



Programmable Controller MELSEC-F

FX3U-16CCL-M INSTALLATION MANUAL

Manual Number: JY997D43401, Revision: F, Date: October 2022

This manual describes the part names, dimensions, mounting, and specifications of the product. Before use, read this manual and the manuals of all relevant products...

Effective October 2022 Specifications are subject to change without notice. © 2011 Mitsubishi Electric Corporation

Safety Precautions (Read these precautions before use.)

This manual classifies the safety precautions into two categories: WARNING and CAUTION.

WARNING and CAUTION icons with descriptions of hazardous conditions and injury risks.

Depending on the circumstances, procedures indicated by CAUTION may also cause severe injury. It is important to follow all precautions for personal safety.

Associated Manuals

Table listing associated manuals including FX3U-16CCL-M User's Manual, FX3G Series User's Manual, FX3GC Series User's Manual, FX3U Series User's Manual, FX3UC Series User's Manual, FX3S/FX3G/FX3GC/FX3U/FX3UC Series Programming Manual, and MELSEC IQ-F FX5S/FX5UJ/FX5UJ/FX5UC User's Manual.

How to obtain manuals For product manuals or documents, consult with the Mitsubishi Electric dealer from who you purchased your product.

Terminal screw and terminal block mounting screw size, and tightening torque. Power supply terminal block, CC-Link connection terminal block.

1.6 Switch setting With regard to the switch setting for station number, transmission rate, line test, hardware test, the switch settings become valid after FX3U-16CCL-M startup.

1.6.1 Station number setting Table with Setting items, Range, and Description for station number settings.

1.6.2 Transmission rate setting, line test, hardware test Table with Setting, Description, and Status for transmission rate and line test settings.

2. Installation For details on installation, refer to the following manual. Refer to the FX3U-16CCL-M User's Manual.

INSTALLATION PRECAUTIONS WARNING and CAUTION sections with detailed instructions on safe installation practices.

DESIGN PRECAUTIONS WARNING and CAUTION sections with instructions on handling during control operation and electrical safety.

DISPOSAL PRECAUTIONS CAUTION section regarding safe disposal of electronic waste.

TRANSPORTATION AND STORAGE PRECAUTIONS CAUTION section regarding safe handling and storage of the unit.

3.1 Applicable PLC Table listing Model name and Applicability for various PLC models.

Certification of UL, cUL standards FX3U-16CCL-M units comply with the UL standards (UL, cUL).

Compliance with EC directive (CE Marking) This note does not guarantee that an entire mechanical module produced in accordance with the contents of this note will comply with the following standards.

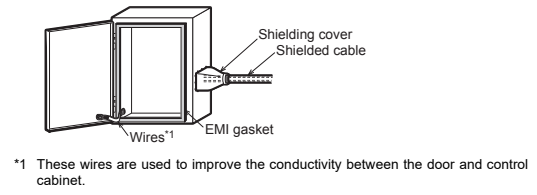
Requirement for Compliance with EMC directive The following products have shown compliance through direct testing (of the identified standards below) and design analysis (through the creation of a technical construction file).

Attention This product is designed for use in industrial applications. Type: Programmable Controller (Open Type Equipment) Models: MELSEC FX3U series manufactured from August 1st, 2011

Table with Standard and Remark columns, detailing compliance with EN61131-2:2007 and other standards.

Caution for EC Directive Installation in Enclosure Programmable controllers are open-type devices that must be installed and used within conductive control cabinets.

- Control cabinet - The control cabinet must be conductive. - Ground the control cabinet with the thickest possible grounding cable.



*1 These wires are used to improve the conductivity between the door and control cabinet.

2.1 Connection with PLC Only one FX3U-16CCL-M can be connected to the right side of a PLC main unit or extension unit/block.

2.2 Mounting The product is mounted by the following method. DIN rail mounting Direct mounting (mounting screw: M4 screw)

3. Specification For details on specifications, refer to the following manual. Refer to the FX3U-16CCL-M User's Manual.

DESIGN PRECAUTIONS WARNING section with instructions on handling during control operation.

DESIGN PRECAUTIONS CAUTION section with instructions on handling during control operation.

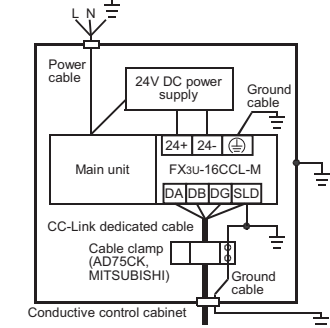
DISPOSAL PRECAUTIONS CAUTION section regarding safe disposal of electronic waste.

TRANSPORTATION AND STORAGE PRECAUTIONS CAUTION section regarding safe handling and storage of the unit.

