

## **NX-series Digital I/O Unit**

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

CSM\_NX-ID\_IA\_OD\_OC\_MD\_DS\_E\_8\_1

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

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





#### **Features**

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

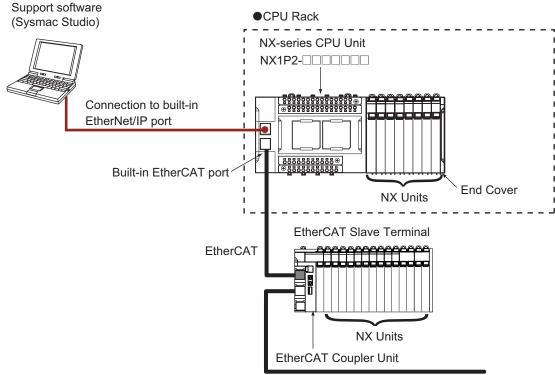
Sysmac is a trademark or registered trademark of OMRON Corporation in Japan and other countries for OMRON factory automation products. EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany. EtherNet/IP<sup>TM</sup> is a trademark of ODVA.

Other company names and product names in this document are the trademarks or registered trademarks of their respective companies.

#### **System Configurations**

#### Connected to a CPU Unit

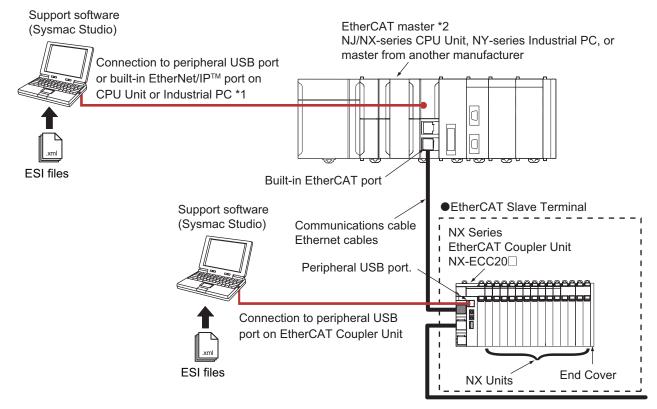
The following figure shows a system configuration when NX Units are connected to an NX-series CPU Unit.



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

#### Connected to an EtherCAT Coupler Unit

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



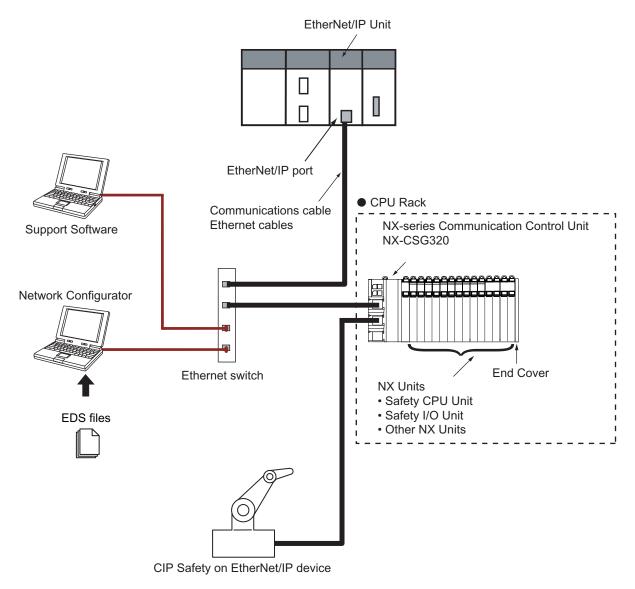
- \*1. The connection method for the Sysmac Studio depends on the model of the CPU Unit or Industrial PC.
- \*2. An EtherCAT Slave Terminal cannot be connected to any of the OMRON CJ1W-NC□81/□82 Position Control Units even though they can operate as EtherCAT masters.

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

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

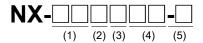
The following figure shows a system configuration when a group of NX Units is connected to an NX-series Communication Control Unit. To configure a Safety Network Controller, mount the Safety CPU Unit, which is one of the NX Units, to the CPU Rack of the Communication Control Unit

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



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

#### **Model Number Structure**



#### (1) Unit type

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

#### (2) Number of points

No.	. Specification						
2	2 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/OTAX connector

#### (4) Other specifications **Digital Input Units**

		ON/OFF res	ponse 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	

#### **Digital Output Units**

			ON/OFF response time		I/O refreshing I	I/O refreshing method		
No.	Rated voltage	Load current	Exceeds 1 µs	1 μs max.	Free-Run refreshing *1 only or Switching Synchronous I/O refreshing *2 and Free-Run refreshing	Output refreshing with specified time stamp only	Load short-circuit protection	
21	12 to 24 VDC	0.5 A	Yes		Yes			
33	or 240 VAC	2 A	Yes		Yes			
53				Yes	Yes			
54				Yes		Yes		
56	04.1/00	0.5 A	Yes		Yes		Yes	
57	24 VDC			Yes	Yes		Yes	
58				Yes		Yes	Yes	
68		2 A	Yes		Yes		Yes	

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

	Input section	Output section							
No.	Rated input voltage		Load	ON/OFF response time			Other functions		
		Rated voltage	current	Exceeds 1 μs	1 μs max.	I/O refreshing method	Load short-circuit protection		
21	24 VDC	12 to24 VDC	0.5 A	Yes		Switching Synchronous I/O refreshing and	Yes		
56	Z4 VDC	24 VDC	0.5 A	Yes		Free-Run refreshing			

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

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

## **Ordering Information**

#### **Applicable standards**

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

#### **Digital Input Units**

	Specifications						
Product Name	Number of points	Internal I/O common	Rated input 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	
	4 points		24 VDC	Input refreshing with input changed time only *1	100 ns max./100 ns max.	NX-ID3344	
OC Input Unit	4 points		12 to 24 VDC	Switching Synchronous I/O re-	20 μs max./400 μs max.	NX-ID3417	
		PNP		freshing and Free-Run refreshing		NX-ID3443	
				Input refreshing with input changed time only *1	100 ns max./100 ns max.	NX-ID3444	
	0 ! 4	NPN				NX-ID4342	
	8 points	PNP				NX-ID4442	
Screwless Clamping erminal Block, 12 mm	40 ! 4	NPN	24 VDC			NX-ID5342	
erminal Block, 12 mm Vidth/24 mm Width)	16 points	PNP	1	Switching Synchronous I/O re-	20 μs max./400 μs max.	NX-ID5442	
,		NPN		freshing and Free-Run refreshing	20 μο παχ./400 μο παχ.	NX-ID6342	
	32 points	INPIN				<u>NE</u>	
	oz points	PNP				NX-ID6442 <i>NE</i>	
DC Input Unit							
	16 points						
		nts 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	
		141 14/1 141		resting and rice-rain renesting			
M2 Carry Tarriage							
(M3 Screw Terminal Block, 30 mm Width)							
DC Input Unit							
	NPN/F		24 VDC	Switching Synchronous I/O re- freshing and Free-Run refreshing	20 μs max./400 μs max.	NV IDE442 E	
		For both NPN/PNP				NX-ID5142-5	
7							
		22 mainta					NV ID0440 5
(MIL Connector, 30 mm						NX-ID6142-5	
Width)							
DC Input Unit							
		For both	041/00	Switching Synchronous I/O re-	00 /400	NV IBALIA	
	32 points	NPN/PNP	24 VDC	freshing and Free-Run refreshing	20 μs max./400 μs max.	NX-ID6142-6	
0							
(Fujitsu/OTAX Connector, 30 mm							
Sonnector, 30 mm Width)							
AC Input Unit			1				
	4	200 to 240 VAC, 50/		For a Down materials	40 /40	NV IACAAT	
	4 points	(170 to 264 \		Free-Run refreshing	10 ms max./40 ms max.	NX-IA3117	
Screwless Clamping							
erminal Block, 12 mm							

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

#### **Digital Output Units**

				Specifications			
Product Name	Number of points	Internal I/O common	Maximum value of load current	Rated voltage	I/O refreshing method	ON/OFF response time	Model
	2 points	NPN	0.5 A/point, 1 A/Unit	24 VDC	Output refreshing with speci-	300 ns max./	NX-OD2154
	2 points	PNP	0.07 vpoint, 17 voint	24 100	fied time stamp only *1	300 ns max.	NX-OD2258
		NDN		12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD3121
		NPN	0.5 A/point 2 A/Unit			300 ns max./ 300 ns max.	NX-OD3153
	4 points		0.5 A/point, 2 A/Unit			0.5 ms max./ 1.0 ms max.	NX-OD3256
ransistor Output Unit		PNP		24 VDC		300 ns max./ 300 ns max.	NX-OD3257
			2 A/point, 8 A/Unit	-		0.5 ms max./ 1.0 ms max.	NX-OD3268
	0 i t	NPN		12 to 24 VDC	Switching Synchronous I/O re- freshing and Free- Run refresh-	0.1 ms max./ 0.8 ms max.	NX-OD4121
Screwless Clamping Ferminal Block, 12 mm Vidth/24 mm Width)	8 points	PNP	0.5 A/point 4.A/Unit	24 VDC	ing	0.5 ms max./ 1.0 ms max.	NX-OD4256
viatii/24 iiiiii vviatii)	40	NPN	0.5 A/point, 4 A/Unit	12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD5121
	16 points	PNP		24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD5256
		NPN	0.5 A/point,	12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD6121 <u>NEV</u>
	32 points	PNP	4 A/terminal block, 8 A/Unit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD6256 <u>NEV</u>
Transistor Output Unit		NPN		12 to 24 VDC	Switching Synchronous I/O re-	0.1 ms max./ 0.8 ms max.	NX-OD5121-1
	16 points		0.5 A/point, 5 A/Unit		freshing and Free- Run refreshing		
M3 Screw Terminal Block, 30 mm Width)		PNP		24 VDC	9	0.5 ms max./ 1.0 ms max.	NX-OD5256-1
Fransistor Output Unit		NPN		12 to 24 VDC	Switching Synchronous I/O re- freshing and Free- Run refresh- ing	0.1 ms max./ 0.8 ms max.	NX-OD5121-5
	16 points	PNP	0.5 A/point, 2 A/Unit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD5256-5
		NPN	0.5 A/point, 2 A/	12 to 24 VDC		0.1 ms max./ 0.8 ms max.	NX-OD6121-5
MIL Connector, 30 mm Vidth)	32 points	PNP	common, 4 A/Unit	24 VDC		0.5 ms max./ 1.0 ms max.	NX-OD6256-5
Fransistor Output Unit							
	32 points	NPN	0.5 A/point, 2 A/ common, 4 A/Unit	12 to 24 VDC	Switching Synchronous I/O re- freshing and Free- Run refresh- ing	0.1 ms max./ 0.8 ms max.	NX-OD6121-6
(Fujitsu/OTAX Connector, 30 mm Width)							
Relay Output Unit		Relay type: N.O.	050 ) (4 0 /6 1 /	) 050 V4 C4		45 (	NX-OC2633
	2 points	Relay type: N.O.+N.C.	250 VAC/2 A (cosφ=1 2 A (cosφ=0.4), 24 VE		Free-Run refreshing	15 ms max./ 15 ms max.	NX-OC2733
Screwless Clamping Terminal Block, 12 mm Vidth/24 mm Width)	8 points	Relay type: N.O.	250 VAC/2 A (cosφ=1), 250 VAC/ 2 A (cosφ=0.4), 24 VDC/2 A, 8 A/Unit		Free-Run refreshing	15 ms max./ 15 ms max.	NX-OC4633
<u>'</u>	l	.4 . 1		N I I I	th unit version 1.1 or later and	1.41 0 04-	

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

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

	Specifications							
Product Name	Number of points			I/O refreshing method	ON/OFF response time	Model		
DC Input/Transistor Output Unit	Outputs: 16 points	Outputs: NPN Inputs: For both NPN/PNP	Outputs: 12 to 24 VDC Inputs: 24 VDC	Switching Synchronous I/	Outputs: 0.1 ms max./ 0.8 ms max. Inputs: 20 μs max./ 400 μs max.	NX-MD6121-5		
(MIL Connector, 30 mm Width)	Inputs: 16 points	Outputs: PNP Inputs: For both NPN/PNP	Outputs: 24 VDC Inputs: 24 VDC	O refreshing and Free- Run refreshing	Outputs: 0.5 ms max./ 1.0 ms max. Inputs: 20 μs max./ 400 μs max.	NX-MD6256-5		
DC Input/Transistor Output Unit  (Fujitsu/OTAX 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		Speci	Specification			
Unit/Terminal Block Coding Pins	For 10 Units (Terminal Block: 30 pins, Unit: 30 pins)				NX-AUX02	
		Speci				
Product name	No. of terminals	Terminal number indications	Ground terminal mark	Terminal current capacity	Model	Standards
	8				NX-TBA082	
Tamminal Black	12	A/B		10 A	NX-TBA122	
Terminal Block	16		None		NY TO A 400	

16

C/D

#### **Accessories**

Not included.

NX-TBA162

NX-TBB162

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

Pattern	Configuration	Number of connectors	Branching
А	Connecting Cable Connector-Terminal Block Conversion Unit 20 or 40 terminals	1	None
В	Connecting Cable Connector-Terminal Block Conversion Unit 20 terminals 20 terminals	2	None

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

Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *	Connector-Terminal Block Conversion Unit	Wiring method	Common terminal
					XW2Z-□□□X	XW2K-20G-T	Push-In Plus	No
		1 MIL	NPN/		XW2Z-□□□X-R	XW2K-20G-O16A-IN	Push-In Plus	Yes
NX-ID5142-5	16 inputs	connector	PNP	Α	XW2Z-□□□X	XW2D-20G6	Phillips screw	No
					XW2Z-□□□X	XW2R-E20GD-T	Slotted screw (rise up)	No
				Α	XW2Z-□□□K	XW2K-40G-O32C	Push-In Plus	No
				Α	XW2Z-□□□K	XW2K-40G-O32C-IN	Push-In Plus	Yes
NX-ID6142-5	32 inputs	1 MIL	NPN/	Α	XW2Z-□□□K	XW2R-J34GD-C2	Phillips screw	No
10(1201120	oz inputo	connector	PNP	Α	XW2Z-□□□K	XW2D-40G6	Phillips screw	No
				А	XW2Z-□□□K	XW2R-E34GD-C2	Slotted screw (rise up)	No
		1 Fujitsu/ OTAX		Α	XW2Z-□□□B	XW2K-40G-O32A	Push-In Plus	No
			NPN/	Α	XW2Z-□□□B	XW2K-40G-O32A-IN	Push-In Plus	Yes
NX-ID6142-6	32 inputs			Α	XW2Z-□□□B	XW2R-J34GD-C1	Phillips screw	No
	02puto	connector	PNP	Α	XW2Z-□□□B	XW2D-40G6	Phillips screw	No
				Α	XW2Z-□□□B	XW2R-E34GD-C1	Slotted screw (rise up)	No
				Α	XW2Z-□□□X	XW2K-20G-T	Push-In Plus	No
		1 MIL		Α	XW2Z-□□□X-R	XW2K-20G-O16B-OUT	Push-In Plus	Yes
NX-OD5121-5	16 outputs	connector	NPN	Α	XW2Z-□□□X	XW2D-20G6	Phillips screw	No
				А	XW2Z-□□□X	XW2R-E20GD-T	Slotted screw (rise up)	No
				Α	XW2Z-□□□X	XW2K-20G-T	Push-In Plus	No
		1 MIL		Α	XW2Z-□□□X-R	XW2K-20G-O16B-OUT	Push-In Plus	Yes
NX-OD5256-5	16 outputs	connector	PNP	Α	XW2Z-□□□X	XW2D-20G6	Phillips screw	No
		3333.61		A	XW2Z-□□□X	XW2R-E20GD-T	Slotted screw (rise up)	No

Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *	Connector-Terminal Block Conversion Unit	Wiring method	Common terminal
				Α	XW2Z-□□□K	XW2K-40G-O32C	Push-In Plus	No
				Α	XW2Z-□□□K	XW2K-40G-O32C-OUT	Push-In Plus	Yes
NX-OD6121-5	32 outputs	1 MIL	NPN	Α	XW2Z-□□□K	XW2R-J34GD-C4	Phillips screw	No
10/ 0201210	oz outputo	connector		Α	XW2Z-□□□K	XW2D-40G6	Phillips screw	No
				А	XW2Z-□□□K	XW2R-E34GD-C4	Slotted screw (rise up)	No
				Α	XW2Z-□□□B	XW2K-40G-O32B	Push-In Plus	No
				Α	XW2Z-□□□B	XW2K-40G-O32B-OUT	Push-In Plus	Yes
NX-OD6121-6	32 outputs	1 Fujitsu/ OTAX	NPN	Α	XW2Z-□□□B	XW2R-J34GD-C3	Phillips screw	No
020.2. 0	02 0449410	connector		Α	XW2Z-□□□B	XW2D-40G6	Phillips screw	No
				А	XW2Z-□□□B	XW2R-E34GD-C3	Slotted screw (rise up)	No
				Α	XW2Z-□□□K	XW2K-40G-O32C	Push-In Plus	No
				Α	XW2Z-□□□K	XW2K-40G-O32C-OUT	Push-In Plus	Yes
NX-OD6256-5	32 outputs	1 MIL	PNP	Α	XW2Z-□□□K	XW2R-J34GD-C4	Phillips screw	No
1474-0200-0	oz outputs	connector	1 141	Α	XW2Z-□□□K	XW2D-40G6	Phillips screw	No
				А	XW2Z-□□□K	XW2R-E34GD-C4	Slotted screw (rise up)	No
				В	XW2Z-□□□X	XW2K-20G-T	Push-In Plus	No
				В	XW2Z-□□□X-R	XW2K-20G-O16A-IN	Push-In Plus	Yes
	16 inputs	1 MIL connector	NPN/ PNP	В	XW2Z-□□□X	XW2D-20G6	Phillips screw	No
NIV MB0404 5				В	XW2Z-□□X	XW2R-E20GD-T	Slotted screw (rise up)	No
NX-MD6121-5				В	XW2Z-□□□X	XW2K-20G-T	Push-In Plus	No
		4 8411		В	XW2Z-□□□X-R	XW2K-20G-O16B-OUT	Push-In Plus	Yes
	16 outputs	1 MIL connector	NPN	В	XW2Z-□□□X	XW2D-20G6	Phillips screw	No
				В	XW2Z-□□X	XW2R-E20GD-T	Slotted screw (rise up)	No
				В	XW2Z-□□□A	XW2K-20G-T	Push-In Plus	No
		1 Fujitsu/	NIDNI	В	XW2Z-□□□A	XW2K-20G-O16A-IN	Push-In Plus	Yes
	16 inputs	OTAX	NPN/ PNP	В	XW2Z-□□□A	XW2D-20G6	Phillips screw	No
NIV MD0404 0		connector		В	XW2Z-□□□A	XW2R-E20GD-T	Slotted screw (rise up)	No
NX-MD6121-6				В	XW2Z-□□□A	XW2K-20G-T	Push-In Plus	No
		1 Fujitsu/		В	XW2Z-□□□A	XW2K-20G-O16B-OUT	Push-In Plus	Yes
	16 outputs	OTAX	NPN	В	XW2Z-□□□A	XW2D-20G6	Phillips screw	No
		connector		В	XW2Z-□□□A	XW2R-E20GD-T	Slotted screw (rise up)	No
				В	XW2Z-□□□X	XW2K-20G-T	Push-In Plus	No
			NEN	В	XW2Z-□□□X-R	XW2K-20G-O16A-IN	Push-In Plus	Yes
	16 inputs	1 MIL connector	NPN/ PNP	В	XW2Z-□□□X	XW2D-20G6	Phillips screw	No
NIV MD0050 5				В	XW2Z-□□X	XW2R-E20GD-T	Slotted screw (rise up)	No
NX-MD6256-5				В	XW2Z-□□□X	XW2K-20G-T	Push-In Plus	No
		4 1 1		В	XW2Z-□□□X-R	XW2K-20G-O16B-OUT	Push-In Plus	Yes
	16 outputs	tputs 1 MIL connector	NPN	В	XW2Z-□□□X	XW2D-20G6	Phillips screw	No
				В	XW2Z-□□□X	XW2R-E20GD-T	Slotted screw (rise up)	No

Note: For other models and specifications that are not listed above, refer to the XW2K Series Datasheet (Cat. No. G152), XW2R Series Catalog (Cat. No. G077) and XW2D Series Datasheet for details.

<sup>\*</sup>  $\square\square\square$  in the model number indicates the cable length. Refer to the *XW2Z Datasheet* for details.

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

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

## Connections to I/O Relay Terminals

Unit	I/O capacity	Number of connectors	Polarity	Connectio n pattern	Number of branches	Connecting Cable *1	I/O Relay Terminal	Wiring method
				F	None	XW2Z-RO□C	G7TC-ID16	Phillips screw
			NDN	F	None	XW2Z-RO□C	G7TC-IA16	Phillips screw
NIV IDEA 40 E	40: 1	1 MIL	NPN	F	None	XW2Z-RO□C	G70V-SID16P	Push-in spring
NX-ID5142-5	16 inputs	connector		F	None	XW2Z-RO□C	G70V-SID16P-C16	Push-in spring
			PNP	F	None	XW2Z-RO□C	G70V-SID16P-1	Push-in spring
			PINP	F	None	XW2Z-RO□C	G70V-SID16P-1-C16	Push-in spring
				Α	2	XW2Z-RO□-□-D1	G7TC-ID16	Phillips screw
			NPN	Α	2	XW2Z-RO□-□-D1	G7TC-IA16	Phillips screw
NX-ID6142-5	20 innute	1 MIL	INPIN	Α	2	XW2Z-RO□-□-D1	G70V-SID16P	Push-in spring
NA-1D0 142-5	32 inputs	connector		Α	2	XW2Z-RO□-□-D1	G70V-SID16P-C16	Push-in spring
			PNP	Α	2	XW2Z-RO□-□-D1	G70V-SID16P-1	Push-in spring
			PINP	Α	2	XW2Z-RO□-□-D1	G70V-SID16P-1-C16	Push-in spring
				Α	2	XW2Z-RI□C-□	G7TC-ID16	Phillips screw
			NPN	Α	2	XW2Z-RI□C-□	G7TC-IA16	Phillips screw
NX-ID6142-6	32 inputs	1 Fujitsu/ OTAX connector		Α	2	XW2Z-RI□C-□	G70V-SID16P	Push-in spring
INA-ID0 142-0	32 Inputs			Α	2	XW2Z-RI□C-□	G70V-SID16P-C16	Push-in spring
			PNP	Α	2	XW2Z-RI□C-□	G70V-SID16P-1	Push-in spring
			FINE	Α	2	XW2Z-RI□C-□	G70V-SID16P-1-C16	Push-in spring
				F	None	XW2Z-RO□C	G7TC-OC08	Phillips screw
				F	None	XW2Z-RO□C	G70D-SOC08	Phillips screw
				F	None	XW2Z-RO□C	G70R-SOC08 *2	Phillips screw
				F	None	XW2Z-RO□C	G7TC-OC16	Phillips screw
				F	None	XW2Z-RO□C	G70D-SOC16	Phillips screw
NX-OD5121-5	16 outputs	1 MIL connector	NPN	F	None	XW2Z-RO□C	G70D-VSOC16	Phillips screw
		2311100101		F	None	XW2Z-RO□C	G70D-FOM16	Phillips screw
				F	None	XW2Z-RO□C	G70D-VFOM16	Phillips screw
				F	None	XW2Z-RO□C	G70A-ZOC16-3	Phillips screw
				F	None	XW2Z-RO□C	G70V-SOC16P	Push-in spring
				F	None	XW2Z-RO□C	G70V-SOC16P-C4	Push-in spring

NX-OD5256-5   16 outputs   1 MIL connector   PNP   F   None   XW2Z-RO□C   G770-XOC16-1   Phillips screw   F   None   XW2Z-RO□C   G700-XOC16-1   Phillips screw   T   XW2Z-RO□C   G700-XOC16   Phillips screw   T   XW2Z-RO□C   G700-XOC1	Unit	I/O capacity	Number of connectors	Polarity	Connectio n pattern	Number of branches	Connecting Cable *1	I/O Relay Terminal	Wiring method
1 Mill					F	None	XW2Z-RI□C	G7TC-OC16-1	Phillips screw
NX-OD6256-5   16 outputs   F   None   XW2Z-RO□C   G70x-ZOC16-4   Phillips screw   F   None   XW2Z-RO□C   G70x-ZOC16-1   Phillips screw   F   None   XW2Z-RO□C   G70x-SOC16P-1-4   Push-in spring   F   None   XW2Z-RO□C   G70x-SOC16P-1-4   Push-in spring   F   None   XW2Z-RO□C   G70x-SOC16P-1-4   Push-in spring   G70x-SOC16P-1-4   Phillips screw   G70x-SOC16P-1-4   Phillips screw   G70x-SOC16P-1-4   Phillips screw   G70x-SOC16P-1-4   Push-in spring   G70x-SOC16P-1-4					F	None	XW2Z-RO□C	G70D-SOC16-1	Phillips screw
F   None   XV922ROLC   G70A-ZOC164   Phillips screw   F   None   XV922ROLC   G70V-SOC16P-1   Push-in spring   F   None   XV922ROLC   G70V-SOC16P-1-C4   Push-in spring   A 2   XV922ROLC   G70V-SOC16P-1-C4   Push-in spring   A 2   XV922ROLC   G70V-SOC16P-1-C4   Push-in spring   A 2   XV922ROLC   G70V-SOC16P-1-C4   Phillips screw   A 2   XV922ROLC   G70V-SOC16P   Phillips screw   A 2   XV922ROLC   G70V-SOC16P   Phillips screw   A 2   XV922ROLC   G70D-SOC16   Phillips screw   A 2   XV922ROLC   G70D-VFOM16   Phillips screw   Phillips screw   A 2   XV922ROLC   G70D-VFOM16   Phillips screw   A 2   XV922ROLC   G70D-SOC08   Phillips scre	NV ODEOEC E	40	1 MIL	DND	F	None	XW2Z-RO□C	G70D-FOM16-1 *2	Phillips screw
F   None   XW2Z-RO□-0   G70X-SCC16P-1-C4   Push-in spring	NX-UD5256-5	16 outputs	connector	PNP	F	None	XW2Z-RO□C	G70A-ZOC16-4	Phillips screw
NX-OD6121-5   32 outputs					F	None	XW2Z-RO□C	G70V-SOC16P-1	Push-in spring
NX-OD6121-5   32 outputs					F	None	XW2Z-RO□C	G70V-SOC16P-1-C4	Push-in spring
NX-OD6121-5					Α	2	XW2Z-RO□-□-D1	G7TC-OC16	Phillips screw
NX-OD6121-5   32 outputs   1 MIL connector   1 MIL connector   1 MIL connector   2 Min   2					Α	2	XW2Z-RO□-□-D1	G7TC-OC08	Phillips screw
NX-OD6121-5					Α	2	XW2Z-RO□-□-D1	G70D-SOC16	Phillips screw
NX-OD6121-5   32 outputs   1 MIL connector   A 2   XW2Z-RO□□□D1   G700-VFOM16   Phillips screw   A 2   XW2Z-RO□□D1   G700-XCOC16-3 and Relay   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC08   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC08   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC08   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   A 2   XW2Z-RO□□D1   G700-SOC16   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   A 2   XW2Z-RO□□D1   G700-SOC16P   Push-in-spring   Phillips screw   A 2   XW2Z-RO□□D1   G700-SOC16-1   Phillips screw   A 2   XW2Z-RO□D1   G700-SOC16-					Α	2	XW2Z-RO□-□-D1	G70D-FOM16	Phillips screw
NX-DD6121-5   32 outputs   A					Α	2	XW2Z-RO□-□-D1	G70D-VSOC16	Phillips screw
A 2   XW2Z-RO□-□-01   G70A-ZOC16-3 and Relay   Phillips screw	NX-OD6121-5	32 outputs		NPN	Α	2	XW2Z-RO□-□-D1	G70D-VFOM16	Phillips screw
NX-OD6121-6   NX-OD6256-5			Connector		Α	2	XW2Z-RO□-□-D1	G70A-ZOC16-3 and Relay	Phillips screw
NX-OD6121-6   NX-OD6256-5					Α	2	XW2Z-RO□-□-D1	G70R-SOC08 *2	Phillips screw
A 2   XW2Z-RO□-□-D1   G70V-SOC16P-C4   Push-in spring					Α	2	XW2Z-RO□-□-D1	G70D-SOC08	Phillips screw
NX-OD6121-6					Α	2	XW2Z-RO□-□-D1	G70V-SOC16P	Push-in spring
NX-OD6121-6					Α	2	XW2Z-RO□-□-D1	G70V-SOC16P-C4	Push-in spring
NX-OD6121-6   NX-OD6121-5					Α	2	XW2Z-RO□C-□	G7TC-OC16	Phillips screw
NX-OD6121-6			OTAX		Α	2	XW2Z-RO□C-□	G7TC-OC08	Phillips screw
NX-OD6121-6   NX-OD6121-5				NPN	Α	2	XW2Z-RO□C-□	G70D-SOC16	Phillips screw
NX-OD6121-6   32 outputs   OTAX connector   A					Α	2	XW2Z-RO□C-□	G70D-FOM16	Phillips screw
NX-OD6121-6   32 outputs					Α	2	XW2Z-RO□C-□	G70D-VSOC16	Phillips screw
A	NX-OD6121-6	32 outputs			Α	2	XW2Z-RO□C-□	G70D-VFOM16	Phillips screw
A 2   XW2Z-RO□C-□   G70D-SOC08   Phillips screw					Α	2	XW2Z-RO□C-□	G70A-ZOC16-3 and Relay	Phillips screw
NX-OD6256-5   32 outputs   1 MIL connector   1 MIL connector   1 MIL connector   NX-DD6256-5   16 outputs   1 MIL connector   2 MIL con					Α	2	XW2Z-RO□C-□	G70R-SOC08 *2	Phillips screw
NX-OD6256-5   32 outputs   1 MIL connector   2 XW2Z-RO□-□-D1   G70D-SOC16-1   Phillips screw   2 XW2Z-RO□-□-D1   G70D-SOC16-1   Phillips screw   2 XW2Z-RO□-□-D1   G70D-SOC16-1   Phillips screw   2 XW2Z-RO□-□-D1   G70D-FOM16-1 *2   Phillips screw   2 XW2Z-RO□-□-D1   G70D-FOM16   Phillips screw   2 XW2Z-RO□-□-D1   G70D-SOC16   Phillips screw   2 XW2Z-RO□-□-D1   G70D-FOM16   Phillips screw   2 XW2Z-RO□-D1   G					Α	2	XW2Z-RO□C-□	G70D-SOC08	Phillips screw
NX-OD6256-5   32 outputs   1 MIL connector   1 MIL connector   2					Α	2	XW2Z-RO□C-□	G70V-SOC16P	Push-in spring
NX-OD6256-5   32 outputs   1 MIL connector   PNP   A   2   XW2Z-RO□-□-D1   G70D-SOC16-1   Phillips screw					Α	2	XW2Z-RO□C-□	G70V-SOC16P-C4	Push-in spring
NX-OD6256-5   32 outputs					Α	2	XW2Z-RI□-□-D1	G7TC-OC16-1	Phillips screw
NX-OD6256-5   32 outputs   connector   PNP			1 MII		Α	2	XW2Z-RO□-□-D1	G70D-SOC16-1	Phillips screw
1 MIL connector	NX-OD6256-5	32 outputs		PNP	Α	2	XW2Z-RO□-□-D1	G70D-FOM16-1 *2	Phillips screw
1 MIL connector   1 MIL connector   E					Α	2	XW2Z-RO□-□-D1	G70A-ZOC16-4 and Relay	Phillips screw
16 inputs   NPN					Е	None	XW2Z-RO□C	G7TC-ID16	Phillips screw
NPN			1 MIL		Е	None	XW2Z-RO□C	G7TC-IA16	Phillips screw
NX-MD6121-5     NX-MD6121-5		16 inputs		NPN	Е	None	XW2Z-RO□C	G70V-SID16P	Push-in spring
NX-MD6121-5					Е	None	XW2Z-RO□C	G70V-SID16P-C16	Push-in spring
NX-MD6121-5					Е	None	XW2Z-RO□C	G7TC-OC16	Phillips screw
NX-MD6121-5  16 outputs  1 MIL connector  NPN  E None XW2Z-RO□C G70D-FOM16 Phillips screw  E None XW2Z-RO□C G70D-VSOC16 Phillips screw  E None XW2Z-RO□C G70D-VFOM16 Phillips screw  E None XW2Z-RO□C G70A-ZOC16-3 and Relay Phillips screw  E None XW2Z-RO□C G70R-SOC08 *2 Phillips screw  E None XW2Z-RO□C G70D-SOC08 Phillips screw  E None XW2Z-RO□C G70D-SOC08 Phillips screw  E None XW2Z-RO□C G70V-SOC16P Push-in spring					Е	None			
16 outputs 1 MIL connector NPN E None XW2Z-RO□C G70D-VSOC16 Phillips screw E None XW2Z-RO□C G70D-VFOM16 Phillips screw E None XW2Z-RO□C G70A-ZOC16-3 and Relay Phillips screw E None XW2Z-RO□C G70R-SOC08 *2 Phillips screw E None XW2Z-RO□C G70D-SOC08 Phillips screw E None XW2Z-RO□C G70D-SOC08 Phillips screw E None XW2Z-RO□C G70V-SOC16P Push-in spring									· ·
16 outputs 1 MIL connector NPN E None XW2Z-RO□C G70D-VSOC16 Phillips screw E None XW2Z-RO□C G70D-VFOM16 Phillips screw E None XW2Z-RO□C G70A-ZOC16-3 and Relay Phillips screw E None XW2Z-RO□C G70R-SOC08 *2 Phillips screw E None XW2Z-RO□C G70D-SOC08 Phillips screw E None XW2Z-RO□C G70D-SOC08 Phillips screw E None XW2Z-RO□C G70V-SOC16P Push-in spring	NX-MD6121-5				Е	None	XW2Z-RO□C	G70D-FOM16	Phillips screw
16 outputs      1 MIL connector									
E         None         XW2Z-RO□C         G70A-ZOC16-3 and Relay         Phillips screw           E         None         XW2Z-RO□C         G70R-SOC08 *2         Phillips screw           E         None         XW2Z-RO□C         G70D-SOC08         Phillips screw           E         None         XW2Z-RO□C         G70V-SOC16P         Push-in spring		16 outputs		NPN	E	None	XW2Z-RO□C	G70D-VFOM16	Phillips screw
E         None         XW2Z-RO□C         G70R-SOC08 *2         Phillips screw           E         None         XW2Z-RO□C         G70D-SOC08         Phillips screw           E         None         XW2Z-RO□C         G70V-SOC16P         Push-in spring			CONNECTOR		-	None	XW2Z-RO□C	G70A-ZOC16-3 and Relay	-
E     None     XW2Z-RO□C     G70D-SOC08     Phillips screw       E     None     XW2Z-RO□C     G70V-SOC16P     Push-in spring					Е	None	XW2Z-RO□C		-
E None XW2Z-RO□C G70V-SOC16P Push-in spring					Е		XW2Z-RO□C		
					Е	None	XW2Z-RO□C	G70V-SOC16P-C4	Push-in spring

