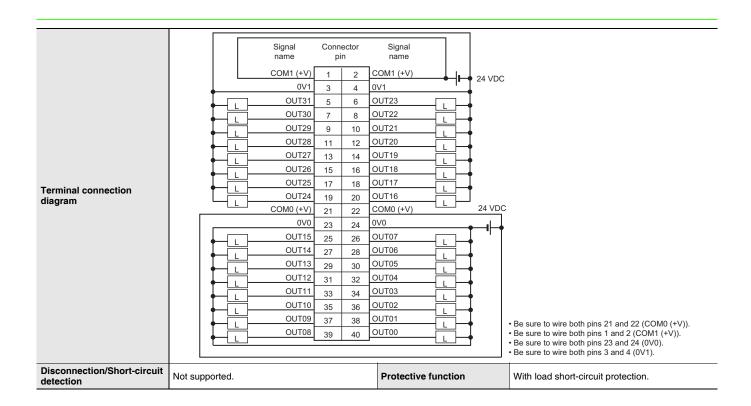
## NX-OD6121-5

Unit name	Transistor Output Unit	Model	NX-OD6121-5
Number of points	32 points	External connection terminals	MIL connector (40 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	
	TS indicator, output indicator	Internal I/O common	NPN
	OD6121-5	Rated voltage	12 to 24 VDC
	DTS 0 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Maximum value of load current	0.5 A/point, 2 A/common, 4 A/Unit
	24 25 26 27 28 29 30 31	Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.00 W max.     Connected to a Communications Coupler Unit 0.80 W max.	Current consumption from I/O power supply	50 mA max.
Weight	90 g max.		
Circuit layout	Internal circuits	+V0 +V0 OUT0 to OUT18 COM0 +V1 +V1 +V1 OUT16 to OUT3*	Connector
Installation aviantation and	NX bus connector (left) I/O power supply +	I/O powe	
Installation orientation and restrictions	Connected to a CPU Unit or Communication C     Connected to a Communications Coupler Unit Restrictions: No restrictions		nstaliation.

	T		
Terminal connection diagram	12 to	Connector pin         Signal name           1         2         +V1           3         4         COM1           5         6         OUT23         L           7         8         OUT22         L           9         10         OUT21         L           11         12         OUT20         L           13         14         OUT19         L           15         16         OUT18         L           17         18         OUT17         L           21         22         +V0           23         24         COM0           25         26         OUT07         L           29         30         OUT06         L           29         30         OUT06         L           31         32         OUT04         L           33         34         OUT03         L           37         38         OUT01         L           39         40         OUT00         L	Be sure to wire both pins 21 and 22 (+V0). Be sure to wire both pins 23 and 24 (COM0). Be sure to wire both pins 1 and 2 (+V1). Be sure to wire both pins 3 and 4 (COM1).
detection	Not supported.	Protective function	Not supported.

## NX-OD6256-5

Unit name	Transistor Output Unit	Model	NX-OD6256-5
Number of points	32 points	External connection terminals	MIL connector (40 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F		
	TS indicator, output indicator	Internal I/O common	PNP
	OD6256-5	Rated voltage	24 VDC
	DTS 0 1 2 3 4 5 6 7	Operating load voltage range	20.4 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Maximum value of load current	0.5 A/point, 2 A/common, 4 A/Unit
	24 25 26 27 28 29 30 31	Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.30 W max.     Connected to a Communications Coupler Unit 1.00 W max.	Current consumption from I/O power supply	80 mA max.
Weight	95 g max.		
Circuit layout	NX bus connector (left)  I/O power supply +	Short-circuit protection protection	COM0 (+V)  COM0 (+V)  OUT0 to OUT15  OV0  COM1 (+V)  COM1 (+V)  COM1 (+V)  OUT16 to OUT31  OV1  OV1  OV1  I/O power supply + I/O power supply - I/
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication C  Connected to a Communications Coupler Unit Restrictions: No restrictions		nstallation.



## ● Transistor Output Unit (Fujitsu Connector, 30 mm Width) NX-OD6121-6

Unit name	Transistor Output Unit	Model	NX-OD6121-6
Number of points	32 points	External connection	Fujitsu connector (40 terminals)
	·	terminals	. 2, (10 (011111100))
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Internal I/O common	NPN
	TS indicator, output indicator	Rated voltage	12 to 24 VDC
	OD6121-6 ■TS	Operating load voltage range	10.2 to 28.8 VDC
Indicators	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 2 A/common, 4 A/Unit
	16 17 18 19 20 21 22 23	Maximum inrush current	4.0 A/point, 10 ms max.
	24 25 26 27 28 29 30 31	Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.10 W max.     Connected to a Communications Coupler Unit 0.80 W max.	Current consumption from I/O power supply	50 mA max.
Weight	90 g max.		
Circuit layout	NX bus connector (left)  NX bus connector supply + I/O power supply -	ctor	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication C Connected to a Communications Coupler Unit Restrictions: No restrictions		nstallation.
Terminal connection diagram	12 to 24 VDC   Signal name   NI name		
Disconnection/	Not supported.	Protective function	Not supported.
Short-circuit detection	3866		

