# Product Discontinuation Notice

| Product Discontinuation | Recommended Replacement |
|---|---|
| Programmable Controller | Programmable Controller<br>Machine Automation Controller |
| **CJ1W-ADG41** | **CJ1W-AD042**<br>**NX-HAD401/402** |

## [ Final order entry date ]
The end of March 2024

## [ Date of The Last Shipping ]
The end of September 2024

## [ Scheduled date of maintenance close ]
The end of March 2031

## [ Caution on recommended replacement ]

1. For CJ1W-AD042
CJ1W-AD042 does not support some of the functions of CJ1W-ADG41.
Please review the application to make sure there are no problems with the actual ladder program of the CPU Unit.

2. NX-HAD401/402
It is necessary to configure the system which is included in the CPU Unit.
For details, please refer to the NX-Series Analog I/O Units User's Manual for High-speed Analog Input Units (Cat. No. W592) and other related manuals.

## [ Difference from discontinued product ]

| Recommended replacement model | Body Color | Dimen-sions | Wire connection | Mounting dimensions | Charac-teristics | Operation ratings | Operation methods |
|---|---|---|---|---|---|---|---|
| 1.  CJ1W-AD042 | ** | ** | -- | ** | * | -- | * |
| 2.  NX-HAD401/402 | * | -- | -- | -- | -- | -- | -- |

** : Compatible
* : The change is a little/Almost compatible
-- : Not compatible
- : No corresponding specification

## [ Product Discontinuation and recommended replacement ]

| Product discontinuation | Recommended replacement |
|---|---|
| CJ1W-ADG41 | CJ1W-AD042 |
|  | NX-HAD401 |
|  | NX-HAD402 |

# 1. Comparison with CJ1W-AD042

## [ Wire connection ]

| Product discontinuation CJ1W-ADG41 | Recommended replacement 1 CJ1W-AD042 |
|---|---|
| **Terminal Arrangement** | **Terminal Arrangement** |

**Terminal Arrangement (CJ1W-ADG41)**

| | | | | |
|---|---|---|---|---|
| Input I 2+ | B1 | A1 | Input I 1+ | |
| Input V 2+ | B2 | A2 | Input V 1+ | |
| Input 2 − | B3 | A3 | Input 1 − | |
| Input I 4+ | B4 | A4 | Input I 3+ | |
| Input V 4+ | B5 | A5 | Input V 3+ | |
| Input 4 − | B6 | A6 | Input 3 − | |
| External input trigger 2 | B7 | A7 | External input trigger 1 | |
| External input trigger 4 | B8 | A8 | External input trigger 3 | |
| COM | B9 | A9 | COM | |

**Terminal Arrangement (CJ1W-AD042)**

| | | | | |
|---|---|---|---|---|
| Current input 2 (+) ∗ | B1 | A1 | Current input 1 (+) ∗ |
| Voltage input 2 (+) | B2 | A2 | Voltage input 1 (+) |
| Input 2 (−) | B3 | A3 | Input 1 (−) |
| AG | B4 | A4 | AG |
| Current input 4 (+) ∗ | B5 | A5 | Current input 3 (+) ∗ |
| Voltage input 4 (+) | B6 | A6 | Voltage input 3 (+) |
| Input 4 (−) | B7 | A7 | Input 3 (−) |
| AG | B8 | A8 | AG |
| NC | B9 | A9 | N.C. |

