# 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<sup>®</sup> Coupler Unit
- Connect to the NJ/NX/NY Controller via EtherCAT





#### Features

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

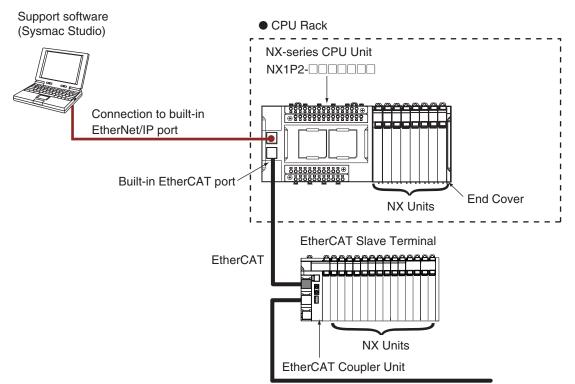
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## **System Configurations**

#### Connected to a CPU Unit

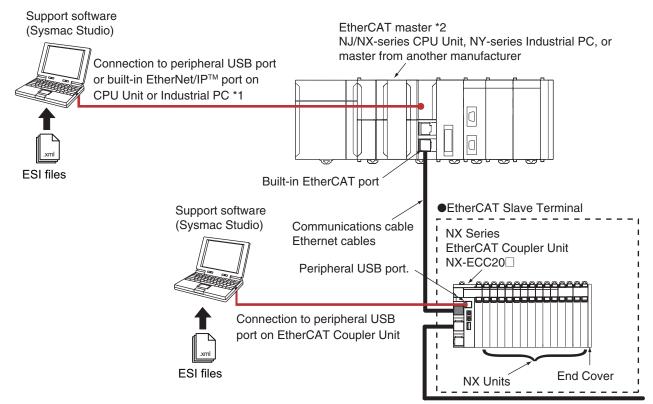
The following figure shows a system configuration when NX Units are connected to an NX-series CPU Unit.



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

#### Connected to an EtherCAT Coupler Unit

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



\*1. The connection method for the Sysmac Studio depends on the model of the CPU Unit or Industrial PC.

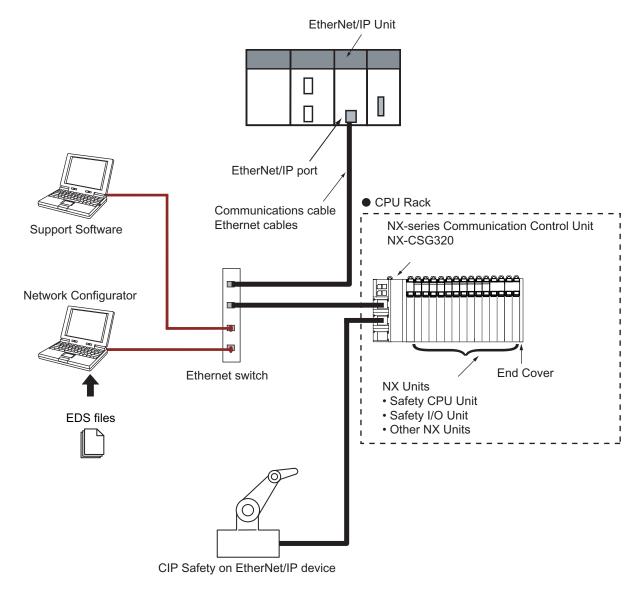
\*2. An EtherCAT Slave Terminal cannot be connected to any of the OMRON CJ1W-NC 81/82 Position Control Units even though they can operate as EtherCAT masters.

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

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

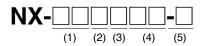
The following figure shows a system configuration when a group of NX Units is connected to an NX-series Communication Control Unit. To configure a Safety Network Controller, mount the Safety CPU Unit, which is one of the NX Units, to the CPU Rack of the Communication Control Unit.

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



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

### **Model Number Structure**



#### (1) Unit type

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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 response time		I/O refreshing i	nethod	Other functions
No.	No. Rated Lo voltage cur		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		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	21 56 24 VDC	12 to24 VDC	0.5 A	Yes		Switching Synchronous	Yes		
		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**

	Specifications							
Product Name	Number of points	Internal I/O common	Rated input voltage	I/O refreshing method	ON/OFF response time	Model		
			12 to 24 VDC	Switching Synchronous I/O re-	20 μs max./400 μs max.	NX-ID3317		
		NPN		freshing and Free-Run refreshing		NX-ID3343		
DC Input Unit			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		
1		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 Width)	8 points	PNP		Switching Synchronous I/O re-	00 //00	NX-ID4442		
width)		NPN		freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID5342		
	16 points	PNP				NX-ID5442		
(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					NX-ID5142-5		
	To points					NA-105142-5		
(MIL Connector, 30 mm Width)	32 points	For both NPN/PNP	24 VDC	Switching Synchronous I/O re- freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID6142-5		
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	Wess Clamping inal Block, 12 mm 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		21100	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 <sup>•</sup> erminal Block, 12 mm Vidth)	8	NPN		12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD4121		
ilan)	0	PNP		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		
(M3 Screw Terminal Block, 30 mm Width)		NPN		12 to 24 VDC	Switching Synchronous I/O re-	0.1 ms max./ 0.8 ms max.	NX-OD5121-		
	16 PN	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-		
		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-(		
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 Width/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		
DC Input/Transistor Output Unit (MIL Connector, 30 mm Width)	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				NX-TBA082	
Terminal Block	12	A/B	None	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	I I	2 branches
С	Connecting Cable Conversion Unit 20 terminals 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	NX-ID5142-5 16 inputs		NPN/ PNP	A	XW2Z-□□□X	XW2R-D20GD-T	Depends on model *3	None
	•	connector	PNP		XW2Z-DDX	XW2D-20G6	Phillips screw	None
				A	XW2Z-DDDK	XW2R-□34GD-C2	Depends on model *3	None
				A	XW2Z-DDK	XW2D-40G6	Phillips screw	None
				В	XW2Z-DDDN	XW2R-D20GD-T (2 Units)	Depends on model *3	None
NX-ID6142-5 32 inputs	32 inputs	1 MIL connector	NPN/ PNP	В	XW2Z-DDDN	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-DDDN	XW2E-20G5-IN16 (2 Units) *2	Phillips screw	Yes
	32 inputs	1 Fujitsu connector		А	XW2Z-DDB	XW2R-□34GD-C1	Depends on model *3	None
			NPN/ PNP	A	XW2Z-DDB	XW2D-40G6	Phillips screw	None
				В	XW2Z-□□□D	XW2R-□20GD-T (2 Units)	Depends on model *3	None
NX-ID6142-6				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-DDX	XW2D-20G6	Phillips screw	None
NX-OD5256-5	16 outputs	a <sup>1</sup> MIL PNP		А	XW2Z-□□□X	XW2R-D20GD-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
				A	XW2Z-🗆 K	XW2R-□34GD-C4	Depends on model *3	None
			NPN	Α	XW2Z-DDK	XW2D-40G6	Phillips screw	None
NX-OD6121-5	32 inputs	1 MIL connector		В	XW2Z-□□□N	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
				A	XW2Z-🗆 🗆 B	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-□□□L	XW2R-□20GD-T (2 Units)	Depends on model *3	None
				В	XW2Z-DDL	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes
				В	XW2Z-DDL	XW2D-20G6 (2 Units)	Phillips screw	None
				А	XW2Z-□□□K	XW2R-□34GD-C4	Depends on model *3	None
	32 inputs	1 MIL connector	PNP	Α	XW2Z-□□□K	XW2D-40G6	Phillips screw	None
NX-OD6256-5				В	XW2Z-DDDN	XW2R-□20GD-T (2 Units)	Depends on model *3	None
				В	XW2Z-□□□N	XW2C-20G6-IO16 (2 Units)	Phillips screw	Yes
				В	XW2Z-□□□N	XW2D-20G6 (2 Units)	Phillips screw	None
	16 outputs	1 MIL connector	NPN/ PNP	С	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None
NX-MD6121-5			FINE	С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None
NX-WD0121-5	16 outputs	1 MIL connector	NPN	С	XW2Z-□□□X	XW2R-□20GD-T	Depends on model *3	None
				С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None
				С	XW2Z-🗆 🗆 A	XW2R-□20GD-T	Depends on model *3	None
	40	1 Fujitsu	NPN/	С	XW2Z-□□□A	XW2C-20G5-IN16 *2	Phillips screw	Yes
	16 outputs	connector	PNP	С	XW2Z-□□□A	XW2C-20G6-IO16	Phillips screw	Yes
NX-MD6121-6				С	XW2Z-□□□A	XW2D-20G6	Phillips screw	None
INX-IVID0121-0				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		COLLIGCTOL	1 111	С	XW2Z-□□□X	XW2D-20G6	Phillips screw	None
	16 outputs	1 MIL connector	PNP	С	XW2Z-□□□X	XW2R-D20GD-T	Depends on model *3	None
		Connector		С	XW2Z-DDX	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
				А	2	XW2Z-RO-D1	G7TC-ID16	Phillips screw
			NPN	Α	2	XW2Z-RO -D1	G7TC-IA16	Phillips screw
NX-ID6142-5	32 inputs	1 MIL	INPIN	А	2	XW2Z-RO -D1	G70V-SID16P	Push-in spring
NX-ID0142-5	32 inputs	connector		А	2	XW2Z-RO-D1	G70V-SID16P-C16	Push-in spring
			PNP	А	2	XW2Z-RO-D1	G70V-SID16P-1	Push-in spring
			FINE	А	2	XW2Z-RO-D1	G70V-SID16P-1-C16	Push-in spring
		s 1 Fujitsu connector		А	2	XW2Z-RIC-	G7TC-ID16	Phillips screw
			NPN	А	2	XW2Z-RIC-	G7TC-IA16	Phillips screw
NX-ID6142-6	32 inputs		PNP	Α	2	XW2Z-RIC-	G70V-SID16P	Push-in spring
NA-ID0142-0	32 inputs			А	2	XW2Z-RI C-	G70V-SID16P-C16	Push-in spring
				А	2	XW2Z-RI C-	G70V-SID16P-1	Push-in spring
			FINE	А	2	XW2Z-RICC-	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 outputs	1 MIL	PNP	F	None	XW2Z-RO C	G70D-FOM16-1 *2	Phillips screw												
NX-OD5256-5	16 outputs	connector	PNP	F	None	XW2Z-RO□C	G70A-ZOC16-4	Phillips screw												
				F	None	XW2Z-RO C	G70V-SOC16P-1	Push-in spring												
				F	None	XW2Z-RO C	G70V-SOC16P-1-C4	Push-in spring												
						А	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												
				А	2	XW2Z-RO -D1	G70D-FOM16	Phillips screw												
				А	2	XW2Z-RO -D1	G70D-VSOC16	Phillips screw												
IX-OD6121-5	32 outputs	1 MIL connector	NPN	Α	2	XW2Z-RO D-D1	G70D-VFOM16	Phillips screw												
		connector		А	2	XW2Z-RO -D1	G70A-ZOC16-3 and Relay	Phillips screw												
				A	2	XW2Z-RO D-D1	G70R-SOC08 *2	Phillips screw												
				Α	2	XW2Z-RO D-D1	G70D-SOC08	Phillips screw												
				Α	2	XW2Z-RO -D1	G70V-SOC16P	Push-in spring												
				Α	2	XW2Z-RO -D1	G70V-SOC16P-C4	Push-in spring												
				А	2	XW2Z-ROC-	G7TC-OC16	Phillips screw												
		1 Fujitsu connector														A	2	XW2Z-RO C-	G7TC-OC08	Phillips screw
			NPN	Α	2	XW2Z-ROC-	G70D-SOC16	Phillips screw												
				A	2	XW2Z-ROC-	G70D-FOM16	Phillips screw												
				A	2	XW2Z-RO C-	G70D-VSOC16	Phillips screw												
X-OD6121-6	32 outputs			A	2	XW2Z-RO C-	G70D-VFOM16	Phillips screw												
				A	2	XW2Z-RO C-	G70A-ZOC16-3 and Relay	Phillips screw												
				A	2	XW2Z-RO C-	G70R-SOC08 *2	Phillips screw												
				A	2	XW2Z-ROC-	G70D-SOC08	Phillips screw												
				A	2	XW2Z-RO C-	G70V-SOC16P	Push-in spring												
				A	2	XW2Z-RO C-	G70V-SOC16P-C4	Push-in spring												
				A	2	XW2Z-RI - D1	G7TC-OC16-1	Phillips screw												
		1 MII		A	2	XW2Z-RO -D1	G70D-SOC16-1	Phillips screw												
IX-OD6256-5	32 outputs	1 MIL connector	PNP	A	2	XW2Z-RO -D1	G70D-FOM16-1 *2	Phillips screw												
				A	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												
				E	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	G70D-VSOC16	Phillips screw												
	16 outputs	1 MIL	NPN	E	None	XW2Z-ROC	G70D-VFOM16	Phillips screw												
	10 0010010	connector		E	None	XW2Z-RO	G70A-ZOC16-3 and Relay	Phillips screw												
				E	None	XW2Z-ROC	G70R-SOC08 *2	Phillips screw												
				E	None	XW2Z-ROC	G70D-SOC08	Phillips screw												
				E	None	XW2Z-ROCC	G70V-SOC16P	Push-in spring												
				E	None	XW2Z-ROLLC	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
	10.	1 Fujitsu		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
	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 suite	1 MIL		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 *2	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
				E	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.
\*10. Details a socket only.