## ● Relay Output Unit (Screwless Clamping Terminal Block, 12 mm Width) NX-OC2633

Unit name	Relay Output Units	Model	NX-OC2633
	· · ·	External connection	
Number of points	2 points, independent contacts	terminals	Screwless clamping terminal block (8 terminals
I/O refreshing method	Free-Run refreshing TS indicator, output indicator	Relay type	N.O. contact
	OC2633		250 VAC/2 A (cos\phi = 1),
Indicators	DTS 0 1	Maximum switching capacity	250 VAC/2 A (cosφ = 0.4), 24 VDC/2 A, 4 A/Unit
		Minimum switching capacity	5 VDC, 1 mA
Relay service life	Electrical: 100,000 operations* Mechanical: 20,000,000 operations	ON/OFF response time	15 ms max./15 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Relay isolation
Insulation resistance	Between A1/B1 terminals and A3/B3 terminals: 20 M $\Omega$ min. (500 VDC) Between the external terminals and internal circuits: 20 M $\Omega$ min. (500 VDC) Between the internal circuit and GR terminal: 20 M $\Omega$ min. (100 VDC) Between the external terminals and GR terminal: 20 M $\Omega$ min. (500 VDC)	Dielectric strength	Between A1/B1 terminals and A3/B3 terminals: 230 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and GR terminal: 231 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and internal circuits 2300 VAC for 1 min at a leakage current of 5 mA ms. Between the internal circuit and GR terminal: 510 VA for 1 min at a leakage current of 5 mA max.
Vibration resistance	Conforms to IEC60068-2-6. 5 to 8.4 Hz with amplitude of 3.5 mm, 8.4 to 150 Hz, acceleration of 9.8 m/s² 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/s <sup>2</sup> , 3 times each in X, Y, and Z direction
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.20 W max. Connected to a Communications Coupler Unit 0.80 W max.	I/O current consumption	No consumption
Weight	65 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + You cannot replace	ply	I/O power supply +  I/O power supply -  I/O power supply -  I/O power supply -
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication C  Connected to a Communications Coupler Unit: Restrictions: No restrictions	ontrol Unit: Possible in upright in	istallation.
Terminal connection diagram	Relay Output Unit NX-OC2633 B1 Load 0 C0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

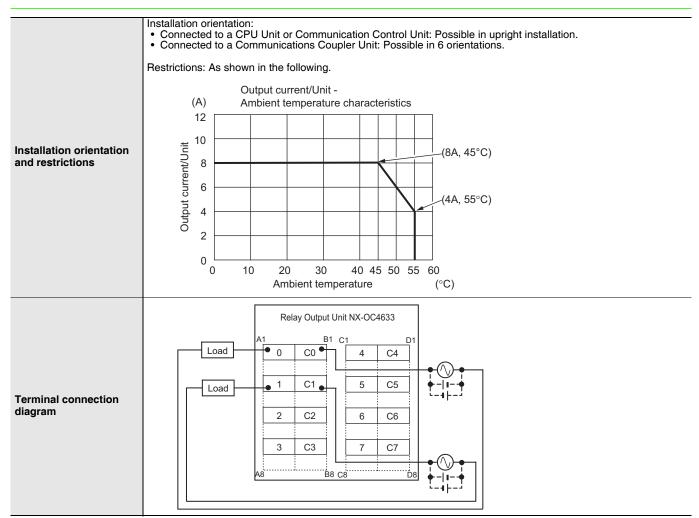
<sup>\*</sup> Electrical service life will vary depending on the current value. Refer to "NX-series Digital I/O Units User's Manual" for details.

### NX-OC2733

Unit name	Relay Output Unit	Model	NX-OC2733
Number of points	2 points, independent contacts	External connection	Screwless clamping terminal block (8
•	' '	terminals	terminals)
I/O refreshing method	TS indicator, output indicator  OC2733  TS  O  TS	Maximum switching capacity	250 VAC/2 A (cosφ = 1), 250 VAC/2 A (cosφ = 0.4), 24 VDC/2 A, 4 A/Unit
		Minimum switching capacity	5 VDC, 10 mA
Relay service life	Electrical: 100,000 operations Mechanical: 20,000,000 operations	ON/OFF response time	15 ms max./15 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Relay isolation
Insulation resistance	Between A1/3, B1/3 terminals and A5/7, B5/7 terminals: $20~M\Omega$ min. (at $500~VDC$ ) Between the external terminals and functional ground terminal: $20~M\Omega$ min. (at $500~VDC$ ) Between the external terminals and internal circuits: $20~M\Omega$ min. (at $500~VDC$ ) Between the internal circuit and the functional ground terminal: $20~M\Omega$ min. (at $100~VDC$ )	Dielectric strength	Between A1/3, B1/3 terminals and A5/7, B5/7 terminals: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and the functional ground terminal: 2300 VAC for min at a leakage current of 5 mA max. Between the external terminals and internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.30 W max.     Connected to a Communications Coupler Unit 0.95 W max.  Coupler Unit 0.95 W max.		No consumption
Weight	70 g max.		
Circuit layout	You cannot r		NO0 to NO1 C0 to C1 Terminal block NC0 to NC1  I/O power supply + NX bus connector (right)  I/O power supply - O D D D D D D D D D D D D D D D D D D D
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Relay Output Unit NX-OC2733 B1 Load  NO0 NC0  NO1 NC1  C1 C1  A8 B8	Load	
Disconnection/Short- circuit detection	Not supported.	Protective function	Not supported.

## ● Relay Output Unit (Screwless Clamping Terminal Block, 24 mm Width) NX-OC4633

Unit name	Relay Output Unit	Model	NX-OC4633	
Number of points	8 points, independent contacts	External connection terminals	Screwless clamping terminal block (8 terminals x 2)	
I/O refreshing method	Free-Run refreshing			
Indicators	0 1		N.O. contact 250 VAC/2 A (cosφ = 1), 250 VAC/2 A (cosφ = 0.4), 24 VDC/2 A, 8 A/Unit	
	2 3 4 5 6 7	Minimum switching capacity	5 VDC, 1 mA	
Relay service life	Electrical: 100,000 operations* Mechanical: 20,000,000 operations	ON/OFF response time	15 ms max./15 ms max.	
Dimensions	24 (W) x 100 (H) x 71 (D)	Isolation method	Relay isolation	
Insulation resistance	Between output bits: $20~M\Omega$ min. (at $500~VDC$ ) Between the external terminals and the functional ground terminal: $20~M\Omega$ min. (at $500~VDC$ ) Between the external terminals and internal circuits: $20~M\Omega$ min. (at $500~VDC$ ) Between the internal circuit and the functional ground terminal: $20~M\Omega$ min. (at $100~VDC$ )	Dielectric strength	Between output bits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and the functional ground terminal: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.	
Vibration resistance	Conforms to IEC 60068-2-6. 5 to 8.4 Hz with amplitude of 3.5 mm, 8.4 to 150 Hz, acceleration of 9.8 m/s <sup>2</sup> 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/s <sup>2</sup> , 3 times each in X, Y, and Z directions	
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 2.00 W max. Connected to a Communications Coupler Unit 1.65 W max.	Current consumption from I/O power supply	No consumption	
Weight	140 g max.	1		
Circuit layout	NX bus connector (left)  I/O power supply +	X bus onnector I/O power supply +		



<sup>\*</sup> Electrical service life will vary depending on the current value. Refer to "NX-series Digital I/O Units User's Manual" for details.

