NX-series Digital I/O Unit NX-ID/IA/OD/OC/MD

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[™] bus coupler

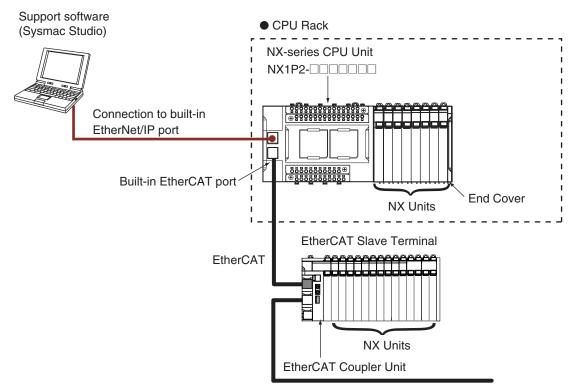
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System Configurations

Connected to a CPU Unit

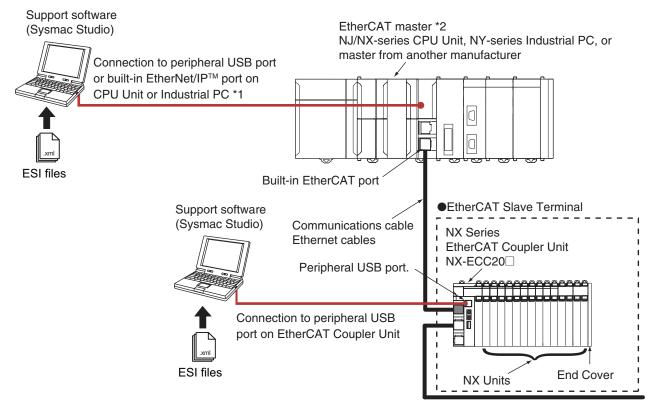
The following figure shows a system configuration when NX Units are connected to an NX-series CPU Unit.



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.

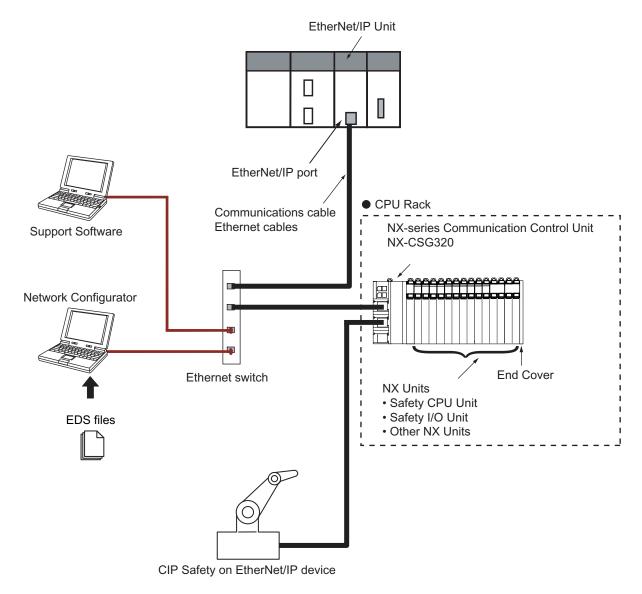
*2. An EtherCAT Slave Terminal cannot be connected to any of the OMRON CJ1W-NC 81/82 Position Control Units even though they can operate as EtherCAT masters.

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

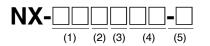
The following figure shows a system configuration when a group of NX Units is connected to an NX-series Communication Control Unit. To configure a Safety Network Controller, mount the Safety CPU Unit, which is one of the NX Units, to the CPU Rack of the Communication Control Unit.

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

	(i)po
No.	Specification
ID	DC input
IA	AC input
OD	Transistor output
OC	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	sponse time	I/O refreshing method		
No.	Input voltage	Exceeds 1 µs	1 μs max.	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	

*1 Free-Run refreshing*2 Synchronous I/O refreshing

Digital Output Units

			ON/OFF res	ponse time	I/O refreshing	I/O refreshing method			
No.	No. Rated Load voltage 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				Yes		Yes			
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		

*1 Free-Run refreshing*2 Synchronous I/O refreshing

Digital Mixed I/O Units

	Input section	Output section							
No.	No. Rated input voltage		Load	ON/OFF res	ponse time		Other functions		
		Rated voltage	current	Exceeds 1 µs	1 μs max.	I/O refreshing method	Load short-circuit protection		
21	24 VDC	12 to24 VDC	0.5 A	Yes		Switching Synchronous	Yes		
56	24 VDC	24 VDC	0.5 A	Yes		I/O refreshing and Free-Run 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

D. J. J. M.	Specifications							
Product Name	Number of points			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	4 m e inte		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		
				Input refreshing with input changed time only *1	100 ns max./100 ns max.	NX-ID3444		
Screwless Clamping	.	NPN	24 VDC			NX-ID4342		
Ferminal Block, 12 mm Vidth)	8 points	PNP		Switching Synchronous I/O re-	00 up may /100 up may	NX-ID4442		
width)	10	NPN		freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID5342		
	16 points	PNP						
(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				20 μs max./400 μs max.	NX-ID5142-5		
MIL Connector, 30 mm Width)	32 points	For both NPN/PNP	24 VDC	Switching Synchronous I/O re- freshing and Free-Run refreshing		NX-ID6142-5		
DC Input Unit	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	4 points	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		

*1. 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.

_		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		21780	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			24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD3256		
		PNP		24 000		300 ns max./ 300 ns max.	NX-OD3257		
			2 A/point, 8 A/Unit		Switching Synchronous I/O re- freshing and Free- Run refresh-	0.5 ms max./ 1.0 ms max.	NX-OD3268		
Screwless Clamping erminal Block, 12 mm Vidth)	8	NPN		12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD4121		
i duity	0	PNP	0 E A/point 4 A/LInit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD4256		
	16	NPN	0.5 A/point, 4 A/Unit	12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD5121		
	10	PNP		24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD5256		
Transistor Output Unit		NPN		12 to 24 VDC	Switching Synchronous I/O re-	0.1 ms max./ 0.8 ms max.	NX-OD5121-		
	16 Pi	PNP	0.5 A/point, 5 A/Unit	24 VDC	- freshing and Free- Run refresh- ing	0.5 ms max./ 1.0 ms max.	NX-OD5256-		
Fransistor Output Unit		NPN		12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD5121-		
	16	PNP	0.5 A/point, 2 A/Unit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD5256-		
	32	NPN	0.5 A/point, 2 A/	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-		
MIL Connector, 30 mm Vidth)	32	PNP	common, 4 A/Unit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD6256-		
Transistor Output Unit	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-OD6121-0		
Fujitsu Connector, 30 nm Width)									
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 (coso=0.4), 24 VI		Free-Run refreshing	15 ms max.	NX-OC2733		
Screwless Clamping ferminal Block, 12 mm Vidth/24 mm Width)	8	Relay type: N.O.	250 VAC/2 A (coso=1), 250 VAC/ 2 A (coso=0.4), 24 VDC/2 A, 8 A/Unit		Free-Run refreshing	15 ms max./ 15 ms max.	NX-OC4633		

*1. 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 common	Maximum value of load current	I/O refreshing method	ON/OFF response time	Model		
	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		
	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		None		NX-TBA082	
Terminal Block	12	A/B		10 A	NX-TBA122	
	16				NX-TBA162	

Accessories

Not included.

Pattern	Configuration	Number of connectors	Branching
A	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 Conversion Unit 20 terminals	2	None

Connection Patterns for Connector-Terminal Block Conversion Units

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	5 16 inputs 1 MIL NPN/ connector PNP			А	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None					
		connector	FINE		XW2Z-DDX	XW2D-20G6	Phillips screw	None					
				A	XW2Z-DDDPM	XW2R-□34GD-C2	Depends on model *3	None					
				A	XW2Z-DDK	XW2D-40G6	Phillips screw	None					
				В	XW2Z-DDN	XW2R-□20GD-T (2 Units)	Depends on model *3	None					
NX-ID6142-5	32 inputs	1 MIL connector	NPN/ PNP	В	XW2Z-DDN	XW2C-20G5-IN16 (2 Units) *2	Phillips screw	Yes					
				В	XW2Z-DDN	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes					
					В	XW2Z-DDN	XW2D-20G6 (2 Units)	Phillips screw	None				
				В	XW2Z-□□□N	XW2E-20G5-IN16 (2 Units) *2	Phillips screw	Yes					
		1 Fujitsu connector			A	XW2Z-DDPF	XW2R-□34GD-C1	Depends on model *3	None				
										A	XW2Z-DDB	XW2D-40G6	Phillips screw
				В	XW2Z-□□□D	XW2R-□20GD-T (2 Units)	Depends on model *3	None					
NX-ID6142-6	32 inputs		NPN/ PNP	в	XW2Z-DDD	XW2C-20G5-IN16 (2 Units) *2	Phillips screw	Yes					
				В	XW2Z-DDD	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes					
				В	XW2Z-DDD	XW2D-20G6 (2 Units)	Phillips screw	None					
				В	XW2Z-□□□D	XW2E-20G5-IN16 (2 Units) *2	Phillips screw	Yes					
NX-OD5121-5	16 outputs	1 MIL	NPN	A	XW2Z-DDX	XW2R-D20GD-T	Depends on model *3	None					
	-	connector		A	XW2Z-DDDX	XW2D-20G6	Phillips screw	None					
NX-OD5256-5	16 outputs	outputs 1 MIL	PNP	A	XW2Z-DDX	XW2R-□20GD-T	Depends on model *3	None					
		connector		A	XW2Z-DDX	XW2D-20G6	Phillips screw	None					

Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *1	Connector-Terminal Block Conversion Unit	Wiring method	Common terminal					
				А	XW2Z-□□□PM	XW2R-🛛 34GD-C4	Depends on model *3	None					
				А	XW2Z-□□□K	XW2D-40G6	Phillips screw	None					
NX-OD6121-5	32 inputs	1 MIL connector				NPN	В	XW2Z-DDN	XW2R-□20GD-T (2 Units)	Depends on model *3	None		
				В	XW2Z-DDDN	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes					
				В	XW2Z-DDDN	XW2D-20G6 (2 Units)	Phillips screw	None					
				А	XW2Z-DDDPF	XW2R-🛛 34GD-C3	Depends on model *3	None					
				A	XW2Z-DDB	XW2D-40G6	Phillips screw	None					
NX-OD6121-6	32 inputs	1 Fujitsu connector	NPN	В	XW2Z-DDL	XW2R-□20GD-T (2 Units)	Depends on model *3	None					
				В	XW2Z-DDDL	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes					
				В	XW2Z-DDDL	XW2D-20G6 (2 Units)	Phillips screw	None					
				А	XW2Z-DDDPM	XW2R-□34GD-C4	Depends on model *3	None					
		uts 1 MIL connector P		Α	XW2Z-DDK	XW2D-40G6	Phillips screw	None					
NX-OD6256-5 32 input	32 inputs		PNP	В	XW2Z-DDN	XW2R-□20GD-T (2 Units)	Depends on model *3	None					
				В	XW2Z-DDN	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes					
				В	XW2Z-DDN	XW2D-20G6 (2 Units)	Phillips screw	None					
	16 outputs	1 MIL connector	NPN/	С	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None					
	-		PNP	С	XW2Z-DDDX	XW2D-20G6	Phillips screw	None					
NX-MD6121-5	16 outputs	1 MIL	I N	NPN	С	XW2Z-□□□X	XW2R-D20GD-T	Depends on model *3	None				
		connector		С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None					
									С	XW2Z-□□□A	XW2R-D20GD-T	Depends on model *3	None
		1 Fuiitsu	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					
				С	XW2Z-🗆 🗆 A	XW2E-20G5-IN16 *2	Phillips screw	Yes					
		1 Fujitsu		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		Sonneolor		С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None					
	16 outputs	1 MIL connector	PNP	С	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None					
		Connector		С	XW2Z-DDDX	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.

 *1 □□□ 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. 🗆 in the model number indicates the wiring method. *3 J = Phillips screw

E = Slotted screw (rise up)

P= Push-in spring

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

Connection Patterns for I/O Relay Terminals

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		
				F	None	XW2Z-RO C	G7TC-IA16	Phillips screw	
	10.	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	
	00 :	1 MIL	NPN	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	
			PNP	Α	2	XW2Z-RO-D1	G70V-SID16P-1-C16	Push-in spring	
					А	2	XW2Z-RIC-	G7TC-ID16	Phillips screw
			NPN	Α	2	XW2Z-RIC-	G7TC-IA16	Phillips screw	
NX-ID6142-6	00 innute	1 Fujitsu connector	INPIN	Α	2	XW2Z-RIC-	G70V-SID16P	Push-in spring	
NX-ID0142-0	32 inputs		ctor	Α	2	XW2Z-RIC-	G70V-SID16P-C16	Push-in spring	
			PNP	А	2	XW2Z-RIC-	G70V-SID16P-1	Push-in spring	
			FINE	А	2	XW2Z-RIC-	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	
				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	

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													
	1C autouta	1 MIL		F	None	XW2Z-RO C	G70D-FOM16-1	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													
				А	2	XW2Z-RO-D1	G7TC-OC08	Phillips screw													
				А	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													
IX-OD6121-5	32 outputs	1 MIL connector	NPN	А	2	XW2Z-RO -D1	G70D-VFOM16	Phillips screw													
		connector		А	2	XW2Z-RO D-D1	G70A-ZOC16-3 and Relay	Phillips screw													
				А	2	XW2Z-RO -D1	G70R-SOC08 *2	Phillips screw													
				Α	2	XW2Z-RO D-D1	G70D-SOC08	Phillips screw													
				А	2	XW2Z-RO D-D1	G70V-SOC16P	Push-in spring													
				Α	2	XW2Z-RO D-D1	G70V-SOC16P-C4	Push-in spring													
				Α	2	XW2Z-ROC-	G7TC-OC16	Phillips screw													
																	Α	2	XW2Z-ROC-	G7TC-OC08	Phillips screw
						Α	2	XW2Z-ROC-	G70D-SOC16	Phillips screw											
			NPN	Α	2	XW2Z-ROC-	G70D-FOM16	Phillips screw													
				Α	2	XW2Z-RO C-	G70D-VSOC16	Phillips screw													
NX-OD6121-6 32 outputs	32 outputs	1 Fujitsu		Α	2	XW2Z-ROC-	G70D-VFOM16	Phillips screw													
	-	connector		А	2	XW2Z-RO C-	G70A-ZOC16-3 and Relay	Phillips screw													
				Α	2	XW2Z-ROC-	G70R-SOC08 *2	Phillips screw													
				Α	2	XW2Z-ROC-	G70D-SOC08	Phillips screw													
				Α	2	XW2Z-ROC-	G70V-SOC16P	Push-in spring													
				Α	2	XW2Z-ROC-	G70V-SOC16P-C4	Push-in spring													
				Α	2	XW2Z-RI -D-D1	G7TC-OC16-1	Phillips screw													
		1 MIL		А	2	XW2Z-RO -D1	G70D-SOC16-1	Phillips screw													
IX-OD6256-5	32 outputs	connector	PNP	Α	2	XW2Z-RO -D1	G70D-FOM16-1	Phillips screw													
				Α	2	XW2Z-RO -D1	G70A-ZOC16-4 and Relay	Phillips screw													
				Е	None	XW2Z-RO C	G7TC-ID16	Phillips screw													
		1 MIL		E	None	XW2Z-RO C	G7TC-IA16	Phillips screw													
	16 inputs	connector	NPN	E	None	XW2Z-RO C	G70V-SID16P	Push-in spring													
				E	None	XW2Z-RO C	G70V-SID16P-C16	Push-in spring													
				Е	None	XW2Z-RO C	G7TC-OC16	Phillips screw													
				E	None	XW2Z-RO C	G7TC-OC08	Phillips screw													
				E	None	XW2Z-RO C	G70D-SOC16	Phillips screw													
IX-MD6121-5				E	None	XW2Z-RO C	G70D-FOM16	Phillips screw													
				E	None	XW2Z-RO C	G70D-VSOC16	Phillips screw													
	16 outputs	1 MIL	NPN	E	None	XW2Z-RO C	G70D-VFOM16	Phillips screw													
		connector		E	None	XW2Z-RO C	G70A-ZOC16-3 and Relay	Phillips screw													
				E	None	XW2Z-RO C	G70R-SOC08 *2	Phillips screw													
				E	None	XW2Z-RO C	G70D-SOC08	Phillips screw													
				E	None	XW2Z-RO C	G70V-SOC16P	Push-in spring													
				E	None	XW2Z-RO C	G70V-SOC16P-C4	Push-in spring													

Unit	I/O capacity	Number of connectors	Polarity	Connectio n pattern	Number of branches	Connecting Cable *1	I/O Relay Terminal	Wiring method
				E	None	XW2Z-R C	G7TC-ID16	Phillips screw
	40.	1 Fujitsu	NEN	E	None	XW2Z-R□C	G7TC-IA16	Phillips screw
	16 inputs	connector	NPN	E	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				E	None	XW2Z-R C	G70D-FOM16	Phillips screw
		1 Fujitsu connector	NPN	E	None	XW2Z-R□C	G70D-VSOC16	Phillips screw
1	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
	10 in muta	1 MIL	MIL DUD	E	None	XW2Z-RO□C	G70V-SID16P-1	Push-in spring
	16 inputs	connector	PNP	E	None	XW2Z-RO C	G70V-SID16P-1-C16	Push-in spring
				E	None	XW2Z-RO□C	G7TC-OC16-1	Phillips screw
				E	None	XW2Z-RI C	G70D-SOC16-1	Phillips screw
NX-MD6256-5	10	1 MIL		E	None	XW2Z-RI□C	G70D-FOM16-1	Phillips screw
	16 outputs	connector	PNP	E	None	XW2Z-RI C	G70A-ZOC16-4 and Relay	Phillips screw
				E	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.

*1. 🗌 in the model number indicates the cable length. Refer to the XW2Z-R Datasheet (Cat. No. G126) for details.

*2. Product no longer available to order.

General Specifications

	Item	Specification		
Enclosure		Mounted in a panel		
Grounding n	nethod	Ground to 100 Ω 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.)		
environment	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/s ² , 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/s ² , 3 times each in X, Y, and Z directions		
Applicable s	tandards *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		

 Applicable standards *2
 EU: EN 61131-2 or EN 61010-2-201, C-Tick or RCM, KC: KC Registration, NK, LR

 *1. 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
 each model.

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 F	ree-Run refreshing	
	TS indicator, input indicator	Internal I/O common	NPN
	ID3317	Rated input voltage	12 to 24 VDC (9 to 28.8 VDC)
	●TS 0 1	Input current	6 mA typical (at 24 VDC), rated current
	2 3	ON voltage/ON current	9 VDC min./3 mA min. (between IOV and each signal)
Indicators		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 M Ω 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		t control	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 I OV IOV IOV IOV I OC IOG I 2 to 24 VDC IOG IOG A8 B8	DC Input Unit NX-ID3317 A1B1 IN0IN1 IOV0IOV1 IOG0IOC1 IN2IN3 IOV2IOV3 IOG2IOG3 A8B8	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	DC Input Unit	Model	NX-ID3343	
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	ree-Run refreshing		
	TS indicator, input indicator	Internal I/O common	NPN	
	ID3343	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 IOV ar 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 Ω 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	Terminal block IN0 to IN3	rent control	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 B1 00V IOV 10G IOG 24 VDC A8 B8		-wire Isor Three-wire sensor	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.	