Unit	I/O capacity	Number of connectors	Polarity	Connectio n pattern	Number of branches	Connecting Cable *1	I/O Relay Terminal	Wiring method
				E	None	XW2Z-R□C	G7TC-ID16	Phillips screw
	40: 1	1 Fujitsu/	NIDNI	Е	None	XW2Z-R□C	G7TC-IA16	Phillips screw
	16 inputs	OTAX connector	NPN	Е	None	XW2Z-R□C	G70V-SID16P	Push-in spring
				E	None	XW2Z-R□C	G70V-SID16P-C16	Push-in spring
				Е	None	XW2Z-R□C	G7TC-OC16	Phillips screw
				Е	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/ OTAX 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
	16 inputs	1 MIL	PNP	E	None	XW2Z-RO□C	G70V-SID16P-1	Push-in spring
	10 inputs	connector	FINE	Е	None	XW2Z-RO□C	G70V-SID16P-1-C16	Push-in spring
				Е	None	XW2Z-RO□C	G7TC-OC16-1	Phillips screw
NX-MD6256-5				E	None	XW2Z-RI□C	G70D-SOC16-1	Phillips screw
14V-INID0520-2	16 outputs	1 MIL	PNP	E	None	XW2Z-RI□C	G70D-FOM16-1 *2	Phillips screw
	10 outputs	connector	FINE	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.

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

## **General Specifications**

	Item	Specification	
Enclosure		Mounted in a panel	
Grounding m	nethod	Ground to 100 $\Omega$ or less	
Ambient operating temperature		0 to 55°C	
	Ambient operating humidity	10% to 95% (with no condensation or icing)	
	Atmosphere	Must be free from corrosive gases.	
	Ambient storage temperature	-25 to 70°C (with no condensation or icing)	
	Altitude	2,000 m max.	
	Pollution degree	2 or less: Meets IEC 61010-2-201.	
Operating environment	Noise immunity	2 kV on power supply line (Conforms to IEC61000-4-4.)	
environnient	Overvoltage category	Category II: Meets IEC 61010-2-201.	
	EMC immunity level	Zone B	
	Vibration resistance *1	Conforms to IEC 60068-2-6. 5 to 8.4 Hz with 3.5-mm amplitude, 8.4 to 150 Hz, acceleration of 9.8 m/s², 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	
	Shock resistance *1	Conforms to IEC 60068-2-27. 147 m/s², 3 times each in X, Y, and Z directions	
Applicable standards *2		cULus: Listed (UL508) or Listed (UL 61010-2-201), ANSI/ISA 12.12.01 or UL121201, EU: EN 61131-2 or EN 61010-2-201, C-Tick or RCM, KC: KC Registration, NK, LR	

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

## **Digital Input Unit Specifications**

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

Unit name	DC Input Unit	Model	NX-ID3317
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		terminais)
<b></b>	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
lo di satsus	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	$20~\text{M}\Omega$ min. between isolated circuits (at $100~\text{VDC})$	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout	NX bus connector (left)  NX bus connector (left)  NX bus connector (left)	nt control reuit	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  FIOV  FIOS  FIOS	DC Input Unit NX-ID3317  Two- ser  IN0 IN1  IOV0 IOV1 IOG0 IOG1 IN2 IN3  IOV2 IOV3 IOG2 IOG3  A8 B8	Three-wire sensor
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

14X-1D3343				
Unit name	DC Input Unit	Model	NX-ID3343	
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)	
I/O refreshing method	Selectable Synchronous I/O refreshing or F			
	TS indicator, input indicator	Internal I/O common	NPN	
	ID3343 • TS	Rated input voltage	24 VDC (15 to 28.8 VDC)	
	0 1	Input current	3.5 mA typical (at 24 VDC), rated current	
Indicators	2 3	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	Without filter, 1 $\mu$ s, 2 $\mu$ s, 4 $\mu$ s, 8 $\mu$ s (factory setting), 16 $\mu$ s, 32 $\mu$ s, 64 $\mu$ s, 128 $\mu$ s, 256 $\mu$ s	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation	
Insulation resistance	20 $\mbox{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.	
NX Unit power consumption	<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	NX bus connector (left)  I/O power supply + I/O power supply -	rent control circuit unau ou telescondinates and the second secon	I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communications Couple Restrictions: No restrictions			
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1 OIOV IOV IOV IOV IOV IOV IOG IOG IOG IOG A8 B8		-wire nsor Three-wire sensor	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.	

Unit name	DC Input Unit	Model	NX-ID3344	
Number of points	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)	
I/O refreshing method	Input refreshing with input changed time	I		
	TS indicator, input indicators	Internal I/O common	NPN	
	ID3344	Rated input voltage 24 VDC (15 to 28.8 VDC)		
	₽TS	Input current	3.5 mA typical (at 24 VDC), rated current	
Indicators	0 1 2 3	ON voltage/ON current	15 VDC min./3 mA min. (between IOV and each signal)	
		OFF voltage/OFF current	5 VDC max./1 mA max. (between IOV and each signal)	
		ON/OFF response time	100 ns max./100 ns max.	
Dimensions	40 (M) - 400 (H) - 74 (D)	Input filter time	No filter *	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation	
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.	
NX Unit power consumption	Connected to a CPU Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	30 mA max.	
Weight	65 g max.			
Circuit layout	NX bus connector (left)  NX bus connector (left)	Power supply  irrent control circuit  irrent control circuit	I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit: Possible in up Connected to a Communications Couple Restrictions: No restrictions	oright installation. er Unit: Possible in 6 orientat	ions.	
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOG IOG  A8 B8		-wire nsor  Three-wire sensor	
Disconnection/ Short-circuit detection	Not supported.  Poort the input filter. If the Unit is susceptible to	Protective function	Not supported.	

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

11.14	Ino	l	Luy ipout
Unit name	DC Input Unit	Model External connection	NX-ID3417 Screwless clamping terminal block (12
Number of points  I/O refreshing method	4 points  Selectable Synchronous I/O refreshing or F	terminals	terminals)
70 refreshing method	TS indicator, input indicator	Internal I/O common	PNP
	ID3417	Rated input voltage	12 to 24 VDC (9 to 28.8 VDC)
	₽TS	Input current	6 mA typical (at 24 VDC), rated current
	0 1 2 3	ON voltage/ON current	9 VDC min./3 mA min. (between IOG and each signal)
Indicators		OFF voltage/OFF current	2 VDC max./1 mA max. (between IOG and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	<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	Terminal block  IOG0 to 3  NX bus connector (left)  I/O power supply +	t control cuit luman circuits	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica  Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1 IOV IOV IOV IOV IOV IOV IOG IOG IOG A8 B8	DC Input Unit	-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 PNP		
	ID3443	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	Without filter, 1 $\mu$ s, 2 $\mu$ s, 4 $\mu$ s, 8 $\mu$ s (factory setting),16 $\mu$ s, 32 $\mu$ s, 64 $\mu$ s, 128 $\mu$ s, 256 $\mu$ s	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation	
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.	
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	30 mA max.	
Weight	65 g max.			
Circuit layout		Current control incircuit incircuit incircuit incircuit	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  IOV IOV IOV IOV IOV IOG IOG IOG A8  B8	DC Input Unit NX-ID3443  Two- Ser IN0 IN1  IOV0 IOV1  IOG0 IOG1 IN2 IN3  IOV2 IOV3  IOG2 IOG3  A8 B8	Three-wire sensor	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.	

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

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

Unit name	DC Input Unit	Model	NX-ID4342	
Number of points	8 points	External connection	Screwless clamping terminal block (16	
I/O refreshing method	Selectable Synchronous I/O refreshing or F	terminals	terminals)	
1/O remeshing method	TS indicator, input indicator	Internal I/O common	NPN	
	ID4342	Rated input voltage	24 VDC (15 to 28.8 VDC)	
	DTS 0 1	Input current	3.5 mA typical (at 24 VDC), rated current	
	2 3 4 5	ON voltage/ON current	15 VDC min./3 mA min. (between IOG and each signal)	
Indicators	6 7	OFF voltage/OFF current	5 VDC max./1 mA max. (between IOG and each signal)	
		ON/OFF response time	20 μs max./400 μs max.	
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation	
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOG: 0.1 A/terminal max.	
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	No consumption	
Weight	65 g max.			
Circuit layout	Terminal block IOG0 to 7  NX bus connector (left) I/O power supply + I/O power supply -	nt control literal circuits	I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions			
Terminal connection diagram	Power Supply Unit  A1  B1  A1  ICO  ICO  ICO  ICO  ICO  ICO  ICO  IC	10G0   10V   10G0   10V   10V   10G2   10V   10V   10G4   10G4		
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		terrinais)	
<u>_</u>	TS indicator, input indicator	Internal I/O common	PNP	
	ID4442	Rated input voltage	24 VDC (15 to 28.8 VDC)	
	■TS 0 1	Input current	3.5 mA typical (at 24 VDC), rated current	
la dia ataua	2 3 4 5 6 7	ON voltage/ON current	15 VDC min./3 mA min. (between IOG and each signal)	
Indicators	8 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	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	No consumption	
Weight	65 g max.			
Circuit layout		nt control reuit	I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or 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  IC  IC  IC  IC  IOV  IOV  IOV  IOV  IC  IC  IC  IC  IC  IC  IC  IC  IC  I	10V0   10   10G   10G   10V2   10   10G   10G   10V4   10   10G   10G   10V4   10		
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	Screwless clamping terminal block (16
·	· ·	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F TS indicator, input indicator	NPN	
	ID5342	Internal I/O common Rated input voltage	24 VDC (15 to 28.8 VDC)
	●TS 0 1 2 3	Input current	2.5 mA typical (at 24 VDC), rated current
	4 5 6 7 8 9 10 11	ON voltage/ON current	15 VDC min./2 mA min. (between IOG and each signal)
Indicators	12 13 14 15	OFF voltage/OFF current	5 VDC max./0.5 mA max. (between IOG and each signal)
		ON/OFF response time	20 μs max./400 μs max.
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	No consumption
Weight	65 g max.		
Circuit layout		ent control circuits	I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions		
Terminal connection diagram	IOV   IOV	Dinit   Connection Unit   B1   A1   B1   A1   OV   IOG   IOG   IOG   OV   IOG   IOG   OV	DC Input Unit
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	Rated input voltage	24 VDC (15 to 28.8 VDC)	
	■TS 0 1 2 3	Input current	2.5 mA typical (at 24 VDC), rated current	
	4 5 6 7 8 9 10 11	ON voltage/ON current	15 VDC min./2 mA min. (between IOG and each signal)	
Indicators	12 13 14 15	OFF voltage/OFF current	5 VDC max./0.5 mA max. (between IOG and each signal)	
		ON/OFF response time	20 μs max./400 μs max.	
		Input filter time	Without filter, 0.25 ms, 0.5 ms, 1 ms (factory setting), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation	
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	No consumption	
Weight	65 g max.			
Circuit layout		cuittol cuitts	I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Installation orientation:			
Terminal connection diagram	IOV   IOV		DC Input Unit NX-ID5442  B1 Two-wire sensor  IN0 IN1	
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.	