\*2. Product no longer available to order.

# **General Specifications**

	Item	Specification		
Enclosure		Mounted in a panel		
Grounding n	unding method Ground to 100 $\Omega$ or less			
	Ambient operating temperature	0 to 55°C		
	Ambient operating humidity	10% to 95% (with no condensation or icing)		
	Atmosphere	Must be free from corrosive gases.		
	Ambient storage temperature	-25 to 70°C (with no condensation or icing)		
	Altitude	2,000 m max.		
	Pollution degree	2 or less: Meets IEC 61010-2-201.		
Operating environment	Noise immunity	2 kV on power supply line (Conforms to IEC61000-4-4.)		
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 <sup>2</sup> , 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 <sup>2</sup> , 3 times each in X, Y, and Z directions		
Applicable standards *2		cULus: Listed (UL508) or Listed (UL 61010-2-201), ANSI/ISA 12.12.01, EU: EN 61131-2 or EN 61010-2-201, C-Tick or RCM, KC: KC Registration, NK, LR		

 
 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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout	NX bus connector (left) I/O power supply +	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 I2 to 24 VDC A8 B8	DC Input Unit NX-ID3317 A1B1 IN0IN1 • IOV0IOV1 IOG0IOG1 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 Free-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 an each signal)				
		OFF voltage/OFF current	5 VDC max./1 mA max. (between IOV and each signal)				
		ON/OFF response time	100 ns max./100 ns max.				
		Input filter time	Without filter, 1 µs, 2 µs, 4 µs, 8 µs (factory setting), 16 µs, 32 µs, 64 µs, 128 µs, 256 µs				
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation				
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.				
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.				
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	Current consumption from I/O power supply	30 mA max.				
Weight	65 g max.						
Circuit layout	Terminal block IN0 to IN3	rent control	I/O power supply + I/O power supply + I/O power supply – NX bus connector (right)				
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or 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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	30 mA max.
Weight	65 g max.		
Circuit layout	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		ions.
Terminal connection diagram	Additional I/O Power Supply Unit A1 B1 I OV IOV 24 VDC 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
In dia ata na	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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	No consumption
Weight	65 g max.		I
Circuit layout	Terminal block	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 00V IOV 12 to 24 VDC IOV IOV IOG IOG IOG IOG IOG IOG A8 B8	DC Input Unit NX-ID3417 Two- A1 B1 ser IOV0 IOV1 IOV0 IOV1 IOG0 IOG1 IN2 IN3 IOV2 IOV3 IOG2 IOG3 A8 B8	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 F				
	TS indicator, input indicator	Internal I/O common Rated input voltage	PNP 24 VDC (15 to 28.8 VDC)		
	ID3443 ITS	Input current	3.5 mA typical (at 24 VDC), rated current		
	0 1 2 3	ON voltage/ON current	15 VDC min./3 mA min. (between IOG and		
Indicators		OFF voltage/OFF current	each signal) 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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.		
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.		
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	Current consumption from I/O power supply	30 mA max.		
Weight	65 g max.				
Circuit layout		ower upply Current control circuit	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 A IOV IOV 24 VDC A Additional I/O Power Supply Unit IOV IOV IOV IOV IOV IOV IOV IOV IOV	DC Input Unit NX-ID3443 Two- A1B1Ser IN0 IN1 • IOV0 IOV1 • IOG0 IOG1 IN2 IN3 • IOV2 IOV3 • IOG2 IOG3 • A8B8			
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.		

#### NX-ID3444

11	Do to a their	M - d-1	
Unit name	DC Input Unit	Model	NX-ID3444
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
I/O refreshing method	Input refreshing with input changed time		
	TS indicator, input indicators	Internal I/O common	PNP
	ID3444	Rated input voltage	24 VDC (15 to 28.8 VDC)
	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	No filter*
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	30 mA max.
Weight	65 g max.		1
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: 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	- Free-Run refreshing	
	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 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	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout		int control ircuit	//O power supply + //O power supply - //O power supply -
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: No restrictions		
Terminal connection diagram	Power Supply Unit A1 B1 A1 ICO IOV IOV IOV IOV IOV IOV IOV IOV IOV IOV IOC IOG IOG IOG	DV         IOV           IN4         IO           DV         IOV           IN6         IN6	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

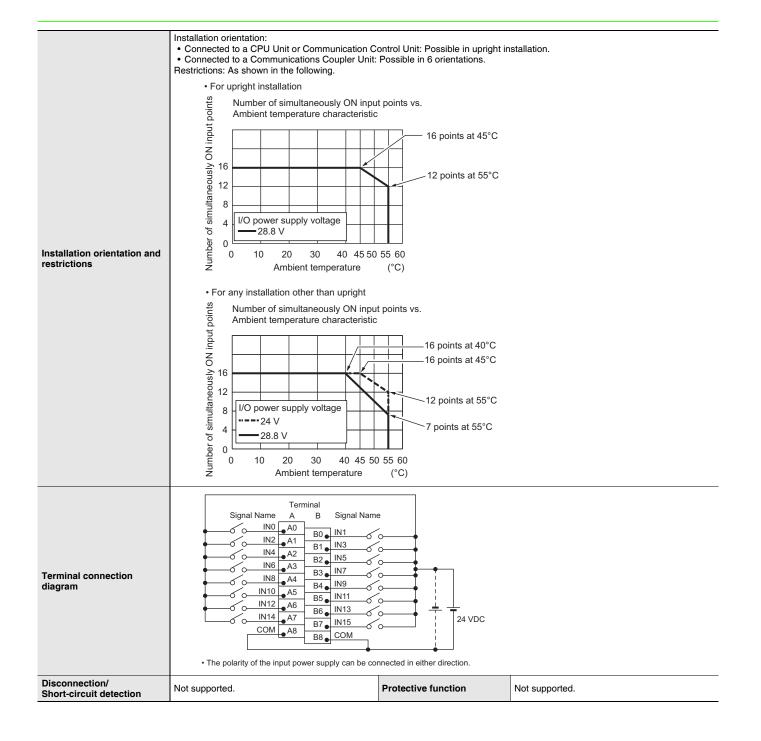
Unit name	DC Input Unit	Model	NX-ID4442	
Number of points	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)	
I/O refreshing method	Selectable Synchronous I/O refreshing or F		terminals)	
/o remesting method	TS indicator, input indicator	Internal I/O common	PNP	
	ID4442	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	IOV: 0.1 A/terminal max.	
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	No consumption	
Weight	65 g max.			
Circuit layout	NX bus connector (left) I/O power supply +	Internation in the second seco	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 A	DG         IOG		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.	

Unit name	DC Input Unit	Model	NX-ID5342
Number of points	16 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	<b>*</b>	
	TS indicator, input indicator	Internal I/O common	NPN
	ID5342	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
	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	12 13 14 13	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 $\Omega$ 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	,	Current capacity of I/O	
method	Supply from the NX bus	power supply terminal	Without I/O power supply terminals
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout		ant 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	IOV         IOV         I           24 VDC         IOV         IOV         IOV           IOV         IOV         IOV         IOV           IOV         IOV         IOV         IOV           IOV         IOV         IOV         IOV           IOV         IOV         IOV         IOV		DC Input Unit NX-ID5342     Two-wire sensor       IN0     IN1       IN2     IN3       IN4     IN5       IN6     IN7       IN8     IN9       IN10     IN11       IN12     IN13       IN14     IN15
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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	Current consumption from I/O power supply	No consumption	
Weight	65 g max.		1	
Circuit layout		t 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	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.	

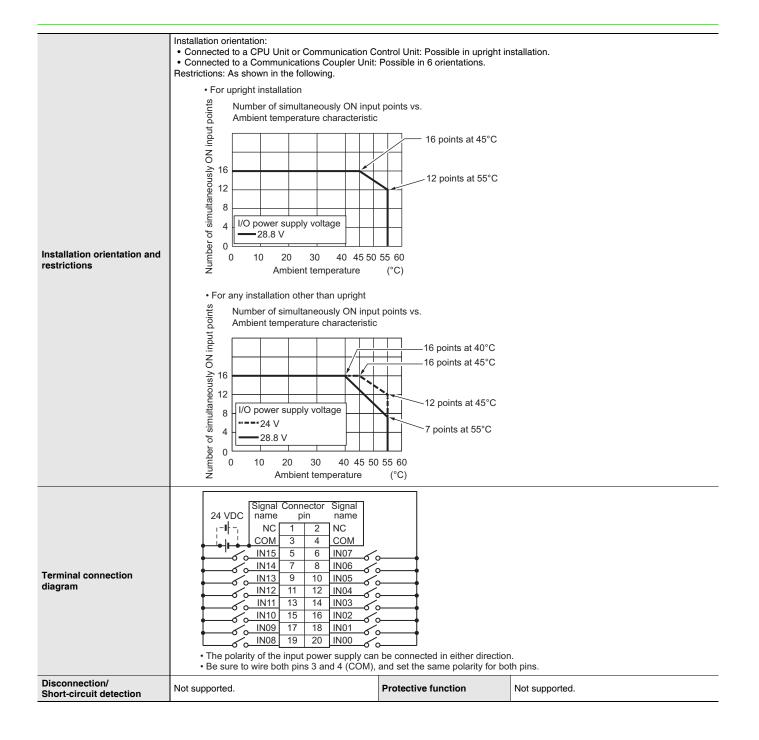
# • DC Input Unit (M3 Screw Terminal Block, 30 mm Width) NX-ID5142-1