NX-ID3344

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)
	DTS	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 M Ω 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	NX bus connector (left) [I/O power supply +	urrent control	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit: Possible in u • Connected to a Communications Couple Restrictions: No restrictions		tions.
Terminal connection diagram	Additional I/O Power Supply Unit A1 B1 I OV IOV I OV IOV I OV IOV I OV IOV I OV IOV A8 B8		D-wire nsor Three-wire sensor
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

* 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
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	ree-Run refreshing	-
	TS indicator, input indicator	Internal I/O common	PNP
	ID3417 ●TS	Rated input voltage	12 to 24 VDC (9 to 28.8 VDC)
	0 1	Input current	6 mA typical (at 24 VDC), rated current
Indiantara	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 M Ω 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	t control	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 B1 00V IOV 12 to 24 VDC IOV IOV IOG IOG A8 B8	DC Input Unit NX-ID3417 Two- A1B1Ser IN0 IN1 • IOV0 IOV1 • IOG0 IOG1 IN2 IN3 • IOV2 IOV3 • IOG2 IOG3 • IOG2 IOG3 • IOG2 IOG3 •	wire Isor Three-wire sensor
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 I	ree-Run refreshing			
	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 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 Ω 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	Terminal block IN0 to IN3	Current control	I/O power supply + NX bus connector (right)		
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communications • Connected to a Communications Couple Restrictions: No restrictions				
Terminal connection diagram	Additional I/O Power Supply Unit A1 B1 OC IOC IOC IOC IOC IOC A8 B8 B8 	DC Input Unit NX-ID3443 A1 B1 Ser IN0 IN1 • IOV0 IOV1 • IOC0 IOG1 IN2 IN3 • IOV2 IOV3 • IOC2 IOC3 • A8 B8	wire Isor Three-wire sensor		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.		

NX-ID3444

Unit name	DC Input Unit	Model	NX-ID3444
		External connection	Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Input refreshing with input changed time		
	TS indicator, input indicators	Internal I/O common Rated input voltage	PNP 24 VDC (15 to 28.8 VDC)
	ID3444 DTS	Input current	3.5 mA typical (at 24 VDC), rated current
	0 1		15 VDC min./3 mA min.
Indicators	2 3	ON voltage/ON current	(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 Ω 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	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 Disconnection/	Additional I/O Power Supply Unit A1 B1 IOV IOV 24 VDC IOV IOV IOV IOV A8 B8 B8	DC Input Unit NX-ID3444 A1 B1 Sen IN0 IN1 IOV0 IOV1 IOG0 IOG1 IN2 IN3 IOV2 IOV3 IOG2 IOG3 A8 B8	
Short-circuit detection	Not supported.	Protective function	Not supported.

* 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		(criminals)	
	TS indicator, input indicator	Internal I/O common	NPN	
	ID4342	Rated input voltage	24 VDC (15 to 28.8 VDC)	
	DTS	Input current	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		Int control	I/O power supply + NX bus connector I/O power supply - (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 00V 10V 100 24 VDC 100 100 100 100	DV IOV IN6 IN6		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.	

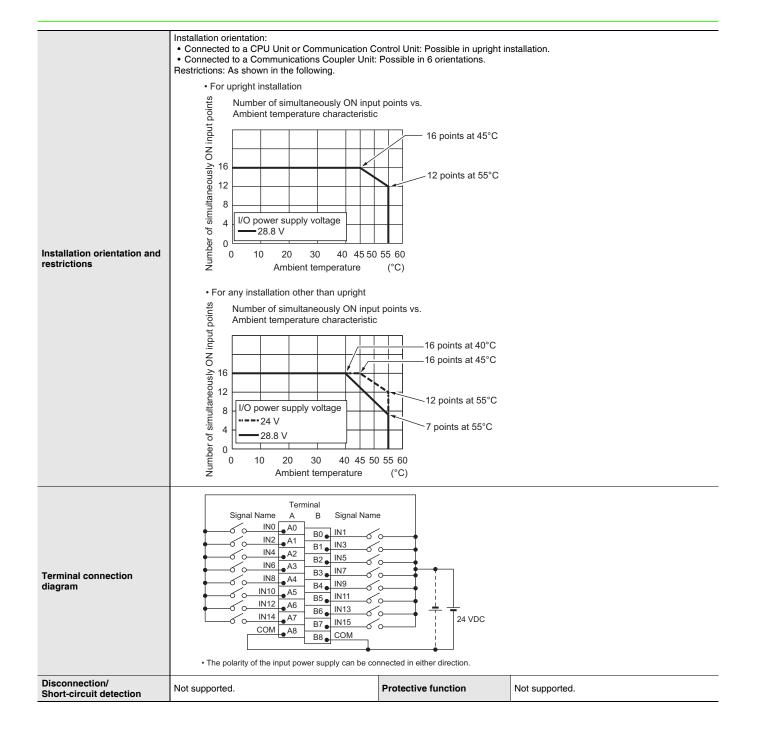
Linit name	DC Input Linit	Madal			
Unit name	DC Input Unit	Model External connection	NX-ID4442		
Number of points	8 points	terminals	Screwless clamping terminal block (16 terminals)		
I/O refreshing method	Selectable Synchronous I/O refreshing or Free-Run refreshing				
	TS indicator, input indicator	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		
	2 3 4 5 6 7	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 M Ω 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	I/O power supply + NX bus connector I/O power supply - (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 Co A1 B1 A1 IC IC IC IC IC IC IC IC IC IC	DG IOG IOV0 IC DG IOG IN2 IC DG IOG IOV2 IC DG IOG IN4 IC DG IOG IOV4 IC DG IOG IN6 IN6			
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 I	Free-Run refreshing	
	TS indicator, input indicator	Internal I/O common	NPN
	ID5342	Rated input voltage	24 VDC (15 to 28.8 VDC)
	■TS 0 1 2 3	Input current	2.5 mA typical (at 24 VDC), rated current
	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 I/O power supply – (^{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	●IOG IOG 24 VDC 10V 10V 10V 10V 10V 10V 10V 10V 10V 10V		DC Input Unit NX-ID5342 B1 Two-wire sensor IN0 IN1 IN2 IN3 IN4 IN5 Three-wire sensor IN6 IN7 IN8 IN9 IN10 IN11 IN12 IN13 IN12 IN13 IN14 IN15 B8
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 Free-Run refreshing				
	TS indicator, input indicator	Internal I/O common	PNP		
	ID5442 DTS	Rated input voltage	24 VDC (15 to 28.8 VDC)		
	0 1 2 3	Input current	2.5 mA typical (at 24 VDC), rated current		
Indicators	4 5 6 7 8 9 10 11 12 13 14 15	ON voltage/ON current	15 VDC min./2 mA min. (between IOG and each signal)		
Indicators		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 M Ω 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		ti control cuit	I/O power supply + NX bus connector I/O power supply - (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	IOG IOG IOV IOV <th></th> <th>DC Input Unit NX-ID5442 B1 Two-wire sensor IN0 IN1 IN2 IN3 IN4 IN5 IN6 IN7 IN8 IN9 IN10 IN11 IN12 IN13 IN14 IN15 B8</th>		DC Input Unit NX-ID5442 B1 Two-wire sensor IN0 IN1 IN2 IN3 IN4 IN5 IN6 IN7 IN8 IN9 IN10 IN11 IN12 IN13 IN14 IN15 B8		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.		

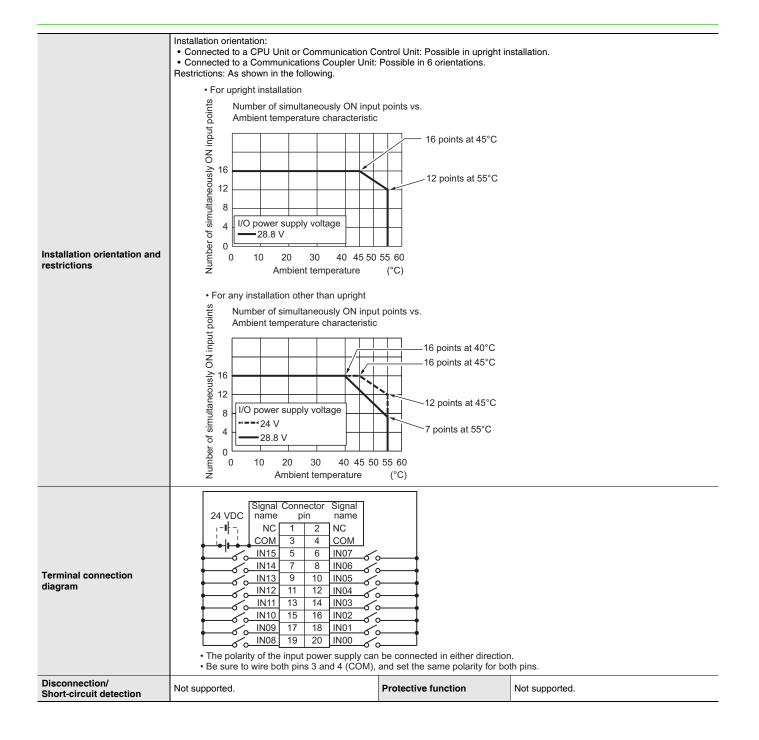
• DC Input Unit (M3 Screw Terminal Block, 30 mm Width) NX-ID5142-1

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-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	∎TS 0 1 2 3 4 5 6 7	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)		
indicators	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 $M\Omega$ 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) IN15 IN15 COM Supply + VO power supply - IN2 Supply - IN2		onnector		



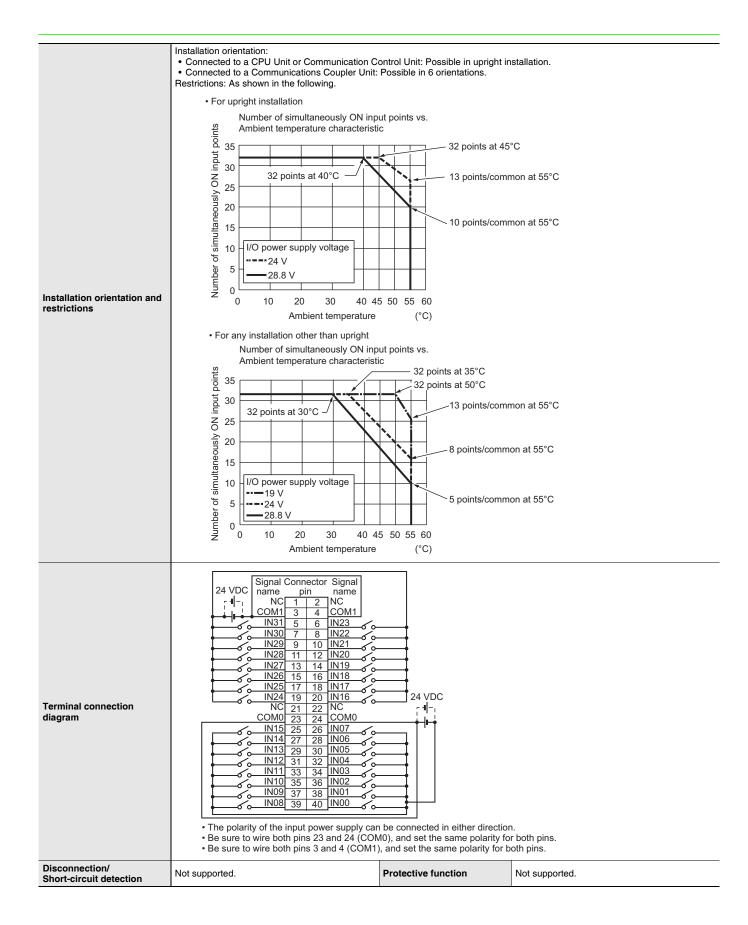
• DC Input Unit (MIL Connector, 30 mm Width) NX-ID5142-5