Unit name	DC Input Unit	Model	NX-ID6342
Number of points	32 points	External connection terminals	Screwless clamping terminal block (16 terminals x 2)
I/O refreshing method	Selectable Synchronous I/O refreshing or F TS indicator, input indicator ID6342  TS	Internal I/O common Rated input voltage Input current	NPN 24 VDC (15 to 28.8 VDC) 2.5 mA typical (at 24 VDC), rated current
Indicators	0 1 2 3 16 17 18 19 4 5 6 7 20 21 22 23 8 9 10 11 24 25 26 27 12 13 14 15 28 29 30 31	ON voltage/ON current OFF voltage/OFF current	15 VDC min./2 mA min. (between IOG and each signal) 5 VDC max./0.5 mA max. (between IOG
		ON/OFF response time	and each signal) 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	24 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.45 W max. Connected to a Communications Coupler Unit 0.70 W max.	Current consumption from I/O power supply	No consumption
Weight	130 g max.		
Circuit layout	Terminal block IN0 to IN31  Current circuit  I/O power supply + I/O power supply -	control luternal circuits	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	● IOV	Connection Unit  B1 A1 B1 A1  IOG IOG IOG IN2  IOG IOG IN2  IOG IOG IN4	IN13 IN28 IN29
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	DC Input Unit	Model	NX-ID6442
Number of points	32 points	External connection terminals	Screwless clamping terminal block (16 terminals x 2)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		terrimais x 2)
<b></b>	TS indicator, input indicator	Internal I/O common	PNP
	ID6442	Rated input voltage	24 VDC (15 to 28.8 VDC)
	DTS	Input current	2.5 mA typical (at 24 VDC), rated current
Indicators	0 1 2 3 16 17 18 19 4 5 6 7 20 21 22 23 8 9 10 11 24 25 26 27	ON voltage/ON current	15 VDC min./2 mA min. (between IOG and each signal)
muicators	12 13 14 15 28 29 30 31	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	24 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.45 W max. Connected to a Communications Coupler Unit 0.70 W max.	Current consumption from I/O power supply	No consumption
Weight	130 g max.		
Circuit layout	Terminal block IN0 to IN31  Current contro circuit  NX Bus connector (left)  I/O power supply + I/O power supply -	Internal circuits	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	● IOV	Connection Unit  B1A1 B1 A1  IOG IOG IN0  IOG IOG IN2  IOG IOG IN4	IN13 IN28 IN29
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

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

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

Installation orientation: Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.
 Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 45°C 16 12 points at 55°C 12 I/O power supply voltage 4 28.8 V 0 Installation orientation and 0 40 45 50 55 60 10 20 30 restrictions Ambient temperature (°C) · For any installation other than upright Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 40°C 16 points at 45°C 16 12 12 points at 55°C I/O power supply voltage 8 ---24 V 7 points at 55°C 4 28.8 V 0 40 45 50 55 60 0 10 20 30 Ambient temperature (°C) Terminal Signal Name Α Signal Name IN0 A0 B0 IN1 €0-IN2 A1 B1 IN3 ဂ IN4 • A2 **√**∘ B2 IN5 6 IN6 A3 <del>-</del>60-B3 **■** IN7 **Terminal connection** √o IN8 A4 B4 • IN9 √odiagram A5 IN10 B5 IN11 60 • A6 IN12 B6 IN13 **√**0 60 IN14 ♠ A7 24 VDC B7 • IN15 COM A8 B8 € COM • The polarity of the input power supply can be connected in either direction. Disconnection/

**Protective function** 

Not supported.

Not supported.

**Short-circuit detection** 

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

Unit name	DC Input Unit	Model	NX-ID5142-5	
Number of points	16 points	External connection terminals	MIL connector (20 terminals)	
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing		
	TS indicator, input indicators	Internal I/O common	For both NPN/PNP	
	ID5142-5	Rated input voltage	24 VDC (15 to 28.8 VDC)	
	∎TS	Input current	7 mA typical (at 24 VDC)	
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)	
Indicators		OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)	
		ON/OFF response time	20 μs max./400 μs max.	
		Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms	
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation	
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.85 W max.     Connected to a Communications Coupler Unit 0.55 W max.  Current consumption from I/ O power supply  O power supply			
Weight	85 g max.			
Circuit layout	Connector IN0 3.3 kΩ  Input indicator 3.3 kΩ  IN0 power supply + I/O power supply + I/O power supply - I/O p			

Installation orientation: Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.
 Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 45°C 16 12 points at 55°C 12 I/O power supply voltage 4 0 Installation orientation and 0 10 40 45 50 55 60 30 restrictions Ambient temperature (°C) · For any installation other than upright Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 40°C 16 points at 45°C 16 12 12 points at 45°C I/O power supply voltage 8 ----24 V 7 points at 55°C 4 28.8 V 0 0 20 30 40 45 50 55 60 Ambient temperature (°C) Signal Connector name pin Signal name 24 VDC ₁−⊪ NC NC COM 3 4 COM 5 6 IN07 IN15 8 IN14 **IN06** ſ0-**Terminal connection** IN13 9 10 IN05 diagram 11 12 IN12 IN04 IN11 13 14 IN03 IN10 15 16 IN02 IN01 IN09 18 **IN08** 19 20 **IN00** The polarity of the input power supply can be connected in either direction.
Be sure to wire both pins 3 and 4 (COM), and set the same polarity for both pins. Disconnection/ Not supported. **Protective function** Not supported.

**Short-circuit detection** 

#### NX-ID6142-5

Unit name	DC Input Unit	Model	NX-ID6142-5
Number of points	32 points	External connection terminals	MIL connector (40 terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing	
	TS indicator, input indicators	Internal I/O common	For both NPN/PNP
	ID6142-5	Rated input voltage	24 VDC (19 to 28.8 VDC)
	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 MΩ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max.     Connected to a Communications Coupler Unit 0.60 W max.	Current consumption from I/O power supply	No consumption
Weight	90 g max.		
Circuit layout	Connector (left)  IN0  3.3 kΩ  Input indicator  3.4 kΩ  Input indicator  3.4 kΩ  Input indicator  3.4 kΩ  Input indicator  3.4 kΩ  Input indicator  Input indicator  3.4 kΩ  Input indicator  3.4 kΩ  Input indicator  Input indicator  3.4 kΩ  Input indicator  Input indic	I/O power supply + I/O power supply - NX bus connector (right)	

Installation orientation: • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points vs. Number of simultaneously ON input points Ambient temperature characteristic 35 32 points at 45°C 30 32 points at 40°C 13 points/common at 55°C 25 20 10 points/common at 55°C 15 10 I/O power supply voltage ---24 V 5 28.8 V 0 Installation orientation and 0 10 20 30 40 45 50 55 60 restrictions Ambient temperature (°C) • For any installation other than upright Number of simultaneously ON input points vs. Ambient temperature characteristic 32 points at 35°C ON input points 35 32 points at 50°C 30 13 points/common at 55°C 32 points at 30°C 25 Number of simultaneously 20 8 points/common at 55°C 15 I/O power supply voltage 10 -19 V 5 points/common at 55°C 5 ---24 V •28.8 V 0 0 10 40 45 50 55 60 20 30 Ambient temperature (°C) Signal Connector Signal name NC pin INC OM1 СОМ1 IN3 6 IN23 IN22 IN2 9 10 IN21 IN28 11 12 IN20 IN27 13 14 IN19 16 IN18 IN26 15 17 IN2 18 IN17 19 20 IN16 24 VDC **Terminal connection** СОМО COMO diagram IN15 26 1N07 IN14 28 IN06 IN13 29 30 IN12 31 IN04 IN11 IN0 IN10 IN09 35 36 1IN02 37 38 IN01 39 40 IN00 **IN08** The polarity of the input power supply can be connected in either direction.
Be sure to wire both pins 23 and 24 (COM0), and set the same polarity for both pins.
Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins. Disconnection/ Short-circuit detection Not supported. Protective function Not supported.

## ● DC Input Unit (Fujitsu/OTAX 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/OTAX 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	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.95 W max.     Connected to a Communications Coupler Unit 0.55 W max.	Current consumption from I/O power supply	No consumption
Weight	90 g max.		
Circuit layout	Connector  IN0 IN15 COM0 COM0 IN16 IN31 COM1 COM1 COM1 COM1 COM1 COM1 COM1 COM	I/O power supply + I/O power supply - NX bus connector (right)	

Installation orientation: • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation. • Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points vs. Number of simultaneously ON input points Ambient temperature characteristic 35 32 points at 45°C 30 32 points at 40°C 13 points/common at 55°C 25 20 10 points/common at 55°C 15 I/O power supply voltage 10 ---24 V 5 28.8 V 0 Installation orientation and 0 10 20 30 40 45 50 55 60 restrictions Ambient temperature (°C) • For any installation other than upright Number of simultaneously ON input points vs. Ambient temperature characteristic 32 points at 35°C Number of simultaneously ON input points 32 points at 50°C 30 13 points/common at 55°C 32 points at 30°C 25 20 8 points/common at 55°C 15 10 I/O power supply voltage -19 V 5 points/common at 55°C 5 --24 V -28.8 V 0 0 40 45 50 55 60 10 20 30 Ambient temperature (°C) Signal name Signal name INO A1 B1 IN16 IN1 A2 B2 IN17 IN2 IN18 A3 | B3 IN3 IN19 A4 B4 IN4 A5 B5 IN20 IN5 A6 B6 IN21 IN6 IN22 A7 B7 IN7 A8 B8 сомо A9 B9 COM1 IN8 A10 B10 IN24 Terminal connection IN9 A11 B11 1 IN 25 diagram IN10 A12 B12 IN26 IN11 A13 B13 IN27 IN12 A14 B14 IN28 IN13 A15 B15 IN29 IN14 A16 B16 IN30 IN15 A17 B17 IN31 COM0 A18 B18 COM1 NC A19 B19 NC NC A20 B20 NC The polarity of the input power supply can be connected in either direction.
Be sure to wire both pins A9 and A18 (COM0), and set the same polarity for both pins.
Be sure to wire both pins B9 and B18 (COM1), and set the same polarity for both pins. Disconnection/ Not supported. **Protective function** Not supported. Short-circuit detection

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

Dimensions   12 (W) x 100 (H) x 71 (D)   Isolation method   Photocoupler isolation	Unit name	AC Input Unit	Model	NX-IA3117
Time File Interesting   Time	Number of points	4 points, independent contacts		
Indicators    Indicators	Capacity	Free-Run refreshing	terminais	(o terrilliais)
Indicators    Imput current   On voltage(ON current		•	Internal I/O common	No polarity
Indicators    Indicators			Rated input voltage	
OFF voltage(OFF current   40 VAC max /2 mA max   And m		0 1	Input current	
Dimensions  12 (W) x 100 (H) x 71 (D)  Between each AC input circuit: 20 M2 min., (at 500 VDC)  Between the AC input circuit: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external terminals and internal circuits: 20 M2 min., (at 500 VDC)  Between the external circuit and the functional circuits: 20 M2 min., (at 500 VDC)  Between the external circuit and the functional circuit and the functional circuit and the functional circuit and the functional circuits: 20 M2 min., (at 500 VDC)  Between the external circuit and the functional circuits: 20 M2 min., (at 500 VDC)  Between the external circuit and the functional circuit and the functional circuits: 20 M2 min., (at 500 VDC)  Between the external circuit and the functional circuits and th	Indicators		-	
Input filter time   No. filter. Q.25 ms, 0.5 ms, 1 ms (default)   2 ms, 4 ms, 8 ms, 6 ms, 32 ms, 64 ms, 128 ms, 256 ms			<u> </u>	
Injustifier time   2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms			ON/OFF response time	
Between each AC input circuit: 20 MΩ min. (at 50 VPC) SOU VPC) SOU VPC) Southern terminal: 20 MΩ min. (at 50 VPC) Between the obtained terminals 20 MΩ min. (at 500 VPC) Setween the cetternal terminals and internal circuits: 20 MΩ min. (at 500 VPC) Setween the cetternal terminals and internal circuits: 20 MΩ min. (at 500 VPC) Setween the cetternal terminals and internal circuits: 20 MΩ min. (at 500 VPC) Setween the cetternal terminals and internal circuits: 20 MΩ min. (at 500 VPC) Setween the cetternal terminals and internal circuit at 00 VPC.) Setween the cetternal terminals and internal circuit at 00 VPC.) Setween the cetternal terminals and internal circuit at 00 VPC. Setween the cetternal terminals and internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.  **Connected to a CPU Unit or Communication Control Unit.** **Connected to a CPU Unit or Communication Coupler Unit.**  **Connected to a CPU Unit or Communication Coupler Unit.**  **Connected to a CPU Unit or Communication Coupler Unit.**  **Connected to a CPU Unit or Communication Coupler Unit.**  **Connected to a CPU Unit or Communication Coupler Unit.**  **Connected to a CPU Unit or Communication Coupler Unit.**  **Connected to a CPU Unit or Communication Coupler Unit.**  **Connected to a CPU Unit or Communication Coupler Unit.**  **Terminal block**  **Terminal block**  **Terminal block**  **Terminal connection**  *			Input filter time	2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms,
Sol VICC    Between the external terminals and the functional ground terminal: 20 MM min. (at 500 VICC)   Between the external terminals and the functional ground terminal: 20 MM min. (at 500 VICC)   Between the external terminals and functional ground terminal: 20 MM min. (at 500 VICC)   Between the external terminals and functional ground terminal: 20 MM min. (at 500 VICC)   Between the external terminals and internal circuits: 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 circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max. Between the internal	Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	•
NX Unit power consumption  NX Unit power consumption  Only My max.  Connected to a CPU Unit or Communication Coupler Unit  Ferminal connection  Installation orientation and restrictions  Terminal connection  Installation orientation and restrictions  Terminal connection  Only My max.  IND to IN3  INS bus connected to a CPU Unit or Communication Coupler Unit  IND to IN3  Installation orientation and restrictions  Terminal connection  Only My max.  Installation orientation and restrictions  Terminal connection  Only My max.  Installation orientation and restrictions  Terminal connection  Only My max.  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.  AC Input Unit  NX-IA3117  Only My My max  Installation orientation  Only power supply + NX bus connection (right)  Installation orientation and restrictions  Terminal connection  Only power supply + NX bus connected to a CPU Unit or Communication Coupler Unit: Possible in upright installation.  Connected to a Communication Coupler Unit: Possible in 6 orientations.  Only power supply + NX bus connected to a CPU Unit or Communication Coupler Unit: Possible in 6 orientations.  Only power supply + NX bus connected to a CPU Unit or Communication Coupler Unit: Possible in 6 orientations.  Only power supply + NX bus connected to a CPU Unit or Communication Coupler Unit: Possible in 6 orientations.  Only power supply + NX bus connected to a CPU Unit or Communication Coupler Unit: Possible in 6 orientations.  Only power supply + NX bus connected to a CPU Unit or Communication Coupler Unit: Possible in 6 orientations.  Only power supply + NX bus connected to a CPU Unit or Communication Coupler Unit: Possible in 6 orientations.  Only power supply + NX bus connected to a CPU Unit or CPU Unit or CPU Unit or CPU Unit or CPU Unit Orientation	Insulation resistance	500 VDC) Between the external terminals and the functional ground terminal: $20~\text{M}\Omega$ min. (at 500 VDC) Between the external terminals and internal circuits: $20~\text{M}\Omega$ min. (at 500 VDC) Between the internal circuit and the functional ground terminal: $20~\text{M}\Omega$ min.	Dielectric strength	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
**Connected to a CPU Unit or Communication Control Unit 0.80 W max. **Connected to a Communications Coupler Unit 0.80 W max. **Connected to a Communications Coupler Unit 0.80 W max. **Connected to a Communications Coupler Unit 0.80 W max.  **Circuit layout**  **Circuit layout**  **Circuit layout**  **Circuit layout**  **Circuit layout**  **Invo to IN3  **NX bus connector (left)	I/O power supply method	Supplied from external source.		Without I/O power supply terminals
Circuit layout    NX bus   I/O power supply +	NX Unit power consumption	Control Unit 0.80 W max.  Connected to a Communications Coupler Unit	Current consumption	No consumption
Circuit layout  Terminal block  NX bus connector (left)  N/O power supply + Open supply - Open suppl	Weight	60 g max.		
Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.     Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions  AC Input Unit NX-IA3117  AC Input Unit NX-IA3117  INIT C1  INI	Circuit layout	Terminal block  C0 to C3  NX bus connector		I/O power supply + NX bus connector (sight)
Terminal connection diagram    NX-IA3117		Connected to a CPU Unit or Communication C     Connected to a Communications Coupler Unit:		nstallation.
		NX-IA3117  A1	31	
		n .		

