NX-series Analog Input Unit

Analog Inputs to meet all machine control needs; from generalpurpose inputs to high-speed synchronous, high-resolution units

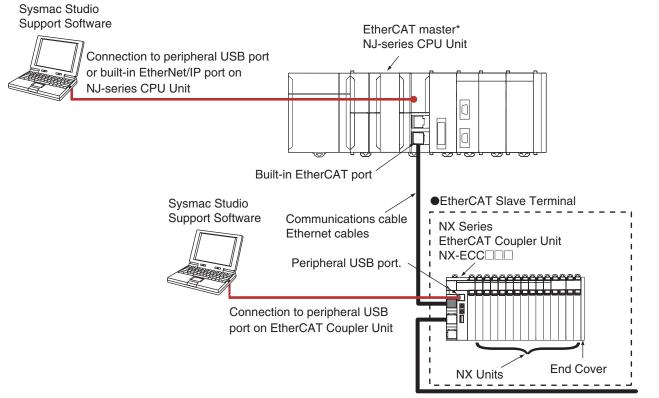
- Analog Input Units for the NX-series modular I/O system.
- Connect to other NX-series I/O Units and EtherCAT Coupler units using the high-speed NX-bus.
- Separate modules for voltage- and current inputs.



Features

- Up to eight analog inputs per unit.
- Free-run refreshing or synchronous I/O refreshing can be selected using the NX-series EtherCAT Coupler.
- Input update cycles of 10µs per channel, and a resolution of 1/30000, ideal for high-speed measurement and, high-precision control.
- All basic models are available as single-ended and differential-input types.
- The screwless terminal block is detachable for easy commissioning and maintenance.
- Screwless push-in terminal block significantly reduces wiring work.
- All models are just 12 mm wide, saving space in your cabinet.

System Configuration



* OMRON CJ1W-NC 81/282 Position Control Units cannot be connected to the EtherCAT Slave Terminal even though they support EtherCAT.

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 of Beckhoff Automation GmbH for their patented technology. Other company names and product names in this document are the trademarks or registered trademarks of their respective companies.

Ordering Information

International Standards

- The standards are abbreviated as follows: U: UL, U1: UL (Class I Division 2 Products for Hazardous Locations), C: CSA, UC: cULus, UC1: cULus (Class I Division 2 Products for Hazardous Locations), CU: cUL, N: NK, L: Lloyd, CE: EC Directives, and KC: KC Registration.
- Contact your OMRON representative for further details and applicable conditions for these standards.

Analog Input Unit

						Specifica	tion			-			
Unit type	Product Name	Capacity	Input range	Resolution	Conversion value, decimal number (0 to 100%)	Over all accuracy (25°C)	Input method	Conversion time	Input impedance	I/O refreshing method	NX Unit power consum ption	Model	Stand ards
					-4000 to	±0.2%	Single- ended input	250 μs/		Free-Run	1.05W max.	NX-AD2603	
				1/8000	4000	(full scale)	Differential Input	point		refreshing	1.05W max.	NX-AD2604	1
		2 points		1/30000	-15000 to 15000	±0.1% (full scale)	Differential Input	10 μs/ point		Selectable Synchronous I/O refreshing or Free-Run refreshing	1.05W max.	NX-AD2608	
	Voltage Input				-4000 to	±0.2%	Single- ended input	250 μs/	-	Free-Run	1.10W max.	NX-AD3603	
	Unit		-10 to	1/8000	4000	(full scale)	Differential Input	point		refreshing	1.10W max.	NX-AD3604	
		4 points	+10V	1/30000	-15000 to 15000	±0.1% (full scale)	Differential Input	10 μs/ point	1MΩ min.	Selectable Synchronous I/O refreshing or Free-Run refreshing	max. NX-AD 1.10W NX-AD 1.10W NX-AD 1.10W NX-AD 1.15W NX-AD 1.15W NX-AD 1.15W NX-AD 1.15W NX-AD 0.90W NX-AD 0.90W NX-AD 0.90W NX-AD	NX-AD3608	
				1/0000	-4000 to	±0.2%	Single- ended input	250 μs/	-	Free-Run		NX-AD4603	
				1/8000	4000	(full scale)	Differential Input	point		refreshing		NX-AD4604	
NX Series		8 points		1/30000	-15000 to 15000	±0.1% (full scale)	Differential Input	10 μs/ point		Selectable Synchronous I/O refreshing or Free-Run refreshing	-	1.15W NX-AD4608	
Analog Input Unit			t/2000 0.4- 2000 ±0.2% Single- ended input 250 μs/	Free-Run		NX-AD2203	CE, KC						
•				1/8000	0 to 8000	(full scale)	Differential Input	point		refreshing	0.90W max.	NX-AD2204	_
		2 points		1/30000	0 to 30000	±0.1% (full scale)	Differential Input	10 μs/ point	2500	Selectable Synchronous I/O refreshing or Free-Run refreshing	Selectable Synchronous I/O refreshing or Free-Run	NX-AD2208	
	Current Input Unit			1/0000	0.4- 0000	±0.2%	Single- ended input	250 μs/	250Ω	Free-Run	0.90W max.	NX-AD3203	
	onit		4 to	1/8000	0 to 8000	(full scale)	Differential Input	point		refreshing	0.90W max.	NX-AD3204	-
		4 points 20mA 1/30000 0 to 30000 ±0.1% Differential (full scale) Input 10 μs/ point	Selectable Synchronous I/O refreshing or Free-Run refreshing	0.95W max.	NX-AD3208	-							
				1/0000	0.1.0000	±0.2%	Single- ended input	250 μs/		Free-Run	1.05W max.	NX-AD4203	_
			1/8000	1/8000	00 0 to 8000	(full scale)	Differential Input	point		refreshing	1.05W max.	NX-AD4204	
		8 points		1/30000	0 to 30000	±0.1% (full scale)	Differential Input	10 μs/ point	85Ω	Selectable Synchronous I/O refreshing or Free-Run refreshing	1.10W max.	NX-AD4208	

Option

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

Accessories

Not included.