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-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)		
	DTS	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 Ω 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	85 g max.		•		
Circuit layout	Connector IN0 to IN15 COM NX bus connector (left) I/O power supply – I/O power supply –				



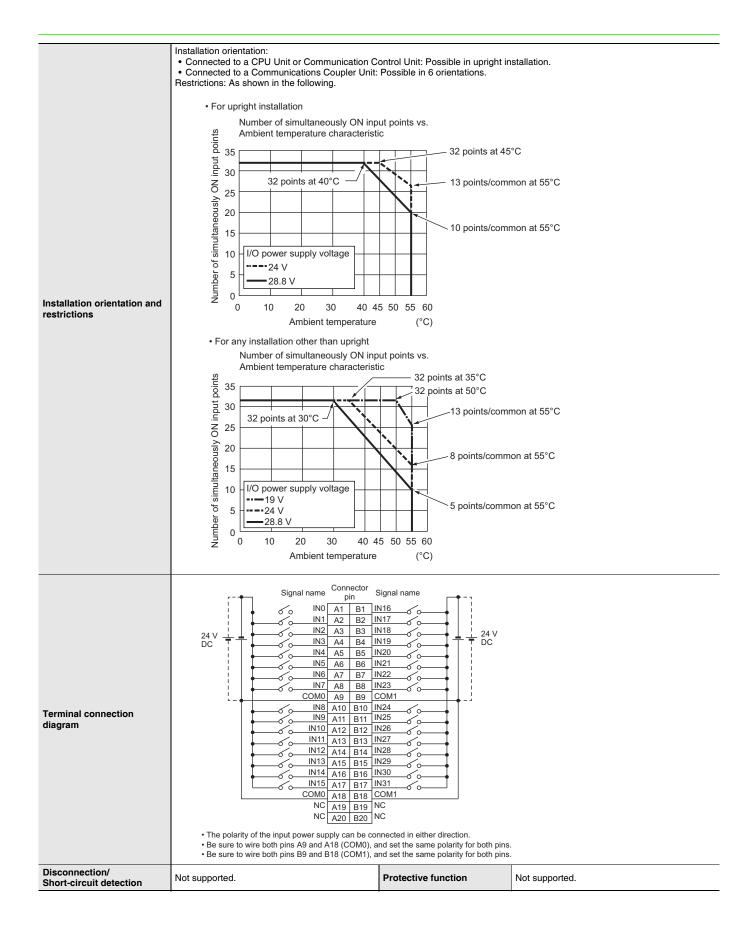
NX-ID6142-5

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-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)		
	DTS	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 Ω 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.		1		
Circuit layout	Connector NX bus (left)	I/O power supply + I/O power supply + I/O power supply - NX bus connector (right)			



• 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)
	DTS	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 Ω 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.		1
Circuit layout	Connector NX bus connector (left) IN0 IN15 COM0 IN15 COM0 IN15 COM0 IN15 COM0 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN15 COM0 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN17 IN17 IN16 IN17 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN16 IN17 IN17 IN17 IN16 IN17	I/O power supply + I/O power supply - NX bus connector (right)	



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

Unit name	AC Input Unit	Model	NX-IA3117
Number of points	4 points, independent contacts	External connection terminals	Screwless clamping terminal block (8 terminals)
Capacity	Free-Run refreshing		<u> </u>
	TS indicator, input indicator	Internal I/O common	No polarity
	IA3117	Rated input voltage	200 to 240 VAC, 50/60 Hz (170 to 264 VAC, ±3 Hz)
	0 1 2 3	Input current	9 mA typical (at 200 VAC, 50 Hz) 11 mA typical (at 200 VAC, 60 Hz)
Indicators		ON voltage/ON current	120 VAC min./4 mA min.
		OFF voltage/OFF current	40 VAC max./2 mA max.
		ON/OFF response time	10 ms max./40 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
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	Between each AC input circuit: 20 M Ω min. (at 500 VDC) Between the external terminals and the functional ground terminal: 20 M Ω min. (at 500 VDC) Between the external terminals and internal circuits: 20 M Ω min. (at 500 VDC) Between the internal circuit and the functional ground terminal: 20 M Ω min. (at 100 VDC)	Dielectric strength	Between each AC input circuit: AC3700V VAC 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 current of 5 mA max.
I/O power supply method	Supplied from external source.	Current capacity of I/O	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.80 W max. Connected to a Communications Coupler Unit 0.50 W max.	power supply terminal Current consumption from I/O power supply	No consumption
Weight	60 g max.		
Circuit layout	Terminal block IN0 to IN3		sti sti u u u u u u u u u u u u u u u u u u u
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 Disconnection/	200 to 240 VAC		
Short-circuit detection	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		
<u> </u>	TS indicator, output indicator	Internal I/O common	NPN
	OD2154	Rated voltage	24 VDC
	002134 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.
		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 Ω 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 Installation orientation:	push-pull output circuit.	IOV0 to 1 OUT0 to OUT1 IOG0 to 1 I/O power supply + I/O power supply – NX bus connector (right)
Installation orientation and restrictions	 Connected to a CPU Unit: Possible in upright installation. Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: No restrictions 		
Terminal connection diagram Disconnection/	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	Transistor Output Unit NX-OD2154 B1 Two-w OUT0_OUT1 IOV 0 IOV IOV 0 IOV IOV 0 IOV IOG 0 IOG NC NC A8 B8	ire type Three-wire type
Short-circuit detection	Not supported.	Protective function	Not supported.

NX-OD2258

Unit name	Transistor Output Unit	Model	NX-OD2258
Number of points	2 points	External connection terminals	Screwless clamping terminal block (8 terminals)
/O refreshing method	Output refreshing with specified time stamp)	
	TS indicator, output indicator	Internal I/O common	PNP
	OD2258	Rated voltage	24 VDC
	■TS 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.
		ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
nsulation resistance	20 M Ω 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 + I/O power supply – This unit uses a	push-pull output circuit.	OUT0 to OUT1 OUT0 to OUT1 Terminal block IOG0 to 1 I/O power supply + 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 IOV IOV IOG IOG A8 B8	Transistor Output Unit NX-OD2258 A1 OUT0 OUT1 IOV IOV IOV IOV NC NC A8 B1 Two-w	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
Number of points	4 points	External connection	Screwless clamping terminal block (12
/O refreshing method	' Selectable Synchronous I/O refreshing or F	terminals	terminals)
o renearing method	TS indicator, output indicator Internal I/O common NPN		
	0D3121	Rated voltage	12 to 24 VDC
	DTS	Operating load voltage	
	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
nsulation resistance	20 M Ω 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 +		IOV0 to 3 OUT0 to OUT3 Terminal block IOG0 to 3 I/O power supply + 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 A1B1 ●IOV IOV IOG IOG 12 to 24 VDC IOV IOV IOV IOV IOG IOG A8B8	Transistor Output Unit NX-OD3121 B1 Two-wi A1 B1 Two-wi IOUT0 OUT1• IOUT0 IOV0 IOV1• IOUT0 IOG0 IOG1 IOUT2 IOV2 IOV3• IOG2 IOG2 IOG3• IOG2 A8 B8 B8	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

NX-OD3153

NX-OD3153				
Unit name	Transistor Output Unit	Model External connection	NX-OD3153	
Number of points	4 points	terminals	Screwless clamping terminal block (12 terminals)	
/O refreshing method	Selectable Synchronous I/O refreshing or Free-Run refreshing			
	TS indicator, output indicator	Internal I/O common	NPN	
	OD3153	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 Ω 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) [//O power supply + //O power supply – ////////////////////////////////////	pull output circuit.	OUT0 to OUT3 Terminal block IOG0 to 3 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 A1B1 OVIOGIOG 24 VDC A8B8	Transistor Output Unit NX-OD3153 A1B1Two-wi IOV0 IOV1 IOV0 IOV1 IOG0 IOG1 OUT2 OUT3 IOV2 IOV3 IOG2 IOG3 A8B8	re type	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.	

