



FX-232AWC-H

USER'S MANUAL



Manual Number	JY997D12601
Revision	H
Date	November 2017

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 fully to acquire proficiency in handling and operating the product. Make sure to learn all the product information, safety information, and precautions. Store this manual in a safe place so that it can be taken out and read whenever necessary. Always forward it to the end user.

Registration:
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Effective November 2017
Specifications are subject to change without notice.
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Safety Precautions (Read these precautions before use.)

This manual classifies the safety precautions into two categories:

WARNING and **CAUTION**.

WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

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

Manual name	Manual No.	Description
FX Series User's Manual - Data Communication Edition	JY997D16901 MODEL CODE: 09R715	Explains N:N network, Parallel Link, Computer Link, Non-Protocol communication by RS and RS2 instructions/FX2N-232IF.

How to obtain manuals

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

1. Outline

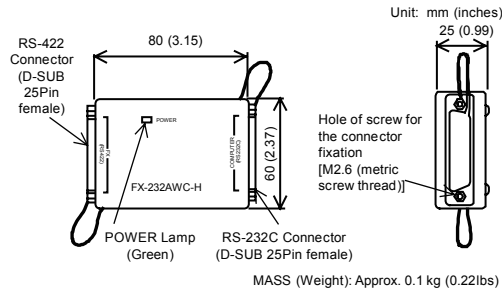
The FX-232AWC-H is a RS-422/RS-232C converter to connect the FX series PLC with a personal computer.

1.1 Incorporated Items

Verify that the following product and items are included in the package:

Product	Included items
FX-232AWC-H type interface unit	User's Manual (this manual)

1.2 External Dimensions and Part Names



2. Specification

INSTALLATION PRECAUTIONS **CAUTION**

- Use the product within the generic environment specifications described in PLC main unit manual (Hardware Edition). Never use the product in areas with excessive dust, oily smoke, conductive dusts, corrosive gas (salt air, Cl₂, H₂S, SO₂, or NO₂), flammable gas, vibration or impacts, or expose it to high temperature, condensation, or rain and wind. If the product is used in such conditions, electric shock, fire, malfunctions, deterioration or damage may occur.

STARTUP AND MAINTENANCE PRECAUTIONS **CAUTION**

- Do not disassemble or modify the PLC. Doing so may cause fire, equipment failures, or malfunctions. * For repair, contact your local Mitsubishi Electric distributor.
- Since the FX-232AWC-H case is made of resin, do not drop it or exert strong impact to it. Doing so may cause damage.

DISPOSAL PRECAUTIONS **CAUTION**

- Please contact a certified electronic waste disposal company for the environmentally safe recycling and disposal of your device.

TRANSPORTATION AND STORAGE PRECAUTIONS **CAUTION**

- The product is a precision instrument. During transportation, avoid impacts larger than those specified in the general specifications by using dedicated packaging boxes and shock-absorbing pallets. Failure to do so may cause failures in the product. After transportation, verify operation of the product and check for damage of the mounting part, etc.

2.1 General Specifications

The general specifications are equivalent to the PLC main unit. For general specifications, refer to the manual of the PLC main unit.

2.2 Electrical Specifications

Power	5V DC power is supplied from the internal power supply of PLC
Current consumption	120mA or less
Level Conversion	Bidirectional between RS-422 and RS-232C
Baud Rate	115200 bits per second, maximum (The baud rate is different in connected equipment.)

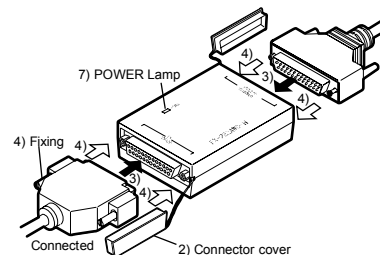
3. System Configuration

The system configuration according to the connected equipment can be found in the manual of the PLC main unit, positioning unit, programmable cam switch, or peripheral equipment. Additionally, when using Non-Protocol communication with the standard built-in port of the FX3G/FX3GC Series PLC, refer to the FX Series User's Manual - Data Communication Edition.