General Specification

	Item	Specification			
Enclosure		Mounted in a panel			
Grounding method		Ground to 100 Ω or less			
	Ambient operating temperature	0 to 55°C			
	Ambient operating humidity	10% to 95% (with no condensation or icing)			
	Atmosphere	Must be free from corrosive gases.			
	Ambient storage temperature	-25 to 70°C (with no condensation or icing)			
	Altitude	2,000 m max.			
	Pollution degree	2 or less: Conforms to JIS B3502 and IEC 61131-2.			
Operating environment	Noise immunity	2 kV on power supply line (Conforms to IEC61000-4-4.)			
environment	Overvoltage category	Category II: Conforms to JIS B3502 and IEC 61131-2.			
	EMC immunity level	Zone B			
	Vibration resistance	Conforms to IEC 60068-2-6. 5 to 8.4 Hz with 3.5-mm amplitude, 8.4 to 150 Hz, acceleration of 9.8 m/s ² , 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)			
	Shock resistance	IConforms to IEC 60068-2-27. 147 m/s ² , 3 times each in X, Y, and Z directions			
Applicable sta	andards	cULus: Listed UL508 and ANSI/ISA 12.12.01 EC: EN 61131-2 and C-Tick, KC Registration, NK, LR			

Analog Input Unit Specifications

Analog Input Unit (voltage input type) 2 points NX-AD2603

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD2603
Capacity	2 points	External connection terminals	Screwless clamping terminal block (8 terminals)
I/O refreshing method	Free-Run refreshing		
	TS indicator	Input method	Single-ended input
	AD2603	Input range	-10 to +10 V
	■TS	Input conversion range	-5 to 105% (full scale)
le dia atau		Absolute maximum rating	±15 V
Indicator		Input impedance	1 M Ω min.
		Resolution	1/8000 (full scale)
		Overall 25°C	±0.2% (full scale)
		accuracy 0 to 55°C	±0.4% (full scale)
		Conversion time	250 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
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	1.05 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	Terminal block INV Input1+ to 2+	AG AG: Analog circuit in	I/O power supply + NX bus Connector I/O power supply – (right)
Installation orientation and restrictions	Installation orientation: Possible in 6 orient Restrictions: No restrictions	ations.	
Terminal connection diagram	Additional I/O Power Supply Unit A1 B1 I OV IOV 24 VDC A8 B8	IOG IOG● NC NC	Input + 24 V (Sensor power supply +) 0 V (Sensor power supply – / Input –) 3-wire sensor
Input disconnection detection	Not supported.		

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD2604		
		External connection	Screwless clamping terminal block (8		
Capacity	2 points	terminals	terminals)		
I/O refreshing method	Free-Run refreshing				
	TS indicator	Input method	Differential Input		
	AD2604	Input range	-10 to +10 V		
		Input conversion range	-5 to 105% (full scale)		
		Absolute maximum rating	±15 V		
Indicator		Input impedance	1 MΩ min.		
		Resolution	1/8000 (full scale)		
		Overall 25°C	$\pm 0.2\%$ (full scale)		
		accuracy 0 to 55°C	$\pm 0.4\%$ (full scale)		
		Conversion time	250 μs/point		
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)		
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.		
I/O power supply method	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals		
NX Unit power consumption	1.05 W max.	I/O current consumption	No consumption		
Weight	70 g max.				
Circuit layout	Terminal block Input1+ to 2+ AG AG AG AG AG AG AG AG AG AG				
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.			
Terminal connection diagram	Voltage Input Unit NX-AD2604 1 Input1+ Input2+ Input1- Input2- AG AG NC NC AG terminal is connected to 0 V of analog circuit inside the Unit. It is not necessary to wire AG terminal normally.				
Input disconnection detection	Not supported.				