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)		
multators	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	<ul> <li>Connected to a CPU Unit or Communication Control Unit</li> <li>0.85 W max.</li> <li>Connected to a Communications Coupler Unit</li> <li>0.55 W max.</li> </ul>	Current consumption from I/O power supply	No consumption		
Weight	125 g max.				
Circuit layout	Terminal block NX bus connector (left)		onnector		



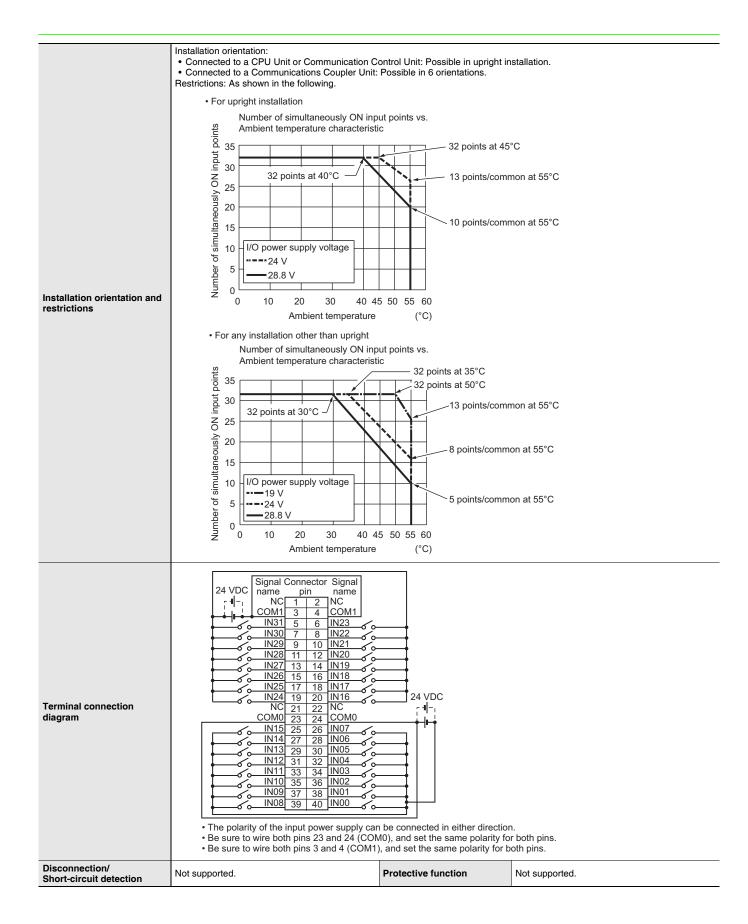
#### • DC Input Unit (MIL Connector, 30 mm Width) NX-ID5142-5

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-F	Run refreshing	
	TS indicator, input indicators	Internal I/O common	For both NPN/PNP
	ID5142-5	Rated input voltage	24 VDC (15 to 28.8 VDC)
	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 $\Omega$ 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	<ul> <li>Connected to a CPU Unit or Communication Control Unit</li> <li>0.85 W max.</li> <li>Connected to a Communications Coupler Unit</li> <li>0.55 W max.</li> </ul>	Current consumption from I/ O power supply	No consumption
Weight	85 g max.		•
Circuit layout	Connector IN0 to IN15 COM COM NX bus connector (left) NX bus connector Supply + I/O power supply - NX bus connector (left) NX bus connector NX bus supply - NX bus supply - NX bus connector NX bus connector (log power supply - NX bus connector (log power (log power supply - (log power supply - (log power supply - (log power (log		



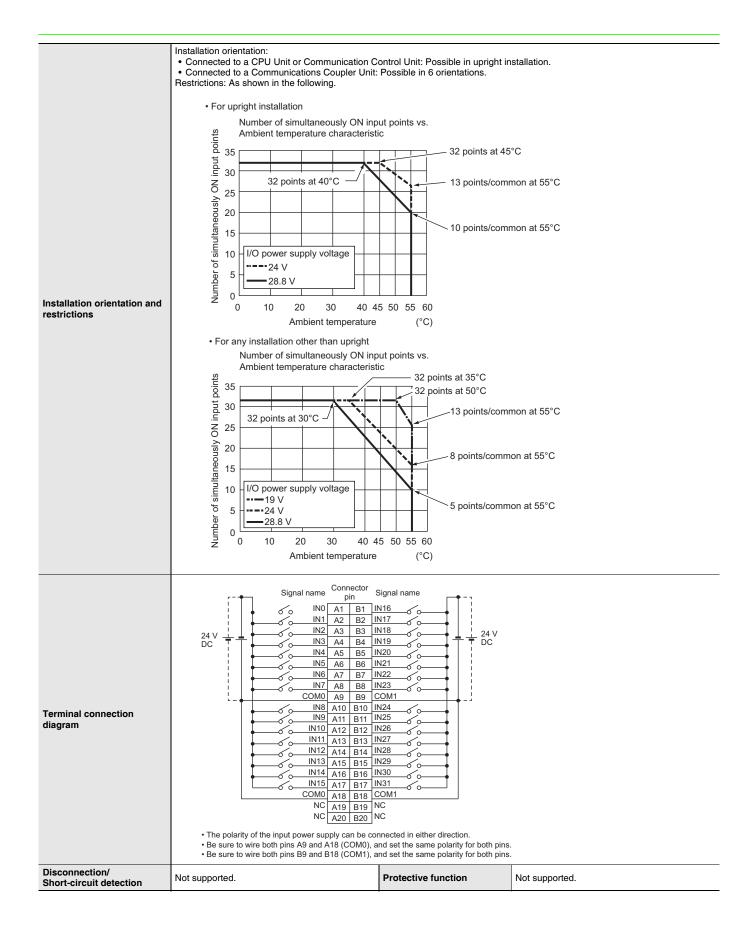
#### NX-ID6142-5

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 $\Omega$ 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	<ul> <li>Connected to a CPU Unit or Communication Control Unit</li> <li>0.90 W max.</li> <li>Connected to a Communications Coupler Unit</li> <li>0.60 W max.</li> </ul>	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 $\Omega$ 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	<ul> <li>Connected to a CPU Unit or Communication Control Unit</li> <li>0.95 W max.</li> <li>Connected to a Communications Coupler Unit</li> <li>0.55 W max.</li> </ul>	Current consumption from I/O power supply	No consumption
Weight	90 g max.		1
Circuit layout	Connector (left) IN0 IN15 COM0 IN15 COM0 IN15 COM0 IN15 COM0 IN16 IN16 IN16 IN16 IN16 IN16 IN16 IN17 IN16 IN17 IN16 IN17 IN16 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 $\Omega$ min. (at 500 VDC) Between the external terminals and the functional ground terminal: 20 M $\Omega$ min. (at 500 VDC) Between the external terminals and internal circuits: 20 M $\Omega$ min. (at 500 VDC) Between the internal circuit and the functional ground terminal: 20 M $\Omega$ min. (at 100 VDC)	Dielectric strength	Between 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	)	
	TS indicator, output indicator	Internal I/O common	NPN
	OD2154	Rated voltage	24 VDC
		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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
	Connected to a CPU Unit		
NX Unit power consumption	<ul> <li>0.85 W max.</li> <li>Connected to a Communications Coupler Unit</li> <li>0.45 W max.</li> </ul>	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) I/O power supply +	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	Additional I/O Power Supply Unit A1 B1 I OV IOV A000 IOC 24 VDC IOV IOV IOV IOV A8 B8	Transistor Output Unit NX-OD2154 0UT0_0UT1 IOV 0UT0 IOV IOV IOV AB BB	Three-wire type
Disconnection/ 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 $\Omega$ 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
/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	<ul> <li>Connected to a CPU Unit 0.85 W max.</li> <li>Connected to a Communications Coupler Unit</li> </ul>	I/O current consumption	40 mA max.
Weight	0.50 W max. 70 g max.		
Circuit layout	NX bus connector (left) I/O power supply + 0	push-pull output circuit.	OUT0 to OUT1 Terminal block 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 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 A8 B8	Transistor Output Unit NX-OD2258 Two-w OUT0 OUT10 IOV IOV IOV IOV NC NC NC NC NC	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

#### NX-OD3121

Unit name	Transistor Output Unit	Model	NX-OD3121		
		External connection	Screwless clamping terminal block (12		
Number of points	4 points	terminals	terminals)		
/O refreshing method	Selectable Synchronous I/O refreshing or Free-Run refreshing				
Indicators	TS indicator, output indicator OD3121	Internal I/O common	NPN 12 to 24 VDC		
	0 1 2 3	Rated voltage Operating load voltage			
		range	10.2 to 28.8 VDC		
		Maximum value of load current	0.5 A/point, 2 A/Unit		
		Maximum inrush current	4.0 A/point, 10 ms max.		
		Leakage current	0.1 mA max.		
		Residual voltage	1.5 V max.		
		ON/OFF response time	0.1 ms max./0.8 ms max.		
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation		
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max		
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.		
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	I/O current consumption	10 mA max.		
Weight	70 g max.				
Circuit layout	NX bus connector (left) //O power supply +		IOV0 to 3 OUT0 to OUT3 Terminal block IOG0 to 3 I/O power supply + I/O power supply - I/O power supply -		
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: No restrictions				
Terminal connection diagram	Additional I/O Power Supply Unit A1 B1 I OV IOV IOG IOG I2 to 24 VDC IOV IOV IOV IOV IOG IOG A8 B8	Transistor Output Unit NX-OD3121       B1       Two-wi         A1       B1       Two-wi         OUT0       OUT1       IOUT0         IOV0       IOV1       IOUT0         IOG0       IOG1       IOUT2         IOV2       IOV3       IOG2         IOG2       IOG3       IOG3         A8       B8       B8	Three-wire type		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.		