## ● DC Input/Transistor Output Unit (MIL Connector, 30 mm Width) NX-MD6121-5

Unit name	name DC Input/Transistor Output Unit Model		NX-MD6121-5			
Number o	of points	16 inputs/16 outputs	External of terminals	connection	2 MIL connectors (20 terminals)	
I/O refres	hing method	Switching Synchronous I/O refreshing and Free-Run refreshing				
	Internal I/O common	NPN		Internal I/O common	For both NPN/PNP	
	Rated voltage	12 to 24 VDC		Rated input voltage	24 VDC (15 to 28.8 VDC)	
	Operating load voltage range	10.2 to 28.8 VDC		Input current	7 mA typical (at 24 VDC)	
Output section	Maximum value of load current	0.5 A/point, 2 A/Unit	section (CN2)	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)	
(CN1)	Maximum inrush current	4.0 A/point, 10 ms max.		(CN2)	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
	Leakage current	0.1 mA max.		ON/OFF response time	20 μs max./400 μs max.	
	Residual voltage	1.5 V max.			No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms,	
	ON/OFF response time	0.1 ms max./0.8 ms max.		Input filter time	4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms	
		TS indicator, I/O indicators	Dimension	ns	30 (W) x 100 (H) x 71 (D)	
		MD6121-5	Isolation I	nethod	Photocoupler isolation	
		CN_ DTS	Insulation	resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	
		1 0 1 2 3 4 5 6 7 1 8 9 10 11 12 13 14 15 2 0 1 2 3 4 5 6 7	Dielectric		510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
		2 8 9 10 11 12 13 14 15	I/O power supply method		Supply from external source	
Indicators	s		Supply ter	apacity of I/O power minal	Without I/O power supply terminals	
			NX Unit power consumption		Connected to a CPU Unit or Communication Control Unit 1.00 W max. Connected to a Communications Coupler Unit 0.70 W max.	
			Current consumption from I/O power supply		30 mA max.	
			Weight		105 g max.	
		CN1 (left) output circuit	+\	/0 ¬		
Circuit layout		NX bus connector (left)  NX bus connector (left)  NX bus connector supply + 1/0 power supply - 1/0 power sup	NX bus connector (left)  NX bus connector (left)  NX bus connector (left)  NX bus connector (left)  NX bus connector (right)			
		Connector  NX bus connector (left)  NIND IND IND IND IND IND IND IND IND IND	Internal circuits	D power pply + connector (right)		

Installation orientation: Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.
 Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. For upright installation ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 35°C 16 points at 45°C 16 Number of simultaneously 13 points at 55°C 12 9 points at 55°C I/O power supply voltage ---24 V 4 28.8 V 0 0 10 20 30 40 45 50 55 60 Installation orientation and restrictions Ambient temperature • For any installation other than upright Number of simultaneously ON input points vs. Number of simultaneously ON input points Ambient temperature characteristic 16 points at 40°C 16 points at 25°C 16 12 I/O power supply 5 points at 55°C 8 voltage ---24 V 4 28.8 V 3 points at 55°C 0 0 10 30 40 45 50 55 60 Ambient temperature (°C) CN1 (left) output terminal Signal Connector Signal name pin name OUT0 20 19 OUT8 name name OUT1 18 17 OUT9 OUT2 16 15 OUT10 OUT3 14 13 OUT11 OUT4 12 11 OUT12 OUT5 10 9 OUT13 OUT6 8 7 OUT14 OUT7 6 5 OUT15 COM0 4 3 COM0 +V0 2 1 +V0 12 to 24 VDC • Be sure to wire both pins 3 and 4 (COM0) of CN1. Terminal connection • Be sure to wire both pins 1 and 2 (+V0) of CN1. diagram CN2 (right) input terminal Signal Connector Signal name pin name NC 1 2 NC COM1 3 4 COM1 IN15 5 6 IN07 7 8 IN14 IN06 IN13 9 10 IN05 IN12 11 12 IN04 IN03 IN11 13 14 IN10 15 16 IN02 60 IN09 17 18 IN01

19 20 IN00

The polarity of the input power supply of CN2 can be connected in either direction.
Be sure to wire both pins 3 and 4 (COM1) of CN2, and set the same polarity for both pins.

**Protective function** 

IN08

Not supported.

Disconnection/Short-circuit

detection

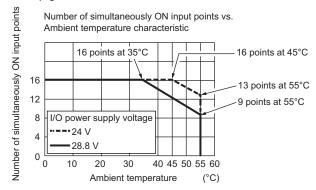
Not supported.

### NX-MD6256-5

Unit name	nit name DC Input/Transistor Output Unit Model			NX-MD6256-5	
Number o	f points	16 inputs/16 outputs	External of terminals	connection	2 MIL connectors (20 terminals)
I/O refresh	ning method	Switching Synchronous I/O refreshing and Free			
	Internal I/O common	PNP		Internal I/O common	For both NPN/PNP
	Rated voltage	24 VDC		Rated input voltage	24 VDC (15 to 28.8 VDC)
	Operating load voltage range	20.4 to 28.8 VDC		Input current	7 mA typical (at 24 VDC)
Output section	Maximum value of load current	0.5 A/point, 2 A/Unit	Input section (CN2)	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)
(CN1)	Maximum inrush current	4.0 A/point, 10 ms max.		OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
	Leakage current	0.1 mA max.		ON/OFF response time	20 μs max./400 μs max.
	Residual voltage	1.5 V max.	_		No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms,
	ON/OFF response time	0.5 ms max./1.0 ms max.		Input filter time	4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
		TS indicator, I/O indicators	Dimensio		30 (W) x 100 (H) x 71 (D)
		MD6256-5	Isolation	method	Photocoupler isolation
		CN DTS	Insulation	n resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)
		1 8 9 10 11 12 13 14 15 2 0 1 2 3 4 5 6 7		strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
		<sup>2</sup> L8 9 10 11 12 13 14 15	•	apacity of I/O power	Supply from external source
Indicators	•		supply terminal		Without I/O power supply terminals
			NX Unit power consumption		Connected to a CPU Unit or Communication Control Unit 1.10 W max. Connected to a Communications Coupler Unit 0.75 W max.
			Current consumption from I/ O power supply Weight		40 mA max.
					110 g max.
		CN1 (left) output circuit			
Circuit layout		NX bus connector (left)  NX bus connector (left)  NX bus connector supply + 1/O power supply - 1/O power sup	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	OUT0 to OUT15 -00V0 1/O power supply + 1/O power supply - 1 supply -	ector
		Connector IN0 (1N15 (COM1 (IN15 (COM1 (Ieft) V))) IO power supply + (I/O power supply - (Ieft) (I) (IN15 (I			