Analog Input Unit (voltage input type) 2 points NX-AD2604

Unit name Analog input (unit (voltage input type) Model External connection terminals NXAD2608 (streminals) VO refreshing method 2 points External connection terminals) External connection terminals) Differential input input method Differential input input method Differential input input method Indicator TS indicator AD2608 TS indicator Input method Differential input input maximum rating at 5 V Indicator 25 C 40.1% (full scale) at 5 V at 5 V Input method 10 weaks 10 weaks accale) at 5 V Dimensions 12 (W) x 100 (H) x 71 (D) Isolation method Between the input and the NX bus: Power isolation between isolated circuits (at 10 webod Dielectric strength Between the input and the NX bus: Power isolation between isolated circuits (at 10 webod Dielectric strength Without I/O power supply terminals NX Unit power consumption 10.5 W max. U/O current cospacity of U/O power supply terminals Without I/O power supply terminals N2 thint power consumption 105 w max. U/O current cospacity of U/O power supply terminals Without I/O power supply terminals N2 thint power consumption 100 power supply terminals Input method No consumption No cons	Capacity 2 pc I/O refreshing method Sele TS	points	External connection			
Capacity 2 points terminals terminals I/O refreshing method Selectable Synchronous I/O refreshing or Free-Run refreshing Input method Differential input Indicator AD2000 10 to +10 V Input method Differential input Indicator AD2000 10 to +10 V AD2000 Indicator AD2000 10 to +10 V AD3000 (full scale) Absolute maximum rating ±15 V Input impedance 1 Mix min. Resolution 173 (full scale) Absolute maximum rating ±15 V Dimensions 12 (M) x 100 (H) x 71 (D) Isolation method Between the Picipial solator Insulation resistance 20 M2 min. between isolated circuits (at biotectric strength Mix but I/O power supply Mixbut I/O power supply terminals NX Unit power consumption 1.05 W max. I/O current consumption No consumption NX Unit power consumption 1.05 W max. I/O current consumption No consumption No consumption 1.05 W max. I/O current consumption No consumption No consumption 1.05 W max. I/O current consumption No consumption No consumption 0.0 power supply </th <th>I/O refreshing method Sele</th> <th>DOINTS</th> <th></th> <th></th>	I/O refreshing method Sele	DOINTS				
Indicator Input method Differential Input Input method Differential Input Input mage -10 to +10 V Input mage -5 to 105% (full scale) Absolute maximum ±15 V Input impedance I MQ min. Resolution 1/30000 (full scale) Overall 25°C 20 X0 xmin. 25°C Besolution resistance 20 MQ min. between isolated circuits (at method Dimensions 12 (W) x 100 (H) x 71 (D) Insulation resistance 20 MQ min. between isolated circuits (at method 20 MQ min. between isolated circuits (at method Deleteritic strength Mo ovDC) Current capacity of MQ min. No supply Current capacity of MQ min. No supply Current capacity of MQ min. No consumption 1.05 W max. Weight 70 g max. Terminal connection Installation orientation: Possible in 6 orientations. Restrictions: No restrictions: No consumption Installation orientation No consumption Installation orientation Acc Analog circuit internal GND Installation orientation No consumption <th>TS</th> <th></th> <th></th> <th></th>	TS					
Indicator Input range -10 to 10 V Input conversion range -5 to 105%. (full scale) Absolute maximum =15 V Input impedance 1 M2 min. Resolution 1 / 30000 (full scale) Overall 25°C accuracy 25°C Overall 200% (full scale) Conversion time 10 µs/point Between the input and the NX bus: Power - Transformer, Signal - Digital isolator (no isolator foruits for 1 minute at a leakage current of 5 mA max. Op over supply No supply Current capacity of 100 No supply No supply Current capacity of 100 power supply terminals NX Unit power 1.05 W max. 100 current consumption No consumption 1.05 W max. 100 power supply terminals NV Unit power 1.05 W max. 100 power supply = 100 power sup			÷			
Indicator Imput conversion range -5 to 105% (full scale) Absolute maximum ±15 V Input impedance 1 Mix min. Participation 1/30000 (full scale) Overall 25° C accurrey 0 to 5° C Overall 25° C accurrey 0 to 5° C Owersupply 0 to 5° C Dimensions 12 (W) x 100 (H) x 71 (D) Isolation resistance 20 Mix min. between isolated circuits (at 100 VbC) Insulation resistance 20 Mix min. between isolated circuits (at 100 VbC) VO power supply No supply Ourrent capacity of <i>VC</i> Without I/O power supply terminals NX Unit power 1.05 W max. VO current consumption No consumption 1.05 W max. VO current consumption Veight 70 g max. Imput the over supply terminals Installation orientation: Possible in 6 orientations. Power supply Installation orientation: Possible in 6 orientations. Power supply Installation orientation: Possible in 6 orientations. Power supply Installation orientation Ac Achaeting strain fise find the find.				-		
Indicator Absolute maximum ±15 V Input impedance 1 MΩ min. Resolution 1730000 (full scale) Overall 25°C ±0.1% (full scale) Overall 25°C ±0.2% (full scale) Coversion time 10 µspoint Dimensions 12 (M) x 100 (H) x 71 (D) Isolation method Insulation resistance 20 MQ min. between isolated circuits (at 100 left) x 71 (D) Isolation method Insulation resistance 20 MQ min. between isolated circuits (at 100 left) x 71 (D) Dielectric strength 510 VAC between isolated circuits for 1 mule at a leakage current of 5 mA max. VO power supply No supply Current capacity of I/O power supply terminals Without I/O power supply terminals NV Unit power consumption 1.05 W max. V/O current consumption No consumption Vo g max. Termatibula Input + to 2+ \$10 VAC between usele + Installation orientation Installation orientation: No consumption No consumption No tag I/O power supply I/O power supply + I/V power supply + I/V power supply + Installation orientation Installation orientation: Possible in 6 orientations. Restrictions Installation orientation: Restrictions: Installation orientation Installation orientat		■TS				
Indicator rating 115 V Input impedance 1 M2 min. 1 Resolution 1 30000 (full scale) 25°C 40.2% (full scale) Overall 25°C 40.2% (full scale) 25°C 40.2% (full scale) Coversion time 10 µs/point 10 µs/point 10 µs/point Insulation resistance 20 M2 min. between isolated circuits (at 100 VPC) Dielectric strength 510 VAC between isolated circuits for 1 minute at a leakage current of 30 mA max. I/O power supply No supply Current capacity of I/O power supply terminals Without I/O power supply terminals NX Unit power 1.05 W max. I/O current consumption No consumption No consumption Vib termination 100 power supply = 100 power supp		-		-5 to 105% (full scale)		
Input impedance Introduction Resculture 1/30000 (full scale) Overall accuracy 25°C ±0.1% (full scale) Dimensions 12 (W) x 100 (H) x 71 (D) Isolation method Between the input and the NX bus: Power signal isolator (no isolation between inputs) Insulation resistance 20 M2 min. between isolated circuits (at 00 VDC) Dielectric strength 510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max. VO power supply No supply Current capacity of I/O power supply terminals Without I/O power supply terminals NX Unit power of 00 VDC) 1.05 W max. I/O current consumption No consumption Weight 70 g max. Imput-to 2- Imput-to 2- Installation orientation Installation orientation: Possible in 6 orientations. NO power supply - Installation orientation Installation orientation: Possible in 6 orientations. Restrictions: No restrictions Restrictions: No restrictions	la dia star			±15 V		
Overall accuracy 28°C (10 55°C) ±0.1% (full scale) Dimensions 12 (W) x 100 (H) x 71 (D) Isolation method Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs) Insulation resistance 20 MQ min. between isolated circuits (at IVO power supply Delectric strength 510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max. V/O power supply method No supply Current capacity of VO power supply terminals Without I/O power supply terminals NX Unit power consumption 1.05 W max. VO current consumption No consumption Vio g max. 70 g max. VO power supply terminals No consumption Without I/O power supply = (if) U/O power supply = (if) (if) (if) (if) (if) (if) (if) (if) (if)	Indicator		Input impedance	1 MΩ min.		
accuracy 0 to 55°C ±0.2% (full scale) Dimensions 12 (W) x 100 (H) x 71 (D) Isolation method Between the input and the NX bus: Power = Transformer. Signal = Digital isolator (no isolation between inputs) Insulation resistance 20 M2 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. VO power supply method No supply Current capacity of VO power supply terminals Without I/O power supply terminals NX Unit power consumption 1.05 W max. I/O current consumption No consumption Veight 70 g max. Imput + to 2+			Resolution	1/30000 (full scale)		
Conversion time 10 µspoint Dimensions 12 (W) x 100 (H) x 71 (D) Isolation method Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs) Insulation resistance 20 MG min. between isolated circuits (at 100 VDC) Dielectric strength 510 VAC between isolated circuits for 1 minute at a leakage current of 5 m M max. I/O power supply method No supply Current capacity of I/O power supply terminal Without I/O power supply terminals NX Unit power consumption 1.05 W max. I/O current consumption No consumption Veight 70 g max. Terminated to find the second NU tage (Input1 + to 2+ (Input1 + to 2+ (Input + to			Overall 25°C	±0.1% (full scale)		
Dimensions 12 (W) x 100 (H) x 71 (D) Isolation method Between the input and the NX bus: Power Transformer, Signal = Digital isolator (no isolation between inputs) Insulation resistance 20 MΩ min. between isolated circuits (at 100 VDC) Delectric strength 510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max. VD power supply method No supply Current capacity of VO power supply terminal Without I/O power supply terminals NX Unit power consumption 1.05 W max. VO current consumption No consumption Weight 70 g max. Imput-1 to 2+			accuracy 0 to 55°C	±0.2% (full scale)		
Dimensions 12 (W) × 100 (H) × 71 (D) Isolation method = Transformer; Signal = Digital isolator (no 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. V0 power supply No supply Current capacity of I/O power supply terminal Without I/O power supply terminals NX Unit power consumption 1.05 W max. I/O current consumption No consumption Weight 70 g max. Input1+ to 2+ (nput1+ to 2- (HT) Input1+ to 2+ (NC) power supply+ (NC) power supp			Conversion time	10 μs/point		
Insulation resistance 100 VDC) Delectric strength minute at a leakage current of 5 mA max. I/O power supply No supply Current capacity of I/O power supply terminals Without I/O power supply terminals NX Unit power consumption 1.05 W max. I/O current consumption No consumption Veight 70 g max. I/O g max. No consumption No consumption Circuit layout Imput + to 2+ (left) Installation orientation diagram Installation orientation: Possible in 6 orientations. Restrictions: No restrictions No wer supply - (left) Imput + (left) Terminal connection diagram Votage Input thit NX-AD2008 Imput + (left) Imput + (left) Votage Input thit NX-AD2008 AG: Analog circuit inside the Unit.	Dimensions 12 ((W) x 100 (H) x 71 (D)	Isolation method			
method No suppy power supply terminal Winduit NO power supply terminals NX Unit power consumption 1.05 W max. 1/O current consumption No consumption Weight 70 g max. Imputite to 2+ Imputite to 2+ Imputite to 2+ Circuit layout Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ NX Usit Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Imputite to 2+ Installation orientation: <			Dielectric strength			
consumption 1.05 W max. Weight 70 g max. Circuit layout Imputition Imputition NX bis Imputition UP power supply Imputition NX bis Imputition Installation orientation and restrictions Installation orientation: Restrictions: No restrictions Terminal connection diagram Installation orientation: Imputition Installation orientation: Restrictions: No restrictions		o supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals		
Circuit layout Input1+ to 2+ Input1- to 2- AG Input1+ to 2+ AG Input1+ to 2+ AG Input1- to 2- AG Input1- Input1- to 2- AG Input1- Input1- to 2- AG Input + Input - Input - AG Input + Input - Input - Input + Input - AG Input + Input - Input - Input + Input - AG Input + Input - AG Input + Input - Input - Input + Input - <	consumption 1.05	05 W max.	I/O current consumption	No consumption		
Circuit layout Terminal block Input1- to 2- AG AG Analog circuit internal GND NX bus corrector (eff) I/O power supply + I/O power supply - (eff) I/O power supply - I/O power supply - I/O power supply - (right) NX bus I/O power supply - I/O power supply - (right) Installation orientation and restrictions Installation orientation: Possible in 6 orientations. Restrictions: No restrictions Terminal connection diagram Installation orientation: Quere supply - AG Input + Input + Input + Input - AG AG AG AG AG AG AG	Weight 70 g	g max.				
and restrictions Restrictions: No restrictions Terminal connection diagram Voltage Input Unit NX-AD2608 A Input + Input2+ Input1- Input2- Input + Input - Input + Input - Inp	Circuit layout	Terminal block Input1- to 2- AG	510 ΚΩ			
Terminal connection diagram			tions.			
		NX-AD2608 A1 B1 Input1+ Input2+ AG AG AG AG NC NC AG terminal is connected to 0 V of analog circuit inside the Unit.				
Input disconnection detection Not supported.		ot supported.				