## **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	Screwless clamping terminal block
•	·	terminals	(8 terminals)
I/O refreshing method	Output refreshing with specified time stamp		Nov
	TS indicator, output indicator	Internal I/O common Rated voltage	NPN 24 VDC
Indicators	OD2154	Operating load voltage range	15 to 28.8 VDC
	0 1	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.
NX Unit power consumption	Connected to a CPU Unit 0.85 W max. Connected to a Communications Coupler Unit 0.45 W max.	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left) I/O power supply +	push-pull output circuit.	OUT0 to OUT1 Terminal block  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 NX-OD2154  Transistor Output Unit NX-OD2154  Two-wire type  10V 10V  10V 10V  10G 10G  10G 10G  NC NC  A8 B8 B8 B8		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

#### NX-OD2258

11-24	Transista Ostara I Init	M - J-1	NIV ODOGGO
Unit name	Transistor Output Unit	Model	NX-OD2258
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	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
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: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit 0.85 W max. Connected to a Communications Coupler Unit 0.50 W max.	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + O  I/O power supply - This unit uses a	a push-pull output circuit.	OUT0 to OUT1  Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit: Possible in upright installation.  Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit NX-OD2258 A1 B1 OUTO OUT1 OUT1 OUT0 IOV IOV IOV IOG IOG NC NC NC NC A8 B8 B8 A8 B8 A8 B8		
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD3121
	·	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	NPN
	OD3121 ■TS	Rated voltage	12 to 24 VDC
	0 1 2 3	Operating load voltage range	10.2 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.1 ms max./0.8 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	I/O current consumption	10 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -		IOV0 to 3 OUT0 to OUT3  Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica  Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1  IOS IOS IOS IOS IOS IOS  A8  B8	Transistor Output Unit NX-OD3121  A1	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

MX-OD3133			
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 F		
	TS indicator, output indicator	Internal I/O common	NPN
	OD3153 ■TS	Rated voltage	24 VDC
	0 1 2 3	Operating load voltage range	15 to 28.8 VDC
Indicators		Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Digital isolator isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.50 W max.	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply +  I/O power supply -  This unit uses a push-	pull output circuit.	OUT0 to OUT3  Terminal block  I/O power supply +  I/O power supply -  NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOV IOV  IOG IOG  A8 B8	Transistor Output Unit NX-OD3153  A1 B1 Two-w IOV0 IOV1 IOV0 IOV1 IOG0 IOG1 OUT2 OUT3 IOV2 IOV3 IOG2 IOG3  A8 B8	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

NA-OD3230			
Unit name	Transistor Output Unit	Model	NX-OD3256
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, 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
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	I/O current consumption	20 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply -	Short-aircuit protection	OUT0 to OUT3  IOG0 to 3  I/O power supply +  I/O power supply -  I/O power supply -  I/O power supply -
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  IOV IOV  IOV IOV  IOG IOG  A8 B8	Transistor Output Unit NX-OD3256  A1	Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

1114	I Town States Outs 111 %	Ba1 - 1	LNV ODOGEZ
Unit name	Transistor Output Unit	Model External connection	NX-OD3257 Screwless clamping terminal block (12
Number of points	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	, , , , , , , , , , , , , , , , , , ,
	TS indicator, output indicator	Internal I/O common	PNP
	OD3257	Rated voltage	24 VDC
	■TS 0 1 2 3	Operating load voltage range	15 to 28.8 VDC
Indicators	2 3	Maximum value of load current	0.5 A/point, 2 A/Unit
		Maximum inrush current	
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
Dimensions	42 (M) × 400 (H) × 74 (D)	ON/OFF response time Isolation method	300 ns max./300 ns max.
Dimensions	12 (W) x 100 (H) x 71 (D) 20 MΩ min. between isolated circuits (at	isolation method	Digital isolator isolation 510 VAC between isolated circuits for 1
Insulation resistance	100 VDC)	Dielectric strength	minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.5 A/terminal max., IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.85 W max. Connected to a Communications Coupler Unit 0.50 W max.	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  NX bus connector (left)  I/O power supply -  This unit uses a push  Installation orientation:	-pull output circuit.	OUT0 to OUT3  Terminal block  IOG0 to 3  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Connected to a CPU Unit or Communicate     Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1  OIOV IOV  IOV IOV  IOG IOG  A8 B8 B8	Transistor Output Unit NX-OD3257  A1	Three-wire type
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	Screwless clamping terminal block (16
•	'	terminals	terminals)
I/O refreshing method	Switching Synchronous I/O refreshing and TS indicator, output indicator	Internal I/O common	PNP
		Rated voltage	24 VDC
	OD3268	Operating load voltage	-
	●TS 0 1	range	15 to 28.8 VDC
Indicators	2 3	Maximum value of load current	2 A/point, 8 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	IOV: 2 A/terminal max., IOG: 2 A/terminal max., COM (+V): 4 A/terminal max., 0V: 4 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.85 W max. Connected to a Communications Coupler Unit 0.50 W max.	Current consumption from I/O power supply	20 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	Short-circuit No No No No No No No No No No No No No	Terminal block  JT 0 to OUT 3  G 0 to IOG 3  P power pply + 0 power pply - 0 power (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	Transistor Output Unit NX-OD3268  A1 B1 OUT0 OUT1 IOV0 IOV1 IOG0 IOG1 OUT2 OUT3 IOV2 IOV3 IOG2 IOG3 OV OV A8 B8 B8  • OV has 2 terminals, so be sure to wire both terr • COM (+V) has 2 terminals, so be sure to wire both terr		
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD4121
Number of points	8 points	External connection	Screwless clamping terminal block (16
<u> </u>	'	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F TS indicator, output indicator	Internal I/O common	NPN
	OD4121	Rated voltage	12 to 24 VDC
	●TS 0 1	Operating load voltage range	10.2 to 28.8 VDC
Indicators	2 3 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	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.55 W max.	I/O current consumption	10 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply -		I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	Additional I/O Power Supply Unit  A1 B1 OIOV IOV  IOV IOV IOV IOV IOV IOS IOG IOG A8 B8	Connection Unit	2 OUT3 2 IOV3 4 OUT5 Three-wire type 1 IOV5 6 OUT7
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

MX-OD4230			
Unit name	Transistor Output Unit	Model	NX-OD4256
Number of points	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	
	TS indicator, output indicator	Internal I/O common	PNP
	OD4256	Rated voltage	24 VDC
	●TS 0 1 2 3	Operating load voltage range	15 to 28.8 VDC
Indicators	4 5 6 7	Maximum value of load current	0.5 A/point, 4 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 $\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOG: 0.5 A/terminal max.
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.00 W max. Connected to a Communications Coupler Unit 0.65 W max.	I/O current consumption	30 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	Short-circuit protection	OUT0 to OUT7  Terminal block  I/O power supply +  I/O power supply -  I/O power supply -
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  IC  IC  IC  IC  IC  IC  IC  IC  IC  I	IOG0   IO   IOG0   IO   OUT2   O   IOG2   IO   IOG2   IO   OUT4   O   IOG4   IO   OUT6   O	Two-wire type  JT1  G1  G1  UT3  OG3  UT5  Three-wire type
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

Unit name	Transistor Output Unit	Model	NX-OD5121
Number of points	16 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	_	
	TS indicator, output indicator	Internal I/O common	NPN
	OD5121 ■TS	Rated voltage	12 to 24 VDC
	0 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 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
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	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)  I/O power supply -		OUT0 to OUT15 Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram		/ IOV	Transistor Output Unit NX-OD5121  A1
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

Unit name	Transistor Output Unit	Model	NX-OD5256
Number of points	16 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		Lovo
	TS indicator, output indicator	Internal I/O common	PNP
	OD5256 ▶TS	Rated voltage	24 VDC
	0 1 2 3 4 5 6 7	Operating load voltage range	15 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 4 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
		ON/OFF response time	0.5 ms max./1.0 ms max.
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.10 W max. Connected to a Communications Coupler Unit 0.70 W max.	I/O current consumption	40 mA max.
Weight	70 g max.		
Circuit layout	NX bus connector (left)  I/O power supply -	Short-circuit protection	OUT0 to OUT15 Terminal block  I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica: Connected to a Communications Couple Restrictions: No restrictions		
Terminal connection diagram	IOV   IOV	Connection Unit	Transistor Output Unit NX-OD5256  B1  Two-wire type  OUT2 OUT3  OUT4 OUT5  OUT6 OUT7  OUT8 OUT9  OUT10 OUT11  OUT12 OUT13  OUT112 OUT13  OUT14 OUT15  B8
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

	Unit name	Transistar Outsut Hait	Model	NV 0D6121
Corrected to a CPU Unit or Communication content layout   Supply from the NX bus   Commendation   Supply from the NX bus   Supply from the NX bu	Unit name	Transistor Output Unit		
TS indicator, output indicator  D0612 18	Number of points	32 points		
Indicators    The company of the com	/O refreshing method	,		
10   2   3   16   17   18   19   18   18   18   18   18   18				
Installation orientation  Installation orien				12 to 24 VDC
Installation orientation Installation orientat		0 1 2 3 16 17 18 19	range	10.2 to 28.8 VDC
Dimensions  24 (W) x 100 (H) x 71 (D)  20 MC min. between isolated circuits (at 10 VCC)  10 VCC)  10 VCC)  10 VCC)  10 VCC  10	Indicators	8 9 10 11 24 25 26 27		0.5 A/point, 4 A/terminal block *1, 8 A/Ur
Residual voltage   1.5 V max.		12 13 14 15 28 29 30 31	Maximum inrush current	4.0 A/point, 10 ms max.
Dimensions 24 (W) x 100 (H) x 71 (D) Isolation method 100 (D) Dielectric strength 100 (VDC) 20 M2 min. between isolated circuits (at 100 VDC) 20 M2 min. between isolated circuits (at 100 VDC) 30 M2 min. between isolated circuits (at 100 VDC) 30 M2 min. between isolated circuits (at 100 VDC) 30 M2 min. between isolated circuits (at 100 VDC) 30 M2 method 30 M2 min. between isolated circuits for 1 minute at a leakage current of 5 mA ma 20 M2 method 30 mA max. Connected to a CPU Unit or Communications Coupler Unit 0.95 W max. Connected to a Communications Coupler Unit 0.95 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Control Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Connected to a Communication Coupler Unit 1.45 W max. Conne				***************************************
Dimensions   24 (W) x 100 (H) x 71 (D)				
Insulation resistance  I/O power supply method  Supply from the NX bus  Connected to a CPU Unit or Communication Control Unit 1.45 W max.  Connected to a Communication Control Unit 0.95 W max.  Weight  130 g max.  Circuit layout  Installation orientation  Connected to a CPU Unit or Communication Control Unit 0.95 W max.  Installation orientation  Connected to a CPU Unit or Communication Control Unit 0.95 W max.  Installation orientation  Connected to a CPU Unit or Communication Control Unit 0.95 W max.  Installation orientation  Connected to a CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit or Communication Control Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to the CPU Unit 1.5 w max.  Installation orientation  Province to		04.040, 400.00, 74.00	· · · · · · · · · · · · · · · · · · ·	
Installation orientation and restrictions   Installation orientation and restrictions   Installation orientation and restrictions   Installation orientation   Installation orientati	Dimensions		Isolation method	· · · · · · · · · · · · · · · · · · ·
Circuit layout    Connected to a CPU Unit or Communication Control Unit 1.45 W max.	Insulation resistance			minute at a leakage current of 5 mA max
Communication Control Unit 1.45 W max.  Connected to a Communications 0.95 W max.  130 g max.  Circuit layout  Circuit layout  Installation orientation and restrictions  Installation orientation and restrictions and restrictions and restric	I/O power supply method	,		Without I/O power supply terminals
Circuit layout    NX Bus   Supply +   Supply	NX Unit power consumption	Communication Control Unit 1.45 W max.  Connected to a Communications Coupler Unit	I/O current consumption	40 mA max.
Installation orientation and restrictions  Installation orientation:  • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  • Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  • Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions  Terminal connection diagram    Vo Power Supply   Vi Power Supply	Weight	130 g max.		
* Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  * Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  * Connected to a Communications Coupler Unit: Possible in 6 orientations.  Restrictions: No restrictions  * Additional I/O Power Supply Unit NX-OD6121    Additional I/O Power Supply Unit NX-OD6121   Additional I/O Power Supply Unit NX-OD6121   Additional I/O Power Supply Unit NX-OD6121   Additional I/O Power Supply Unit NX-OD6121   I/O Power Supply Unit NX-OD6121	Circuit layout	NX Bus connector (left)    I/O power supply +   I/O power supply -   I/O		I/O power of supply + NX Bus connector (right)
Power Supply Unit   A1	Installation orientation and restrictions	Connected to a CPU Unit or Communications     Connected to a Communications Couple		
I Not supported Protective function I Not supported	Terminal connection diagram	Power Supply Unit  A1 B1  IOV IOV	Connection Unit   B1   A1	NX-OD6121  B1C1  OUT1  OUT16  OUT17  OUT3  OUT20  OUT20  OUT20  OUT20  OUT20  OUT20  OUT21  OUT3  OUT9  OUT24  OUT25  OUT11  OUT26  OUT27  OUT13  OUT28  OUT29  OUT13  OUT18  OUT29  OUT11  OUT28  OUT30  OUT31
I Not supported Protective function I Not supported	Disconnection/		<b>5</b>	I.,
		Not supported.	Protective function	Not supported.

<sup>\*1.</sup> The total load currents of OUT 0 to 15 and the total load currents of OUT 16 to 31 must be 4 A or less respectively.

NX-OD6256			
Unit name	Transistor Output Unit	Model	NX-OD6256
Number of points	32 points	External connection terminals	Screwless clamping terminal block (16 terminals x 2)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	
	TS indicator, output indicator	Internal I/O common	PNP
	OD6256	Rated voltage	24 VDC
	DTS 0 1 2 3 16 17 18 19	Operating load voltage range	15 to 28.8 VDC
Indicators	4 5 6 7 20 21 22 23 8 9 10 11 24 25 26 27	Maximum value of load current	0.5 A/point, 4 A/terminal block *1, 8 A/Unit
	12 13 14 15 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	24 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation
	$20 \text{ M}\Omega$ min. between isolated circuits (at		510 VAC between isolated circuits for 1
Insulation resistance	100 VDC)	Dielectric strength	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 1.45 W max. Connected to a Communications Coupler Unit 1.00 W max.	I/O current consumption	80 mA max.
Weight	130 g max.		
Circuit layout	NX Bus connector (left)  I/O power supply + I/O power supply -	Short-circuit protection	OUT0 to OUT31 Terminal block  I/O power supply + I/O power supply -  NX Bus connector (right)
Installation orientation and restrictions	Installation orientation:		
Terminal connection diagram	IOV   IOV	IOG IOG OUT12	Transistor Output Unit
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.

<sup>\*1.</sup> The total load currents of OUT 0 to 15 and the total load currents of OUT 16 to 31 must be 4 A or less respectively.

## ● 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	1	
	TS indicator, output indicator	Internal I/O common	NPN
	OD5121-1 ■TS	Rated voltage	12 to 24 VDC
	0 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC
Indicators	8 9 10 11 12 13 14 15	Maximum value of load current	0.5 A/point, 5 A/Unit
		Maximum inrush current	4.0 A/point, 10 ms max.
		Leakage current	0.1 mA max.
		Residual voltage	1.5 V max.
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 MΩ min. between isolated circuits (at		510 VAC between isolated circuits for 1
Insulation resistance	100 VDC)	Dielectric strength	minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.90 W max. Connected to a Communications Coupler Unit 0.60 W max.	Current consumption from I/O power supply	30 mA max.
Weight	125 g max.		
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	COM  I/O powe supply +  I/O powe supply -	Terminal block  To 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	ation Control Unit: Possible in er Unit: Possible in 6 orientat	n upright installation. ions.
Terminal connection diagram	Terminal   A   B   Signal name   A   Signal name   A   B   Signal name   A   Signal name		
Disconnection/ Short-circuit detection	Not supported.	Protective function	Not supported.

### NX-OD5256-1

NX-0D5256-1				
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	
	DD3230-1 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	Connected to a CPU Unit or Communication Control Unit 0.95 W max. Connected to a Communications Coupler Unit 0.65 W max.	Communication Control Unit 0.95 W max. Connected to a Communications Coupler Unit  Current consumption from I/O power supply		
Weight	125 g max.			
Circuit layout	NX bus connector (left)  I/O power supply + I/O power supply -	Short-circuit protection on No	power poly - NX bus connector (right)	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communica Connected to a Communications Couple Restrictions: No restrictions			
Terminal connection diagram	Signal name			
Disconnection/ Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.	