| Input Circuit Diagram | Input Circuit Diagram |
|---|---|



## [ Characteristics ]
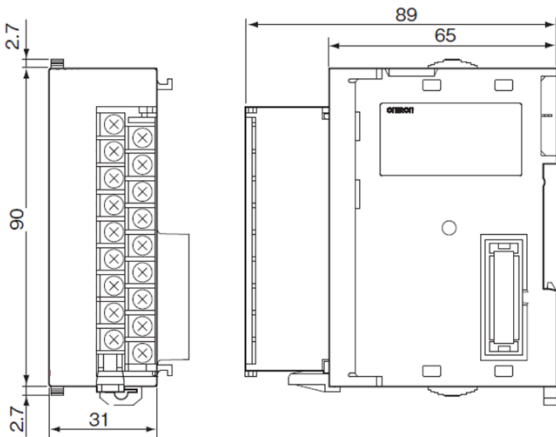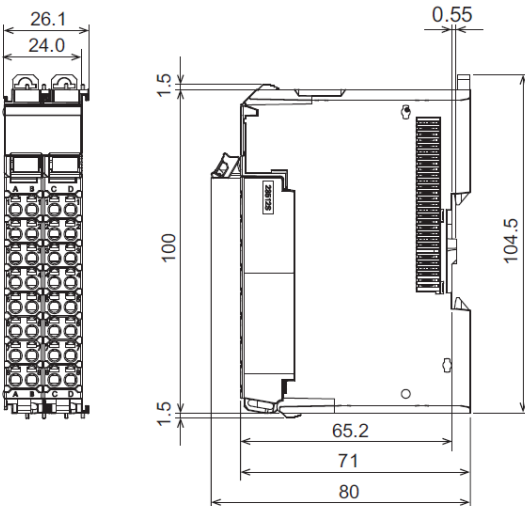
| Item | | | Product discontinuation CJ1W-ADG41 | Recommended replacement 1 CJ1W-AD042 |
|---|---|---|---|---|
| **Unit group** | | | CJ-series CPU Bus Units | CJ-series Special I/O Unit |
| **Isolation** | | | Isolation between input and PLC signals | Isolation between input and PLC signals |
| **Analog Inputs specification** | | | | |
| | **Number of inputs** | | 4 | 4 |
| **Signal ranges and resolutions** | | -10 to 10V | 1/60,000 | 1/40,000 |
| | | 0 to 10V | 1/30,000 | 1/20,000 |
| | | 0 to 5V | 1/30,000 | N/A |
| | | 1 to 5V | 1/24,000 | 1/10,000 |
| | | 4 to 20mA | 1/24,000 | 1/10,000 |
| | | -5 to 5V | N/A | 1/20,000 |
| | **Input impedance** | | Voltage inputs : 1MΩ min, Current inputs: 250 Ω (typ) | Voltage inputs : 1MΩ min, Current inputs: 250 Ω (typ) |
| | **A/D conversion data** | | 16 bits binary | 16 bits binary |
| | **Overall accuracy of Full Scale** | 25°C | ±0.05% | Voltage inputs: ±0.2% Current inputs: ±0.4% |
| | | 0 to 55°C | ±0.1% | Voltage inputs: ±0.4% Current inputs: ±0.6% |

| Item | | Product discontinuation CJ1W-ADG41 | Recommended replacement 1 CJ1W-AD042 |
|---|---|---|---|
| **Conversion period** | | 80 us max. for 2 points<br>160 us max. for 4 points | 20 us max for 1 point<br>25 us max for 2 points<br>30 us max for 3 points<br>35 us max for 4 points |
| **Analog input function** | | | |
| | **Mean value processing** | The number of averaged buffers 2, 4, 8, 16, 32, or 64 | The number of averaged buffers 2, 4, 8, 16, 32, 64, 128, 256, or 512 |
| | **Scaling** | Between -32,768 and 32,767 | Between -32,768 and 32,767 |
| | **Comparator function** | | N/A |
| | **Comparator Interrupts function** | | N/A |
| | **Input Disconnection Detection function** | 1 to 5V: Less than 0.3V<br>4 to 20mA: Less than 1.2mA | 1 to 5V: Less than 0.3V<br>4 to 20mA: Less than 1.2mA |
| | **Data Buffering function** | | N/A |
| | **Zero and Span Adjustments function** | | N/A |
| **External trigger inputs** | | | |
| | **Number of inputs** | 4 | N/A |
| | **Input voltage** | 24 VDC | N/A |
| | **Input impedance** | 3.3kΩ | N/A |
| | **ON/OFF response time** | ON: 0.05ms (max)<br>OFF:0.5ms (max) | N/A |
| **Data exchange with CPU Unit** | | Words Allocated to CPU Bus Unit Area in CIO Area (CIO 1500 to 1899) : 25 words/Unit<br><br>Words Allocated to CPU Bus Unit Area in DM Area (D30000 to D31599) : 100 words/Unit | Special I/O Unit Area in CIO Area (CIO 2000 to 2959) : 10 words/Unit<br><br>Special I/O Unit Area in DM Area (D20000 to D29599) : 100 words/Unit |
| **Internal structure** | |  |  |
| **Available PLC** | | CJ series | CJ series/ NJ series |
| **Reference manual** | | W543 | W345 |

Please refer to the manual about operation ratings and operation methods.