Analog Input Unit (voltage input type) 2 points NX-AD2608

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD3603
		External connection	Screwless clamping terminal block (12
Capacity	4 points	terminals	terminals)
I/O refreshing method	Free-Run refreshing		
	TS indicator	Input method	Single-ended input
	AD3603 ■TS	Input range	-10 to +10 V
		Input conversion range	-5 to 105% (full scale)
Indicator		Absolute maximum rating	±15 V
Indicator		Input impedance	1 MΩ min.
		Resolution	1/8000 (full scale)
		Overall 25°C	±0.2% (full scale)
		accuracy 0 to 55°C	±0.4% (full scale)
		Conversion time	250 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	1.10 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	Terminal block Input1+ to 4+ IOG NX bus connector (left) I/O power supply + I/O power supply –	AMP 1MΩ AG AG: Analog circuit inter	nal GND I/O power supply + I/O power supply – I/O power supply –
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.	
Terminal connection diagram	Additional I/O Power Supply Unit A1 B1 IOV IOV 24 VDC A8 B8	Voltage Input Unit NX-AD3603 A1 B1 Input1+ Input2+ IOV IOV IOG IOG INput3+ Input4+ IOV IOV IOG IOG A8 B8	Input + 24 V (Sensor power supply +) 0 V (Sensor power supply – / Input –) re sensor
Input disconnection detection	Not supported.		