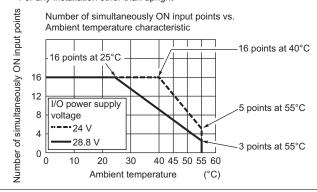
Installation orientation:

- Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.
   Connected to a Communications Coupler Unit: Possible in 6 orientations.
- Restrictions: As shown in the following.
  - For upright installation

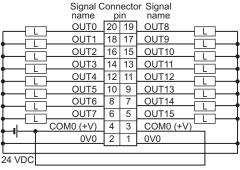


#### Installation orientation and restrictions

· For any installation other than upright



#### CN1 (left) output terminal



#### Terminal connection diagram

- Be sure to wire both pins 3 and 4 (COM0 (+V)) of CN1.
- Be sure to wire both pins 1 and 2 (0V0) of CN1.

#### CN2 (right) input terminal

24 VDC	Signal C	onne	ctc	r Signal	
I ADC I	name	pin		name	
1 :15	NC	1   2	2	NC	
	COM1	3 4	4	COM1	
	IN15	5 6	3	IN07	
	IN14	7 8	3	IN06	~
	IN13	9 1	0	IN05	~
	IN12	11 1	2	IN04	~
	IN11	13 1	4	IN03	~
	IN10	15 1	6	IN02	
	IN09	17 1	8	IN01	
	IN08	19 2	0	IN00	~

- The polarity of the input power supply of CN2 can be connected in either direction.
  Be sure to wire both pins 3 and 4 (COM1) of CN2, and set the same polarity for both pins.

Disconnection/Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.
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## ● DC Input/Transistor Output Unit (Fujitsu Connector, 30 mm Width) NX-MD6121-6

Unit name	e	DC Input/Transistor Output Unit	Model		NX-MD6121-6
Number o	of points	16 inputs/16 outputs	terminals		2 Fujitsu connectors (24 terminals)
I/O refres	hing method	Switching Synchronous I/O refreshing and Free-	Run refreshing		
	Internal I/O common	NPN		Internal I/O common	For both NPN/PNP
	Rated voltage	12 to 24 VDC		Rated input voltage	24 VDC (15 to 28.8 VDC)
	Operating load voltage range	10.2 to 28.8 VDC		Input current	7 mA typical (at 24 VDC)
Output section	Maximum value of load current	0.5 A/point, 2 A/Unit	Input section	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)
(CN1)	Maximum inrush current	4.0 A/point, 10 ms max.	(CN2)	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
	Leakage current	0.1 mA max.		ON/OFF response time	20 μs max./400 μs max.
	Residual voltage	1.5 V max.			11 (11 ) 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	ON/OFF response time	0.1 ms max./0.8 ms max.		Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
	+	TS indicator, I/O indicators	Dimension	ns	30 (W) x 100 (H) x 71 (D)
		B4DC404_C	Isolation i	method	Photocoupler isolation
		MD6121-6 CN_ ■TS	Insulation	resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)
		1 0 1 2 3 4 5 6 7 1 8 9 10 11 12 13 14 15 0 0 1 2 3 4 5 6 7	Dielectric	strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
		2 0 1 2 3 4 5 6 7 2 8 9 10 11 12 13 14 15	I/O power	supply method	Supply from external source
Indicators	s			apacity of I/O pply terminal	Without I/O power supply terminals
			NX Unit power consumption		Connected to a CPU Unit or Communication Control Unit 1.00 W max. Connected to a Communications Coupler Unit 0.70 W max.
			Current co	onsumption from supply	30 mA max.
			Weight		95 g max.
Circuit layout		NX bus connector (left)  NX bus connector supply + I/O power supply -  CN2 (right) input circuit		+V0 +V0 OUT0 to OUT15 COM0 COM0 I/O power supply + I/O power supply –	Connector  NX bus connector (right)
		Connector  Com1  NX bus connector (left)  NX bus connector (left)  IN0  to  IN15  COM1  COM1  L/O power supply + 1/O power supply -	ndicator	I/O power supply + I/O power supply -	NX bus connector (right)

- Installation orientation:

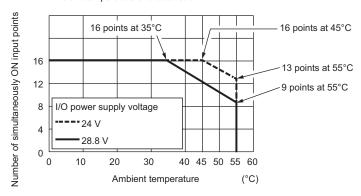
  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.

  Connected to a Communications Coupler Unit: Possible in 6 orientations.

  Restrictions: As shown in the following.

• For upright installation

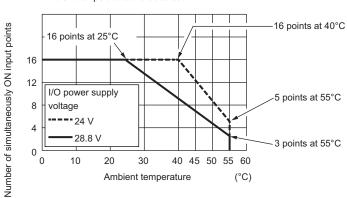
Number of simultaneously ON input points vs. Ambient temperature characteristic

