CJ-series Quick-response Input Units

CJ1W-IDP01

CSM_CJ1W-IDP01_DS_E_2_1

Capture Input Signals Shorter Than the Cycle Time

- This Input Unit can read pulse inputs that are shorter than the cycle time of the CPU Unit.

CJ1W-IDP01

Features

- A pulse width (ON time) of 0.05 ms min. can be read by the Quick-response Input Unit.
- Input data read by the internal circuits is cleared when inputs are refreshed.
- Quick-response Input Units can be used when communicating with inspection equipment to read the many pulse signals that are too short to be read with normal I/O Units.

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, and CE: EC Directives.
- Contact your OMRON representative for further details and applicable conditions for these standards.

Quick-response Input Unit

Unit type	Product name	Specifications					No. of words allocated	Current consumption (A)		Model	Standards
		I/O points	Input voltage, Input current	Commons	Input pulse width conditions	External connection		5 V	24 V		
CJ1 Basic I/O Units	Quick-response Input Unit 	16 inputs	24 VDC, 7 mA	16 points, 1 common	ON time: 0.05 ms max. OFF time: 0.5 ms max.	Removable terminal block	1 word	0.08	–	**CJ1W-IDP01**	UC1, N, L, CE

Note: There are no restrictions on the mounting position or number of Units.

Accessories

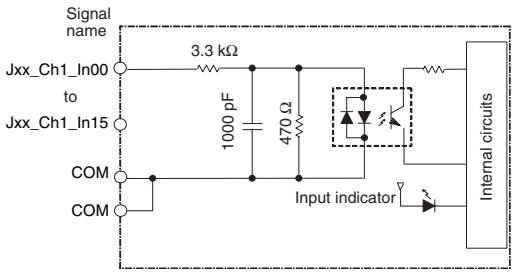
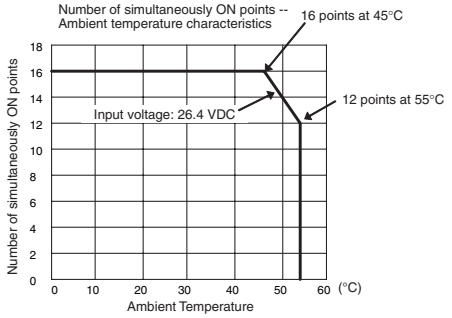
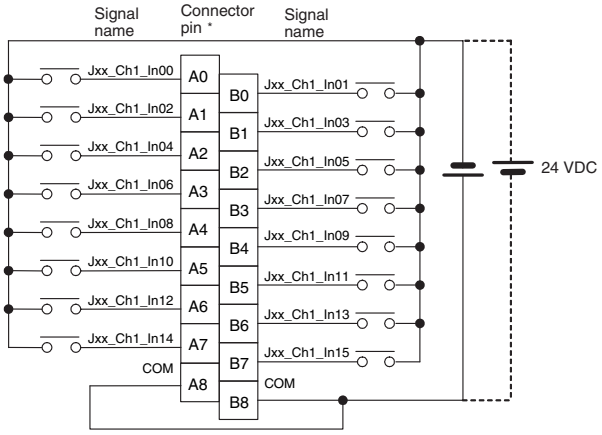
There is no accessory for the CJ series Quick-response Input Units.

Mountable Racks

Model	NJ system		CJ system (CJ1, CJ2)		CP1H system	NSJ system	
	CPU Rack	Expansion Rack	CPU Rack	Expansion Backplane	CP1H PLC	NSJ Controller	Expansion Backplane
CJ1W-IDP01	10 Units	10 Units (per Expansion Rack)	10 Units	10 Units (per Expansion Backplane)	Not supported	Not supported	10 Units (per Expansion Backplane)

Specifications

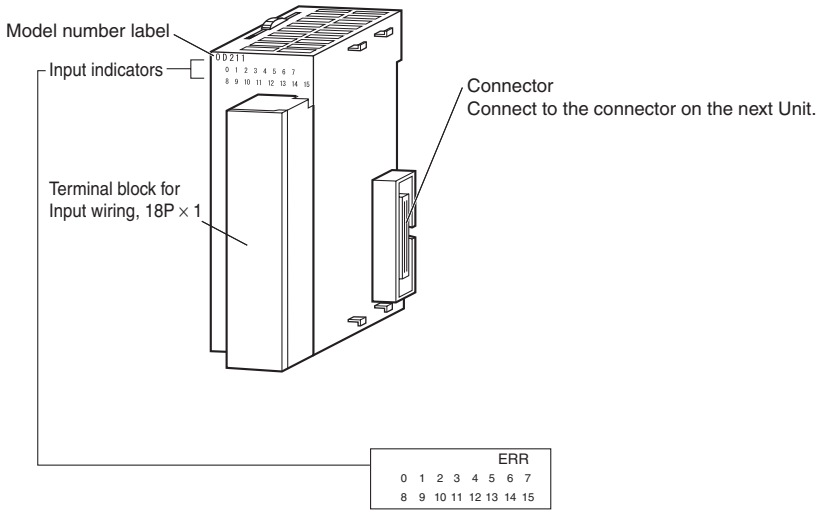
CJ1W-IDP01 Quick-response Input Unit (16 Points)