#### NX-OD3153

NX-0D3153			
Unit name	Transistor Output Unit	Model	NX-OD3153
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or Free-Run refreshing		
	TS indicator, output indicator	Internal I/O common	NPN
	OD3153 DTS	Rated voltage	24 VDC
	0 1 2 3	Operating load voltage range	15 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 $M\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) [I/O power supply + I/O power supply – This unit uses a push-	pull output circuit.	OUT0 to OUT3 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 A1 B1 I OC IOC 24 VDC A8 B8	Transistor Output Unit NX-OD3153         B1         Two-wi           OUT0         OUT10         IOV0         IOV10           IOV0         IOV10         IOV0         IOV10           IOG0         IOG1         IOV2         IOV30           IOV2         IOV30         IOG2         IOG30           A8         B8         B8         IOV0	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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	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 A1 B1 ●IOV IOV 00G IOG 24 VDC IOV IOV IOV IOV A8 B8	Transistor Output Unit NX-OD3256       B1       Two-wi         A1       B1       Two-wi         OUT0       OUT1       IOUT1         IOV0       IOV1       IOO         IOG0       IOG1       IOUT2         IOV2       IOV3       IOG2         IOG2       IOG3       B8	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD3257
		External connection	Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		
	TS indicator, output indicator	Internal I/O common Rated voltage	PNP 24 VDC
	OD3257	Operating load voltage	15 to 28.8 VDC
Indicators	0 1 2 3	range Maximum value of load	0.5 A/point, 2 A/Unit
Indicators		current Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply	,	Current capacity of I/O	IOV: 0.5 A/terminal max.,
method	Supply from the NX bus	power supply terminal	IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.85 W max.     Connected to a Communications Coupler Unit 0.50 W max.	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) I/O power supply + I/O power supply – This unit uses a push- Installation orientation:	-pull output circuit.	OUT0 to OUT3 IOG0 to 3 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 I OV IOV I OV IOV 24 VDC I OV IOV I OG I OG I O I O	Transistor Output Unit NX-OD3257 A1B1Two-wi OUT0OUT1 IOV0IOV1 IOG0IOG1 OUT2OUT3 IOV2IOV3 IOG2IOG3 A8B8	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD3268
Number of points	4 points	External connection terminals	Screwless clamping terminal block (16 terminals)
/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
	UTS 0 1	Operating load voltage range	15 to 28.8 VDC
ndicators	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
nsulation 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
/O power supply nethod	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	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.85 W max.</li> <li>Connected to a Communications Coupler Unit 0.50 W max.</li> </ul>	Current consumption from I/O power supply	20 mA max.
Weight	70 g max.	·	·
Circuit layout	NX bus connector (left) VO power supply + VO power supply +		V 0 to IOV 3 DM (+V) JT 0 to OUT 3 G 0 to IOG 3 D power ppply + D power pply - NX bus connector (right)
nstallation 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		
Ferminal connection diagram	Transistor Output Unit NX-OD3268 A1 B1 OUT0 OUT1 IOV0 IOV1 IOG0 IOG1 OUT2 OUT3 IOV2 IOV3 IOG2 IOG3 COM (+V) COM		
	<ul> <li>COM (+V) has 2 terminals, so be sure to wire b</li> </ul>	ooth terminals.	

NX-0D4121			1
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	-	
	TS indicator, output indicator	Internal I/O common	NPN
	<b>OD4121</b>	Rated voltage	12 to 24 VDC
	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
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max.
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.55 W max.</li> </ul>	I/O current consumption	10 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) I/O power supply +		I/O power supply + I/O power supply + 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 I2 to 24 VDC A8 B8 A	Connection Unit	0     IOV1       2     OUT3       2     IOV3       4     OUT5       4     IOV5       0     OUT7
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	Transistor Output Unit	Model	NX-OD4256
Number of points	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	Free-Run refreshing	
	TS indicator, output indicator	Internal I/O common	PNP
	OD4256	Rated voltage	24 VDC
	DTS 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
nsulation 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
/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	<ul> <li>Connected to a CPU Unit or Communication Control Unit 1.00 W max.</li> <li>Connected to a Communications Coupler Unit 0.65 W max.</li> </ul>	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) I/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 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 Selectable Synchronous I/O refreshing or F	terminals	terminals)
/O refreshing method	TS indicator, output indicator	Internal I/O common	NPN
	OD5121	Rated voltage	12 to 24 VDC
	∎TS 0 1 2 3	Operating load voltage range	10.2 to 28.8 VDC
Indicators	4 5 6 7 8 9 10 11 12 13 14 15	Maximum value of load	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	$20 \text{ M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.00 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
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communica • 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         A1       B1       Two-wire type         OUT0       OUT1       OUT2         OUT2       OUT3       OUT4         OUT6       OUT7         OUT8       OUT9         OUT10       OUT11         OUT12       OUT13         OUT4       OUT5         OUT6       OUT7         OUT10       OUT11         OUT12       OUT13         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	
	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 $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 1.10 W max.</li> <li>Connected to a Communications Coupler Unit 0.70 W max.</li> </ul>	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) NX bus tive to be 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	In Unit         Connection Unit           B1A1         B1         A1           IOV         IOG         IOG           IOV         IOG         IOG	Two-wire type B1 Two-wire type OUT0 OUT1 OUT2 OUT3 OUT4 OUT5 OUT6 OUT7 OUT8 OUT9 Three-wire type DUT10 OUT11 OUT11 OUT13 OUT12 OUT3 OUT3 OUT3 OUT4 OUT5 OUT6 OUT7 OUT3 OUT7 OUT3 OUT7 OUT6 OUT7
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
	DJ 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 5 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.90 W max.</li> <li>Connected to a Communications Coupler Unit 0.60 W max.</li> </ul>	Current consumption from I/O power supply	30 mA max.
Weight	125 g max.		
Circuit layout	NX bus connector (left)	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	UT10 A5 DE OUT11		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

#### NX-OD5256-1

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)
I/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
	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	Maximum value of load current	0.5 A/point, 5 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 0.95 W max.</li> <li>Connected to a Communications Coupler Unit 0.65 W max.</li> </ul>	Current consumption from I/O power supply	30 mA max.
Weight	125 g max.		1
Circuit layout	NX bus connector (left)		M (+V) T0 to OUT15 power pply + power pply - NX bus connector (right)
Installation orientation and restrictions	<ul> <li>Installation orientation:</li> <li>Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.</li> <li>Connected to a Communications Coupler Unit: Possible in 6 orientations.</li> <li>Restrictions: No restrictions</li> </ul>		
Terminal connection diagram	Terminal           Signal name         A         B         Signal na           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         OUT14         A7         B7         OUT15           OV         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.
<b>B1</b>		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
	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.
	<ul> <li>Connected to a Communications Coupler Unit 0.60 W max.</li> </ul>	no power suppry	
Weight	80 g max.		I
			+V
			+V
		j:	OUT0 to OUT15
	Three contracts of the second		Connector
Circuit layout		└──┲─┼─ <u>╋</u> ╵┝ <del>┥</del> ─┘╴╎╴┃	
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 restrictions	<ul> <li>Connected to a CPU Unit or Communication (</li> <li>Connected to a Communications Coupler Unit</li> </ul>		nstallation.
	Restrictions: No restrictions		
	Signal Connector	Signal	
	12 to name pin	name	
	24 VDC +V 1 2	+V	
	COM 3 4	СОМ	
	U OUT15 5 6		
Terminal connection	OUT14 7 8		
Terminal connection diagram	U OUT13 9 10	OUT05	
	L OUT12 11 12	OUT04	
	OUT11 13 14		
	OUT10 15 16		
	OUT09 17 18		
	L OUT08 19 20		
	<ul> <li>Be sure to wire both pins 3 and 4 (COM).</li> <li>Be sure to wire both pins 1 and 2 (+V).</li> </ul>		
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-I	terminals	
No renesting method	TS indicator, output indicator	Internal I/O common	PNP
		Rated voltage	24 VDC
	OD5256-5	Operating load voltage range	20.4 to 28.8 VDC
Indicators	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	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) // O power supply +	Short-circuit Protection	COM (+V) COM (+V) OUT0 to OUT15 OV OV I/O power supply + I/O power supply - I/O power supply -
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communication ( • Connected to a Communications Coupler Uni Restrictions: No restrictions		nstallation.
Terminal connection diagram	Signal name         Connector name           24 VDC         COM (+V)         1         2           0V         3         4           0UT15         5         6           0UT14         7         8           0UT13         9         10           0UT12         11         12           0UT11         13         14           0UT10         15         16           0UT010         15         16           0UT010         15         16           0UT08         19         20           • Be sume to wire both pins 1 and 2 (COM (+V)).         • Be sume to wire both pins 2 and 4 (00)	0V           OUT07         L           OUT06         L           0UT05         L           0UT04         L           0UT03         L           0UT02         L           0UT01         L	
Disconnection/Short-circuit	Be sure to wire both pins 3 and 4 (0V).  Not supported.	Protective function	With load short-circuit protection.
detection	Not supported.		

#### 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
	■ TS ■ TS 0 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Maximum value of load current	0.5 A/point, 2 A/common, 4 A/Unit
	24 25 26 27 28 29 30 31	Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $M\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.00 W max.     Connected to a Communications Coupler Unit 0.80 W max.	Current consumption from I/O power supply	50 mA max.
Weight	90 g max.		
Circuit layout		+V0 +V0 OUT0 to OUT15 COM0 +V1 +V1 +V1 +V1 +V1 OUT16 to OUT31	Connector
	NX bus [I/O power supply + o [I/O power supply - o [I/O power supp	I/O power	connector
Installation orientation and restrictions	Connected to a CPU Unit or Communication C     Connected to a Communications Coupler Unit     Restrictions: No restrictions		nstallation.

Terminal connection diagram	Signal name           24 VDC         +V1           COM1           L         OUT31           L         OUT30           L         OUT29           L         OUT29           L         OUT26           L         OUT27           L         OUT26           L         OUT27           L         OUT26           L         OUT27           L         OUT26           L         OUT21           OUT14         OUT13           L         OUT12           L         OUT12           L         OUT11           L         OUT11           L         OUT10           L         OUT10	Connector pin         Signal name           1         2         +V1           3         4         COM1           5         6         OUT23         L           7         8         OUT22         L           9         10         OUT21         L           9         10         OUT21         L           11         12         OUT20         L           13         14         OUT19         L           15         16         OUT18         L           17         18         OUT17         L           19         20         OUT16         L           21         22         +V0         Z           23         24         COM0         L           24         COM0         L         L           27         28         OUT07         L           29         30         OUT05         L           31         32         OUT04         L           33         34         OUT03         L           35         36         OUT02         L           37         38         OUT01         L  <	• Be sure to wire both pins 21 and 22 (+V0).
		35 36 OUT02 L	<ul> <li>Be sure to wire both pins 21 and 22 (+V0).</li> <li>Be sure to wire both pins 23 and 24 (COM0).</li> <li>Be sure to wire both pins 1 and 2 (+V1).</li> <li>Be sure to wire both pins 3 and 4 (COM1).</li> </ul>
Disconnection/Short-circuit detection	Not supported.	Protective function	Not supported.