Analog Input Unit (voltage input type) 4 points NX-AD3603

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD3604		
Capacity	4 points	External connection terminals	Screwless clamping terminal block (12 terminals)		
I/O refreshing method	Free-Run refreshing				
	TS indicator	Input method	Differential Input		
	AD3604	Input range	-10 to +10 V		
	■TS	Input conversion range	-5 to 105% (full scale)		
		Absolute maximum rating	±15 V		
Indicator		Input impedance	1 MΩ min.		
		Resolution	1/8000 (full scale)		
		Overall 25°C	±0.2% (full scale)		
		accuracy 0 to 55°C	±0.4% (full scale)		
		Conversion time	250 μs/point		
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)		
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	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals		
NX Unit power consumption	1.10 W max.	I/O current consumption	No consumption		
Weight	70 g max.				
Circuit layout	Terminal block Input1+ to 4+ Input1- to 4- AG AG AG AG AG: Analog circuit internal GND I/O power supply + I/O power supply + I/O power supply - I/O power supply - I/O power supply - I/O power supply - I/O power supply -				
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.			
Terminal connection diagram	Voltage Input Unit NX-AD3604 1 Input1+ Input2+ Input1- Input2- Input + Input3+ Input4+ Input4- AG AG AG AG				
Input disconnection detection	Not supported.				

Analog Input Unit (voltage input type) 4 points NX-AD3604

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD3608		
		External connection	Screwless clamping terminal block (12		
Capacity	4 points	terminals	terminals)		
I/O refreshing method	Selectable Synchronous I/O refreshing or F	-			
	TS indicator	Input method	Differential Input		
	AD3608	Input range	-10 to +10 V		
	=10	Input conversion range	-5 to 105% (full scale)		
		Absolute maximum rating	±15 V		
Indicator		Input impedance	1 MΩ min.		
		Resolution	1/30000 (full scale)		
		Overall 25°C	±0.1% (full scale)		
		accuracy 0 to 55°C	±0.2% (full scale)		
		Conversion time	10 μs/point		
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)		
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.		
I/O power supply method	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals		
NX Unit power consumption	1.10 W max.	I/O current consumption	No consumption		
Weight	70 g max.				
Circuit layout	Terminal block Input1+ to 4+	AMP 510 KΩ AG AG: Analog circuit inte	rnal GND I/O power supply + NX bus connector (right)		
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.			
Terminal connection diagram	Voltage Input Unit NX-AD3608 A1B1Input + Input1+ Input2+ Input3+ Input4+ Input3+ Input4+ AG AG AGAG AGAG terminal is connected to 0 V of analog circuit inside the Unit. It is not necessary to wire AG terminal normally.				
Input disconnection detection	Not supported.				

Analog Input Unit (voltage input type) 4 points NX-AD3608

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD4603
Capacity	8 points	External connection terminals	Screwless clamping terminal block (16 terminals)
I/O refreshing method	Free-Run refreshing		
	TS indicator AD4603	Input method Input range	Single-ended input -10 to +10 V
	-10	Input conversion range	-5 to 105% (full scale)
Indicator		Absolute maximum rating	±15 V
indicator		Input impedance	1 MΩ min.
		Resolution	1/8000 (full scale)
		Overall 25°C	±0.2% (full scale)
		accuracy 0 to 55°C	±0.4% (full scale)
		Conversion time	250 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOG: 0.1 A/terminal max.
NX Unit power consumption	1.15 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	Terminal block INC	AMP AG AG: Analog circuit inte	ernal GND I/O power supply + NX bus connector (right)
Installation orientation	Installation orientation: Possible in 6 orienta	ations.	
and restrictions	Restrictions: No restrictions		
Terminal connection diagram	00G 10G 10V 10 24 VDC 10V 10V 10 10V 10V 10V 10 10V 10V 10V 10 10G 10G 10G 10V 10		Input + 24 V (Sensor power supply +) 0 V (Sensor power supply – / I
Input disconnection detection	Not supported.		

Analog Input Unit (voltage input type) 8 points NX-AD4603

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD4604	
	8 points	External connection	Screwless clamping terminal block (16	
Capacity	•	terminals	terminals)	
I/O refreshing method	Free-Run refreshing	In much months and	Differential lagest	
	TS indicator AD4604	Input method	Differential Input	
		Input range	-10 to +10 V	
		Input conversion range Absolute maximum	-5 to 105% (full scale)	
Indiantau		rating	±15 V	
Indicator		Input impedance	1 M Ω min.	
		Resolution	1/8000 (full scale)	
		Overall 25°C	±0.2% (full scale)	
		accuracy 0 to 55°C	±0.4% (full scale)	
		Conversion time	250 μs/point	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)	
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	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	1.15 W max.	I/O current consumption	No consumption	
Weight	70 g max.			
Circuit layout		AMP 510 KΩ AG AG: Analog circuit inter	I/O power supply + NX bus connector I/O power supply – (right)	
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.		
Terminal connection diagram	Voltage Input Unit NX-AD4604 A1 B1 Input1+ Input2+ Input1- Input2- Input3+ Input4+ Input3- Input4- Input5+ Input6+ Input5- Input6- Input7- Input8- B8			
Input disconnection detection	Not supported.			

Analog Input Unit (voltage input type) 8 points NX-AD4604

Unit name	Analog Input Unit (voltage input type)	Model	NX-AD4608	
		External connection	Screwless clamping terminal block (16	
Capacity	8 points	terminals	terminals)	
I/O refreshing method	Selectable Synchronous I/O refreshing or F	-		
	TS indicator	Input method	Differential Input	
	AD4608 ■TS	Input range	-10 to +10 V	
		Input conversion range	-5 to 105% (full scale)	
la d'actan		Absolute maximum rating	±15 V	
Indicator		Input impedance	1 MΩ min.	
		Resolution	1/30000 (full scale)	
		Overall 25°C	±0.1% (full scale)	
		accuracy 0 to 55°C	±0.2% (full scale)	
		Conversion time	10 μs/point	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)	
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals	
NX Unit power consumption	1.15 W max.	I/O current consumption	No consumption	
Weight	70 g max.			
Circuit layout	Terminal block Input1+ to 8+ Input1− to 8− S510 KΩ AG AG	AMP 510 KΩ AG AG: Analog circuit inter	nal GND I/O power supply + NX bus connector (right)	
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.		
Terminal connection diagram	Voltage Input Unit NX-AD4604 A1Input1+ Input2+ Input1- Input2- Input3+ Input4+ Input5+ Input6+ Input5- Input6- Input7+ Input8+ Input7- Input8+ B8B8			
Input disconnection detection	Not supported.			