Unit name	Transistor Output Unit	Model	NX-OD3256
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	
	TS indicator, output indicator	Internal I/O common	PNP
	OD3256	Rated voltage	24 VDC
	∎TS 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
nsulation resistance	20 M Ω 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) I/O power supply +		IOV0 to 3 Terminal block OUT0 to OUT3 IOG0 to 3 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 A1B1 ●IOV IOV 24 VDC IOV IOV IOV IOV IOG IOG A8B8	Transistor Output Unit NX-OD3256 B1 Two-wi A1 B1 Two-wi OUT0 OUT1 IOUT1 IO00 IOV1 IO00 IOG0 IOG1 IOUT2 IOV2 IOV3 IOG2 IOG2 IOG3 IOG3 A8 B8 B8	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

	Tanting One share		
Unit name	Transistor Output Unit	Model External connection	NX-OD3257 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, output indicator	Internal I/O common	PNP
		Rated voltage	24 VDC
	OD3257 ■TS 0 1	Operating load voltage range	15 to 28.8 VDC
Indicators	2 3	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 Ω 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 0.85 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 + I/O power supply – This unit uses a push-	-pull output circuit.	OUT0 to OUT3 IOG0 to 3 I/O power supply + I/O power supply - NX bus connector (right)
Installation orientation and restrictions	Connected to a CPU Unit or Communications Couple Restrictions: No restrictions	er Unit: Possible in 6 orientat	
Terminal connection diagram	Additional I/O Power Supply Unit A1 B1 OV IOV 24 VDC IOV IOV IOV IOV IOG IOG A8 B8	Transistor Output Unit NX-OD3257 A1B1Two-wi OUT0OUT1 IOV0IOV1 IOG0IOG1 OUT2OUT3 IOV2IOV3 IOG2IOG3 A8B8	re 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)
/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
	DTS 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 M Ω 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 (1/O power supply + 1/O power		power NX bus connector
	(left) supply –	Ť	pply – (right)
	(left)supply Installation orientation: • Connected to a CPU Unit or Communications • Connected to a Communications Couple Restrictions: No restrictions	ation Control Unit: Possible in	n upright installation.
Installation orientation and restrictions Terminal connection diagram	Installation orientation: Connected to a CPU Unit or Communications Couple Restrictions: No restrictions Transistor Output Unit NX-OD3268 A1 B1 OUT0 OUT1 OUT1 IOG0 IOG1 OUT2 OUT3 IOV2 IOV3 IOQ2 IOQ3 IOQ2 IOQ3 IOQ2 OV A8 B8 · OV has 2 terminals, so be sure to wire both term	su ation Control Unit: Possible in er Unit: Possible in 6 orientat	n upright installation.
and restrictions	Installation orientation: • Connected to a CPU Unit or Communications Couple Restrictions: No restrictions Transistor Output Unit NX-OD3268 A1 B1 OUT0 OUT1 IOV0 IOV1 IOG0 IOG1 OUT2 OUT3 IOV2 IOV3 IOV2 IOV3 IOC2 IOG3 • COM (+V) COM (+V) A8 B8	su ation Control Unit: Possible in er Unit: Possible in 6 orientat	n upright installation.

Unit name	Transistor Output Unit	Model	NX-OD4121
Number of points	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)
/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	•
	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.
		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
nsulation resistance	20 M Ω 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
/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 +		OUT0 to OUT7 I/O power supply + NX bus connector (right)
nstallation 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 I OV IOV I2 to 24 VDC A8 B8 4	Connection Unit	0 IOV1 2 OUT3 2 IOV3 4 OUT5 4 IOV5 0 OUT7
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

NX-UD4256			
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	-	
	TS indicator, output indicator	Internal I/O common	PNP
	OD4256	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.
		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 Ω 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: 0.5 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) // O power supply +		OUT0 to OUT7 Terminal block IOG0 to 7 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	Power Supply Unit A1 B1 A1 B1 A1 Col A1 B1 A1 Col IC IC IC IC IC IC IC IC IC IC	DV IOV DV IOV	
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD5121
	· · · · · ·	External connection	Screwless clamping terminal block (16
Number of points	16 points	terminals	terminals)
O refreshing method	Selectable Synchronous I/O refreshing or F	Internal I/O common	NPN
	TS indicator, output indicator OD5121	Rated voltage	12 to 24 VDC
	UDS 121 DTS	Operating load voltage	
	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	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
nsulation resistance	20 M Ω 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 1.00 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 +		OUT0 to OUT15 Terminal block
nstallation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communications • Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram		V IOV IOG IOG V IOV IOG IOG	Transistor Output Unit NX-OD5121 B1 Two-wire type OUT0 OUT1 OUT2 OUT2 OUT3 OUT4 OUT5 OUT6 OUT7 OUT8 OUT9 OUT10 OUT11 OUT2 OUT11 OUT4 OUT5 OUT6 OUT7 OUT10 OUT11 OUT12 OUT13 OUT14 OUT15 OUT14 OUT15 OUT14 OUT15 A8 B8
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	Transistor Output Unit	Model External connection	NX-OD5256
Number of points	16 points	terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	-	
	TS indicator, output indicator OD5256	Internal I/O common	PNP 24 VDC
	DD5250 DTS	Rated voltage Operating load voltage	24 VDC
	0 1 2 3 4 5 6 7	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 M Ω 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) NX bus tion to the supply +		OUT0 to OUT15 Terminal block
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communica • Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	IOV IOV 24 VDC IOV IOV IOV IOV IOV IOV IOV IOV IOV IOV IOV IOV IOV	Dinit Connection Unit B1A1 B1 IOV IOG IOG IOG	ansistor Output Unit NX-OD5256 B1 Two-wire type OUT0 OUT1 OUT2 OUT2 OUT3 OUT3 OUT4 OUT5 OUT6 OUT6 OUT7 OUT8 OUT0 OUT11 Three-wire type OUT10 OUT11 OUT12 OUT12 OUT3 OUT6 OUT6 OUT7 OUT8 OUT10 OUT11 OUT12 OUT14 OUT13 OUT14 OUT14 OUT15 OUT14
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		
<u> </u>	TS indicator, output indicator	Internal I/O common	NPN
	OD5121-1	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, 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 Ω 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 (left) [J/O power supply + I/O power supply -	COM V/O powe supply –	Terminal block
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communica • Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	OUT10 A5 D5 OUT11		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

NX-OD5256-1

Unit name	Transistor Output Unit	Model	NX-OD5256-1
Number of points	16 points	External connection terminals	M3 screw terminal block (18 terminals)
/O refreshing method	Switching Synchronous I/O refreshing and	Free-Run refreshing	
- -	TS indicator, output indicator	Internal I/O common	PNP
	OD5256-1	Rated voltage	24 VDC
	OD5250-1 ■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 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 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)	No No No No No No No No No No No No No N	PM (+V) To to OUT15 Deply + power pply - NX bus connector (right)
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communications • Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Terminal Signal name A B Signal name L OUT0 A0 B0 OUT1 L OUT2 A1 B1 OUT3 L OUT4 A2 B2 OUT5 L OUT6 A3 B3 OUT7 L OUT10 A5 B5 OUT11 L OUT12 A6 B6 OUT13 L OUT4 A7 B7 OUT15 0V A8 B8 COM (+V		
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-I		
	TS indicator, output indicator	Internal I/O common	NPN
	OD5121-5	Rated voltage	12 to 24 VDC
		Operating load voltage	10.2 to 28.8 VDC
	0 1 2 3 4 5 6 7	range	
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.
B1		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 Ω 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
	Connected to a CPU Unit or Communication Control Unit		
NX Unit power consumption	0.95 W max.	Current consumption from I/O power supply	30 mA max.
	 Connected to a Communications Coupler Unit 0.60 W max. 	no power suppry	
Weight	80 g max.		I
			+V
			+V
		j:	OUT0 to OUT15
			Connector
Circuit layout		└──┲─┼─ <u>╋</u> ╵┝ ┥ ─┘╴╎╴┃	
onean hyper			
			СОМ
			сом _
	NX bus 1/O power supply + 0		I/O power supply +] NX bus
		Ų	connector
	(left)	O	I/O power supply –] (right)
	Installation orientation:		
Installation orientation and	Connected to a CPU Unit or Communication (Connected to a Communications Coupler Unit		nstallation.
restrictions	Restrictions: No restrictions		
	Signal Connector	Signal	
	12 to name pin	name	
	24 VDC +V 1 2	+V	
	COM 3 4	СОМ	
	UT15 5 6		
	OUT14 7 8		
Terminal connection diagram	L OUT13 9 10	OUT05	
-	L OUT12 11 12	OUT04	
	L OUT11 13 14	OUT03	
	L OUT10 15 16	OUT02	
	OUT09 17 18		
	L OUT08 19 20		
	 Be sure to wire both pins 3 and 4 (COM). Be sure to wire both pins 1 and 2 (+V). 		
Disconnection/Short-circuit	Not supported.	Protective function	Not supported.
detection			

NX-OD5256-5

Unit name	Transistor Output Unit	Model	NX-OD5256-5
Number of points	16 points	External connection	MIL connector (20 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	terminals Run refreshing	
	TS indicator, output indicator	Internal I/O common	PNP
	OD5256-5	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, 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.
Dimonologia	00 (00 - 100 (0) - 71 (D)	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 Ω 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	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 +	Short-circuit protection	COM (+V) COM (+V) OUT0 to OUT15 OV OV I/O power supply + I/O power supply - NX bus connector (right)
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communication (• Connected to a Communications Coupler Unit Restrictions: No restrictions		installation.
Terminal connection diagram	Signal name Connector pin 24 VDC COM (+V) 1 2 0V 3 4 0UT15 5 6 0UT14 7 8 0UT13 9 10 0UT14 7 8 0UT13 9 10 0UT13 9 10 0UT14 7 8 0UT13 9 10 0UT11 11 12 0UT11 13 14 0UT00 17 18 0UT08 19 20 • Be sure to wire both pins 1 and 2 (COM (+V)). • Be sure to wire both pins 2 and 4 (00)	OUT04 L OUT03 L OUT02 L OUT01 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 Ω 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		+V0 +V0 OUT0 to OUT18 COM0 +V1 +V1 +V1 +V1 +V1 +V1 +V1 +V1 +V1 +V1	Connector
	NX bus connector (left) I/O power supply -	I/O power	connector r supply – (right)
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.	installation.

12 to 24 VDC OUT08 39 40 OUT00 • Be sure to wire both pins 21 and 22 (+VU). • Be sure to wire both pins 23 and 24 (COM0).	Terminal connection diagram	Signal name 24 VDC +V1 COM1 L OUT31 L OUT30 L OUT32 L OUT29 L OUT26 L OUT25 L OUT24 +V0 COM0 L OUT14 L OUT12 L OUT11 L OUT11 L OUT11 L OUT10 L OUT10 L OUT09	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 OUT16 L 17 18 OUT17 L 19 20 OUT16 L 21 22 +V0 L 23 24 COM0 L 25 26 OUT07 L 29 30 OUT06 L 31 32 OUT06 L 33 34 OUT03 L 33 34 OUT03 L 37 38 OUT01 L 39 40 OUT00 L	
12 to the sure to wire both pins 21 and 22 (+VU).	Disconnection/Short-circuit		37 38 OUT01 L 39 40 OUT00 L	 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).