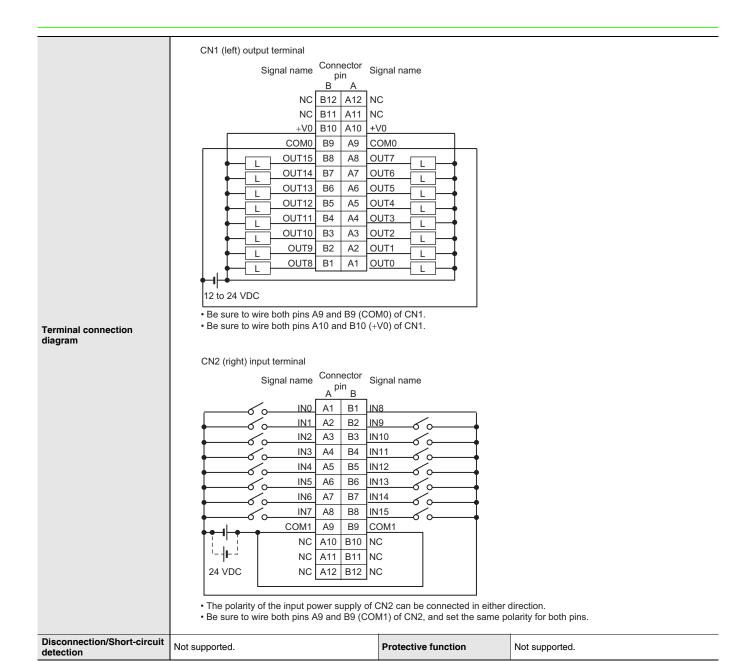


Installation orientation and

• For any installation other than upright

Number of simultaneously ON input points vs. Ambient temperature characteristic





## **Version Information**

### Connected to a CPU Unit

Refer to the user's manual for the CPU Unit for details on the CPU Units to which NX Units can be connected.

NX Unit		Corresponding unit versions/versions				
Model	Unit version	CPU Unit	Sysmac Studio			
NX-ID3317			-			
NX-ID3343						
NX-ID3344						
NX-ID3417						
NX-ID3443						
NX-ID3444						
NX-ID4342						
NX-ID4442						
NX-ID5142-1						
NX-ID5142-5						
NX-ID5342						
NX-ID5442						
NX-ID6142-5						
NX-ID6142-6						
NX-IA3117						
NX-OD2154						
NX-OD2258						
NX-OD3121						
NX-OD3153						
NX-OD3256	Ver.1.0	Ver.1.13	Ver.1.17			
NX-OD3257						
NX-OD3268						
NX-OD4121						
NX-OD4256						
NX-OD5121						
NX-OD5121-1						
NX-OD5121-5						
NX-OD5256						
NX-OD5256-1						
NX-OD5256-5						
NX-OD6121-5						
NX-OD6121-6						
NX-OD6256-5						
NX-OC2633						
NX-OC2733						
NX-OC4633						
NX-MD6121-5						
NX-MD6121-6						
NX-MD6256-5	da waa laawa alla afabaa	and the second s				

Note: Some Units do not have all of the versions given in the above table. If a Unit does not have the specified version, support is provided by the oldest available version after the specified version. Refer to the user's manuals for the specific Units for the relation between models and versions.

## **Connected to an EtherCAT Coupler Unit**

NX Unit		Corre	esponding unit versions/versions	ons
Model	Unit version	EtherCAT Coupler Unit	CPU Unit or Industrial PC	Sysmac Studio
NX-ID3317		Ver.1.0	Ver.1.05	Ver.1.06
NX-ID3343		V 61.1.0	Ver. 1.05	Ver. 1.00
NX-ID3344		Ver.1.1	Ver.1.06 *	Ver.1.07
NX-ID3417		Ver.1.0	Ver.1.05	Ver.1.06
NX-ID3443		VC1.1.0	VCI. 1.00	VC1.1.00
NX-ID3444		Ver.1.1	Ver.1.06 *	Ver.1.07
NX-ID4342				Ver.1.06
NX-ID4442	Ver.1.0			VC1.1.00
NX-ID5142-1				Ver.1.13
NX-ID5142-5				Ver.1.10
NX-ID5342		Ver.1.0	Ver.1.05	Ver.1.06
NX-ID5442				V C1.1.00
NX-ID6142-5				Ver.1.10
NX-ID6142-6				Ver.1.13
NX-IA3117				Ver.1.08
NX-OD2154		Ver.1.1	Ver.1.06 *	Ver.1.07
NX-OD2258		VOI.III	VCI.1.00	VCI.1.07
NX-OD3121				
NX-OD3153			Ver.1.05	Ver.1.06
NX-OD3256				Ver. 1.00
NX-OD3257				
NX-OD3268				Ver.1.13
NX-OD4121				
NX-OD4256				Ver.1.06
NX-OD5121				
NX-OD5121-1	Ver.1.0			Ver.1.13
NX-OD5121-5		Ver.1.0		Ver.1.10
NX-OD5256				Ver.1.06
NX-OD5256-1				Ver.1.13
NX-OD5256-5				Ver.1.10
NX-OD6121-5				¥01.1.10
NX-OD6121-6				Ver.1.13
NX-OD6256-5				Ver.1.10
NX-OC2633				Ver.1.06
NX-OC2733				Ver.1.08
NX-OC4633				Ver.1.17
NX-MD6121-5				Ver.1.10
NX-MD6121-6	Ver.1.0	Ver.1.0	Ver.1.05	Ver.1.13
NX-MD6256-5				Ver.1.10

Note: Some Units do not have all of the versions given in the above table. If a Unit does not have the specified version, support is provided by the oldest available version after the specified version. Refer to the user's manuals for the specific Units for the relation between models and versions.

<sup>\*</sup> The instructions for time stamp refreshing are supported by CPU Units with unit version 1.06 or later. If you do not use instructions for time stamp refreshing, you can use version 1.05. Refer to the *NJ/NX-series Instructions Reference Manual* (Cat. No. W502) for details on the instructions for time stamp refreshing.