Analog Input Unit (voltage input type) 8 points NX-AD4608

Unit name	Analog Input Unit (current input type)	Model	NX-AD2203	
Capacity	2 points	External connection terminals	Screwless clamping terminal block (8 terminals)	
I/O refreshing method	Free-Run refreshing			
	TS indicator	Input method	Single-ended input	
	DA2203	Input range	4 to 20 mA	
	■TS	Input conversion range	-5 to 105% (full scale)	
		Absolute maximum rating	±30 mA	
Indicator			250 Ω min.	
		Resolution	1/8000 (full scale)	
		Overall 25°C	±0.2% (full scale)	
		accuracy 0 to 55°C	±0.4% (full scale)	
		Conversion time	250 μs/point	
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)	
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.	
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.	
NX Unit power consumption	0.90 W max.	I/O current consumption	No consumption	
Weight	70 g max.			
Circuit layout	Terminal block Input1+ to 2+ IOG NX bus connector (left) I/O power supply + I/O power supply - NX bus connector (left) I/O power supply - NX bus connector (left) I/O power supply - NX bus connector (left) I/O power supply -			
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.		
Terminal connection diagram	Additional I/O Power Supply Unit A O Current Input Unit NX-AD2203 A Input + 24 V (Sensor power supply +) 0 V (Sensor power supply -/ Input -) 24 VDC IOV IOV IOV IOV IOG IOG IOG IOG NC NC NC NC The NC terminal is not connected to the internal circuit.		24 V (Sensor power supply +) 0 V (Sensor power supply – / Input –) wire sensor	
Input disconnection detection	Supported.			

Analog Input Unit (current input type) 2 points NX-AD2203

Unit name	Analog Input Unit (current input type)	Model	NX-AD2204
		External connection	Screwless clamping terminal block (8
Capacity	2 points	terminals	terminals)
I/O refreshing method	Free-Run refreshing		
	TS indicator	Input method	Differential Input 4 to 20 mA
	AD2204 ■TS		
		Input conversion range	-5 to 105% (full scale)
		Absolute maximum rating	±30 mA
Indicator		Input impedance	250 Ω min.
		Resolution	1/8000 (full scale)
		Overall 25°C	±0.2% (full scale)
		accuracy 0 to 55°C	±0.4% (full scale)
		Conversion time	250 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	0.90 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	$Terminal block \begin{bmatrix} Input1+ to 2+ \\ Input1- to 2- \\ AG \\ AG \\ KG \\ KG \\ KG \\ KG \\ KG \\ KG$		nal GND
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.	
Terminal connection diagram	Current Input Unit Input + Input1+ Input2+ Input + Input1- Input2- Input + AG AG AG AG AG AG AG AG AG AG Input - Input - Input -		
Input disconnection detection	Supported.		

Analog Input Unit (current input type) 2 points NX-AD2204

Unit name	Analog Input Unit (current input type)	Model	NX-AD2208
		External connection	Screwless clamping terminal block (8
Capacity	2 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	-	
	TS indicator	Input method	Differential Input
	AD2208	Input range	4 to 20 mA
	-10	Input conversion range -5 to 105% (full scale)	
		Absolute maximum rating	±30 mA
Indicator		Input impedance	250 Ω
		Resolution	1/30000 (full scale)
		Overall 25°C	±0.1% (full scale)
		accuracy 0 to 55°C	±0.2% (full scale)
		Conversion time	10 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
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	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	0.90 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	Terminal block Input1+ to 2+ Input1- to 2- AG NX bus connector (left) I/O power supply + I/O power supply -	510 KΩ \$ 510 KΩ AG: Analo AG	Dg circuit hal GND I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.	
Terminal connection diagram	Current Input Unit NX-AD2208 A1 B1 Input1+ Input2+ Input1- Input2- Input1- Input2- AG AG NC NC A6 terminal is connected to 0 V of analog circuit inside the Unit. It is not necessary to wire AG terminal normally.		
Input disconnection detection	Supported.		

Analog Input Unit (current input type) 2 points NX-AD2208

Unit name	Analog Input Unit (current input type) Model NX-AD3203		
		External connection	Screwless clamping terminal block (12
Capacity	4 points	terminals	terminals)
I/O refreshing method	Free-Run refreshing		
	TS indicator		Single-ended input
	AD3203	Input range	4 to 20 mA
		Input conversion range	-5 to 105% (full scale)
la dia seco		Absolute maximum rating	±30 mA
Indicator		Input impedance	250 Ω min.
		Resolution	1/8000 (full scale)
		Overall 25°C	±0.2% (full scale)
		accuracy 0 to 55°C	±0.4% (full scale)
		Conversion time	250 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	Supply from the NX bus	Current capacity of I/O power supply terminal	IOV: 0.1 A/terminal max., IOG: 0.1 A/terminal max.
NX Unit power consumption	0.90 W max. I/O current consumption		No consumption
Weight	70 g max.		
Circuit layout	Terminal block Input1+ to 4+ IOG NX bus connector (left) I/O power supply + I/O power supply - I/O power supply -		
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.	
Terminal connection diagram	Additional I/O Power Supply Unit A A A B B A B B A B B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B B A B B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B B A B B B A B B B B B A B B B B A B B B A B B B A B B B A B B B B B A B B B B B B B B B B B B B		
Input disconnection detection	Supported.		

Analog Input Unit (current input type) 4 points NX-AD3203

Unit name	Analog Input Unit (current input type)	Model	NX-AD3204
		External connection	Screwless clamping terminal block (12
Capacity	4 points	terminals	terminals)
I/O refreshing method	Free-Run refreshing		
	TS indicator	Input method	Differential Input
	AD3204 ■TS	Input range	4 to 20 mA
		Input conversion range	-5 to 105% (full scale)
		Absolute maximum rating	±30 mA
Indicator		Input impedance	250 Ω min.
		Resolution	1/8000 (full scale)
		Overall 25°C	±0.2% (full scale)
		accuracy 0 to 55°C	±0.4% (full scale)
		Conversion time	250 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
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	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	0.90 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	Terminal block Input1+ to 4+ AG NX bus connector (left) I/O power supply + I/O power supply –	510 KΩ 510 KΩ AG: Anale AG	og circuit nal GND I/O power supply + NX bus connector (right)
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.	
Terminal connection diagram	Current Input Unit NX-AD3204 B1 A1 B1 Input1+ Input2+ Input + Input3+ Input4+ Input4+ Input3- Input4- AG AG AG AG AG Input5- Input4+ Input5- Input4- Input5- Input5- Input5- Input5-		
Input disconnection detection	Supported.		