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-Run refreshing			
	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 Ω 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	Short-circuit protection Protection	COM0 (+V) COM0 (+V) OUT0 to OUT15 OV0 OV0 COM1 (+V) COM1 (+V) COM1 (+V) OUT16 to OUT31 OV1 OV1 OV1 OV1 OV1 OV1 NX bus	
Installation orientation and	(left) I/O power supply -	Control Unit: Possible in upright i	I/O power supply – (right)	
restrictions	 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 			

	Signal Connector Signal name pin name
	COM1 (+V) 1 2 COM1 (+V) 24 VDC
Terminal connection	
diagram	
-	COM0 (+V) 21 22 COM0 (+V) 24 VDC
	OUT14 27 28 OUT06
	• Be sure to wire both pins 21 and 22 (COM0 (+V)).
	OUT08 39 40 OUT00 • Be sure to wire both pins 1 and 2 (COM1 (+V)).
	Be sure to wire both pins 23 and 24 (0V0). Be sure to wire both pins 3 and 4 (0V1).
Disconnection/Short-circuit detection	Not supported. Protective function With load short-circuit protection.

• 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 terminals	Fujitsu connector (40 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	I
	TS indicator, output indicator	Internal I/O common	NPN
	OD6121-6	Rated voltage	12 to 24 VDC
	∎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 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 Residual voltage	0.1 mA max. 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 Ω min. between isolated circuits (at 100	Dielectric strength	510 VAC between isolated circuits for 1 minute at
	VDC)	Current capacity of I/O	a leakage current of 5 mA max.
I/O power supply method	Supply from external source	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)	ctor	
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	12 to 24 VDC Name		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.
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• Relay Output Unit (Screwless Clamping Terminal Block, 12 mm Width) NX-OC2633

Unit name	Relay Output Units Model		NX-OC2633	
Number of points	2 points, independent contacts	External connection terminals	Screwless clamping terminal block (8 terminals	
I/O refreshing method	Free-Run refreshing	commutes		
	TS indicator, output indicator	Relay type	N.O. contact	
Indicators	OC2633 UTS 0 1	Maximum switching capacity	250 VAC/2 A (cos¢ = 1), 250 VAC/2 A (cos¢ = 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 Ω min. (500 VDC) Between the external terminals and internal circuits: 20 M Ω min. (500 VDC) Between the internal circuit and GR terminal: 20 M Ω min. (100 VDC) Between the external terminals and GR terminal: 20 M Ω min. (500 VDC)	Dielectric strength	Between A1/B1 terminals and A3/B3 terminals: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and GR 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 ma 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/s ² 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/s², 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 1.20 W max. Connected to a Communications Coupler Unit 0.80 W max. 	No consumption		
Weight	65 g max.		l	
Circuit layout	NX bus connector (left) NX bus (lop power supply + lop power supply - (lop power suppl			
Installation orientation and restrictions	You cannot replace the relay. 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	Relay Output Unit NX-OC2633 Load 0 C0 Load 0 C			
Disconnection/ Short-circuit detection	Not supported. Protective function Not supported.			

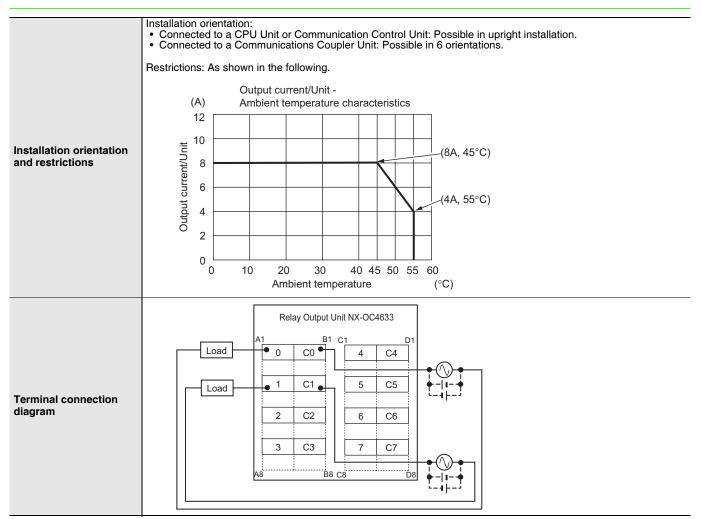
* Electrical service life will vary depending on the current value. Refer to "NX-series Digital I/O Units User's Manual" for details.

NX-OC2733

Unit name	Relay Output Unit	Model	NX-OC2733	
Number of points	2 points, independent contacts	External connection terminals	Screwless clamping terminal block (8 terminals)	
/O refreshing method	Free-Run refreshing			
Indicators	TS indicator, output indicator OC2733 DTS 0 1	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 Ω min. (at 500 VDC) Between the external terminals and functional ground terminal: 20 M Ω min. (at 500 VDC) Between the external terminals and internal circuits: 20 M Ω min. (at 500 VDC) Between the internal circuit and the functional ground terminal: 20 M Ω 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 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.	No consumption		
Weight	70 g max.			
Circuit layout	NX bus connector (left) [//O power supply + NO0 and NO1 are normal open contacts, and NC0 and NC1 are normal close contacts. You cannot replace the relay.			
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	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			
Disconnection/Short- circuit detection	Not supported.	Protective function	Not supported.	

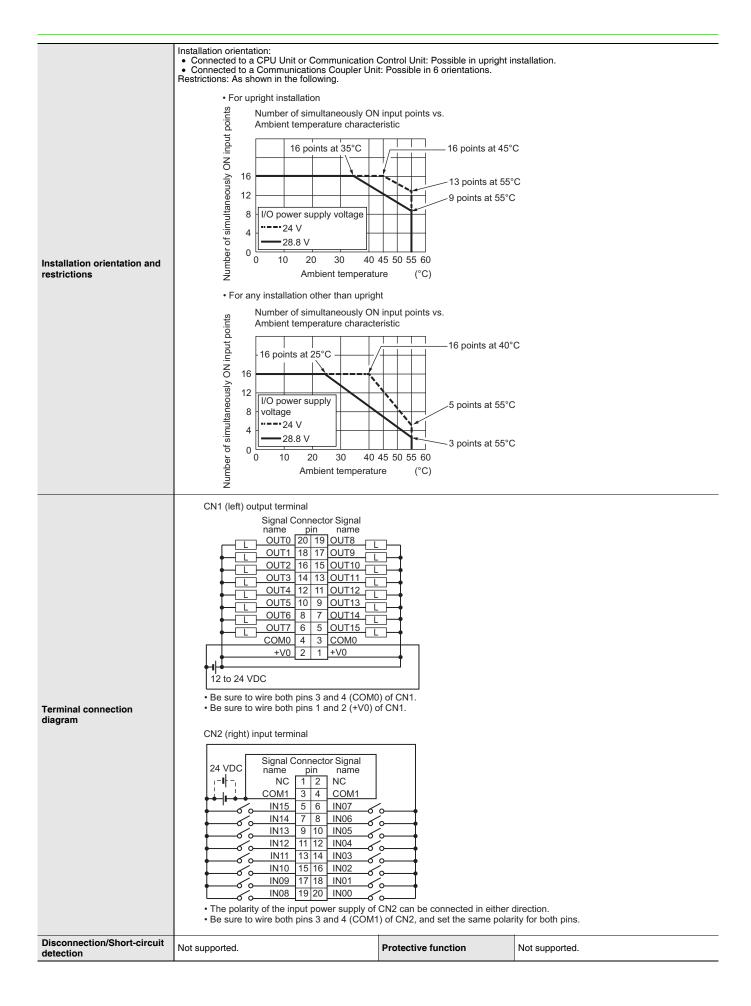
• Relay Output Unit (Screwless Clamping Terminal Block, 24 mm Width) NX-OC4633

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	TS indicator, output indicator OC4633 TS 0 1 2 3	Relay type Maximum switching capacity	N.O. contact 250 VAC/2 A $(\cos\phi = 1)$, 250 VAC/2 A $(\cos\phi = 0.4)$, 24 VDC/2 A, 8 A/Unit	
	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: $20 \text{ M}\Omega \text{ min.}$ (at 500 VDC) Between the external terminals and the functional ground terminal: $20 \text{ M}\Omega \text{ min.}$ (at 500 VDC) Between the external terminals and internal circuits: $20 \text{ M}\Omega \text{ min.}$ (at 500 VDC) Between the internal circuit and the functional ground terminal: $20 \text{ M}\Omega \text{ min.}$ (at 100 VDC)	Dielectric strength	Between output bits: 2300 VAC for 1 min 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 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 ² 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/s ² , 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.			
Circuit layout		e C0 to C7		
	NX bus connector (left) I/O power supply + I/O power supply –	place the relay.	I/O power supply + NX bus connector I/O power supply – (right)	



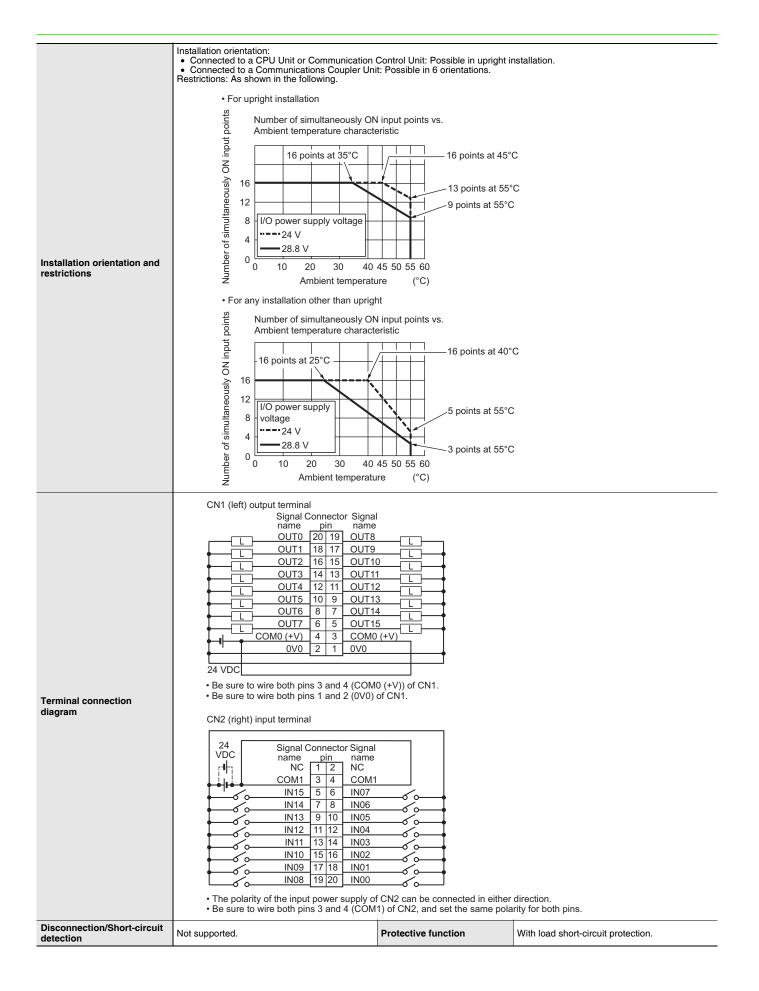
* Electrical service life will vary depending on the current value. Refer to "NX-series Digital I/O Units User's Manual" for details.