#### NX-OD6256-5

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

	Signal Connector Signal name pin name
	COM1 (+V) 1 2 COM1 (+V) 24 VDC
	OUT27 13 14 OUT19
Terminal connection	
diagram	OUT24 19 20 OUT16
	COM0 (+V) 21 22 COM0 (+V) 24 VDC
	• 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	Fujitsu connector (40 terminals)				
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F					
	TS indicator, output indicator	Internal I/O common	NPN			
	OD6121-6	Rated voltage	12 to 24 VDC			
	DTS	Operating load voltage range	10.2 to 28.8 VDC			
Indicators	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Maximum value of load current         0.5 A/point, 2 A/common,				
	16 17 18 19 20 21 22 23 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.			
Dimensions	30 (W) x 100 (H) x 71 (D)	ON/OFF response time Isolation method	0.1 ms max./0.8 ms max. Photocoupler isolation			
	$20 \text{ M}\Omega$ min. between isolated circuits (at 100		510 VAC between isolated circuits for 1 minute at			
Insulation resistance	VDC)	Dielectric strength	a leakage current of 5 mA max.			
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals			
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.10 W max.     Connected to a Communications Coupler Unit 0.80 W max.	Current consumption from I/O power supply	50 mA max.			
Weight	90 g max.					
Circuit layout	NX bus connector (left)					
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communication C • Connected to a Communications Coupler Unit Restrictions: No restrictions	Control Unit: Possible in upright in Possible in 6 orientations.	nstallation.			
Terminal connection diagram	12 to 24 VDC Signal pin name OUTO A1 B1 OUT16 A1 B1 OUT16 COUT1 A2 B2 OUT17 A2 B2 OUT17 A3 B3 OUT18 COUT12 A3 B3 OUT18 A B6 OUT21 L OUT3 A4 B4 OUT20 A7 B7 OUT22 L OUT7 A8 B6 OUT21 L OUT7 A8 B6 OUT21 L OUT7 A8 B6 OUT21 L OUT7 A8 B6 OUT21 L OUT7 A8 B6 OUT21 L OUT7 A8 B6 OUT23 L OUT7 A8 B6 OUT21 L OUT7 A8 B6 OUT21 L OUT7 A8 B6 OUT23 L OUT7 A1 B11 OUT24 L OUT9 A12 B12 OUT25 L OUT12 A15 B15 OUT26 L OUT12 A15 B15 OUT28 L OUT14 A16 B16 OUT29 L OUT12 A15 B15 OUT28 L OUT14 A16 B16 OUT29 L OUT14 A16 B16 OUT29 L OUT14 A17 B17 OUT28 L OUT14 A16 B16 OUT29 L OUT14 A17 B17 OUT28 L OUT14 A16 B16 OUT29 L OUT14 A16 B16 OUT29 L OUT14 A17 B17 OUT28 L OUT14 A16 B16 OUT29 L OUT14 A16 B16 OUT29 L OUT14 A17 B17 OUT28 L OUT14 A16 B16 OUT29 L OUT14 A17 B17 OUT30 B19 J V1 Be sure to wire both pins A9 and A19 (COM1). Be sure to wire both pins A10 and A20 (+V0). Be sure to wire both pins B10 and B20 (+V1).					
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				
U	TS indicator, output indicator	Relay type	N.O. contact		
Indicators	OC2633 TS 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, 1 mA		
Relay service life	Electrical: 100,000 operations* Mechanical: 20,000,000 operations	ON/OFF response time	15 ms max./15 ms max.		
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Relay isolation		
Insulation resistance	Between A1/B1 terminals and A3/B3 terminals: 20 M $\Omega$ min. (500 VDC) Between the external terminals and internal circuits: 20 M $\Omega$ min. (500 VDC) Between the internal circuit and GR terminal: 20 M $\Omega$ min. (100 VDC) Between the external terminals and GR terminal: 20 M $\Omega$ min. (500 VDC)	Dielectric strength	Between A1/B1 terminals and A3/B3 terminals: 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 <sup>2</sup> 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/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.				
Weight	65 g max.				
Circuit layout	NX bus connector (left) // O power supply + // // // // // // // // // // // // //	ply	0 to 1 Terminal block C0 to C1 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	Relay Output Unit NX-OC2633 B1 0 c0 0 c0 0				
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.		

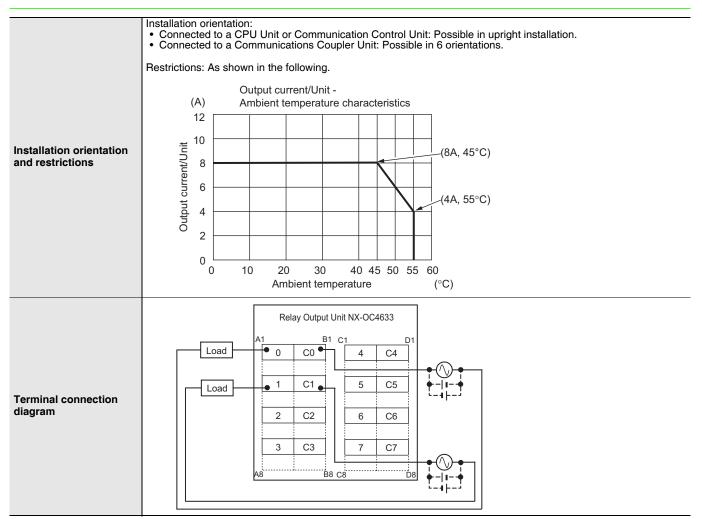
\* Electrical service life will vary depending on the current value. Refer to "NX-series Digital I/O Units User's Manual" for details.

#### 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)			
I/O refreshing method	Free-Run refreshing					
Indicators	TS indicator, output indicator OC2733 ■TS 0 1	Maximum switching capacity Minimum switching	250 VAC/2 A $(\cos\phi = 1)$ , 250 VAC/2 A $(\cos\phi = 0.4)$ , 24 VDC/2 A, 4 A/Unit			
		capacity	5 VDC, 10 mA			
Relay service life	Electrical: 100,000 operations Mechanical: 20,000,000 operations	ON/OFF response time	15 ms max./15 ms max.			
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Relay isolation			
Insulation resistance	Between A1/3, B1/3 terminals and A5/7, B5/7 terminals: 20 M $\Omega$ min. (at 500 VDC) Between the external terminals and functional ground terminal: 20 M $\Omega$ min. (at 500 VDC) Between the external terminals and internal circuits: 20 M $\Omega$ min. (at 500 VDC) Between the internal circuit and the functional ground terminal: 20 M $\Omega$ min. (at 100 VDC)	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	Supply from external source	Current capacity of I/O	Without I/O power supply terminals			
method 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.     Consumption from I/O power supply     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 contact You cannot replace the relay.					
Installation orientation and restrictions	Installation orientation: • Connected to a CPU Unit or Communica • Connected to a Communications Couple Restrictions: No restrictions					
Terminal connection diagram	Relay Output Unit NX-OC2733         B1           Load         •NO0         NC0           C0         C0         •           NO1         NC1         •           C1         C1         C1           A8         B8         •	Load $Vinit$ A1 NX-OC2733 B1 Load $Oint Coord Coo$				
Disconnection/Short-		/ 1	1			

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

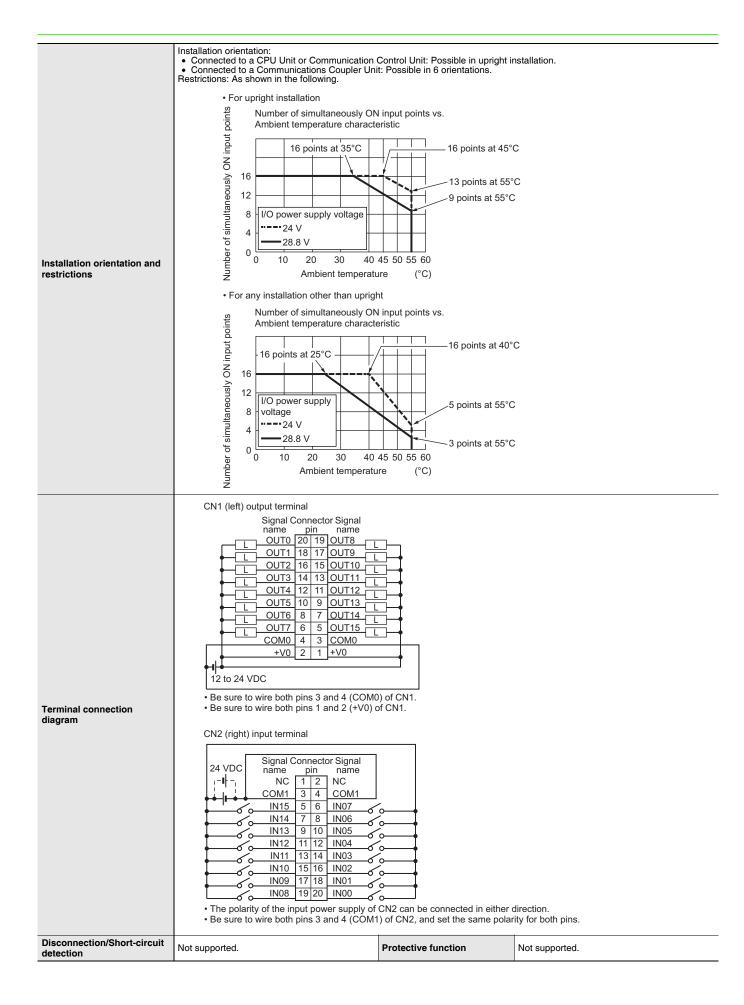
Unit name	Relay Output Unit	Model	NX-OC4633		
Number of points	8 points, independent contacts	External connection terminals	Screwless clamping terminal block (8 terminals x 2)		
I/O refreshing method	Free-Run refreshing				
Indicators	TS indicator, output indicator OC4633 TS 0 1 2 3	Relay type Maximum 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 $500 \text{ VDC}$ ) Between the external terminals and the functional ground terminal: $20 \text{ M}\Omega \text{ min.}$ (at $500 \text{ VDC}$ ) Between the external terminals and internal circuits: $20 \text{ M}\Omega \text{ min.}$ (at $500 \text{ VDC}$ ) Between the internal circuit and the functional ground terminal: $20 \text{ M}\Omega \text{ min.}$ (at $100 \text{ VDC}$ )	Dielectric strength	Between output bits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and the functional ground terminal: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the external terminals and internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.		
Vibration resistance	Conforms to IEC 60068-2-6. 5 to 8.4 Hz with amplitude of 3.5 mm, 8.4 to 150 Hz, acceleration of 9.8 m/s <sup>2</sup> 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/s <sup>2</sup> , 3 times each in X, Y, and Z directions		
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals		
NX Unit power consumption	<ul> <li>Connected to a CPU Unit or Communication Control Unit 2.00 W max.</li> <li>Connected to a Communications Coupler Unit 1.65 W max.</li> </ul>	Current consumption from I/O power supply	No consumption		
Weight	140 g max.				
Circuit layout	NX bus connector (left) I/O power supply +		0 to 7 C0 to C7 C0 to C7 I/O power supply + I/O power supply - NX bus connector (right)		
	You cannot rep	place the relay.	]		



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

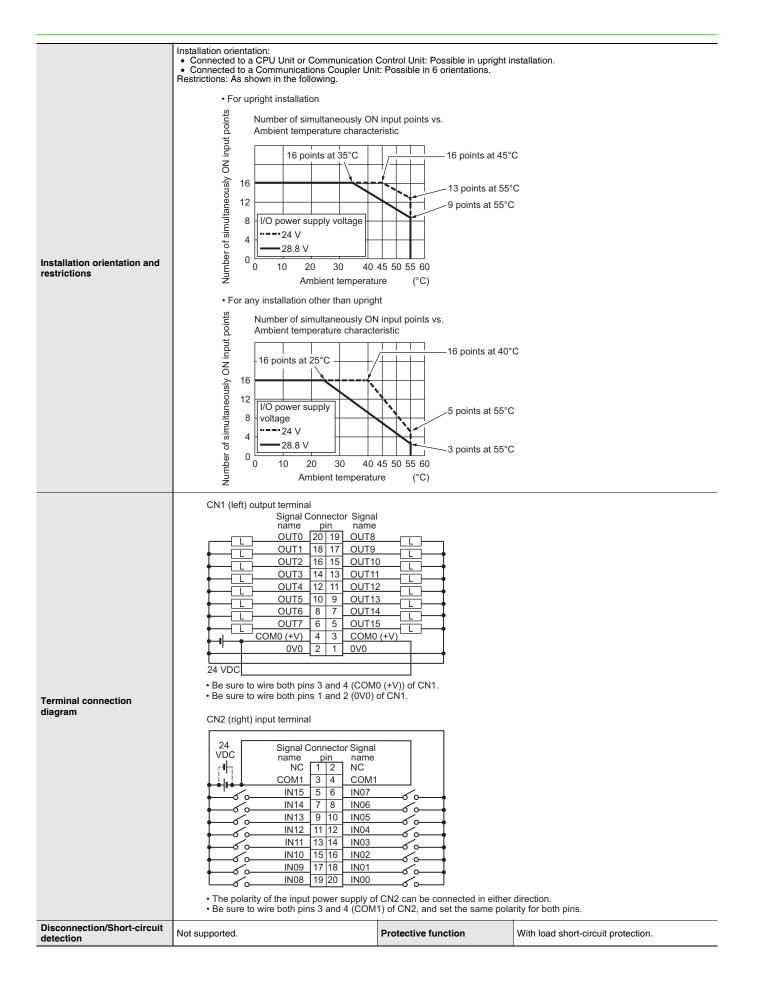
## • DC Input/Transistor Output Unit (MIL Connector, 30 mm Width) NX-MD6121-5

