Power Supply Unit

# CK3W-PD048

CSM_CK3W-PD048_DS_E_DITA_2_2

## Supplies power to the CK3M Controller



CK3W-PD048

## Features

- 24 VDC input
- The power supply status indicator shows operating status



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# 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.

## Power Supply Unit

The models and outline of specifications are given below.

| Product name | Specifications | Model |
|---|---|---|
| Power Supply Unit | Rated output voltage: 5 VDC/24 VDC<br>Maximum output power: 5 VDC 23 W, 24 VDC 55 W | **CK3W-PD048** |

## 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.

| Manufacturer | Ferrule model | Applicable wire ($mm^2$ (AWG)) | Crimping Tool (applicable wire size given in parentheses) |
|---|---|---|---|
| Phoenix Contact | AI0,25-8 | 0.25 (#24) | Phoenix Contact<br>CRIMPFOX 6 (0.25 to 6 $mm^2$, AWG24 to 10) |
| | AI0,5-8 | 0.5 (#20) | |
| | AI0,75-8 | 0.75 (#18) | |
| | AI1,0-8 | 1.0 (#18) | |
| | AI1,5-8 | 1.5 (#16) | |
| Weidmüller | H0.25/12 | 0.25 (#24) | Weidmüller<br>PZ6 Roto (0.14 to 6 $mm^2$, AWG26 to 10) |
| | H0.34/12 | 0.34 (#22) | |
| | H0.5/14 | 0.5 (#20) | |
| | H0.75/14 | 0.75 (#18) | |
| | H1.0/14 | 1.0 (#18) | |
| | H1.5/14 | 1.5 (#16) | |

### Using Twisted or Solid Wires

| Wire type | Conductor cross-sectional area | Conductor length (stripping length) |
|---|---|---|
| Solid wire | 0.2 to 4 $mm^2$ | 8 mm |
| Twisted wire | 0.2 to 2.5 $mm^2$ | 8 mm |

## Required Tools

Use a flat-blade screwdriver to remove wires.
The recommended screwdriver is as follows.

| Model | Manufacturer |
|---|---|
| SZF 0-0,4X2,5 | Phoenix Contact |



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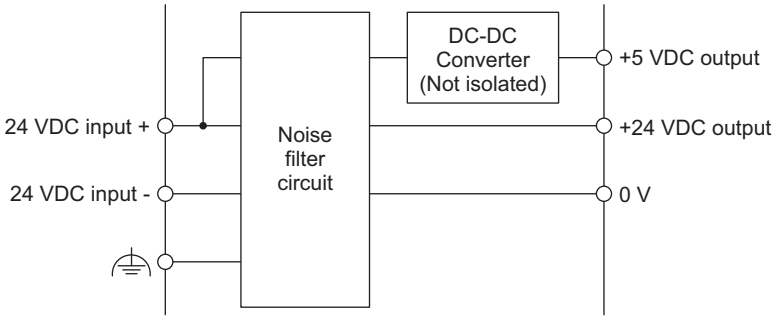
# General Specifications

This section describes the Motion Controller specifications.

| Item | | Specification |
|---|---|---|
| **Enclosure** | | Mounted in a panel |
| **Grounding Method** | | Ground to less than 100 Ω. |
| **Operating Environment** | **Ambient Operating Temperature** | 0 to 55°C |
| | **Ambient Operating Humidity** | 10% to 95% (with no condensation or icing) |
| | **Atmosphere** | Must be free of corrosive gases. |
| | **Ambient Storage Temperature** | -25 to 70°C (with no condensation or icing) |
| | **Vibration Resistance** | Conforms to IEC 60068-2-6.<br>5 to 8.4 Hz with 3.5-mm amplitude,<br>8.4 to 150 Hz, acceleration of 9.8 $m/s^2$<br>100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total) |
| | **Shock Resistance** | Conforms to IEC 60068-2-27.<br>147 $m/s^2$, 3 times each in X, Y, and Z directions |
| **Insulation Resistance** | | 20 MΩ min. between isolated circuits (at 100 VDC) |
| **Dielectric Strength** | | 510 VAC between isolated circuits for 1 minute with a leakage current of 5 mA max. |
| **Applicable Standards** | | cULus, EU: EN 61326, RCM, KC |

# Specifications

The specifications are shown below.

| Item | Specification |
|---|---|
| Power supply voltage | 24 VDC |
| Allowable power supply voltage range | 20.4 to 26.4 VDC |
| Power consumption | 101.7 W max. |
| Rated output voltage | 5 VDC/24 VDC |
| Maximum output power *1 | 5 VDC 23 W<br>24 VDC 55 W |
| Isolation method | Not isolated |
| Circuit configuration |  |
| Weight | 130 g max. |
| Dimensions (height × depth × width) | 90(H)/80(D)/45(W) |

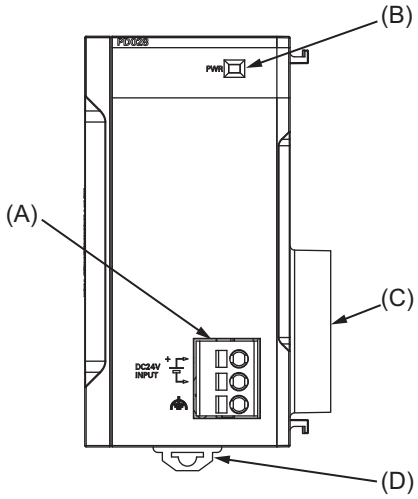
*1. Internal components in the Power Supply Unit may deteriorate or be damaged if the Power Supply Unit is used for an extended period of time exceeding the power supply output capacity or used when the outputs are shorted.