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



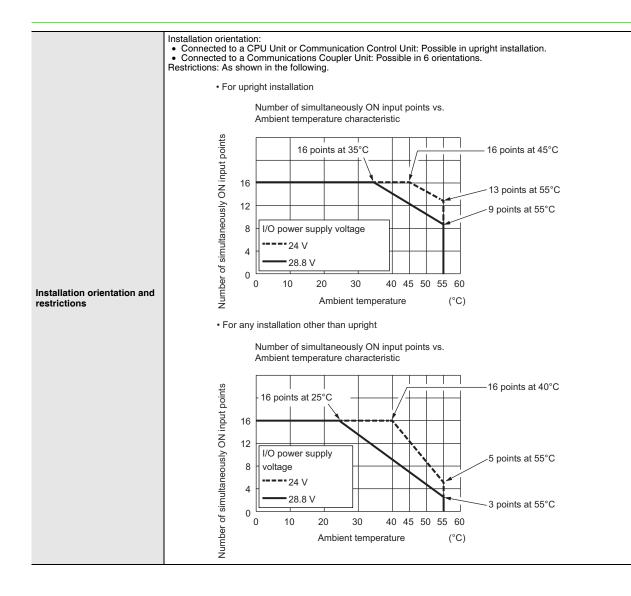
NX-MD6256-5

	D6256-5				1	
Unit name		DC Input/Transistor Output Unit	Model External connection		NX-MD6256-5	
Number o	-	16 inputs/16 outputs	terminals		2 MIL connectors (20 terminals)	
I/O refres	hing method	Switching Synchronous I/O refreshing and Free-	Run refresh			
	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	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	ns	30 (W) x 100 (H) x 71 (D)	
		MD6256-5	Isolation I	nethod	Photocoupler isolation	
		CN DTS	Insulation	resistance	20 M Ω min. between isolated circuits (at 100 VDC)	
		L8 9 10 11 12 13 14 15	Dielectric strength		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	· ·	supply method	Supply from external source	
Indicators	;		Current ca supply ter	apacity of I/O power rminal	Without I/O power supply terminals	
			NX Unit power o		 Connected to a CPU Unit or Communication Control Unit 1.10 W max. Connected to a Communications Coupler Unit 0.75 W max. 	
			Current co O power s	onsumption from I/ supply	40 mA max.	
			Weight		110 g max.	
		CN1 (left) output circuit				
Circuit layout		NX bus connector (left) NX bus connector (left) NX bus connector (left) NX bus connector (left) NX bus connector (left) NX bus connector (left) NX bus connector (left) NX bus connector (left) NX bus connector (left)				
		CN2 (right) input circuit				
		Connector NX bus connector (left) (N0 to IN15 COM1 IN15				



• DC Input/Transistor Output Unit (Fujitsu Connector, 30 mm Width) NX-MD6121-6

Unit name		DC Input/Transistor Output Unit	Model		NX-MD6121-6
Number o			External connection terminals		2 Fujitsu connectors (24 terminals)
I/O refreshing method Switching Synchronous I/O refre		Switching Synchronous I/O refreshing and Free-			
Internal I/O common		NPN		Internal I/O common	For both NPN/PNP
Output	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)
	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 ON/OFF response time	1.5 V max. 0.1 ms max./0.8 ms max.	1	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
	reepenee and	TS indicator, I/O indicators	Dimensio	ns	30 (W) x 100 (H) x 71 (D)
			Isolation	-	Photocoupler isolation
		MD6121-6 _{CN_} ▶ ^{TS}		resistance	$20 \text{ M}\Omega$ min. between isolated circuits (at 100 VDC)
		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Dielectric strength		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
ndicators	3			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 I/O power	onsumption from supply	30 mA max.
			Weight		95 g max.
Circuit layout		NX bus connector (left) [//O power supply + I/O power supply - CN2 (right) input circuit		COM0 COM0 COM0 I/O power supply + bl/O power supply -	Connector NX bus connector (right)
		Connector (left) NX bus connector (left) COM1 I/O power supply – I/O power supply –		NX bus connector (right)	



	CN14 (loft) output terminal
	CN1 (left) output terminal
	Signal name pin B A
	NC B11 A11 NC
	+V0 B10 A10 +V0
	COM0 B9 A9 COM0
	UT14 B7 A7 OUT6 L OUT13 B6 A6 OUT5
	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
	12 to 24 VDC
	• Be sure to wire both pins A9 and B9 (COM0) of CN1.
Terminal connection diagram	• Be sure to wire both pins A10 and B10 (+V0) of CN1.
alugium	
	CN2 (right) input terminal
	Signal name A ^{pin} B
	IN2 A3 B3 IN10
	0 IN6 A7 B7 IN14 0 IN14 0 IN15 0 IN7 A8 B8 IN15 0 IN7 A8 B8 IN15 0 IN7 IN14 0 IN75 0 I
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	24 VDC NC A12 B12 NC
	• The polarity of the input power supply of CN2 can be connected in either direction.
	Be sure to wire both pins A9 and B9 (COM1) of CN2, and set the same polarity for both pins.
Disconnection/Short-circuit	Not supported. Protective function Not supported.
detection	

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			Ver.1.17		
NX-OD3121					
NX-OD3153					
NX-OD3256	Ver.1.0	Ver.1.13			
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					

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

N	K 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		vei.i.o	Vel.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		vei.i.o	Vel.1.05	ver.1.00
NX-ID3444		Ver.1.1	Ver.1.06 *	Ver.1.07
NX-ID4342				Ver.1.06
NX-ID4442	Ver.1.0			ver.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				vel.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		V C1.1.1	Vel.1.00	Ver.1.07
NX-OD3121				
NX-OD3153				Ver.1.06
NX-OD3256				
NX-OD3257				
NX-OD3268				Ver.1.13
NX-OD4121				Ver.1.06
NX-OD4256				
NX-OD5121				
NX-OD5121-1	Ver.1.0			Ver.1.13
NX-OD5121-5		Ver.1.0	Ver.1.05	Ver.1.10
NX-OD5256				Ver.1.06
NX-OD5256-1				Ver.1.13
NX-OD5256-5				Ver.1.10
NX-OD6121-5				vei.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.

* 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 L	NX Unit		Cor	responding un	it versions/version	ıs		
		Application with	n an NJ/NX/NY-ser *1	ies Controller	Application with a CS/CJ/CP-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		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0	Ver. 1.10	Ver. 1.00	
NX-ID3343		ver. 1.2	vei. 1.14	ver. 1.19	ver. 1.0	ver. 1.10	ver. 1.00	
NX-ID3344								
NX-ID3417		Ver 10	Ver. 1.14	Ver 1 10	Ver. 1.0	Ver. 1.10	Vor. 1.00	
NX-ID3443		Ver. 1.2	ver. 1.14	Ver. 1.19	ver. 1.0	ver. 1.10	Ver. 1.00	
NX-ID3444								
NX-ID4342						Ver 1.10		
NX-ID4442						Ver. 1.10		
NX-ID5142-1						Ver. 1.13		
NX-ID5142-5							1	
NX-ID5342		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0	May 140	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						Vor 1 10	-	
NX-OD5256		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0	Ver. 1.10	Ver. 1.00	
NX-OD5256-1		VCI. 1.2	VCI. 1.14	VCI. 1.13	VCI. I.U	Ver. 1.13	vei. 1.00	
NX-OD5256-5						Ver. 1.10		
NX-OD6121-5								
NX-OD6121-6						Ver. 1.13		
NX-OD6256-5								
NX-OC2633						Ver. 1.10		
NX-OC2733								
NX-OC4633						Ver. 1.17	1	
NX-MD6121-5						Ver. 1.10	1	
NX-MD6121-6						Ver. 1.13	1	
NX-MD6256-5						Ver. 1.10	1	

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 un	it versions/versions
Model	Unit version	Communication Control Unit	Sysmac Studio
NX-ID3317		Mar. 1.00	Ver. 1.04
NX-ID3343		Ver. 1.00	Ver. 1.24
NX-ID3344	Ver. 1.0		
NX-ID3417		No. 4 00	No. 4 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			
NX-OD4121			
NX-OD4256			
NX-OD5121			
NX-OD5121-1			
NX-OD5121-5			
NX-OD5256		Nov. 1.00	Var. 1.04
NX-OD5256-1		Ver. 1.00	Ver. 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			
			1

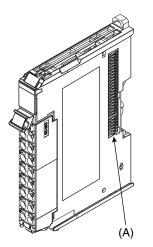
Note: 1. Some Units do not have all of the versions given in the above table. If a Unit does not have the specified version, support is provided by the oldest available version after the specified version. Refer to the user's manuals for the specific Units for the relation between models and versions.

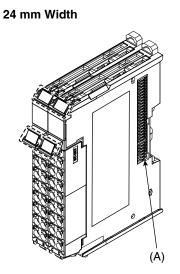
2. Note: You cannot connect the relevant NX Unit to the Communication Control Unit if "---" is shown in the corresponding unit versions/ versions column.