Name	16-point Quick-response Input Unit with Terminal Block
Model	CJ1W-IDP01
Rated Input Voltage	24 VDC
Rated Input Voltage Range	20.4 to 26.4 VDC
Input Impedance	3.3 kΩ
Input Current	7 mA typical (at 24 VDC)
ON Voltage/ON Current	14.4 VDC min./3 mA min.
OFF Voltage/OFF Current	5 VDC max./1 mA max.
ON Response Time	0.05 ms max.
OFF Response Time	0.5 ms max.
Number of Circuits	16 (16 points/common, 1 circuit)
Number of Simultaneously ON Points	100% (16 points/common) simultaneously ON (24 VDC)
Insulation Resistance	20 MΩ between external terminals and GR terminal (at 100 VDC)
Dielectric Strength	1,000 VAC between external terminals and GR terminal for 1 minute at a leakage current of 10 mA max.
Internal Current Consumption	80 mA max.
Weight	110 g max.
Accessories	None
Circuit Configuration	 • The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name. 
External connection and terminal-device variable diagram	 • The input power supply polarity can be connected in either direction. • The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

- With quick-response inputs, pulse inputs shorter than the CPU Unit's cycle time can be read by the CPU Unit.
- The pulse width (ON time) that can be read by the Quick-response Input Unit is 0.05 ms.
- Inputs read by the internal circuits are cleared when inputs are refreshed.

* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

External Interface



Wiring Terminal Blocks

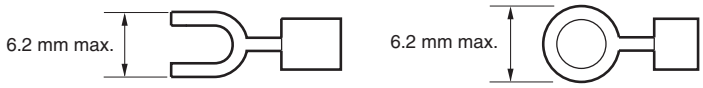
Electric Wires

The following wire gauges are recommended.

Terminal Block Connector	Wire Size
18-terminal	AWG 22 to 18 (0.32 to 0.82 mm^2)

Crimp terminals

Use crimp terminals (M3) having the dimensions shown below.

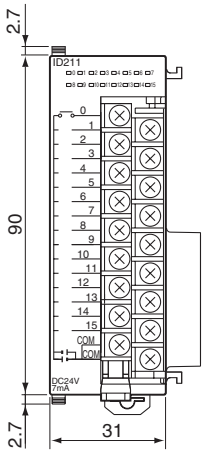


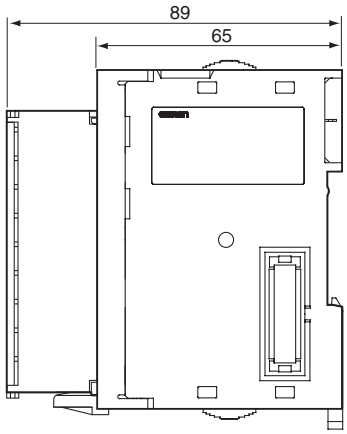
Dimensions

(Unit: mm)

8-point/16-point Units (18-point Terminal Blocks)

CJ1W-IDP01





Related Manuals

Name	Cat. No.	Contents
CJ-series CJ2H-CPU6□-EIP, CJ2H-CPU6□, CJ2M-CPU□□ CJ2 CPU Unit Hardware User's Manual	W472	Describes the following for CJ2 CPU Units: • Overview and features • Basic system configuration • Part nomenclature and functions • Mounting and setting procedure • Remedies for errors • Also refer to the Software User's Manual (W473).
CJ Series CJ1H-CPU□□H-R, CJ1G/H-CPU□□H, CJ1G-CPU□□P, CJ1G-CPU□□, CJ1M-CPU□□ Programmable Controllers Operation Manual	W393	Provides an outlines of and describes the design, installation, maintenance, and other basic operations for the CJ-series PLCs.
NJ-series CPU Unit Hardware User's Manual NJ501-□□□□	W500	An introduction to the entire NJ-series system is provided along with the following information on a Controller built with an NJ501 CPU Unit. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection Use this manual together with the NJ-series CPU Unit Software User's Manual (Cat. No. W501).

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