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

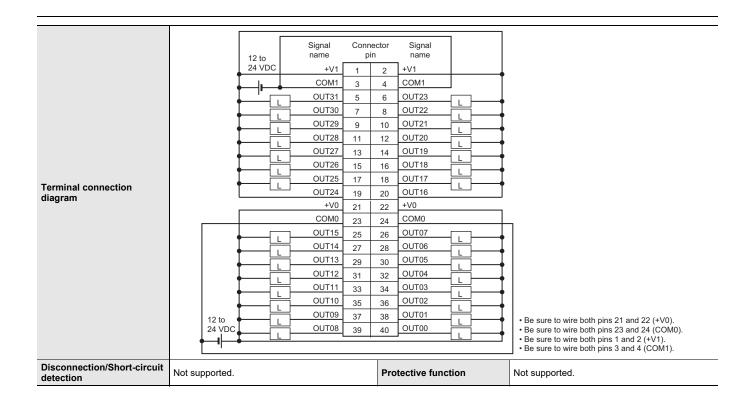
Unit name	Transistor Output Unit	Model	NX-OD5121-5	
Number of points	16 points	External connection terminals	MIL connector (20 terminals)	
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing		
	TS indicator, output indicator	Internal I/O common NPN		
	OD5121-5	Rated voltage	12 to 24 VDC	
	DTS	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/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 external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 0.95 W max.     Connected to a Communications Coupler Unit 0.60 W max.	Current consumption from I/O power supply	30 mA max.	
Weight	80 g max.			
Circuit layout	NX bus connector (left)  NX bus connector (left)		+V OUT0 to OUT15  Connector  COM COM I/O power supply + I/O power supply - I/O power supp	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Connected to a Communications Coupler Unit Restrictions: No restrictions	Control Unit: Possible in upright in Endergon : Possible in 6 orientations.	nstallation.	
Terminal connection diagram	Signal   Connector   pin	Signal name +V COM OUT07 L OUT06 L OUT05 L OUT04 L OUT03 L OUT02 L OUT01 L OUT01 L OUT01 L OUT00 L		
Disconnection/Short-circuit	Be sure to wire both pins 1 and 2 (+V).  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)			
·		terminals	Wile definition (20 terminals)			
I/O refreshing method	Switching Synchronous I/O refreshing and Free-Run refreshing  TS indicator, output indicator Internal I/O common PNP					
	, ,	Rated voltage	24 VDC			
	OD5256-5 ■TS	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.			
Dii	20 (M) 400 (H) 74 (D)	ON/OFF response time	0.5 ms max./1.0 ms max.			
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation 510 VAC between isolated circuits for 1 minute at			
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	a leakage current of 5 mA max.			
I/O power supply method	Supplied from external source.	Current capacity of I/O power supply terminal	Without I/O power supply terminals			
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit     1.00 W max.     Connected to a Communications Coupler Unit     0.70 W max.	Current consumption from I/O power supply	40 mA max.			
Weight	85 g max.					
Circuit layout	NX bus connector (left)  I/O power supply +	COM (+V) COM (+V)  OUT0 to OUT15  OV OV  I/O power supply + I/O power supply - (right)				
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication C  Connected to a Communications Coupler Unit Restrictions: No restrictions		nstallation.			
Terminal connection diagram	Signal connector name pin  24 VDC	OUT04 L OUT03 L OUT02 L OUT01 L				
Disconnection/Short-circuit detection	Not supported.	Protective function	With load short-circuit protection.			

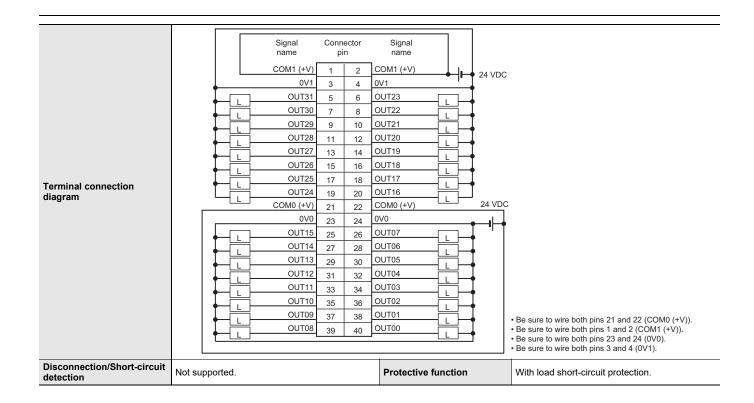
### NX-OD6121-5

Unit name	Transistor Output Unit	Model	NX-OD6121-5	
Number of points	32 points	External connection terminals	MIL connector (40 terminals)	
I/O refreshing method	Switching Synchronous I/O refreshing and Free-F	Run refreshing		
	TS indicator, output indicator	Internal I/O common	NPN	
	OD6121-5	Rated voltage	12 to 24 VDC	
	DTS 0 1 2 3 4 5 6 7	Operating load voltage range	10.2 to 28.8 VDC	
Indicators	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Maximum value of load current	0.5 A/point, 2 A/common, 4 A/Unit	
	24 25 26 27 28 29 30 31	Maximum inrush current	4.0 A/point, 10 ms max.	
		Leakage current	0.1 mA max.	
		Residual voltage	1.5 V max.	
		ON/OFF response time	0.1 ms max./0.8 ms max.	
Dimensions	30 (W) x 100 (H) x 71 (D)	Isolation method	Photocoupler isolation	
Insulation resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 1.00 W max.     Connected to a Communications Coupler Unit 0.80 W max.	Current consumption from I/O power supply	50 mA max.	
Weight	90 g max.			
Circuit layout	Internal circuits	+V0 +V0 OUT0 to OUT18 COM0 +V1 +V1 +V1 OUT16 to OUT31	Connector	
	NX bus connector (left) I/O power supply +	I/O power	] (%)	
Installation orientation and restrictions	Connected to a CPU Unit or Communication C     Connected to a Communications Coupler Unit Restrictions: No restrictions		nstallation.	



### NX-OD6256-5

I/O refreshing method	32 points Switching Synchronous I/O refreshing and Free-FTS indicator, output indicator  OD6256-5	External connection terminals Run refreshing Internal I/O common	MIL connector (40 terminals)
	TS indicator, output indicator		
		Internal I/O common	
	OD6256-5	internal if a commen	PNP
	<b>■ 4 7 4 7 4 7 1 0 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1</b>	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
	$20~\text{M}\Omega$ min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit     1.30 W max.     Connected to a Communications Coupler Unit     1.00 W max.	Current consumption from I/O power supply	80 mA max.
Weight	95 g max.		
Circuit layout	NX bus connector I/O power supply +	Short-circuit protection protection	COM0 (+V)  COM0 (+V)  OUT0 to OUT15  OV0  OV0  COM1 (+V)  COM1 (+V)  OUT16 to OUT31  OV1  OV1  OV1  OV1  NX bus connector
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication ( Connected to a Communications Coupler Unit		nstallation.



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

Note of points   S2 points   S2 points   Synchronous I/O reflecting and Fire-Pour reflecting   Feature Commonator (40 terminals)	Unit name	Transistor Output Unit	Model	NX-OD6121-6	
Soliciting Synchronous IO refreshing and Fine-Plum refreshing in the Plum refreshing in the	Number of points	32 points		Fujitsu/OTAX connector (40 terminals)	
Indicators	I/O refreshing method	Switching Synchronous I/O refreshing and Free-F			
Indicators    Oberlay		TS indicator, output indicator	Internal I/O common	NPN	
10		OD6121-6		12 to 24 VDC	
8 9 10 11 2 23 14 15 2 22 22 24 25 20 27 28 29 20 31		D⊤S		10.2 to 28.8 VDC	
Dimensions  30 (W) x 100 (H) x 71 (D)  1	Indicators	8 9 10 11 12 13 14 15		0.5 A/point, 2 A/common, 4 A/Unit	
Circuit layout   Circ			Maximum inrush current	4.0 A/point, 10 ms max.	
Dimensions   30 (W) x 100 (H) x 71 (D)   Isolation member   Protection   1 ms max (D ms max)   Dimensions   30 (W) x 100 (H) x 71 (D)   Isolation member   Protection   150 (W) College   150		24 25 20 21 28 29 30 31	Leakage current	0.1 mA max.	
Dissulation resistance   20 (W) x 100 (H) x 71 (D)   Insulation resistance   20 (M) x 100 (H) x 71 (D)   Disconnection   Dis			_		
Insulation resistance   20 Mit min. between isolated circuits (at 100   Dielectric strength   510 VAC Devices isolated circuits for 1 minute at a leakage current of 5 m Am axx.			•		
Installation orientation and restrictions   Installation orientation   Installation   Installa	Dimensions		Isolation method		
NX Unit power consumption  Connected to a Connected to a Counter Consumption from Control Unit or Communications Coupler Unit or Counter Consumption from the Counter Count	Insulation resistance		-		
Circuit layout    Circuit layout   Connector   Connect	I/O power supply method			Without I/O power supply terminals	
Circuit layout    Installation orientation and restrictions   Installation contents   Installation orientation and restrictions   Installation orientation and restrictions   Installation orientation and restrictions   Installation orientation   Installation orientations   Installation orientation   Installation orientation   Installation   Installation		Control Unit 1.10 W max.  Connected to a Communications Coupler Unit 0.80 W max.		50 mA max.	
Circuit layout    NX bus   NX	Weight	90 g max.			
**Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.  **Connected to a Communications Coupler Unit: Possible in 6 orientations.  **Restrictions: No restrictions  12 to 24 VDC    OUTO   A1   B1   OUT16   A2   B2   OUT17   L   OUT2   A3   B3   OUT18   L   OUT3   A4   B4   OUT19   L   OUT4   A5   B5   OUT20   L   OUT5   A6   B6   OUT21   L   OUT7   A8   B8   OUT22   L   OUT7   A8   B8   OUT23   L   OUT8   A7   B7   OUT2   L   OUT9   A7   B7   OUT2   L   OUT14   A7   B7   OUT2   L   OUT14   A7   B7   OUT2   L   OUT14   A7   B7   OUT3   A7   B7   OUT3   OUT3   L   OUT3   A7   B7   OUT3   A7   B7   OUT3   O	Circuit layout	NX bus connector (left)    I/O power supply + I/O power supply -   I/O p	s		
Terminal connection diagram  Terminal connection    2 to 24 VDC		Connected to a CPU Unit or Communication C     Connected to a Communications Coupler Unit		nstallation.	
I Not supported   Protective function   Not supported		12 to 24 VDC   name   pin   name   na			
		Not supported.	Protective function	Not supported.	

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

Unit name	Relay Output Units	Model External connection	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			
	TS indicator, output indicator	Relay type	N.O. contact	
Indicators	OC2633 ■TS 0 1	Maximum switching capacity	250 VAC/2 A (cos\( \phi = 1 \), 250 VAC/2 A (cos\( \phi = 0.4 \), 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: $20~\text{M}\Omega$ min. (500 VDC) Between the external terminals and internal circuits: $20~\text{M}\Omega$ min. (500 VDC) Between the internal circuit and GR terminal: $20~\text{M}\Omega$ min. (100 VDC) Between the external terminals and GR terminal: $20~\text{M}\Omega$ 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 max. Between the internal circuit and GR terminal: 510 VAC for 1 min at a leakage current of 5 mA max.	
Vibration resistance	Conforms to IEC60068-2-6. 5 to 8.4 Hz with amplitude of 3.5 mm, 8.4 to 150 Hz, acceleration of 9.8 m/s² 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/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.	I/O current consumption	No consumption	
Weight	65 g max.			
Circuit layout	NX bus connector (left)  NX bus connector (left)  I/O power supply -  You cannot replace to	oly	I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Installation orientation:  Connected to a CPU Unit or Communication Connected to a Communications Coupler Unit: Restrictions: No restrictions		estallation.	
Terminal connection diagram	Relay Output Unit NX-OC2633 A1  O C0  Load  NC NC  NC NC  NC NC  A8  B8			

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

#### NX-OC2733 Unit name Relay Output Unit Model NX-OC2733 **External connection** Screwless clamping terminal block (8 **Number of points** 2 points, independent contacts terminals terminals) I/O refreshing method Free-Run refreshing TS indicator, output indicator 250 VAC/2 A $(\cos \phi = 1)$ 250 VAC/2 A ( $\cos \phi = 0.4$ ), Maximum switching OC2733 24 VDC/2 A, capacity TS 4 A/Unit Indicators 0 1 Minimum switching 5 VDC, 10 mA capacity Electrical: 100,000 operations Relay service life ON/OFF response time 15 ms max./15 ms max. Mechanical: 20,000,000 operations Dimensions 12 (W) x 100 (H) x 71 (D) Isolation method Relay isolation Between A1/3, B1/3 terminals and A5/7, Between A1/3, B1/3 terminals and A5/7 B5/7 terminals: 2300 VAC for 1 min at a B5/7 terminals: 20 M $\Omega$ min. (at 500 VDC) leakage current of 5 mA max. Between the external terminals and Between the external terminals and the functional ground terminal: 20 $\mbox{M}\Omega$ min. (at functional ground terminal: 2300 VAC for 1 500 VDC) min at a leakage current of 5 mA max. Insulation resistance Dielectric strength Between the external terminals and Between the external terminals and internal circuits: 2300 VAC for 1 min at a internal circuits: 20 M $\Omega$ min. (at 500 VDC) Between the internal circuit and the leakage current of 5 mA max. functional ground terminal: 20 $\mbox{M}\Omega$ min. (at Between the internal circuit and the 100 VDC) functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max. I/O power supply Current capacity of I/O Supply from external source Without I/O power supply terminals method power supply terminal Connected to a CPU Unit or Communication Control Unit **NX** Unit power Current consumption 1.30 W max. No consumption Connected to a Communications consumption from I/O power supply Coupler Unit 0.95 W max. Weight 70 g max. NO0 to NO1 circuits C0 to C1 Terminal block NC0 to NC1 nternal Circuit layout Internal power supply NX bus NX bus I/O power supply + I/O power supply connector connecto (left) (right) I/O power supply I/O power supply NO0 and NO1 are normal open contacts, and NC0 and NC1 are normal close contacts. You cannot replace the relay. Installation orientation 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. and restrictions Restrictions: No restrictions Relay Output Únit NX-OC2733 Load •NO0 NC0 Load

C0

NO<sub>1</sub>

C1

C0 •

NC1

C1

**Protective function** 

Not supported.

Not supported.