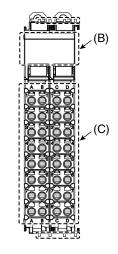
External Interface

Screwless Clamping Terminal Block Type

12 mm Width

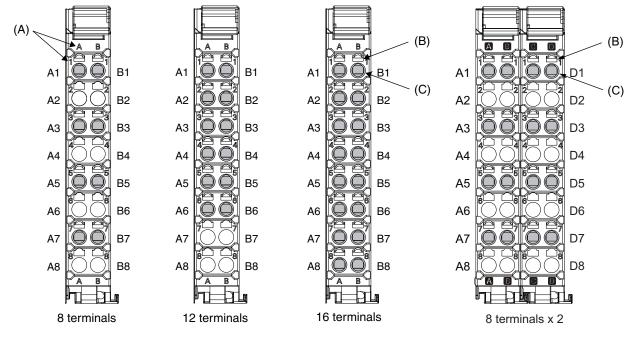






Letter	Item	Specification			
(A)	NX bus connector	This connector is used to connect to another Unit.			
(B)	Indicators	The indicators show the current operating status of the Unit.			
(C)	Terminal block	The terminal block is used to connect to external devices. The number of terminals depends on the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

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Applicable Terminal Blocks for Each Unit Model

l lucit un e de l		Termi	inal Blocks	
Unit 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	NX-TBA082	8	None	10 A
NA-004033	NX-TBB082	8	None	10 A

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.

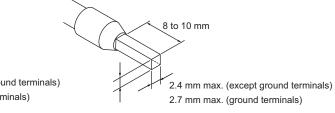
The applicable ferrules, wires, and crimping tools are listed in the following table.

Terminal type	Manufacturer	Ferrule model	Applicable wire (mm ² (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 ² , AWG24 to 10)
terminais		Al0,5-10		
		Al0,75-8	0.75 (#18)	
		Al0,75-10		
		AI1,0-8	1.0 (#18)	
		AI1,0-10	1	
		AI1,5-8	1.5 (#16)	
		AI1,5-10		
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 mm ² , AWG 26 to 10)
terminals		H0.34/12	0.34 (#22)	
		H0.5/14	0.5 (#20)	
		H0.5/16		
		H0.75/14	0.75 (#18)	
		H0.75/16		
		H1.0/14	1.0 (#18)	
		H1.0/16	1	
		H1.5/14	1.5 (#16)	
		H1.5/16	Ţ	

* 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



1.6 mm max. (except ground terminals)2.0 mm max. (ground terminals)

Using Twisted Wires/Solid Wires

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

Torn	ninals		Wire	type			O a maku at a m la m arth	
Term		Twisted wires		Solid wire		Wire size	Conductor length (stripping length)	
Classification	Current capacity	Plated	Unplated	Plated	Unplated		(en pping longin)	
	2 A or less		Possible	Possible	Possible			
All terminals except ground terminals	Greater than 2 A and 4 A or less	Possible	sible Not	Possible *1	Not	0.08 to 1.5 mm ² AWG28 to 16	8 to 10 mm	
ground terminalo	Greater than 4 A	Possible *1	Possible	Not Possible	Possible			
Ground terminals		Possible	Possible	Possible *2	Possible *2	2.0 mm ²	9 to 10 mm	

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

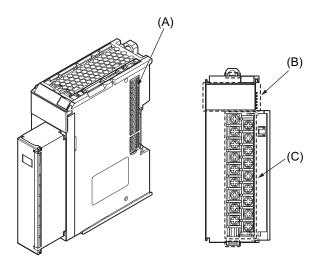
*2. With the NX-TB



Conductor length (stripping length)

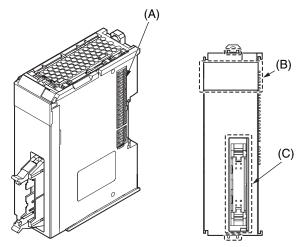
<Additional Information> If more than 2 A will flow on the wires, use plated wires or use ferrules.

M3 Screw Terminal Block Type 30 mm Width

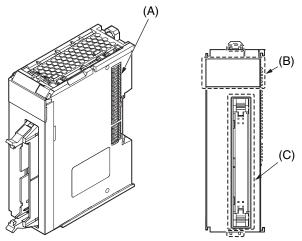


Letter	Item	Specification	
(A)	(A) NX bus connector This connector is used to connect to another Unit.		
(B)	Indicators	The indicators show the current operating status of the Unit.	
(C)	(C) Screw terminals These screw terminals are used to connect the wires.		

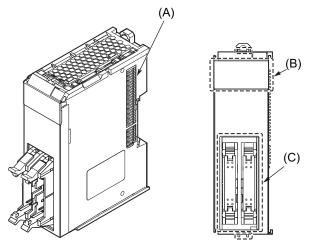
MIL Connector Type (1 Connector with 20 terminals) 30 mm Width



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

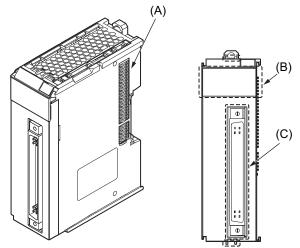


MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width

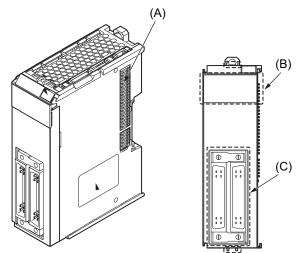


Letter	Item	Specification	
(A)	NX bus connector	This connector is used to connect to another Unit.	
(B)	Indicators	The indicators show the current operating status of the Unit.	
(C)	Connectors	The connectors are used to connect to external devices.	

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



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

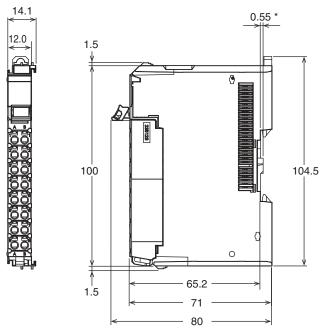


Letter	Item	Specification
(A)	NX bus connector	This connector is used to connect to another Unit.
(B)	Indicators	The indicators show the current operating status of the Unit.
(C)	Connectors	The connectors are used to connect to external devices.

(Unit/mm)

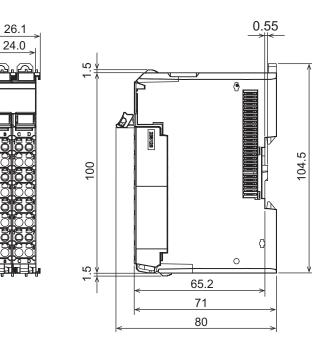
Dimensions

Screwless Clamping Terminal Block Type 12 mm Width

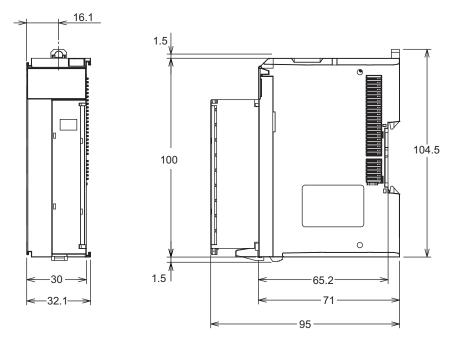


* The dimension is 1.35 mm for Units with lot numbers through December 2014.

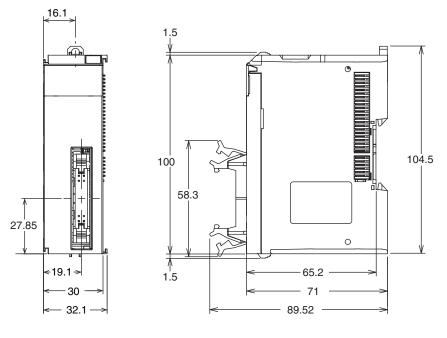
24 mm Width



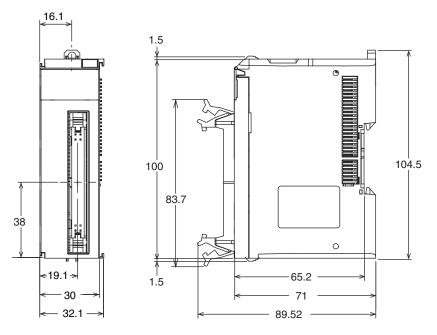
M3 Screw Terminal Block Type 30 mm Width



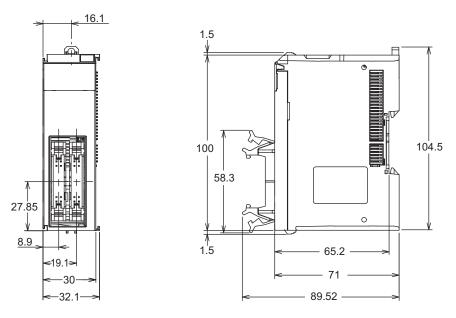
MIL Connector Type (1 Connector with 20 terminals) 30 mm Width



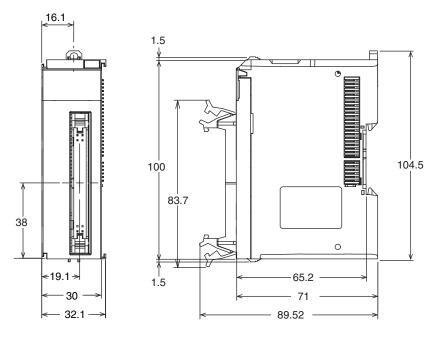
MIL Connector Type (1 Connector with 40 terminals) 30 mm Width



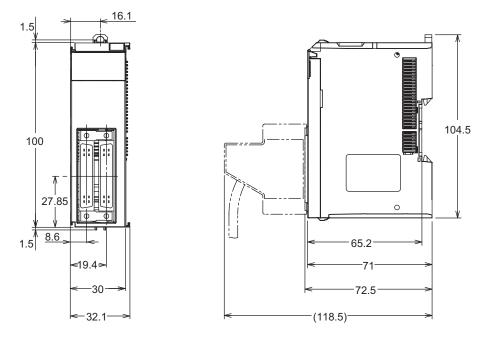
MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width



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-IA NX-OD NX-OC NX-OC NX-MD	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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