Analog Input Unit (current input type) 4 points NX-AD3204

Unit name	Analog Input Unit (current input type)	Model	NX-AD3208
		External connection	Screwless clamping terminal block (12
Capacity	4 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F		
	TS indicator	Input method	Differential Input
	AD3208 ■TS	Input range	4 to 20 mA
		Input conversion range	-5 to 105% (full scale)
		Absolute maximum rating	±30 mA
Indicator		Input impedance	250 Ω min.
		Resolution	1/30000 (full scale)
		Overall 25°C	±0.1% (full scale)
		accuracy 0 to 55°C	±0.2% (full scale)
		Conversion time	10 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	0.95 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	$\begin{array}{c} \text{Terminal block} \begin{bmatrix} \text{Input1+ to 4+} \\ \text{Input1- to 4-} \\ \text{AG} \\ \text{AG} \\ \text{AG} \\ \text{Input1- to 4-} \\ \text{AG} \\ \text{AG} \\ \text{AG} \\ \text{I/O power supply +} \\ \text{I/O power supply +} \\ \text{I/O power supply -} \\ I/O power supply$		
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.	
Terminal connection diagram	Current Input Unit NX-AD3208 A1 B1 Input1+ Input2+ Input2- Input3+ Input4+ Input3- Input4- AG AG AG AG AG AG AG AG AG AG BB AG terminal is connected to 0 V of analog circuit inside the Unit. It is not necessary to wire AG terminal normally.		
Input disconnection	Supported		
detection	Supported.		

Analog Input Unit (current input type) 4 points NX-AD3208

Unit name Analog Input Unit (current input type) Model NX-AD4203 Capacity 8 points External connection terminals Screwless clamping terminal biterminals) I/O refreshing method Free-Run refreshing Input method Single-ended input TS indicator AD4203 Input range 4 to 20 mA Input accuracion range 5 to 105% (full coole) 5 to 105% (full coole)	lock (16
Capacity 8 points terminals terminals) I/O refreshing method Free-Run refreshing TS indicator Input method Single-ended input AD4203 Input range 4 to 20 mA	
TS indicator AD4203 Input method Single-ended input 4 to 20 mA	
AD4203 Input range 4 to 20 mA	
Input conversion range -5 to 105% (full scale)	
Absolute maximum rating ±30 mA	
Indicator Input impedance 85 Ω	
Resolution 1/8000 (full scale)	
Overall 25°C ±0.2% (full scale)	
accuracy 0 to 55°C ±0.4% (full scale)	
Conversion time 250 µs/point	
Dimensions12 (W) x 100 (H) x 71 (D)Isolation methodBetween the input and the NX to = Transformer, Signal = Digital in isolation between inputs)	
Insulation resistance20 MΩ min. between isolated circuits (at 100 VDC)Dielectric strength510 VAC between isolated circuits (at minute at a leakage current of \$	
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 1.05 W max. I/O current consumption No consumption	
Weight 70 g max.	
Circuit layout NX bus connector (left) I/O power supply + I/O power supply - I/O powe	ŗ
Installation orientation Installation orientation: Possible in 6 orientations.	
and restrictions Restrictions: No restrictions	
Terminal connection diagram Additional I/O Power Supply Unit I/O Power Supply Unit Voltage Input Unit NX-AD4203 1 00 100	
Input disconnection detection Supported.	

Analog Input Unit (current input type) 8 points NX-AD4203

Unit name	Analog Input Unit (current input type) Model NX-AD4204		NX-AD4204
		External connection	Screwless clamping terminal block (16
Capacity	8 points	terminals	terminals)
I/O refreshing method	Free-Run refreshing		
	TS indicator	Input method	Differential Input
	AD4203 ■TS	Input range	4 to 20 mA
		Input conversion range	-5 to 105% (full scale)
la d'actan		Absolute maximum rating	±30 mA
Indicator		Input impedance	85 Ω
		Resolution	1/8000 (full scale)
		Overall 25°C	±0.2% (full scale)
		accuracy 0 to 55°C	±0.4% (full scale)
		Conversion time	250 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	1.05 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	Terminal block Input1+ to 8+ Input1- to 8- S 510 KΩ \$510 KΩ AG: Analog cir internal G NX bus connector (left) I/O power supply +		
Installation orientation and restrictions	Installation orientation: Possible in 6 orient Restrictions: No restrictions	ations.	
Terminal connection diagram	Current Input Unit NX-AD4204 A1		
Input disconnection detection	Supported.		
uelection			

Analog Input Unit (current input type) 8 points NX-AD4204

Unit name	Analog Input Unit (current input type) Model NX-AD4208		
		External connection	Screwless clamping terminal block (16
Capacity	8 points	terminals	terminals)
I/O refreshing method	Selectable Synchronous I/O refreshing or F	ree-Run refreshing	
	TS indicator		Differential Input 4 to 20 mA
	AD4208		
	■TS		-5 to 105% (full scale)
		Absolute maximum rating	±30 mA
Indicator		Input impedance	85 Ω
		Resolution	1/30000 (full scale)
		Overall 25°C	±0.1% (full scale)
		accuracy 0 to 55°C	±0.2% (full scale)
		Conversion time	10 μs/point
Dimensions	12 (W) x 100 (H) x 71 (D)	Isolation method	Between the input and the NX bus: Power = Transformer, Signal = Digital isolator (no isolation between inputs)
Insulation resistance	20 M Ω min. between isolated circuits (at 100 VDC)	Dielectric strength	510 VAC between isolated circuits for 1 minute at a leakage current of 5 mA max.
I/O power supply method	No supply	Current capacity of I/O power supply terminal	Without I/O power supply terminals
NX Unit power consumption	1.10 W max.	I/O current consumption	No consumption
Weight	70 g max.		
Circuit layout	$\begin{array}{c} \text{Terminal block} \begin{bmatrix} \text{Input1+ to 8+} \\ \text{Input1- to 8-} \\ \text{Input1- to 8-} \\ \text{KX bus} \\ \text{connector} \\ (\text{left}) \end{bmatrix} \begin{bmatrix} \text{I/O power supply +} \\ \text{I/O power supply -} \\ \text{KX bus} \\ \text{I/O power supply -} \\ \text{KX bus} \\ \text{Connector} \\ \text{I/O power supply -} \\ \text{KX bus} \\ \text{Connector} \\ \text{KX bus} \\ \text{CONECTOR} \\ \text{KX bus} \\ \text{KX bus} \\ \text{KX bus} \\ \text{CONECTOR} \\ \text{KX bus} \\ \text{KX bus} \\ \text{KX bus} \\ \text{CONECTOR} \\ \text{KX bus} \\ \text{KX bus} \\ \text{KX bus} \\ \text{CONECTOR} \\ \text{KX bus} \\ KX$		
Installation orientation and restrictions	Installation orientation: Possible in 6 orienta Restrictions: No restrictions	ations.	
Terminal connection diagram	Current Input Unit NX-AD4208 Input A1 B1 Input1+ Input2+ Input3+ Input4+ Input5- Input6+ Input7+ Input8+ Input7- Input8+ Input7- Input8+ B8 B8		
Input disconnection detection	Supported.		