**Terminal connection** 

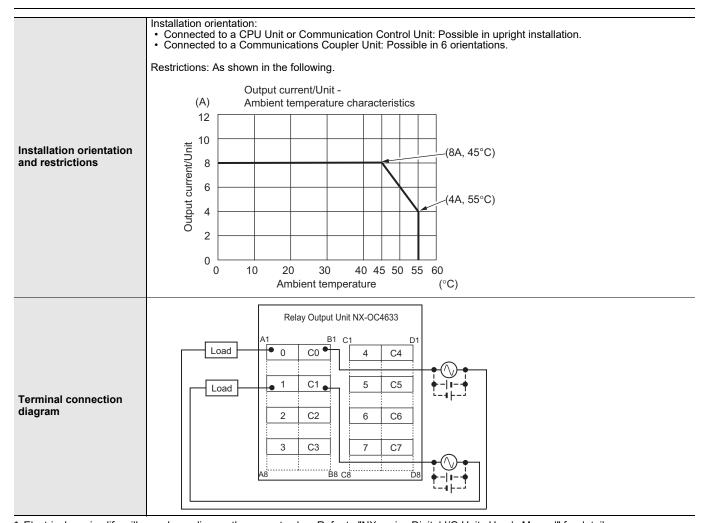
Disconnection/Short-

circuit detection

diagram

## ● 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	Maximum switching capacity	N.O. contact 250 VAC/2 A (cosφ = 1), 250 VAC/2 A (cosφ = 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: $20~M\Omega$ min. (at $500~VDC$ ) Between the external terminals and the functional ground terminal: $20~M\Omega$ min. (at $500~VDC$ ) Between the external terminals and internal circuits: $20~M\Omega$ min. (at $500~VDC$ ) Between the internal circuit and the functional ground terminal: $20~M\Omega$ min. (at $100~VDC$ )	Dielectric strength	Between output bits: 2300 VAC for 1 min at a leakage current of 5 mA max.  Between the external terminals and the functional ground terminal: 2300 VAC for 1 min at a leakage current of 5 mA max.  Between the external terminals and internal circuits: 2300 VAC for 1 min at a leakage current of 5 mA max.  Between the internal circuit and the functional ground terminal: 510 VAC for 1 min at a leakage current of 5 mA max.			
Vibration resistance	Conforms to IEC 60068-2-6. 5 to 8.4 Hz with amplitude of 3.5 mm, 8.4 to 150 Hz, acceleration of 9.8 m/s <sup>2</sup> 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	Shock resistance	100 m/s <sup>2</sup> , 3 times each in X, Y, and Z directions			
I/O power supply method	Supply from external source	Current capacity of I/O power supply terminal	Without I/O power supply terminals			
NX Unit power consumption	Connected to a CPU Unit or Communication Control Unit 2.00 W max. Connected to a Communications Coupler Unit 1.65 W max.	Current consumption from I/O power supply	No consumption			
Weight	140 g max.					
Circuit layout		0 to 7  Terminal block  C0 to C7  Terminal block  I/O power supply + NX bus				
	(left) I/O power supply – You cannot rep	place the relay.	I/O power supply – connector (right)			



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

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

Unit name	)	DC Input/Transistor Output Unit	Model		NX-MD6121-5
Number o	f points	16 inputs/16 outputs	External of terminals	connection	2 MIL connectors (20 terminals)
I/O refresi	hing method	Switching Synchronous I/O refreshing and Free-	-Run refresh	ing	
	Internal I/O common	NPN		Internal I/O common	For both NPN/PNP
	Rated voltage	12 to 24 VDC		Rated input voltage	24 VDC (15 to 28.8 VDC)
	Operating load voltage range	10.2 to 28.8 VDC		Input current	7 mA typical (at 24 VDC)
Output section	Maximum value of load current	0.5 A/point, 2 A/Unit	Input section	ON voltage/ON current	15 VDC min./3 mA min. (between COM and each signal)
(CN1)	Maximum inrush current	4.0 A/point, 10 ms max.	(CN2)	OFF voltage/OFF current	5 VDC max./1 mA max. (between COM and each signal)
	Leakage current	0.1 mA max.	-	ON/OFF response time	20 μs max./400 μs max.
	Residual voltage	1.5 V max.			No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms,
	ON/OFF response time	0.1 ms max./0.8 ms max.		Input filter time	4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
		TS indicator, I/O indicators	Dimensio	ns	30 (W) x 100 (H) x 71 (D)
		MD6121-5	Isolation	method	Photocoupler isolation
		CN ₽TS	Insulation	resistance	20 M $\Omega$ min. between isolated circuits (at 100 VDC)
		1 0 1 2 3 4 5 6 7 1 8 9 10 11 12 13 14 15 2 0 1 2 3 4 5 6 7	Dielectric strength		510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
		2 8 9 10 11 12 13 14 15		supply method	Supply from external source
Indicators	<b>.</b>		Supply te	apacity of I/O power rminal	Without I/O power supply terminals
			NX Unit power consumption		Connected to a CPU Unit or Communication Control Unit 1.00 W max. Connected to a Communications Coupler Unit 0.70 W max.
			Current co	onsumption from supply	30 mA max.
			Weight		105 g max.
Circuit lay	<b>/out</b>	CN1 (left) output circuit  NX bus connector (left)  CN2 (right) input circuit  Connector  NX bus connector (left)  I/O power supply –  CN2 (right) input circuit  Input indicat 3.3 kΩ  IN0  IN15  COM1  COM1  NX bus connector (left)  I/O power supply + I/O powe	COMO COMO I/O power supply + I/O power supply - I/O power supply - I/O power (right)		TOO & THAX.

Installation orientation Connected to a CPU Unit or Communication Control Unit: Possible in upright installation.
 Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. · For upright installation Number of simultaneously ON input points vs. points Ambient temperature characteristic Number of simultaneously ON input 16 points at 35°C 16 points at 45°C 16 13 points at 55°C 12 9 points at 55°C 8 I/O power supply voltage ----24 V 4 28.8 V 0 0 10 20 30 40 45 50 55 60 Installation orientation and Ambient temperature · For any installation other than upright Number of simultaneously ON input points vs. Number of simultaneously ON input points Ambient temperature characteristic 16 points at 40°C 16 points at 25°C 12 I/O power supply 5 points at 55°C 8 voltage ---24 V 4 28.8 V 3 points at 55°C 0 10 30 40 45 50 55 60 Ambient temperature (°C) CN1 (left) output terminal Signal Connector Signal name pin name OUT0 20 19 OUT8 name OUT1 18 17 OUT9 OUT10 L OUT2 16 15 OUT3 14 13 OUT11 OUT4 12 11 OUT12 OUT5 10 9 OUT13 OUT6 8 7 OUT14 OUT7 6 5 OUT15 COM0 4 3 COM0 +V0 2 1 +V0 • Be sure to wire both pins 3 and 4 (COM0) of CN1. Terminal connection • Be sure to wire both pins 1 and 2 (+V0) of CN1. diagram CN2 (right) input terminal Signal Connector Signal 24 VDC name pin name 1 2 NC NC COM1 3 4 COM1 IN15 5 6 IN07 7 8 IN14 IN06 IN13 9 10 IN05 60 IN12 11 12 IN04 13 14 IN11 IN03 6 c IN10 15 16 IN02 60 17 18 IN01 IN09 IN08 19 20 IN00 **√**0 The polarity of the input power supply of CN2 can be connected in either direction.
Be sure to wire both pins 3 and 4 (COM1) of CN2, and set the same polarity for both pins. Disconnection/Short-circuit Not supported. **Protective function** Not supported. detection

### NX-MD6256-5

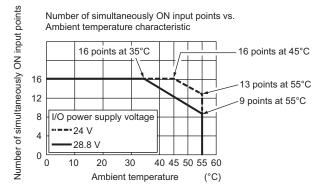
Unit name	DC Input/Transistor Output Unit	Model		NX-MD6256-5
Number of points	16 inputs/16 outputs	External connection		
	· · · · · · · · · · · · · · · · · · ·	terminals		2 MIL connectors (20 terminals)
I/O refreshing method Internal I/O	Switching Synchronous I/O refreshing and Free-	Internal I/O		
common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

- Installation orientation:

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

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

  Restrictions: As shown in the following.
- - For upright installation



#### Installation orientation and restrictions

· For any installation other than upright

Number of simultaneously ON input points Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 40°C 16 points at 25°C 16 12 I/O power supply 5 points at 55°C 8 voltage ----24 V 4 28.8 V 3 points at 55°C 0 0 10 20 30 40 45 50 55 60 (°C) Ambient temperature

#### CN1 (left) output terminal

	Signal C	onn	ecto	or Signal	
	name	pi	in	name	
	OUT0	20	19	OUT8 _	$\neg \Box$
	OUT1	18	17	OUT9	╤
	OUT2	16	15	OUT10	╤┸
	OUT3	14	13	OUT11	=
	OUT4	12	11	OUT12	=
	OUT5	10	9	OUT13	╤┈╻
	OUT6	8	7	OUT14	╤
	OUT7	6	5	OUT15	≒□
	COM0 (+V)	4	3	COM0 (+V)	<u>-</u> -' I
<u> </u>	0V0	2	1	0V0	
L	'			•	
24 VDC					
_		_			

#### Terminal connection diagram

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

#### CN2 (right) input terminal

24				<u>.</u>	
24 VDC	Signal C name		necto in	or Signal name	
lah l	NC	1	2	NC NC	
	COM1	3	4	COM1	
	IN15	5	6	IN07	
	IN14	7	8	IN06	
	IN13	9	10	IN05	`
	IN12	11	12	IN04	`
	IN11	13	14	IN03	
	IN10	15	16	IN02	
	IN09	17	18	IN01	
	IN08	19	20	IN00	

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

detection Not supported. Protective function With load short-circuit protection.
--

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

Unit name		DC Input/Transistor Output Unit	Model		NX-MD6121-6
Number o	f points	16 inputs/16 outputs	External of terminals	connection	2 Fujitsu/OTAX connectors (24 terminals)
I/O refresi	hing method	Switching Synchronous I/O refreshing and Free-F	Run refreshii	ng	
	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.			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.			N. 514 0.05 0.5 4 (1.5 H) 0
	ON/OFF response time	0.1 ms max./0.8 ms max.		Input filter time	No filter, 0.25 ms, 0.5 ms, 1 ms (default), 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms
	+	TS indicator, I/O indicators	Dimension	ns	30 (W) x 100 (H) x 71 (D)
			Isolation	method	Photocoupler isolation
		MD6121-6 CN	Insulation	resistance	20 MΩ min. between isolated circuits (at 100 VDC)
		1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Dielectric strength		510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
		2 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	I/O power supply method		Supply from external source
Indicators	<b>.</b>	LO 9 10 11 12 13 14 13	Current ca	apacity of I/O	Without I/O power supply terminals
			NX Unit power consumption		Connected to a CPU Unit or Communication Control Unit 1.00 W max. Connected to a Communications Coupler Unit 0.70 W max.
			Current co	onsumption from supply	30 mA max.
			Weight		95 g max.
Circuit layout		NX bus connector (left)  NX bus connector (left)  CN2 (right) input circuit		+V0 +V0 OUT0 to OUT15 COM0 COM0 I/O power supply + I/O power supply –	Connector  NX bus connector (right)
		Connector  Connector  IN0 to IN15  COM1  COM1  NX bus connector (left)  I/O power supply + I/O power supply -	ndicator	I/O power supply + U/O power supply - U/O power sup	NX bus connector (right)

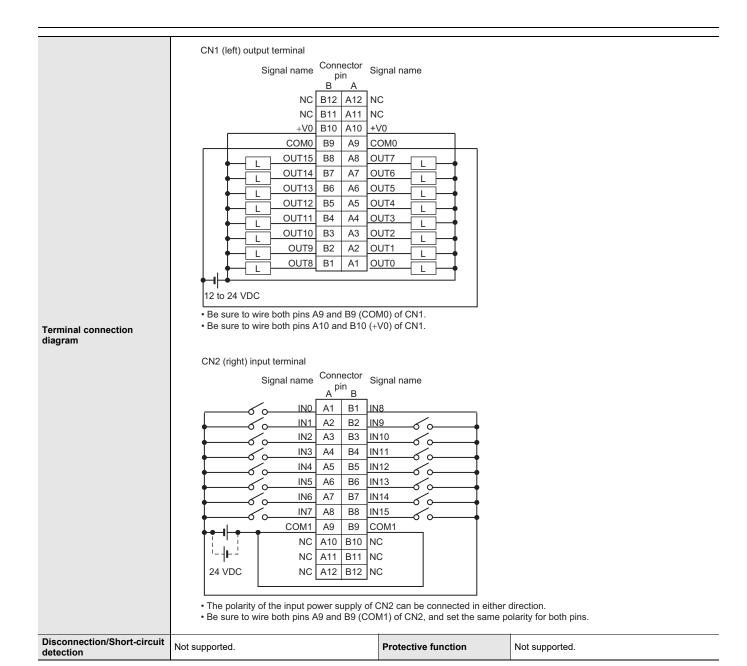
Installation orientation:

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

Connected to a Communications Coupler Unit: Possible in 6 orientations. Restrictions: As shown in the following. • For upright installation Number of simultaneously ON input points vs. Ambient temperature characteristic Number of simultaneously ON input points 16 points at 35°C 16 points at 45°C 16 -13 points at 55°C 12 9 points at 55°C 8 I/O power supply voltage **--**24 V 4 28.8 V 0 0 10 20 30 40 45 50 55 60 Installation orientation and (°C) Ambient temperature • For any installation other than upright Number of simultaneously ON input points vs. Ambient temperature characteristic 16 points at 40°C Number of simultaneously ON input points 16 points at 25°C 16 12 I/O power supply 5 points at 55°C voltage 8 ----24 V 4 28.8 V -3 points at 55°C 0 0 10 20 30 40 45 50 55 60

Ambient temperature

(°C)



### **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			Van 4.47			
NX-ID4442			Ver.1.17			
NX-ID5142-1						
NX-ID5142-5						
NX-ID5342						
NX-ID5442						
NX-ID6142-5						
NX-ID6142-6						
NX-ID6342			Van 4.54			
NX-ID6442			Ver.1.54			
NX-IA3117						
NX-OD2154						
NX-OD2258						
NX-OD3121						
NX-OD3153						
NX-OD3256	Ver.1.0	Ver.1.13				
NX-OD3257						
NX-OD3268			Ver.1.17			
NX-OD4121			Vel.1.17			
NX-OD4256						
NX-OD5121						
NX-OD5121-1						
NX-OD5121-5						
NX-OD5256						
NX-OD5256-1						
NX-OD5256-5						
NX-OD6121			Ver.1.54			
NX-OD6121-5			Ver.1.17			
NX-OD6121-6			V G1.1.17			
NX-OD6256			Ver.1.54			
NX-OD6256-5						
NX-OC2633						
NX-OC2733						
NX-OC4633			Ver.1.17			
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**

NX Unit		Corresponding unit versions/versions					
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							
NX-ID3344		Ver.1.1	Ver.1.06 *	Ver.1.07			
NX-ID3417		Ver.1.0	Ver.1.05	Ver.1.06			
NX-ID3443		V G1.1.0	VCI.1.00	VCI.1.00			
NX-ID3444		Ver.1.1	Ver.1.06 *	Ver.1.07			
NX-ID4342	Ver.1.0			Ver.1.06			
NX-ID4442				Ver. 1.00			
NX-ID5142-1				Ver.1.13			
NX-ID5142-5				Ver.1.10			
NX-ID5342				Var 1.06			
NX-ID5442		Ver.1.0	Ver.1.05	Ver.1.06			
NX-ID6142-5				Ver.1.10			
IX-ID6142-6				Ver.1.13			
NX-ID6342				V 4. E 4			
NX-ID6442				Ver.1.54			
NX-IA3117				Ver.1.08			
NX-OD2154		V 44	V 400 t	\\			
NX-OD2258		Ver.1.1	Ver.1.06 *	Ver.1.07			
NX-OD3121							
NX-OD3153			Ver.1.05				
NX-OD3256	_			Ver.1.06			
NX-OD3257							
NX-OD3268	_	er.1.0		Ver.1.13			
NX-OD4121							
NX-OD4256				Ver.1.06			
NX-OD5121							
IX-OD5121-1				Ver.1.13			
NX-OD5121-5	Ver.1.0			Ver.1.10			
NX-OD5256		Ver.1.0		Ver.1.06			
NX-OD5256-1				Ver.1.13			
X-OD5256-5				Ver.1.10			
NX-OD6121				Ver.1.54			
X-OD6121-5				Ver.1.10			
IX-OD6121-6				Ver.1.13			
IX-OD6256				Ver.1.54			
IX-OD6256-5				Ver.1.10			
IX-OC2633				Ver.1.06			
X-OC2733				Ver.1.08			
IX-OC4633				Ver.1.17			
X-MD6121-5				Ver.1.17			
IX-MD6121-6	 Ver.1.0	Ver.1.0	Ver.1.05	Ver.1.13			
IX-MD6121-0	v C1.1.U	V GI. I.U	V GI. 1.00	Ver.1.10			