### Connected to an EtherNet/IP Coupler Unit

NX Unit		Corresponding unit versions/versions							
		Application with	n an NJ/NX/NY-ser *1	ies Controller	Application w	ith a CS/CJ/CF	P-series PLC *2		
Model	Unit version	EtherNet/IP Coupler Unit	CPU Unit or Industrial PC	Sysmac Studio	EtherNet/IP Coupler Unit	Sysmac Studio	NX-IO Configurator *3		
NX-ID3317		Vor. 1.0	Ver. 1.14	Vor. 1.10	Vor. 1.0	Vor. 1.10	Vor. 1.00		
NX-ID3343		Ver. 1.2	ver. 1.14	Ver. 1.19	Ver. 1.0	Ver. 1.10	Ver. 1.00		
NX-ID3344									
NX-ID3417		V 4.0	V 4 44	V 4.40	V 4.0	V 4.40	V 4.00		
NX-ID3443		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0	Ver. 1.10	Ver. 1.00		
NX-ID3444									
NX-ID4342									
NX-ID4442						Ver. 1.10			
NX-ID5142-1						Ver. 1.13			
NX-ID5142-5									
NX-ID5342		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0		Ver. 1.00		
NX-ID5442						Ver. 1.10			
NX-ID6142-5									
NX-ID6142-6						Ver. 1.13			
NX-IA3117						Ver. 1.10	_		
NX-OD2154									
NX-OD2258									
NX-OD3121									
NX-OD3153									
NX-OD3256	Ver. 1.0					Ver. 1.10			
NX-OD3257									
NX-OD3268						Ver. 1.13			
NX-OD4121									
NX-OD4256						Ver. 1.10			
NX-OD5121									
NX-OD5121-1						Ver. 1.13			
NX-OD5121-5									
NX-OD5256						Ver. 1.10			
NX-OD5256-1		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0	Ver. 1.13	Ver. 1.00		
NX-OD5256-5							1		
NX-OD6121-5						Ver. 1.10			
NX-OD6121-6						Ver. 1.13	-		
NX-OD6256-5						-	-		
NX-OC2633						Ver. 1.10			
NX-OC2733									
NX-OC4633						Ver. 1.17	-		
NX-MD6121-5						Ver. 1.10	-		
NX-MD6121-6						Ver. 1.13	-		
NX-MD6256-5						Ver. 1.10	-		

- Note: 1. Some Units do not have all of the versions given in the above table. If a Unit does not have the specified version, support is provided by the oldest available version after the specified version. Refer to the user's manuals for the specific Units for the relation between models and versions.
  - 2. Note: You cannot connect the relevant NX Unit to the target Communications Coupler Unit if "---" is shown in the corresponding unit versions/versions column.
- \*1 Refer to the user's manual for the EtherNet/IP Coupler Units for information on the unit versions of EtherNet/IP Units that are compatible with EtherNet/IP Coupler Units.
- \*2 Refer to the user's manual for the EtherNet/IP Coupler Units for information on the unit versions of CPU Units and EtherNet/IP Units that are compatible with EtherNet/IP Coupler Units.
- \*3 For connection to an EtherNet/IP Coupler Unit with unit version 1.0, connection is supported only for a connection to the peripheral USB port on the EtherNet/IP Coupler Unit. You cannot connect by any other path. If you need to connect by another path, use an EtherNet/IP Coupler Unit with unit version 1.2 or later.

### **Connected to Communication Control Units**

NX Unit		Corresponding unit versions/versions			
Model	Unit version	Communication Control Unit	Sysmac Studio		
NX-ID3317		V 1.00	V 104		
NX-ID3343		Ver. 1.00	Ver. 1.24		
NX-ID3344	Ver. 1.0				
NX-ID3417		Vov. 1.00	Vor. 1.04		
NX-ID3443		Ver. 1.00	Ver. 1.24		
NX-ID3444					
NX-ID4342					
NX-ID4442					
NX-ID5142-1					
NX-ID5142-5					
NX-ID5342		Ver. 1.00	Ver. 1.24		
NX-ID5442					
NX-ID6142-5					
NX-ID6142-6					
NX-IA3117					
NX-OD2154					
NX-OD2258					
NX-OD3121					
NX-OD3153					
NX-OD3256					
NX-OD3257					
NX-OD3268	Ver. 1.0				
NX-OD4121	Ver. 1.0				
NX-OD4256					
NX-OD5121					
NX-OD5121-1					
NX-OD5121-5					
NX-OD5256		Ver. 1.00	Ver. 1.24		
NX-OD5256-1		VGI. 1.00	VCI. 1.24		
NX-OD5256-5					
NX-OD6121-5					
NX-OD6121-6					
NX-OD6256-5					
NX-OC2633					
NX-OC2733					
NX-OC4633					
NX-MD6121-5					
NX-MD6121-6					
NX-MD6256-5					

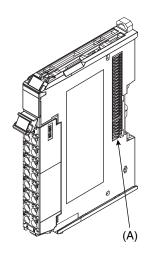
Note: 1. Some Units do not have all of the versions given in the above table. If a Unit does not have the specified version, support is provided by the oldest available version after the specified version. Refer to the user's manuals for the specific Units for the relation between models and versions.

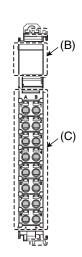
<sup>2.</sup> Note: You cannot connect the relevant NX Unit to the Communication Control Unit if "---" is shown in the corresponding unit versions/ versions column.

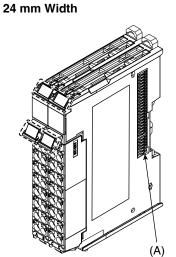
## **External Interface**

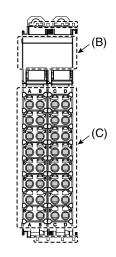
## **Screwless Clamping Terminal Block Type**

### 12 mm Width



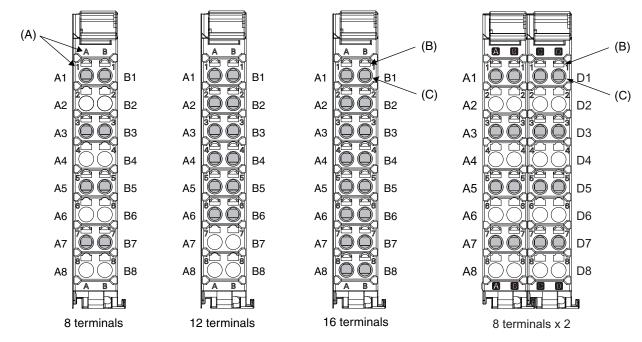






Letter	Item	Specification			
(A)	NX bus connector	This connector is used to connect to another Unit.			
(B)	Indicators	The indicators show the current operating status of the Unit.			
(C)	Terminal block	The terminal block is used to connect to external devices. The number of terminals depends on the Unit.			

#### **Terminal Blocks**



Letter	Item	Specification			
(A)	Terminal number indication	The terminal number is identified by a column (A through D) and a row (1 through 8).  Therefore, terminal numbers are written as a combination of columns and rows, A1 through A8 and B1 through B8.  The terminal number indication is the same regardless of the number of terminals on the terminal block.			
(B)	Release hole	A flat-blade screwdriver is inserted here to attach and remove the wiring.			
(C)	Terminal hole	The wires are inserted into these holes.			