## 2. Comparison with NX-HAD401/402

### [ Dimensions ]

| Product discontinuation<br>CJ1W-ADG41 | Recommended replacement 2<br>NX-HAD401/402 |
|---|---|
|  |  |

### [ Mounting dimensions ]

| Product discontinuation<br>CJ1W-ADG41 | Recommended replacement 2<br>NX-HAD401/402 |
|---|---|
| Attached to an CJ-series CPU Unit.<br>For details, please refer to the manual of CJ-series CPU Unit. | Attach to an NX-series CPU Unit or NX-series Communications Coupler Unit.<br>Please refer the relevant manuals for the NX series. |

### [ Wire connection ]

| Product discontinuation<br>CJ1W-ADG41 | Recommended replacement 2<br>NX-HAD401/402 |
|---|---|
| **Terminal Arrangement** | **Terminal Arrangement** |
|  |  |
| **Input Circuit Diagram** | **Input Circuit Diagram** |
|  |  |

## [ Characteristics ]

| Item | | | Product discontinuation CJ1W-ADG41 | Recommended replacement 2 NX-HAD401/402 |
|---|---|---|---|---|
| **Available PLC** | | | CJ series | NX series and NJ series |
| **Terminal block** | | | Screw terminal | Screwless clamping terminal |
| **Isolation** | | | Isolation between input and PLC signals | Isolation between the input circuits and internal circuits and between the input circuits of the Unit. |
| **Analog Inputs specification** | | | | |
| | **Number of inputs** | | 4 | 4 |
| | **Signal ranges and resolutions** | **-10 to 10V** | 1/60,000 | 1/64,000 |
| | | **0 to 10V** | 1/30,000 | 1/32,000 |
| | | **0 to 5V** | 1/30,000 | 1/32,000 |
| | | **1 to 5V** | 1/24,000 | 1/32,000 |
| | | **4 to 20mA** | 1/24,000 | 1/32,000 |
| | | **-5 to 5V** | N/A | 1/64,000 |
| | **Input impedance** | | Voltage inputs : 1MΩ min, Current inputs: 250 Ω (typ) | Voltage inputs : 1MΩ min, Current inputs: 250 Ω (typ) |
| | **A/D Conversion data** | | 16 bits binary | 16 bits binary |
| | **Overall accuracy of Full Scale** | **25°C** | ±0.05% | **±**0.1% |
| | | **0 to 55°C** | ±0.1% | **±**0.2% |
| | **Conversion period** | | 80 us max. for 2 points 160  max. for 4 points | 5 us max. for 4 points ● Regarding as the number of sampling setting |
| **Analog input function** | | | | |
| | **Mean value processing** | | The number of averaged buffers 2, 4, 8, 16, 32, or 64 | The moving average filter correspond to this function. The number of moving average filter  :0 to 4096. |
| | **Scaling** | | Between -32,768 and 32,767 | Carry out by program of CPU unit |
| | **Comparator function** | | ✓ | N/A |
| | **Comparator Interrupts function** | | ✓ | N/A |
| | **Input Disconnection Detection function** | | 1 to 5V: Less than 0.3V 4 to 20mA: Less than 1.2mA | 1 to 5V: Less than 0.3V 4 to 20mA: Less than 1.2mA |
| | **Data Buffering function** | | | N/A |
| | **Start Data Buffering** | | External trigger input Operation CPU unit relay Trigger of analog input level | It is possible to always read to CPU unit without trigger input. |
| | **Zero and Span Adjustments function** | | ✓ | The user calibration is corresponded to this function. |
| | **External trigger inputs** | | ✓ | Record analog input value and DC time on external trigger input |
| **Reference manual** | | | W543 | W592 and related manuals which are introduced in W592 |

Please refer to the reference manual and relevant manuals about operation ratings and operation methods.