Section (CN1)     of load current     0.5 A/point, 2 A/Unit     Input mathematical section (CN2)     current     each signal)       Maximum inrush current     4.0 A/point, 10 ms max.     0.1 ms max.     0FF voltage/OFF current     5 VDC max./1 mA max. (between COM a each signal)       Leakage current     0.1 mA max.     1.5 V max.     0N/OFF response ime     20 µs max./400 µs max.       ON/OFF response ime     0.1 ms max./0.8 ms max.     0.1 ms max./0.8 ms max.     No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 24 ms, 8 ms, 16 ms, 30 (W) x 100 (H) x 71 (D)       Indicators     Imput filter time     Dislation method     Photocoupler isolated cincuits for 1 m at a leakage c		D6121-5				
Number of points         16 Inputs to outputs         terminate         2 ML connectors (2) demmals).           VO refreshing         Multicing Synchronous I/O refreshing and Free-Run refereshing         For both NPN/PNP           Internal I/O common         NPN         For both NPN/PNP           Added voltage         12 to 24 VDC         For both NPN/PNP           Output for adding range         0.2 to 28.8 VDC         For both NPN/PNP           Internal I/O common         0.5 Algoint, 2 A/Unit         For both NPN/PNP           Internal I/O content         0.5 Algoint, 2 A/Unit         Internal I/O common         For both NPN/PNP           Internal I/O content         0.5 Algoint, 2 A/Unit         Internal I/O content         S/DC max/1 nx max. (between COM a each signal)           Internal I/O content         0.1 mx max.         Internal I/O content         S/DC max/1 nx max. (between COM a each signal)           Internal I/O content time         0.1 mx max./D.8 ms max.         Internal I/O Content         S/DC max/1 nx max. (between COM a each signal)           Internal I/O content time         0.1 mx max./D.8 ms max.         Internal I/O Content time         S/DC max/1 nx max. (between COM a each signal)           Internal I/O Content time         0.1 mx max./D.8 ms max.         Internal I/O Content time         S/DC max/1 nx max. (between COM a each signal)           Internal I/O Content time	Unit name	e	DC Input/Transistor Output Unit	Model	NX-MD6121-5	
Internal I/O common         NPN           Rated voltage         12 to 24 VDC           Operating load voltage range         10 2 to 28.8 VDC           Mated voltage         0.5 A point, 2 A/Unit           Maximum Nalue of load current         0.5 A point, 2 A/Unit           Maximum Insue of load current         0.4 Apoint, 10 ms max.           Leakage current         0.1 mA max.           Residual voltage         1.5 V max.           Indicators         0.1 ms max.0.8 ms max.           TS indicators         0.1 ms max.0.8 ms max.           UP oppoint         0.1 ms max.0.8 ms ma	Number o	of points			2 MIL connectors (20 terminals)	
common         NPN           Rated voltage         12 to 24 VDC           Outopting         Operating load         10.2 to 28.8 VDC           Indicators         Input current         7 mA typical (at 24 VDC)           Maximum value         0.5 A/point, 2 A/Unit         Input current         7 mA typical (at 24 VDC)           Maximum value         0.5 A/point, 2 A/Unit         Input current         7 mA typical (at 24 VDC)           Maximum value         0.5 A/point, 10 ms max.         0.1 worksept and the section (CMA)         10 Worksept and the section (CMA)           Residual voltage         1.5 V max.         Input filter time         No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 4ms, 4ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms, 24 ms, 28 ms, 16 ms, 228 ms, 24 ms, 128 ms, 24 ms,	I/O refres	hing method	Switching Synchronous I/O refreshing and Free-	Run refresh	ing	
Hated voltage         12 16 24 VDC         voltage         24 VDC (15 0 28.8 VDC)           Output (CN1)         10 2 to 28.8 VDC         input current         7 mA typical (a124 VDC)           Maximum value (CN1)         0.6 A/point, 2 A/Unit         input 15 VDC min.2 mA min. (between COM a each signal)           Leakage current         0.1 mA max.         0.1 mA max.         0.1 mA max.(between COM a each signal)           NO/DFF response inc         0.1 ma max/0.8 ms max.         0.1 ms max/0.8 ms max.         0.1 ms max/0.8 ms max.           Mb0121-5         TS indicator, I/O indicators         TS indicator, I/O indicators         0 insulation resistance (a1 100 VDC)         0 (W) x 10 (P) x 71 (D)           Inclustors         1         2         3 4 5 6 7 1         1         0 power supply method         Supply from external source CNU power supply terminal           1         1         2         3 4 5 6 7 1         1         0 power supply terminal         Supply from external source CNU power supply terminal           1         1         2         3 4 5 6 7 1         0         0 power supply terminal         Supply from external source CNU power supply terminal           1         1         1         1         1         1         1         1           2         0         1         1         1         0	common		NPN			For both NPN/PNP
Voltage range         IN2 82 8 VCC         Input space			12 to 24 VDC			24 VDC (15 to 28.8 VDC)
excition (CN1)     of load current Maximum inrush (CN2)     0.5 Apoint, 2 AUDIt     excition (CN2)     each signal)       Head current (CN2)     4.0 A/point, 10 ms max.     of Fer source (CN2)     of Fer source (CN2)     S VDC max./1 mA max. (between COM a each signal)       Hesidual voltage (CN2)     1.5 V max.     of Fer source (CN2)     0N/OFF response (CN2)     20 µs max./400 µs max.       TS indicator, I/O indicators     15 indicator, I/O indicators     15 indicator, I/O indicators     30 (W) x 100 (H) x 71 (D)       Isolation method     Photocoupler isolated circuits (at 100 VDC)     12 (2 3 4 5 6 7 (1 (2 9 1 2 3 4 5 6 7 (1 (2 9 1 0 11 12 13 14 15)     Dimensions     30 (W) x 100 (H) x 71 (D)       Isolation resistance     20 M2 min, between isolated circuits for 1 m at a leakage current of 5 mA max.     10 power supply method     Supply for mexternal source       Indicators     1 (2 (1 0 1 1 2 13 14 15)     10 Power soupply method     Supply for external source     10 power supply method     Supply for minals       Indicators     0 (H) (H) output circuit     I/O power supply method     Supply for minals     0 connector       Vieight     10 S g max.     0 MA max.     0 Sig max.			10.2 to 28.8 VDC		Input current	7 mA typical (at 24 VDC)
indicators       4.0 A/point, 10 ms max.       indicators       input filter time       each signal)       each signal)         Indicators       0.1 mA max.       input filter time       20 µs max./400 µs max.         Input filter time       0.1 ms max./0.8 ms max.       Input filter time       No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 24 ms, 128 ms, 12	section		0.5 A/point, 2 A/Unit	section		15 VDC min./3 mA min. (between COM and each signal)
Leakage current     20 is max.4400 js max.       Time     20 is max.4400 js max.       Indicator set in a max.       Indicator, I/O indicators       Binensions     30 (W) x 100 (H) x 71 (D)       Isolation method     Photocoupler isolation       Indicator, I/O indicators       Dimensions     30 (W) x 100 (H) x 71 (D)       Isolation method     Photocoupler isolation       Indicator, I/O indicators       Dimensions     30 (W) x 100 (H) x 71 (D)       Isolation method     Photocoupler isolation       Indicator, I/O indicators       Indicator, I/O power       Indicator, I/O power       Indicator, I/O power       Indicator, I/O power	(CN1)		4.0 A/point, 10 ms max.	(CN2)		5 VDC max./1 mA max. (between COM and each signal)
ON/OFF response time       0.1 ms max./0.8 ms max.       Input filter time       No filter, 0.25 ms, 1 ms (default), 2 4 ms, 8 ms, 128 ms, 32 ms, 64 ms, 128 ms, 64 ms, 128 ms, 32 ms, 64 ms, 128 ms, 64 ms, 128 ms, 128 ms, 64 ms, 128 ms,		Leakage current	0.1 mA max.			20 μs max./400 μs max.
ON/OF Fresponse time       0.1 ms max./0.8 ms max.       Input mer time       4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 2 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 2 30 (W) × 100 (H) × 71 (D)         Indicators       MD6121-5 CN 1 [ 8 9 10 11 12 13 14 15 2 [ 8 9 10 11 12 13 14 15 2 [ 8 9 10 11 12 13 14 15 2 [ 8 9 10 11 12 13 14 15       Dimensions       30 (W) × 100 (H) × 71 (D)         Indicators       NX Unit power supply method Supply form external source       Diverse supply method Current capacity of I/O power Without I/O power supply terminal       Supply form external source         Current consumption I/O power supply       NX Unit power consumption I/O power supply       O max.       Connected to a CPU Unit or Communit 0.70 W max.         Current consumption I/O power supply       Supply form external source       Current consumption I/O power supply       30 mA max.         Veight       105 g max.       Connector Supply       NX bus Connector I/O power       NX bus Connector I/O power       I/O power Supply         Cricuit layout       I/O power (HP)       I/O power       NX bus Connector       NX bus Connector       NX bus Connector       NX bus Connector		Residual voltage	1.5 V max.	-		No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms,
Indicators       Isolation method       Photocoupler isolation         Indicators       Isolation method       Photocoupler isolation         Indicators       Isolation method       Photocoupler isolated circuits         Indicators       Isolation method       Photocoupler isolated circuits         Indicators       Isolation method       Photocoupler isolated circuits for 1 n at a leakage current of 5 mA max.         I/2       Isolation method       Supply form external source         Current capacity of I/O power supply terminals         INX Unit power consumption       • Connected to a CPU Unit or Communications Coupling to a CPU Unit or Communications Coupling         00 mA max.       • Connected to a CPU Unit or Communications Coupling         00 mA max.       • Connected to a CPU Unit or Communications Coupling         00 mA max.       • Connected to a Communications Coupling         00 mA max.       • Connector         00 max       • Connector         00 max       • Connector         00 max       • Connector			0.1 ms max./0.8 ms max.		Input filter time	4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Indicators       Image: Constraint of the second seco			TS indicator, I/O indicators	Dimensio	ns	30 (W) x 100 (H) x 71 (D)
Indicators       Insulation resistance       20 MM Init. Policited circuits (at 100 VDC)         Insulation resistance       20 MM Init. Policited circuits (at 100 VDC)         Dielectric strength       510 VAC between isolated circuits or 1 m at a leakage current of 5 mA max.         I/O power supply method       Supply form external source         Current capacity of I/O power supply terminal       Supply terminals         NX Unit power consumption       Connected to a CPU Unit or Communic Control Unit 1.00 W max.         Current consumption from I/O power supply       30 mA max.         Weight       105 g max.         CN1 (lift) output circuit       If the power supply is the power supply weight         Insulation resistance       NX bus connector         NX bus connector       I/O power supply			MD6121-5	Isolation r	nethod	
Indicators       Image: Constraint of the start of the s			CN_ ∎TS	Insulation	resistance	(at 100 VDC)
Indicators <sup>2</sup> L 8 9 10 11 12 13 14 15 <sup>10</sup> Dower supply method           Supply indifferent a source          Indicators <sup>10</sup> Dower supply terminal <sup>10</sup> Dower supply method <sup>10</sup> Dower supply method <sup>10</sup> Dower supply method          Indicators <sup>10</sup> Dower supply terminal <sup>10</sup> Dower supply terminal <sup>10</sup> Current capacity of I/O power <sup>10</sup> Dower supply terminals          NX Unit power consumption <sup>10</sup> Dower supply <sup>10</sup> Dower supply <sup>10</sup> Connected to a CPU Unit or Communic <sup>10</sup> Connected to a Communications Coupling          Weight <sup>10</sup> Dower supply <sup>10</sup> Dower supply <sup>10</sup> Dower supply          Weight <sup>10</sup> Dower supply <sup>10</sup> O DOWEr <sup>10</sup> Dower          NX bus <sup>11</sup> Dower <sup>10</sup> Dower <sup></sup>			<sup>1</sup> L 8 9 10 11 12 13 14 15	Dielectric strength		
Indicators       supply terminal       without 1/0 power supply terminals         NX Unit power consumption       • Connected to a CPU Unit or Communic Control Unit 1.00 W max. • Connected to a Communications Coup Unit 0.70 W max.         Current consumption from I/O power supply       30 mA max.         Weight       105 g max.         CN1 (left) output circuit       • Vonector Unit 0.70 W max.         CN1 (left) output circuit       • Vonector Unit 0.70 W max.         Weight       105 g max.			<sup>2</sup> L8 9 10 11 12 13 14 15			Supply from external source
NX Unit power consumption       Control Unit 1.00 W max.         Connected to a Communications Coup Unit 0.70 W max.         Current consumption from VO power supply       30 mA max.         Weight       105 g max.         CN1 (left) output circuit       Image: Connector View of the connector View of the connector View of the connector View of the connector         NX bus connector       VO power         NX bus (left)       VO power         NX bus (left)       VO power         NX bus (left)       VO power         NX bus (left)       VO power	Indicators	s				Without I/O power supply terminals
Circuit layout			NX Unit power consumption		ower consumption	<ul> <li>1.00 W max.</li> <li>Connected to a Communications Coupler Unit</li> </ul>
Circuit layout				I/O power supply		30 mA max.
Circuit layout						105 g max.
Connector NX bus connector NX bus connector	Circuit layout		NX bus connector (left) NX bus connector (left) NX bus connector Supply – CN2 (right) input circuit Connector IN0 to IN15 COM1 NX bus Connector I/O power Supply – CM1 NX bus Connector		V0 OUT15 Connector Connector Connector Connector Connector Connector Connector (right) Connector Connector (right)	



