



Programmable Controller MELSEC-F

FX2N-10PG PULSE GENERATOR BLOCK

INSTALLATION MANUAL



Manual number, Revision, Date table

Thank you for purchasing the FX2N-10PG pulse generator block for the Mitsubishi Electric programmable controllers.

This manual describes the handling of the MELSEC-F series FX2N-10PG pulse generator block before using the product, please read this manual and the relevant manuals carefully and develop familiarity with their specifications to handle the product correctly.

Make sure that the end users read the manuals included with each product, and keep the manuals in a safe place for future reference.

Published in August 2022 Specifications are subject to change without notice. © 2001 MITSUBISHI ELECTRIC CORPORATION

Safety Precautions (Read these precautions before use.)

Before installing, operating, maintaining, and inspecting this product, read carefully this manual and the relevant manuals and documents for the programmable controller and devices connected to the product.

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

WARNING and CAUTION icons and descriptions

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

Further Information Manual Lists

Table listing manuals like FX2N-10PG User's Manual, FX2N HARDWARE MANUAL, etc.

Manual name, Manual number, Description table

Compliance with EC Directives (CE marking)

This manual does not guarantee that an entire machinery which equips with this product will comply with the following directives.

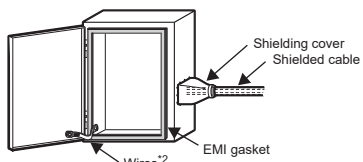
The following products are compliant with the EC Directives for Electromagnetic Compatibility (2014/30/EU) through direct testing...

Table with columns: Electromagnetic Compatibility Standards (EMC), Remark

Caution for EC Directives

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.



- Note for compliance with EN61131-2: 2007. General note on the use of the power supply cable. Mitsubishi FX2N-10PG pulse generator block (identified overleaf) has been found to be compliant to the European standards and directives...

Compliance with UKCA marking

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

1. Introduction

DESIGN PRECAUTIONS WARNING

- To make sure the entire system operates safely even when problems such as a faulty external power supply, PLC, or FX2N-10PG occurs, provide safety circuits outside the PLC and FX2N-10PG.

DISPOSAL PRECAUTIONS CAUTION

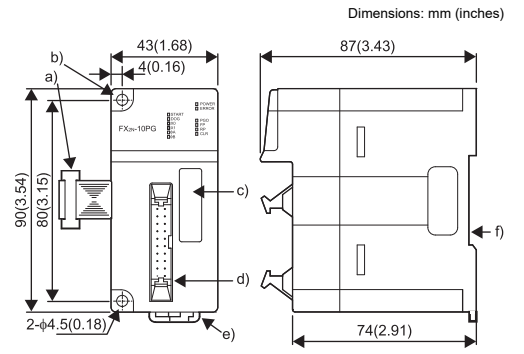
- When disposing of the product, handle it as industrial waste.

The FX2N-10PG pulse generator block (Hereafter referred to as "FX2N-10PG" or "pulse generator block") outputs pulses of 1MHz or less.

1.1 Features of the FX2N-10PG

- Positioning control with a stepper motor or servo motor. (1 FX2N-10PG can control 1 positioning axis.)

1.2 External Dimensions and Each Part Name



- a) Extension cable and connector
b) Mounting hole 2-φ4.5(0.18inch)
c) Extension port
d) I/O port
e) DIN rail clip
f) Attachment groove for 35mm(1.38inch) wide DIN rail

1.3 LED display

Table with columns: LED name, State, Content of display

LED name, State, Content of display table

1.4 Array and allocation of pin

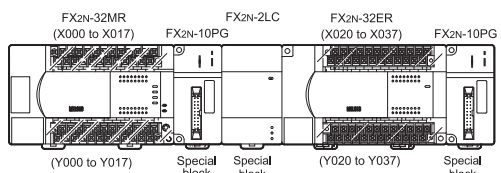
I/O port

Table showing terminal names and contents for various I/O ports

2. System configuration

The FX2N-10PG connects on the right side of a PLC main unit or extension unit/block (including special function blocks).

FX2N-10PG connects by extension cable from the PLC main unit. (It is not possible to use the FX2N-10PG as a stand alone unit)



- Up to 8 FX2N-10PG can be connected to an FX2N/FX3U/FX3UC-2 series PLC. Up to 4 units can be connected to an FX2N series PLC.

- Optional cables FX0N-65EC or FX0N-30EC can be used to extend the distance from the host PLC.

- *1 Because the special unit No.0 is assigned to the built-in CC-Link/LT master in the FX3UC-32MT-LT(-2), unit numbers assigned to special units begin with No.1.

- *2 Up to 7 units can be connected to the FX3UC-32MT-LT(-2) PLC.

2.1 Applicable PLC

Table with columns: Series name, Applicable version

3. Installation

INSTALLATION PRECAUTIONS CAUTION

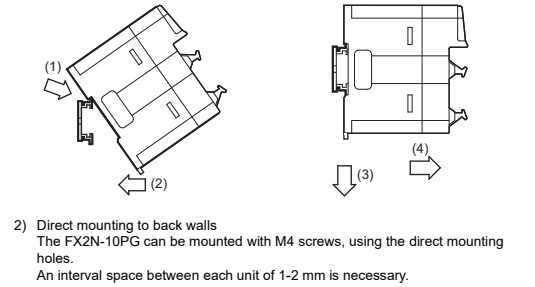
- Use the block under the environmental conditions specified in the manual. Do not use the unit in a location surrounded by dust, oil fumes, conductive dust, corrosive gas or combustible gas...

The FX2N-10PG can be connected on the right side of the FX2NC, FX3U, or FX3UC series PLC main unit, extension unit, or another extension block.

3.1 Mounting

The FX2N-10PG can be DIN rail direct wall mounted.

- 1) DIN rail mounting
a) Align the upper side of the DIN rail mounting groove of the FX2N-10PG with a DIN rail (1), and push it on the DIN rail (2).



4. Installation

4.1 General Specifications

Table with columns: Items, Specifications

4.2 Power Supply Specifications

Table with columns: Items, Specifications

- Refer to the USER'S MANUAL for the performance specification and the I/O specification.

5. Diagnostics

STARTUP AND MAINTENANCE PRECAUTIONS WARNING

- Do not touch any terminal while the PLC's power is on. Doing so may cause electric shock. Before cleaning or retightening terminals, cut off all phases of the power supply externally.

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 representative.

5.1 Preliminary Checks

Check Wiring and Program of the PLC main unit when FX2N-10PG does not operate normally. FX2N-10PG will not operate normally if the FROM/TO instruction is executed when an abnormality occurs in the PLC main unit.

LED check

Table with columns: LED name, State display, Measures

Table with columns: LED name, State display, Measures

「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。

产品中有害物质的名称及含量

| 部件名称 | 有害物质 | | | | | |
|------------|--------|--------|--------|--------------|------------|--------------|
| | 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。

基于中国标准法的参考规格: GB/T15969.2

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Warranty

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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 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 |
|---|
| <ul style="list-style-type: none">• 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. |

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