### **Applicable Terminal Blocks for Each Unit Model**

Unit model		Terminal Blocks						
Offit model	Model	No. of terminals	Ground terminal mark	Terminal current capacity				
NX-ID3	NX-TBA122	12	None	10 A				
NX-ID4□□□	NX-TBA162	16	None	10 A				
NX-ID5□□□	NX-TBA162	16	None	10 A				
NX-IA3117	NX-TBA082	8	None	10 A				
NX-OD2	NX-TBA082	8	None	10 A				
NX-OD3□□□ (any model other than NX-OD3268)	NX-TBA122	12	None	10 A				
NX-OD3268 NX-OD4□□□	NX-TBA162	16	None	10 A				
NX-OD5□□□	NX-TBA162	16	None	10 A				
NX-OC2	NX-TBA082	8	None	10 A				
NX-OC4633 *1	NX-TBA082	8	None	10 A				

<sup>\*1.</sup> Use the NX-TBA082 in both the A/B and C/D columns for the NX-OC4633. In such situations, the column number display on the terminal block will be for the A/B columns even in the C/D columns.

### **Applicable Wires**

#### **Using Ferrules**

If you use ferrules, attach the twisted wires to them.

Observe the application instructions for your ferrules for the wire stripping length when attaching ferrules.

Always use plated one-pin ferrules. Do not use unplated ferrules or two-pin ferrules.

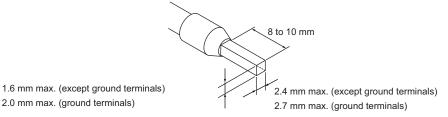
The applicable ferrules, wires, and crimping tools are listed in the following table.

Terminal type	Manufacturer	Ferrule model	Applicable wire (mm² (AWG))	Crimping tool
Terminals other	Phoenix Contact	AI0,34-8	0.34 (#22)	Phoenix Contact (The figure in parentheses is the applicable wire size.)
than ground terminals		AI0,5-8	0.5 (#20)	CRIMPFOX 6 (0.25 to 6 mm <sup>2</sup> , AWG24 to 10)
terriiriais		AI0,5-10		
		AI0,75-8	0.75 (#18)	
		AI0,75-10	1	
		Al1,0-8	1.0 (#18)	
		Al1,0-10		
		Al1,5-8	1.5 (#16)	
		Al1,5-10	1	
Ground terminals		Al2,5-10	2.0 *	
Terminals other	Weidmuller	H0.14/12	0.14 (#26)	Weidmuller (The figure in parentheses is the applicable wire size.)
than ground terminals		H0.25/12	0.25 (#24)	PZ6 Roto (0.14 to 6 mm², AWG 26 to 10)
terriiriais		H0.34/12	0.34 (#22)	
		H0.5/14	0.5 (#20)	
		H0.5/16		
		H0.75/14	0.75 (#18)	
		H0.75/16	1	
		H1.0/14	1.0 (#18)	
		H1.0/16	1	
		H1.5/14	1.5 (#16)	
		H1.5/16	1	

<sup>\*</sup> Some AWG 14 wires exceed 2.0 mm² and cannot be used in the screwless clamping terminal block.

When you use any ferrules other than those in the above table, crimp them to the twisted wires so that the following processed dimensions are achieved.

Finished Dimensions of Ferrules



#### **Using Twisted Wires/Solid Wires**

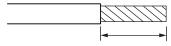
2.0 mm max. (ground terminals)

If you use the twisted wires or the solid wires, use the following table to determine the correct wire specifications.

Tern	Wire type					0		
Tem		Twiste	d wires	Solid	wire	Wire size	Conductor length (stripping length)	
Classification	Current capacity	Plated	Unplated	Plated	Unplated		(ourphing length)	
	2 A or less		Possible	Possible	Possible			
All terminals except ground terminals	Greater than 2 A and 4 A or less	Possible	ossible Not	Possible *1	Not	0.08 to 1.5 mm <sup>2</sup> AWG28 to 16	8 to 10 mm	
ground terrimale	Greater than 4 A	Possible *1	Possible	Not Possible	Possible	AWG20 to 10		
Ground terminals		Possible	Possible	Possible *2	Possible *2	2.0 mm <sup>2</sup>	9 to 10 mm	

<sup>\*1.</sup> Secure wires to the screwless clamping terminal block. Refer to the Securing Wires in the USER'S MANUAL for how to secure wires.

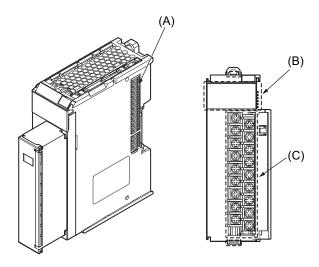
<sup>\*2.</sup> With the NX-TB□□□1 Terminal Block, use twisted wires to connect the ground terminal. Do not use a solid wire.



Conductor length (stripping length)

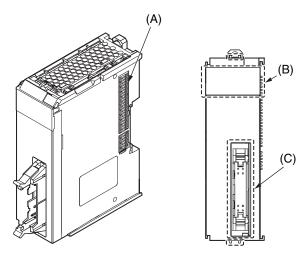
<sup>&</sup>lt; Additional Information > If more than 2 A will flow on the wires, use plated wires or use ferrules.

## M3 Screw Terminal Block Type 30 mm Width

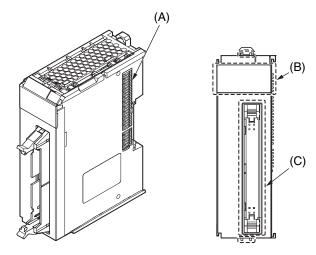


Letter Item Specification		Specification
(A)	NX bus connector	This connector is used to connect to another Unit.
(B)	Indicators	The indicators show the current operating status of the Unit.
(C)	Screw terminals	These screw terminals are used to connect the wires.