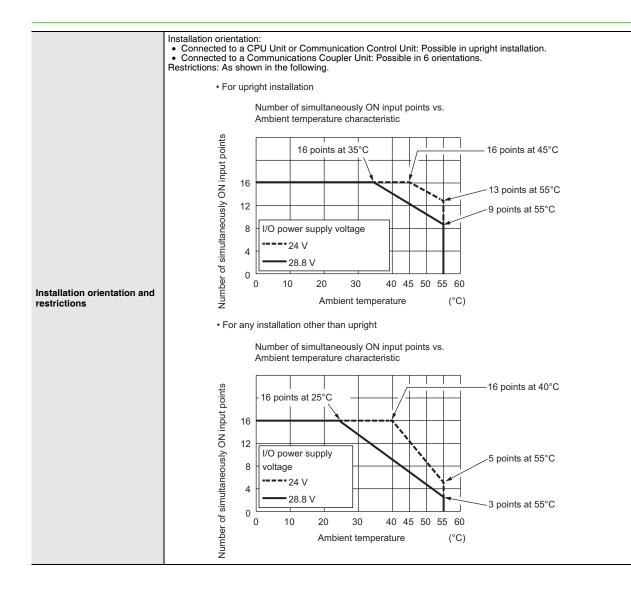
#### NX-MD6256-5

NX-MD6256-5		Medal		
	DC Input/Transistor Output Unit	Model External c	onnection	NX-MD6256-5
Jumber of points         16 inputs/16 outputs         Exeminal connection           /O refreshing method         Switching Synchronous I/O refreshing and Free-Run refreshing		2 MIL connectors (20 terminals)		
I/O refreshing method Internal I/O		Run retresn	Internal I/O	For both NPN/PNP
common	PNP		common	
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 Maximum value section of load current	0.5 A/point, 2 A/Unit	Input section	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)
(CN1) Maximum inrush current	4.0 A/point, 10 ms max.	(CN2)	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
Leakage current	0.1 mA max.		ON/OFF response time	20 μs max./400 μs max.
Residual voltage	1.5 V max.		Input filter time	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	Dimension	ns	30 (W) x 100 (H) x 71 (D)
	MD6256-5	Isolation r	nethod	Photocoupler isolation
	CNTS	Insulation	resistance	20 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
Indicators		Current capacity of I/O power supply terminal		Without I/O power supply terminals
	NX Unit power consumption			<ul> <li>Connected to a CPU Unit or Communication Control Unit 1.10 W max.</li> <li>Connected to a Communications Coupler Unit 0.75 W max.</li> </ul>
	Current consumption from I/ O power supply		40 mA max.	
		Weight		110 g max.
Circuit layout	CN1 (left) output circuit	cator	OUT0 to OUT15 00V0 l/O power supply + l/O power supply – (right)	IS



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

Unit name	e DC Input/Transistor Output Unit Model			NX-MD6121-6	
Number o	f points	16 inputs/16 outputs	External of terminals	connection	2 Fujitsu connectors (24 terminals)
/O refres	ning method	Switching Synchronous I/O refreshing and Free-			
	Internal I/O common	NPN	Internal I/O common		For both NPN/PNP
	Rated voltage	12 to 24 VDC		Rated input voltage	24 VDC (15 to 28.8 VDC)
	Operating load voltage range	10.2 to 28.8 VDC		Input current	7 mA typical (at 24 VDC)
Output section	Maximum value of load current	0.5 A/point, 2 A/Unit	Input section	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)
(CN1)	Maximum inrush current	4.0 A/point, 10 ms max.	(CN2)	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
	Leakage current	0.1 mA max.		ON/OFF response time	20 μs max./400 μs max.
	Residual voltage ON/OFF	1.5 V max. 0.1 ms max./0.8 ms max.	-	Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
	response time	TS indicator, I/O indicators	Dimensio		20 (M) × 100 (H) × 71 (D)
			Isolation	-	30 (W) x 100 (H) x 71 (D) 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.
		$2\begin{bmatrix} 0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 \end{bmatrix}$	I/O power	supply method	Supply from external source
ndicators	;			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 -		COM0 COM0 I/O power supply + ol/O power supply -	Connector NX bus connector (right)
		CN2 (right) input circuit Input i 3.3 kΩ input i 3.3 kΩ input i 3.3 kΩ Connector IN15 COM1 COM1 COM1 COM1 COM1 COM1 I/O power supply – I/O power supply –	ndicator	I/O power supply + V/O power supply –	NX bus connector (right)



	CN14 (loft) output torminal
	CN1 (left) output terminal
	Signal name Connector pin Signal name B A
	NC B12 A12 NC
	NC B11 A11 NC
	+V0 B10 A10 +V0
	COM0 B9 A9 COM0
	UT14 B7 A7 OUT6 L OUT13 B6 A6 OUT5
	L OUT10 B3 A3 OUT2
	│
	12 to 24 VDC
	<ul> <li>Be sure to wire both pins A9 and B9 (COM0) of CN1.</li> <li>Be sure to wire both pins A10 and B10 (+V0) of CN1.</li> </ul>
Terminal connection diagram	
	CN2 (right) input terminal
	Signal name <sup>Connector</sup> Signal name A <sup>pin</sup> B
	IN6 A7 B7 IN14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
	I I I I I I I NC
	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 detection	Not supported. Protective function Not supported.
uelection	

### **Version Information**

#### Connected to a CPU Unit

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

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

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				vei.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		VCI.I.I	Vel.1.00	Ver.1.07
NX-OD3121				
NX-OD3153				Ver.1.06
NX-OD3256				
NX-OD3257			_	
NX-OD3268				Ver.1.13
NX-OD4121				
NX-OD4256				Ver.1.06
NX-OD5121			Ver.1.05	
NX-OD5121-1	Ver.1.0			Ver.1.13
NX-OD5121-5		Ver.1.0		Ver.1.10
NX-OD5256				Ver.1.06
NX-OD5256-1				Ver.1.13
NX-OD5256-5				Ver.1.10
NX-OD6121-5				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 U	Jnit	Corresponding unit versions/versions							
		Application with	n an NJ/NX/NY-ser *1	ies Controller	Application w	ith a CS/CJ/CF	-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. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0	Ver. 1.10	Ver. 1.00		
NX-ID3443		ver. 1.2	vei. 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							_		
NX-ID5342		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0		Ver. 1.00		
NX-ID5442						Ver. 1.10			
NX-ID6142-5									
NX-ID6142-6						Ver. 1.13	_		
NX-IA3117						Ver. 1.10	-		
NX-OD2154									
NX-OD2258									
NX-OD3121									
NX-OD3153									
NX-OD3256	Ver. 1.0					Ver. 1.10			
NX-OD3257									
NX-OD3268						Ver. 1.13			
NX-OD4121									
NX-OD4256						Ver. 1.10			
NX-OD5121									
NX-OD5121-1						Ver. 1.13	-		
NX-OD5121-5						Ver. 1.10	_		
NX-OD5256		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0		Ver. 1.00		
NX-OD5256-1		VOI: 1.2	VOI: 1.14	VCI. 1.10	Vol. 1.0	Ver. 1.13	VCI. 1.00		
NX-OD5256-5						Ver. 1.10			
NX-OD6121-5						VCI. 1.10			
NX-OD6121-6						Ver. 1.13			
NX-OD6256-5									
NX-OC2633						Ver. 1.10			
NX-OC2733									
NX-OC4633						Ver. 1.17			
NX-MD6121-5						Ver. 1.10			
NX-MD6121-6						Ver. 1.13			
NX-MD6256-5						Ver. 1.10	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		it versions/versions	
Model	Unit version	Communication Control Unit	t Sysmac Studio	
NX-ID3317		Ver. 1.00	Ver. 1.24	
NX-ID3343		ver. 1.00	Vel. 1.24	
NX-ID3344	Ver. 1.0			
NX-ID3417		Ver. 1.00	Ver. 1.24	
NX-ID3443		Ver. 1.00	Vel. 1.24	
NX-ID3444				
NX-ID4342				
NX-ID4442				
NX-ID5142-1				
NX-ID5142-5				
NX-ID5342		Ver. 1.00	Ver. 1.24	
NX-ID5442				
NX-ID6142-5				
NX-ID6142-6				
NX-IA3117				
NX-OD2154				
NX-OD2258				
NX-OD3121				
NX-OD3153				
NX-OD3256				
NX-OD3257				
NX-OD3268	Ver 10			
NX-OD4121	Ver. 1.0			
NX-OD4256				
NX-OD5121				
NX-OD5121-1				
NX-OD5121-5				
NX-OD5256		Ver. 1.00	Ver. 1.24	
NX-OD5256-1			VCI. 1.24	
NX-OD5256-5				
NX-OD6121-5				
NX-OD6121-6				
NX-OD6256-5				
NX-OC2633				
NX-OC2733				
NX-OC4633				
NX-MD6121-5				
NX-MD6121-6				
NX-MD6256-5				

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

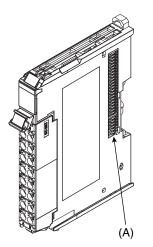
2. Note: You cannot connect the relevant NX Unit to the Communication Control Unit if "---" is shown in the corresponding unit versions/ versions column.