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# Part Names and Functions

## Part Names and Functions

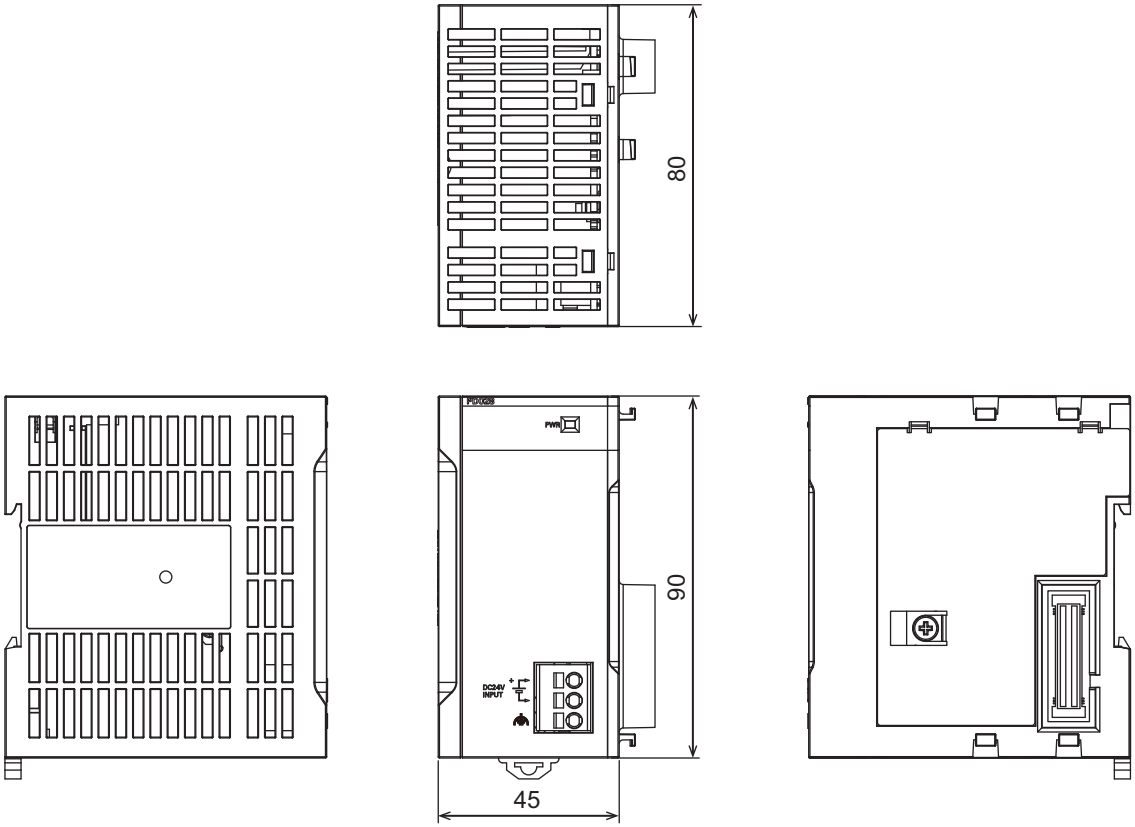



| Letter | Name | Function |
|---|---|---|
| A | Power supply connection terminal block | Connects the power supply. |
| B | Power supply status indicator | Lights when 5 V is output from the Power Supply Unit. |
| C | CPU Unit connector | Connector that connects to the CPU Unit. |
| D | DIN Track mounting hook | Used to mount the Unit to a DIN Track. |

# Dimensions

(Unit: mm)

## Power Supply Unit






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# Related Manuals

The following manuals are related. Use these manuals for reference. Contact your OMRON representative for information on how to procure these manuals.

| Manual name | Cat. No. | Application | Description |
|---|---|---|---|
| CK3M/CK5M-series Programmable Multi-Axis Controller Hardware User's Manual | O036 | Learning the basic specifications of the CK3M/CK5M-series Programmable Multi-Axis Controller, including introductory information, design, installation, and maintenance. Mainly hardware information is provided. | An introduction to the entire CK3M/CK5M-series system is provided along with the following information.<br>• Features and system configuration<br>• Introduction<br>• Part names and functions<br>• General specifications<br>• Installation and wiring<br>• Maintenance and inspection |
| Power PMAC User's Manual | O014 | Learning the features and usage examples of the Motion Controller. | The following information is provided on the Motion Controller.<br>• Basic functions<br>• Setup examples<br>• Programming examples |
| Power PMAC Software Reference Manual | O015 | Learning how to program Motion Controller. | The following information is provided on the Motion Controller.<br>• Details of commands<br>• Details of data structure |
| Power PMAC IDE User Manual | O016 | Learning how to operate Power PMAC IDE, the integrated development environment of the Controller. | Describes the operating procedures of Power PMAC IDE, and examples of how to start the system. |
| Power PMAC-NC Quick Start Manual | O017 | Briefly understanding the basic usage of Power PMAC-NC. | Describes the Quick setup procedure to run Power PMAC-NC on a desktop PC by showing some examples. |
| Power PMAC-NC .ini Configuration Manual | O018 | Configuring an application for CNC devices by using Power PMAC-NC. | Describes how to set up PowerPmacNC.ini, the setup data file to be loaded when Power PMAC-NC starts. |
| Power PMAC-NC Software User Manual | O019 | Learning about usage and features of Power PMAC-NC, Support Software required to use the Controller for CNC devices. | The following information is provided on Power PMAC-NC.<br>• How to use the software<br>• Features included in the software<br>• Features that can be customized |
| Power PMAC-NC Mill G-Code Manual | O020 | Creating programs for CNC devices by using Power PMAC-NC. | Describes the basic G-code set that can be used for Power PMAC-NC, and relevant instructions. |

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PMAC is an abbreviation for Programmable Multi Axis Controller.



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