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

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

### Connected to an EtherNet/IP Coupler Unit

NX	Unit		Coi	rresponding un	it versions/versio	ns	
		Application with	an NJ/NX/NY-ser *1	ries Controller	Application w	ith a CS/CJ/CF	P-series PLC *2
Model	Unit version	EtherNet/IP Coupler Unit	CPU Unit or Industrial PC	Sysmac Studio	EtherNet/IP Coupler Unit	Sysmac Studio	NX-IO Configurator *3
NX-ID3317		Ver. 1.2	Ver. 1.14	Ver. 1.19	Ver. 1.0	Ver. 1.10	Ver. 1.00
NX-ID3343		VCI. 1.2	VCI. 1.14	VOI. 1.13	VCI. 1.0	VCI. 1.10	VCI. 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			7 5		7 511 115	7 3.1 1.1 0	7 511 1100
NX-ID3444							
NX-ID4342						Ver. 1.10	
NX-ID4442							
NX-ID5142-1						Ver. 1.13	
NX-ID5142-5				Ver. 1.19			Ver. 1.00
NX-ID5342						Ver. 1.10	
NX-ID5442		Ver. 1.2	Ver. 1.14		Ver. 1.0		
NX-ID6142-5							_
NX-ID6142-6						Ver. 1.13	
NX-ID6342				Ver.1.54		Ver.1.54	Ver.1.23
NX-ID6442							
NX-IA3117				Ver. 1.19		Ver. 1.10	Ver. 1.00
NX-OD2154							
NX-OD2258							
NX-OD3121							- - Ver. 1.00
NX-OD3153						Ver. 1.10	
NX-OD3256	Ver. 1.0						
NX-OD3257						Van 4.42	
NX-OD3268 NX-OD4121						Ver. 1.13	
NX-OD4121 NX-OD4256				Ver. 1.19		Ver. 1.10	
NX-OD4230 NX-OD5121				vei. i.i9		vei. 1.10	Ver. 1.00
NX-OD5121 NX-OD5121-1						Ver. 1.13	_
NX-OD5121-1						Vel. 1.13	- -
NX-OD5256						Ver. 1.10	
NX-OD5256-1						Ver. 1.13	
NX-OD5256-5		Ver. 1.2	Ver. 1.14		Ver. 1.0	Ver. 1.10	
NX-OD5256-5 NX-OD6121				Ver.1.54		Ver. 1.10 Ver.1.54	Ver.1.23
NX-OD6121-5				V C1. 1. U-4		Ver. 1.10	V CI . I . Z U
NX-OD6121-6				Ver. 1.19		Ver. 1.13	Ver. 1.00
NX-OD6121-0				Ver.1.54		Ver. 1.15	Ver.1.23
NX-OD6256-5				V 01.1.07		V 01.1.04	V 01.1.20
NX-OC2633						Ver. 1.10	
NX-OC2733						751. 1.10	
NX-OC4633				Ver. 1.19		Ver. 1.17	Ver. 1.00
NX-MD6121-5						Ver. 1.10	-
NX-MD6121-6						Ver. 1.13	1
NX-MD6256-5						Ver. 1.10	1
		- <b>f</b> th			not have the speci		4

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

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

<sup>\*1</sup> 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.

<sup>\*2</sup> 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.

<sup>\*3</sup> 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**

N)	( Unit	Corresponding unit versions/versions				
Model	Unit version	Communication Control Unit	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		Vel. 1.00	VGI. 1.24			
NX-ID3444						
NX-ID4342						
NX-ID4442						
NX-ID5142-1						
NX-ID5142-5			Ver. 1.24			
NX-ID5342			Vel. 1.24			
NX-ID5442		Ver. 1.00				
NX-ID6142-5						
NX-ID6142-6						
NX-ID6342			Ver. 1.54			
NX-ID6442			Ver. 1.54			
NX-IA3117			Ver. 1.24			
NX-OD2154						
NX-OD2258						
NX-OD3121						
NX-OD3153						
NX-OD3256						
NX-OD3257						
NX-OD3268	Ver. 1.0					
NX-OD4121	ver. 1.0					
NX-OD4256			Ver. 1.24			
NX-OD5121						
NX-OD5121-1						
NX-OD5121-5						
NX-OD5256						
NX-OD5256-1		Vor. 1.00				
NX-OD5256-5		Ver. 1.00				
NX-OD6121			Ver. 1.54			
NX-OD6121-5			Vor. 1.24			
NX-OD6121-6			Ver. 1.24			
NX-OD6256			Ver. 1.54			
NX-OD6256-5						
NX-OC2633						
NX-OC2733						
NX-OC4633			Ver. 1.24			
NX-MD6121-5						
NX-MD6121-6						
NX-MD6256-5						

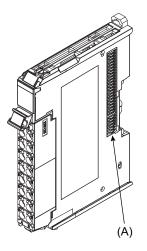
Note: 1. Some Units do not have all of the versions given in the above table. If a Unit does not have the specified version, support is provided by the oldest available version after the specified version. Refer to the user's manuals for the specific Units for the relation between models and versions.

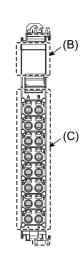
<sup>2.</sup> Note: You cannot connect the relevant NX Unit to the Communication Control Unit if "---" is shown in the corresponding unit versions/ versions column.

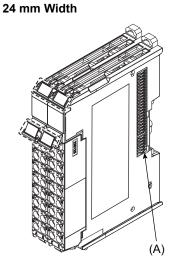
### **External Interface**

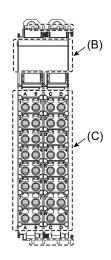
### **Screwless Clamping Terminal Block Type**

#### 12 mm Width



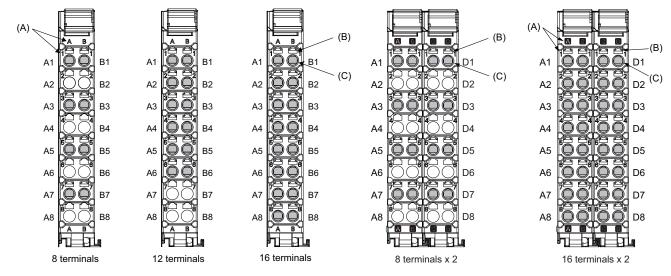






Letter	r Item Specification			
(A)	NX bus connector	This connector is used to connect to another Unit.		
(B)	Indicators	The indicators show the current operating status of the Unit.		
(C)	Terminal block	The terminal block is used to connect to external devices. The number of terminals depends on the 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-ID6□□□	NX-TBA162	16	None	10 A				
NA-IDOLLL	NX-TBB162	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-OD6□□□	NX-TBA162	16	None	10 A				
NX-ODOLILL	NX-TBB162	16	None	10 A				
NX-OC2	NX-TBA082	8	None	10 A				
NX-OC4633 *1	NX-TBA082	8	None	10 A				

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

### **Applicable Wires**

#### **Using Ferrules**

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

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

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

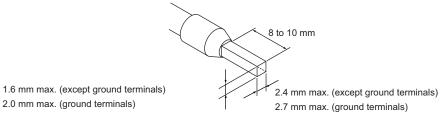
The applicable ferrules, wires, and crimping tools are listed in the following table.

Terminal type	Manufacturer	Ferrule model	Applicable wire (mm² (AWG))	Crimping tool
Terminals other	Phoenix Contact	AI0,34-8	0.34 (#22)	Phoenix Contact (The figure in parentheses is the applicable wire size.)
than ground terminals		AI0,5-8	0.5 (#20)	CRIMPFOX 6 (0.25 to 6 mm <sup>2</sup> , AWG24 to 10)
terriiriais		AI0,5-10		
		AI0,75-8	0.75 (#18)	
		AI0,75-10		
		AI1,0-8	1.0 (#18)	
		AI1,0-10		
		AI1,5-8	1.5 (#16)	
		AI1,5-10		
Ground terminals		AI2,5-10	2.0 *	
Terminals other	Weidmuller	H0.14/12	0.14 (#26)	Weidmuller (The figure in parentheses is the applicable wire size.)
than ground terminals		H0.25/12	0.25 (#24)	PZ6 Roto (0.14 to 6 mm², AWG 26 to 10)
terriiriais		H0.34/12	0.34 (#22)	
		H0.5/14	0.5 (#20)	
		H0.5/16		
		H0.75/14	0.75 (#18)	
		H0.75/16		
		H1.0/14	1.0 (#18)	
		H1.0/16		
		H1.5/14	1.5 (#16)	
		H1.5/16		

<sup>\*</sup> 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



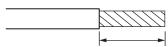
#### **Using Twisted Wires/Solid Wires**

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

Torn	Wire type					Conductor length (stripping length)	
Terminals		Twisted wires		Solid wire			Wire size
Classification	Current capacity	Plated	Unplated	Plated	Unplated		(ourphing longin)
	2 A or less		Possible	Possible	Possible		
All terminals except ground terminals	Greater than 2 A and 4 A or less	Possible	Not	Possible *1	Not	0.08 to 1.5 mm <sup>2</sup> AWG28 to 16	8 to 10 mm
	Greater than 4 A	Possible *1	Possible	Not Possible	Possible	74476201010	
Ground terminals		Possible	Possible	Possible *2	Possible *2	2.0 mm <sup>2</sup>	9 to 10 mm

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

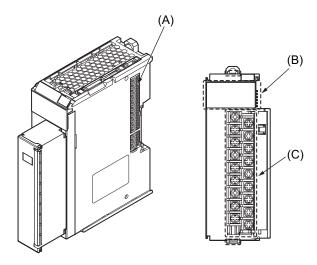
<sup>\*2.</sup> With the NX-TB \underset 1 Terminal Block, use twisted wires to connect the ground terminal. Do not use a solid wire.



Conductor length (stripping length)

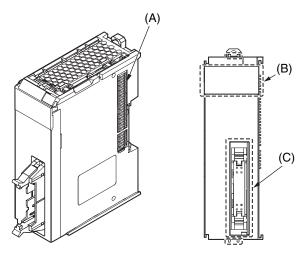
<sup>&</sup>lt; Additional Information > If more than 2 A will flow on the wires, use plated wires or use ferrules.

# M3 Screw Terminal Block Type 30 mm Width

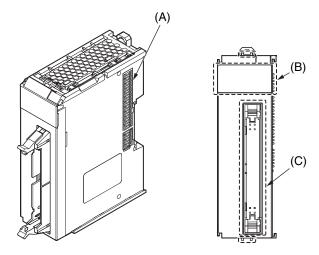


Letter	Item	Specification
(A)	NX bus connector	This connector is used to connect to another Unit.
(B)	Indicators	The indicators show the current operating status of the Unit.
(C)	Screw terminals	These screw terminals are used to connect the wires.

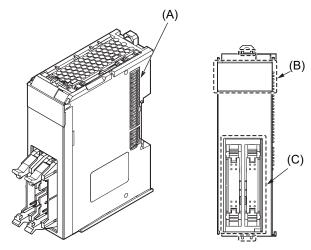
## MIL Connector Type (1 Connector with 20 terminals) 30 mm Width



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

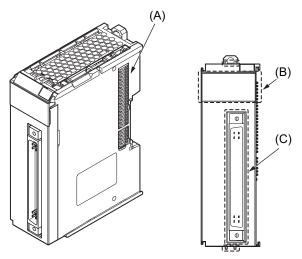


## MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width

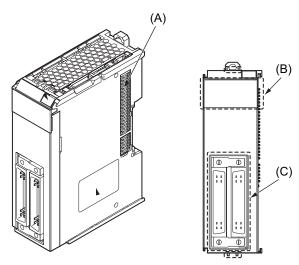


Letter	Item	Specification	
(A)	NX bus connector	This connector is used to connect to another Unit.	
(B)	Indicators	The indicators show the current operating status of the Unit.	
(C)	Connectors	The connectors are used to connect to external devices.	

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



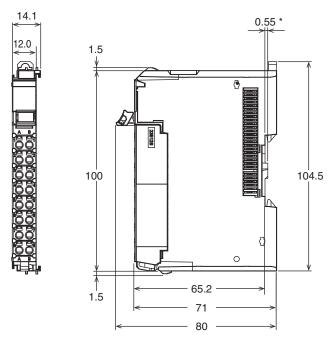
## Fujitsu/OTAX Connector Type (2 Connectors with 24 terminals) 30 mm Width



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

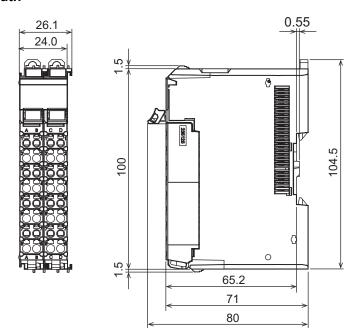
Dimensions (Unit/mm)

## Screwless Clamping Terminal Block Type 12 mm Width

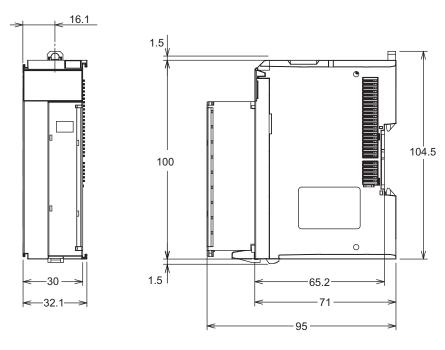


<sup>\*</sup> The dimension is 1.35 mm for Units with lot numbers through December 2014.

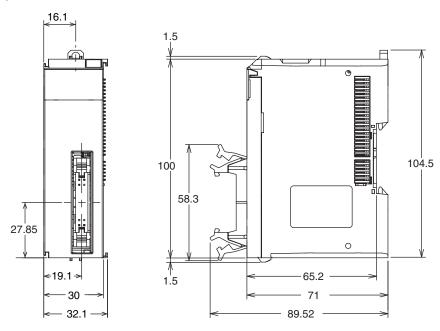
#### 24 mm Width



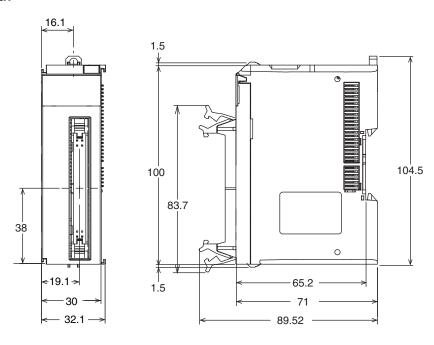
## M3 Screw Terminal Block Type 30 mm Width



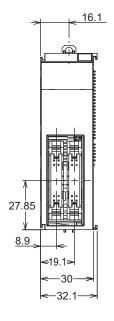
## MIL Connector Type (1 Connector with 20 terminals) 30 mm Width

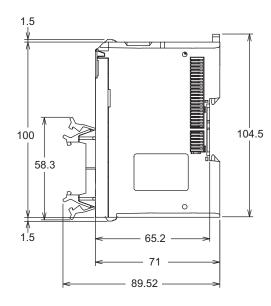


## MIL Connector Type (1 Connector with 40 terminals) 30 mm Width

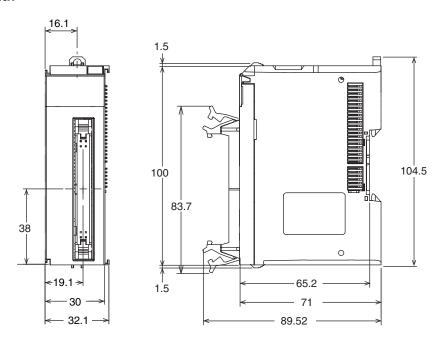


## MIL Connector Type (2 Connectors with 20 terminals) 30 mm Width

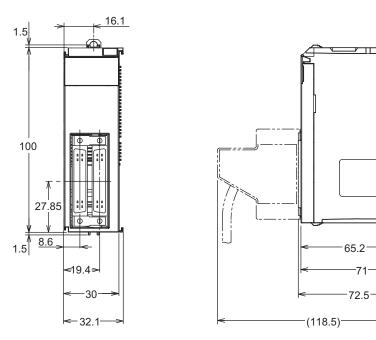




## Fujitsu/OTAX Connector Type (1 Connector with 40 terminals) 30 mm Width



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



### **Related Manual**

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

104.5

#### Terms and Conditions Agreement

#### Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

#### Warranties.

- (a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.
- (b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE

PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See <a href="http://www.omron.com/global/">http://www.omron.com/global/</a> or contact your Omron representative for published information.

#### <u>Limitation on Liability; Etc.</u>

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

#### Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine. system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

#### Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

#### Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

#### Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

<u>Errors and Omissions.</u>
Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

2023.11

In the interest of product improvement, specifications are subject to change without notice.