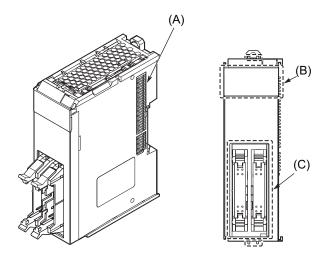
## MIL Connector Type (1 Connector with 20 terminals) 30 mm Width



MIL Connector Type (1 Connector with 40 terminals) 30 mm Width

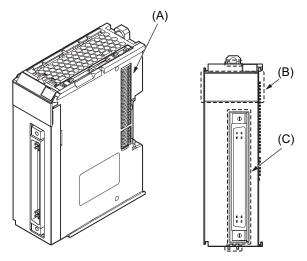


MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width

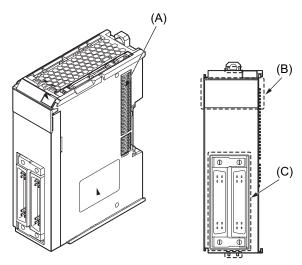


Letter	Item	Specification	
(A)	NX bus connector	This connector is used to connect to another Unit.	
(B)	Indicators	The indicators show the current operating status of the Unit.	
(C)	Connectors	The connectors are used to connect to external devices.	

## Fujitsu Connector Type (1 Connector with 40 terminals) 30 mm Width



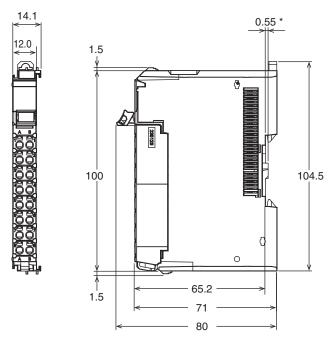
## Fujitsu Connector Type (2 Connectors with 24 terminals) 30 mm Width



Letter	Item	Specification	
(A)	NX bus connector	This connector is used to connect to another Unit.	
(B)	Indicators	The indicators show the current operating status of the Unit.	
(C)	Connectors	The connectors are used to connect to external devices.	

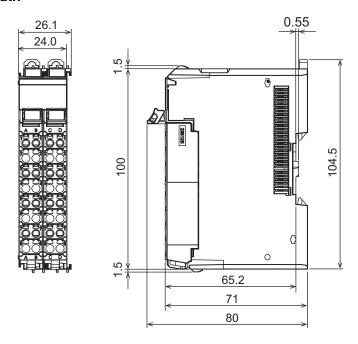
**Dimensions** (Unit/mm)

## **Screwless Clamping Terminal Block Type** 12 mm Width

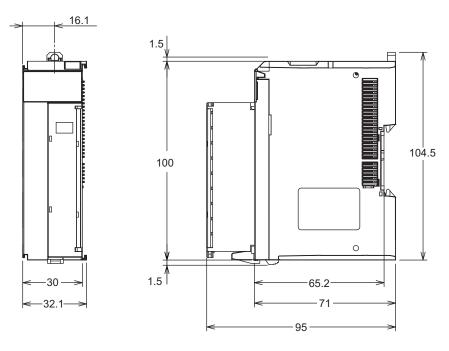


 $<sup>^{\</sup>star}$  The dimension is 1.35 mm for Units with lot numbers through December 2014.

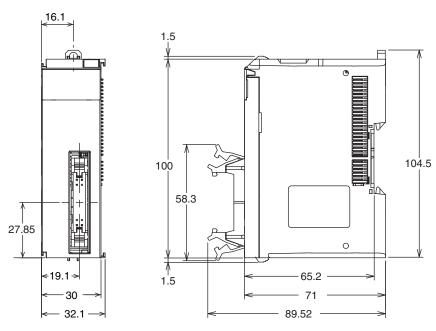
### 24 mm Width



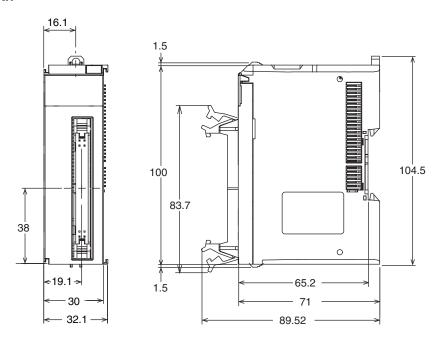
## M3 Screw Terminal Block Type 30 mm Width



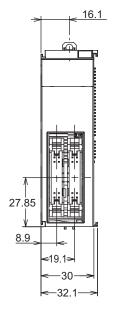
# MIL Connector Type (1 Connector with 20 terminals) 30 mm Width

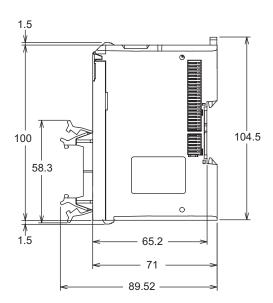


## MIL Connector Type (1 Connector with 40 terminals) 30 mm Width

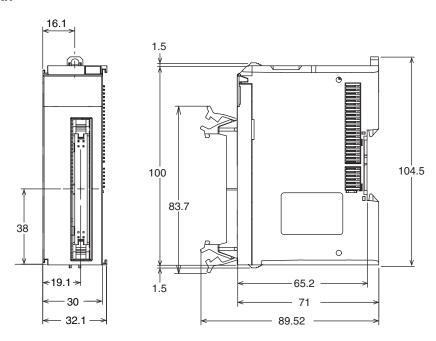


## MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width

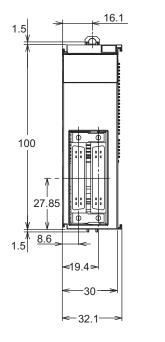


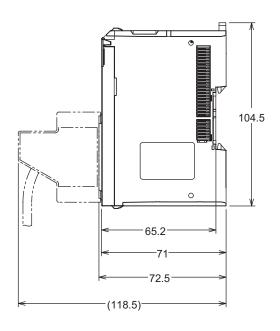


## Fujitsu Connector Type (1 Connector with 40 terminals) 30 mm Width



## Fujitsu Connector Type (2 Connectors with 24 terminals) 30 mm Width





## **Related Manual**

Cat. No.	Model number	Manual name	Application	Description
W521	NX-ID	NX-series Digital I/O Units User's Manual	Learning how to use NX-series Digital I/O Units	The hardware, setup methods, and functions of the NX-series Digital I/O Units are described.

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