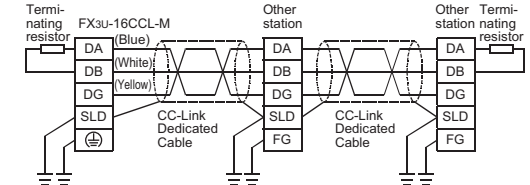
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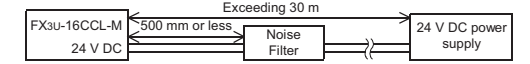
Configuration example inside control cabinet



Wiring simplified diagram



Notes for compliance with EN61131-2:2007 General notes on the use of the power supply cable. The FX3U-16CCL-M unit requires that the cable used for power supply is 30 m or less.



Compliance with UKCA marking The requirements for compliance with UKCA marking are the same as that with EC directive (CE marking).

1. Introduction The CC-Link master block FX3U-16CCL-M is a special function block which assigns an FX3G/FX3GC/FX3UJ/FX3UC/FX5UJ/FX5UC PLC as the master station of a CC-Link system.

1.1 Major Features of the FX3U-16CCL-M 1) Compatible with CC-Link Ver. 2.00 and Ver. 1.10. The FX3U-16CCL-M is compatible with CC-Link Ver. 2.00, and enables expanded cyclic transmission to facilitate the handling of applications requiring multiple points of data processing.

1.2 Incorporated Items Check to ensure the following product and items are included in the package.

Included Items table listing items like FX3U-16CCL-M, Special unit/block No. label, Terminal resistor, Dust proof protection sheet, and Manuals.

*1 An FX2NC-CNV-IF or FX3UC-1PS-5V is necessary to connect the FX3U-16CCL-M with the FX3GC/FX3UC PLC. *2 An FX5-CNV-BUS or FX5-CNV-BUSC is necessary to connect the FX3U-16CCL-M with the FX5UJ/FX5UC PLC.

3.2 General Specifications Items other than the following are equivalent to those of the PLC main unit. For general specifications, refer to the manual of the PLC main unit.

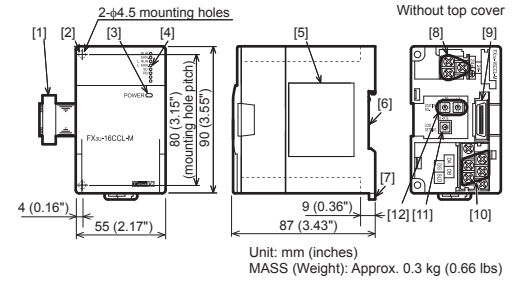
Table with Item and Specification columns, listing Dielectric withstand voltage, Insulation resistance, and Power supply specification.

3.3 Power Supply Specification Table with Item and Specification columns, listing Power supply voltage and Current consumption.

Table with Item and Specification columns, listing External power supply, Internal power supply, and Performance specification.

3.4 Performance Specification Table with Item and Specification columns, listing Applicable function, CC-Link applicable version, Station number, Transmission rate, Maximum total cable length, Connection cable, Maximum number of connectable stations, Maximum number of I/O points per system, Number of link points per station, Communication with PLC, Number of I/O occupied points, and Number of connectable units to the main unit.

1.3 External Dimensions and Part Names

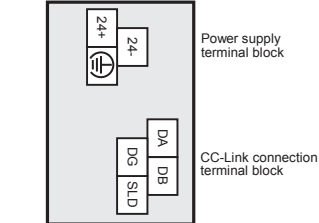


- [1] Extension cable, [2] Direct mounting hole, [3] Power LED (green), [4] Status LEDs, [5] Name plate, [6] DIN rail mounting groove, [7] DIN rail mounting hook, [8] Power supply terminal block, [9] Extension connector, [10] CC-Link connection terminal block, [11] Transmission rate setting switch, [12] Station number setting switch

1.4 Power and status LEDs

Table with LED display, LED Color, Status, and Description columns, detailing the meaning of various power and status LEDs.

1.5 Terminal Layout



*1 CC-Link dedicated cables, Ver. 1.10 compatible CC-Link dedicated cable and CC-Link dedicated high-performance cable cannot be used together. Also attach the terminating resistor which matches the kind of the cable.

*2 Indicates the number of link points for remote net ver. 1 mode. For the number of link points for remote net ver. 2 mode/remote net additional mode, refer to the FX3U-16CCL-M User's Manual.

*3 For details of other applied instructions and methods, refer to the FX3S/FX3G/FX3GC/FX3UJ/FX3UC Programming Manual.

「电器电子产品有害物质限制使用标识要求」的表示方式

Note: This symbol mark is for China only.

含有害6物质的名称, 含有量, 含有部品. 本产品中所含有的有害6物质的名称, 含有量, 含有部品如下表所示.

Table with 6 columns for hazardous substances: Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBB), and Polybrominated Diphenyl Ethers (PBDE).

本表格依据SJ/T 11364的规定编制. 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下. 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求.

基于中国标准法的参考规格: GB/T15969.2

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- (1) Damages caused by any cause found not to be the responsibility of Mitsubishi. (2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products. (3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products. (4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life. Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi Electric. This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.