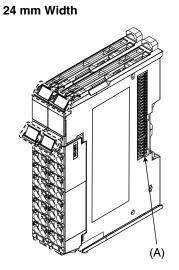
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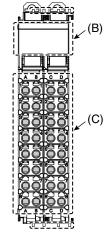
### **External Interface**

### Screwless Clamping Terminal Block Type

12 mm Width

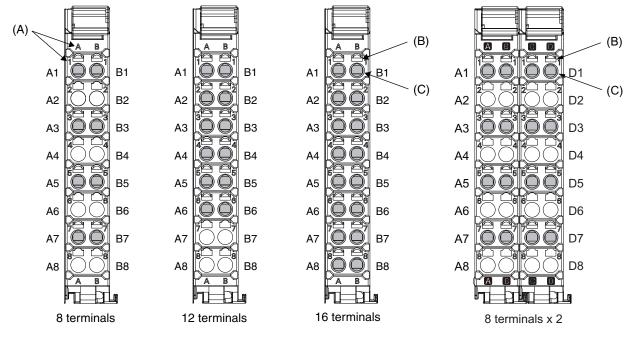






Letter	Item Specification			
(A)	NX bus connector	This connector is used to connect to another Unit.		
(B)	Indicators	The indicators show the current operating status of the Unit.		
(C)	Terminal block	The terminal block is used to connect to external devices. The number of terminals depends on the Unit.		

#### **Terminal Blocks**



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

#### Applicable Terminal Blocks for Each Unit Model

Unit model		Terminal Blocks						
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 *1	NX-TBA082	8	None	10 A				

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

#### **Applicable Wires**

#### **Using Ferrules**

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

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

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

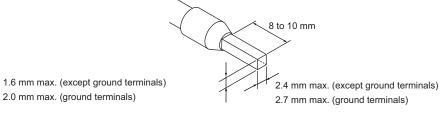
The applicable ferrules, wires, and crimping tools are listed in the following table.

Terminal type	Manufacturer	Ferrule model	Applicable wire (mm <sup>2</sup> (AWG))	Crimping tool
Terminals other	Phoenix Contact	AI0,34-8	0.34 (#22)	Phoenix Contact (The figure in parentheses is the applicable wire size.)
than ground terminals		AI0,5-8	0.5 (#20)	CRIMPFOX 6 (0.25 to 6 mm <sup>2</sup> , AWG24 to 10)
lemmais		Al0,5-10	1	
		AI0,75-8	0.75 (#18)	
		Al0,75-10		
		AI1,0-8	1.0 (#18)	
		Al1,0-10		
		Al1,5-8	1.5 (#16)	
		Al1,5-10	1	
Ground terminals		Al2,5-10	2.0 *	
Terminals other	Weidmuller	H0.14/12	0.14 (#26)	Weidmuller (The figure in parentheses is the applicable wire size.)
than ground terminals		H0.25/12	0.25 (#24)	PZ6 Roto (0.14 to 6 mm <sup>2</sup> , AWG 26 to 10)
leminais		H0.34/12	0.34 (#22)	
		H0.5/14	0.5 (#20)	
		H0.5/16		
		H0.75/14	0.75 (#18)	
		H0.75/16	1	
		H1.0/14	1.0 (#18)	
		H1.0/16		
		H1.5/14	1.5 (#16)	
		H1.5/16	]	

\* Some AWG 14 wires exceed 2.0 mm<sup>2</sup> 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)

#### **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.

Term		Wire	type			O an alteration law with		
Terri		Twisted wires		Solid wire		Wire size	Conductor length (stripping length)	
Classification	Current capacity	Plated	Unplated	Plated	Unplated		(ourpping lengur)	
	2 A or less			Possible	Possible			
All terminals except ground terminals	Greater than 2 A and 4 A or less	Possible		Possible *1	Not	0.08 to 1.5 mm <sup>2</sup> AWG28 to 16	8 to 10 mm	
ground terminate	Greater than 4 A	Possible *1	Possible	Not Possible	Possible			
Ground terminals		Possible	Possible	Possible *2	Possible *2	2.0 mm <sup>2</sup>	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.

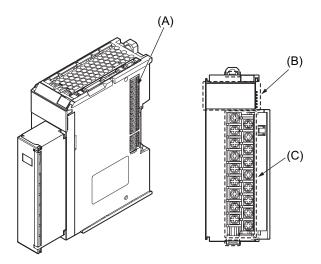
\*2. With the NX-TB



Conductor length (stripping length)

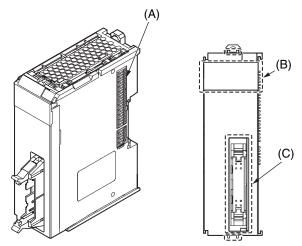
<Additional Information> If more than 2 A will flow on the wires, use plated wires or use ferrules.

## M3 Screw Terminal Block Type 30 mm Width

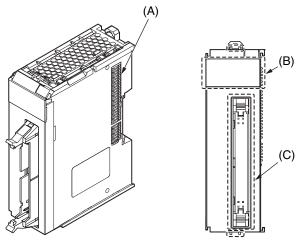


Letter	ter Item Specification	
(A)	(A) NX bus connector This connector is used to connect to another Unit.	
(B)	Indicators The indicators show the current operating status of the Unit.	
(C)	(C) Screw terminals These screw terminals are used to connect the wires.	

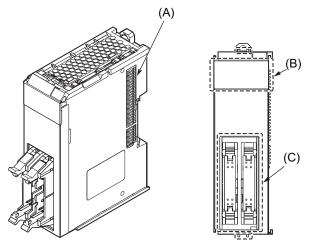
## MIL Connector Type (1 Connector with 20 terminals) 30 mm Width



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

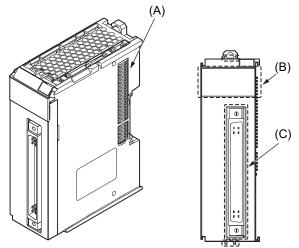


## MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width

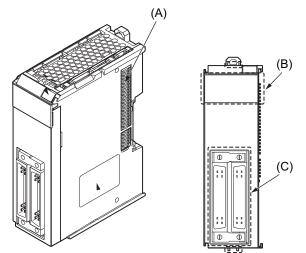


Letter	Letter Item Specification		
(A)	(A) NX bus connector This connector is used to connect to another Unit.		
(B)	Indicators	The indicators show the current operating status of the Unit.	
(C)	Connectors	The connectors are used to connect to external devices.	

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



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

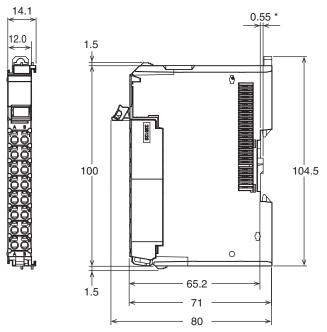


Letter	Item	Specification
(A)	NX bus connector	This connector is used to connect to another Unit.
(B)	Indicators	The indicators show the current operating status of the Unit.
(C)	Connectors	The connectors are used to connect to external devices.

(Unit/mm)

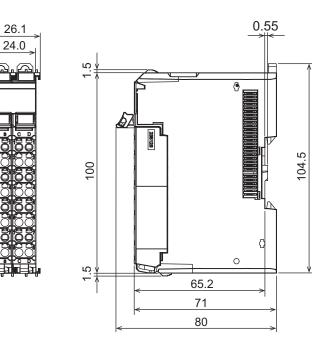
### Dimensions

## Screwless Clamping Terminal Block Type 12 mm Width

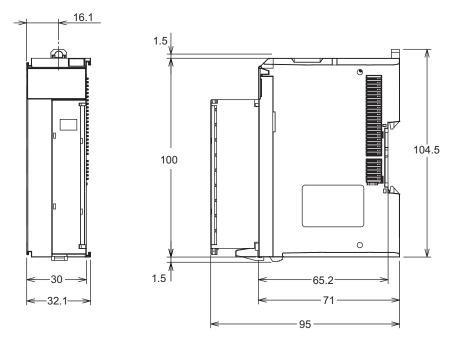


\* The dimension is 1.35 mm for Units with lot numbers through December 2014.

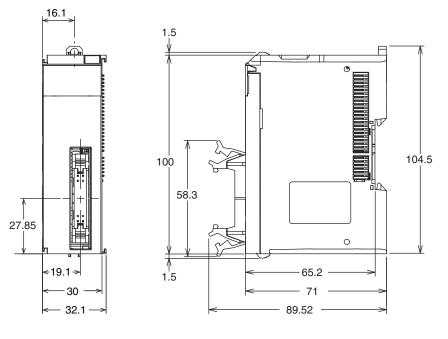
#### 24 mm Width



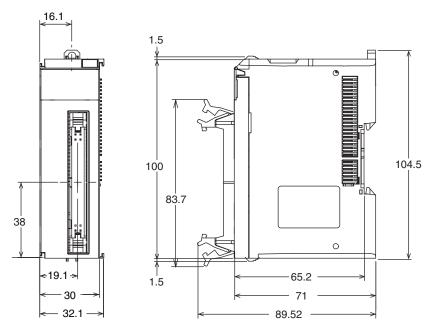
## M3 Screw Terminal Block Type 30 mm Width



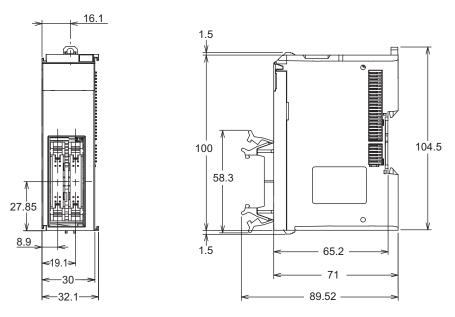
# MIL Connector Type (1 Connector with 20 terminals) 30 mm Width



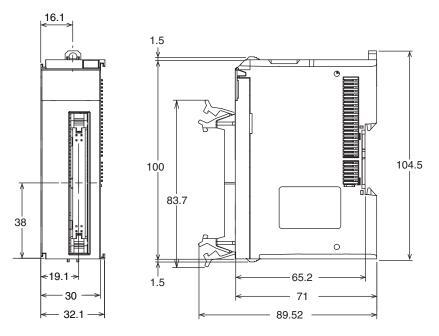
## MIL Connector Type (1 Connector with 40 terminals) 30 mm Width



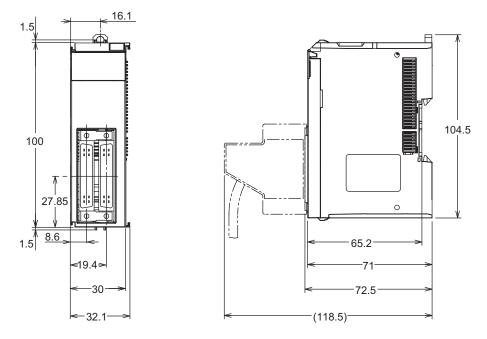
## MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width



## 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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