Analog Input Unit (current input type) 8 points NX-AD4208

Version Information

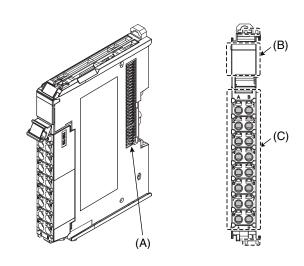
NX Unit		Corresponding unit versions/versions		ons
Model	Unit Version	EtherCAT Coupler Units NX-ECC201/ECC202 *	NJ-series CPU Units NJ501-000/NJ301-000	Sysmac Studio
NX-AD	Ver.1.0	Version 1.0 or later	Version 1.05 or later	Version 1.06 or higher

* For the NX-ECC202, there is no unit version of 1.1 or earlier.

External Interface

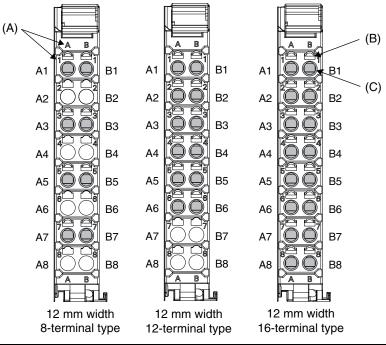
Analog Input Unit

NX-AD



Symbol	Name	Function
(A)	NX bus connector	This connector is used to connect each Unit.
(B)	Indicators	The indicators show the current operating status of the Unit.
(C)	Terminal block	The terminal block is used to connect external devices. The number of terminals depends on the type of Unit.

Terminal Blocks



Symbol	Name	Function
(A)	Terminal number indications	Terminal numbers for which A to D indicate the column, and 1 to 8 indicate the line are displayed. The terminal number is a combination of column and line, so A1 to A8 and B1 to B8 are displayed. The terminal number indications are the same regardless of the number of terminals on the terminal block.
(B)	Release holes	Insert a flat-blade screwdriver into these holes to connect and remove the wires.
(C)	Terminal holes	The wires are inserted into these holes.

Applicable Terminal Blocks for Each Unit Model

	Terminal Blocks					
Unit model	Model	No. of terminals	Terminal number indications	Ground terminal mark	Terminal current capacity	
NX-AD2	NX-TBA082	8	A/B	None	10 A	
NX-AD3	NX-TBA122	12	A/B	None	10 A	
NX-AD4	NX-TBA162	16	A/B	None	10 A	

Applicable Wires

Using Ferrules

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

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

Always use one-pin ferrules. Do not use two-pin ferrules.

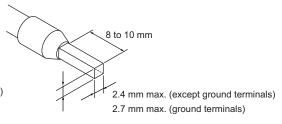
The applicable ferrules, wires, and crimping tool are given in the following table.

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

* Some AWG 14 wires exceed 2.0 mm² and cannot be used in the screwless clamping terminal block.

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

Finished Dimensions of Ferrules



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

Using Twisted Wires/Solid Wires

If you use the twisted wires or the solid wires, the applicable wire range and conductor length (stripping length) are as follows.

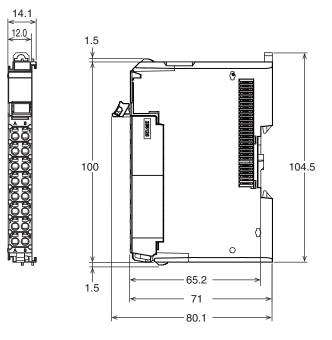
Terminal types	Applicable wires	Conductor length (stripping length)
Ground terminals	2.0 mm ²	9 to 10 mm
Terminals other than ground terminals	0.08 to 1.5 mm ² AWG28 to 16	8 to 10 mm

Conductor length (stripping length)

Dimensions

(Unit/mm)

Analog Input Unit NX-AD



Related Manuals

Cat. No.	Model number	Manual name	Application	Description
W522	NX-AD	NX-series Analog I/O Units User's Manual	Learning how to use NX-series Analog I/O Units and Temperature Input Units	The hardware, setup methods, and functions of the NX- series Analog I/O Units and Temperature Input Units are described.

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 http://www.omron.com/global/ or contact your Omron representative for published information.

Limitation on Liability; Etc.

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.

Errors and Omissions. 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.

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

OMRON Corporation Industrial Automation Company

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Omron:

<u>NX-AD4208</u> <u>NX-AD4204</u> <u>NX-AD4203</u> <u>NX-AD2604</u> <u>NX-AD2603</u> <u>NX-AD2608</u> <u>NX-AD3603</u> <u>NX-AD2203</u> <u>NX-AD3604</u> <u>NX-AD3204</u> <u>NX-AD3608</u> <u>NX-AD4603</u> <u>NX-AD4608</u> <u>NX-AD4604</u> <u>NX-AD3208</u> <u>NX-AD3204</u> <u>NX-AD3203</u> <u>NX-AD3208</u> <u>NX-AD3208</u>



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный) **Факс:** 8 (812) 320-02-42 **Электронная почта:** <u>org@eplast1.ru</u> **Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.