

[Issue No.] HIME-T-P-0159A

[Title] How to use MELSEC iQ-F series FX5U CPU module built-in analog inputs as current inputs

[Date of Issue] Apr. 2016

[Relevant Models] MELSEC iQ-F series FX5U CPU module

Thank you for your continued support of Mitsubishi programmable controllers MELSEC iQ-F series. This document describes the method for using the FX5U CPU module built-in analog inputs as current inputs (4 to 20 mA DC).

Please read the manual relevant to this technical news when using this method.

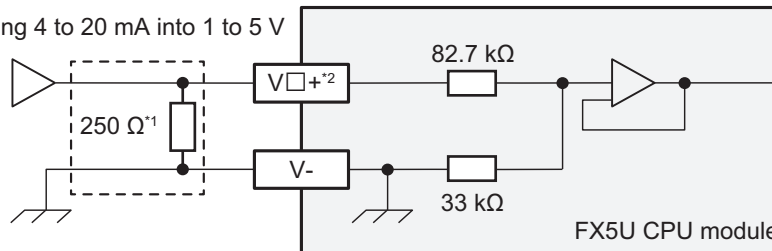
1. Method of using the FX5U CPU module for current inputs (4 to 20 mA DC)

The FX5U CPU module is designed to handle only voltage inputs.

However, the FX5U CPU module can be used for current inputs by connecting a 250 Ω resistor (tolerance: 0.5%) between the V□+ terminal and the V- terminal.

Example of wiring

Converting 4 to 20 mA into 1 to 5 V



*1: Instead of a 250 Ω resistor, a 500 Ω resistor can be connected in parallel. When selecting a resistor, consider the maximum input current.

*2: "□" in "V□+" indicates the channel number (1 or 2).

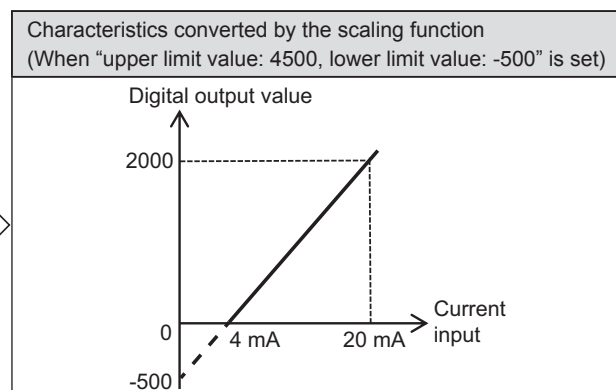
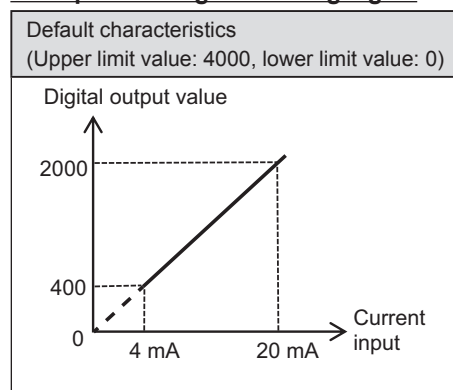
2. Specifications

Item	Specifications
Analog input	4 to 20 mA DC
Digital output value	400 to 2000 ^{*3}
Resolution	10 μA
Absolute maximum input	-2 mA, 60 mA

*3: The digital output value can be changed using the scaling function.

Scaling function: Converts the upper limit value and lower limit value of digital values.

Example of using the scaling signal



Revised History

Date	Revision	Description
Apr. 2016	A	First Edition

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