4. Connecting Procedure

The procedure for connecting to peripheral equipment is shown.

- Power off the PLC.
- Remove the connector cover of the FX-232AWC-H.
- Connect the cables to the connectors of the FX-232AWC-H. (For the selection of the cable, refer to the manual of the connected equipment or peripheral equipment.)
- Fix the connector of the FX-232AWC-H and the connected cable with the fixing screws.
- Power ON the PLC.
- Power ON the Personal computer.
- Make sure the POWER Lamp of the FX-232AWC-H is lit. (The POWER Lamp of the FX-232AWC-H lights when the power supply is normally supplied by the PLC)
- When the FX-232AWC-H is not in use, reattach the connector to prevent dust from entering.



5. Troubleshooting

When it is not possible to communicate between the PLC (The positioning units and the programmable cam switch are included.) and the personal computer via the FX-232AWC-H, check the following depending on the status of the POWER Lamp of the FX-232AWC-H.

State of POWER Lamp	Contents
POWER Lamp is lit.	The 5V DC power supply from PLC is normally supplied. Check the following when it is not possible to communicate. <ul style="list-style-type: none"> Check if the correct cable is connected between the FX-232AWC-H and the personal computer. Confirm whether the selection of the communication setting and the connected model is correctly set referring to the manual of the software which is installed on the personal computer.
POWER Lamp is not lit.	The 5V DC power supply from PLC is not supplied. Confirm the items below. <ul style="list-style-type: none"> Ensure that the FX-232AWC-H and the PLC are connected with the specified cable. Confirm whether the power supply is supplied to the PLC. (POWER Lamp of PLC lights when the power supply is correctly supplied to the PLC.) Confirm whether the 5V DC power supply capacity of PLC is sufficient. The PLC supplies 5V DC to the special function blocks. (The PLC will not operate when a configuration that exceeds the 5V DC capacity is used. It will also be impossible to communicate normally.)

Note Concerning the CE Marking

The CE marking does not guarantee that an entire mechanical module produced in accordance with the contents of the notification comply with the following standards. Compliance to EMC standards of the entire mechanical module should be checked by the user / manufacturer.

Standards with which this product complies

Type: Programmable Controller (Open Type Equipment)

Models: Products manufactured from July 1st, 2004.

Electromagnetic Compatibility Standards (EMC)	Remark
EN61000-6-4:2007 Electromagnetic compatibility -Generic standards - Emission standard for Industrial environment	Compliance with all relevant aspects of the standard. (Radiated Emissions and Mains Terminal Voltage Emissions)

Electromagnetic Compatibility Standards (EMC)	Remark
EN61131-2:2007 Programmable controllers Equipment requirements and tests	Compliance with all relevant aspects of the standard. (Radiated electromagnetic field, Fast transient burst, Electrostatic discharge, Damped oscillatory wave, Conducted RF, High-energy surge, and Power frequency magnetic field)
EN61000-6-2:2005 Electromagnetic compatibility -Generic standards Immunity for industrial environments.	Compliance with all relevant aspects of the standard. (RF immunity, Fast transients, ESD, Conducted, Surges, Power magnetic fields, Voltage dips and Voltage interruptions)

Notes for compliance to the EMC regulation.

It is necessary to install the FX-232AWC-H module in a shielded metal control panel. For more details please contact the local Mitsubishi Electric sales site.

Attention

This product is designed for use in industrial applications.

「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.

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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。

部件名称	产品中有害物质的名称及含量					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
可编程控制器	○	○	○	○	○	○
外壳	○	○	○	○	○	○
印刷基板	×	○	○	○	○	○

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。

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Warranty

Exclusion of loss in opportunity and secondary loss from warranty liability
Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:
(1) Damages caused by any cause found not to be the responsibility of Mitsubishi.
(2) Loss in opportunity, lost profits incurred by 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.