Application example 3

Simplification of program for communication

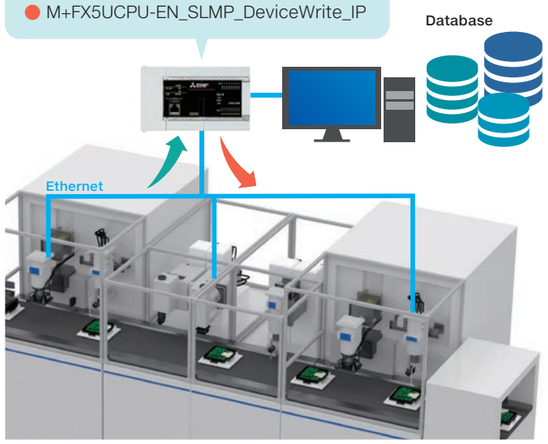
Example of FB for FX5U CPU

Overview:

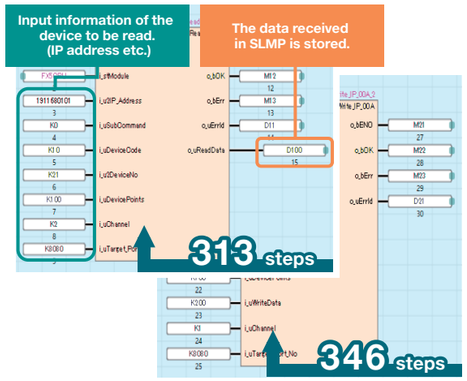
M+FX5UCPU-EN_SLMP_DeviceRead_IP:
This function reads device data of a device compatible with SLMP by IP address specification.

M+FX5UCPU-EN_SLMP_DeviceWrite_IP:
This function writes device data of a device compatible with SLMP by IP address specification.

- M+FX5UCPU-EN_SLMP_DeviceRead_IP
- M+FX5UCPU-EN_SLMP_DeviceWrite_IP



M+FX5UCPU-EN_SLMP_DeviceRead_IP



M+FX5UCPU-EN_SLMP_DeviceWrite_IP

When transferring data using SLMP, a request frame must be composed.

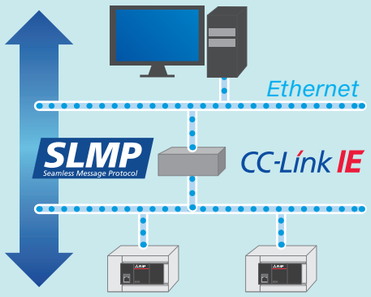
▼

Using a FB, it is not necessary to compose the request frame, and a program can be easily made by simply inputting the required data.

What is SLMP (Seamless Message Protocol) ?

SLMP (Seamless Message Protocol) is a common protocol for achieving system management and operation without worrying about the differences in networks. SLMP directly conveys information between "Production site" and "IT system", making it easy to a share information over a wide area.

By using devices compatible with SLMP, an Ethernet connection can be created between devices without complex settings needed for general-purpose Ethernet communication.
Share information from your IT systems to your production equipment using seamless information transmission that easily crosses network boundaries.



⚠ Safety Warning

To ensure proper use of the products in this document, please be sure to read the instruction manual prior to use.

Registration

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MELSEC iQ-F Series
MELSOFT Library Utilization Example Leaflet

A new era of programming
Don't "Write", but "Choose"!

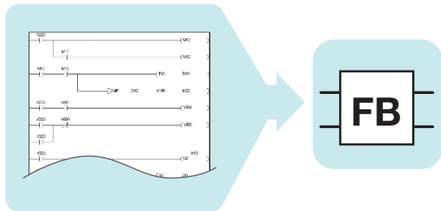
MELSEC iQ-F series

What is MELSOFT Library?

MELSOFT Library refers to FB and sample ladder which are available for use in GX Works3.
By using MELSOFT Library, you can easily perform setting and operation of MELSEC iQ-F series.
MELSOFT Library is attached to GX Works3 as a standard. Also, there is a manual for each MELSOFT Library.

What is FB?

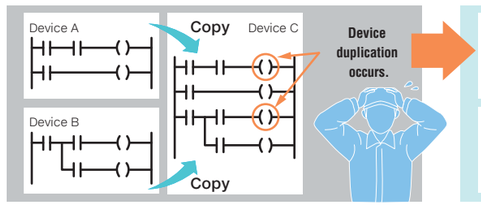
It is an abbreviation for function block, which is componentization of a circuit block repeatedly used in a sequence program.



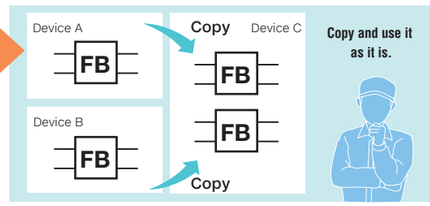
These are great advantages of FB!

High reusability!

When diverting an existing sequence program, revision is needed to prevent device duplication.

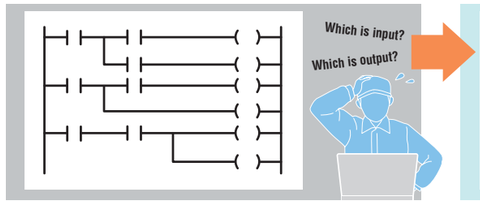


By using labels instead of devices in FB, the program can be diverted without worrying about device duplication.

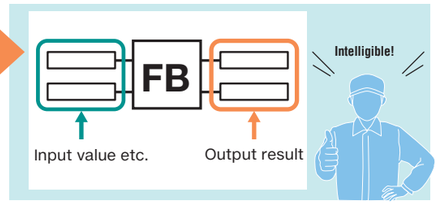


Easy to read!

In an existing sequence program, all programs are displayed and appearance is complicated.



In FB, only necessary input/output are displayed and appearance is simple.



To learn more about FB,
FB Quick Start Guide is recommended!

L (NA) 08475ENG

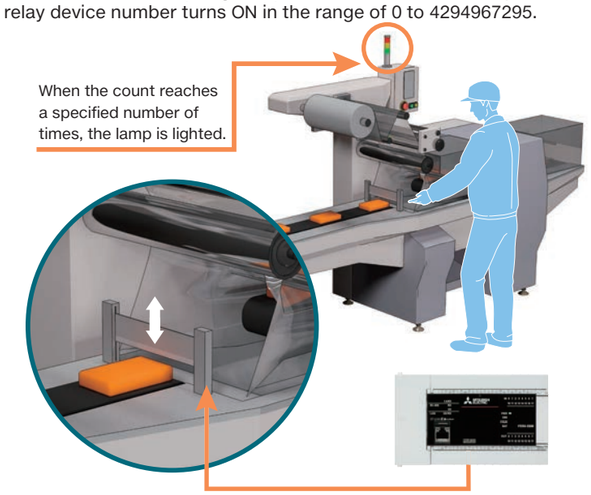
MELSOFT Library Application Examples for MELSEC iQ-F series

Application example ❶

Application in preventive maintenance

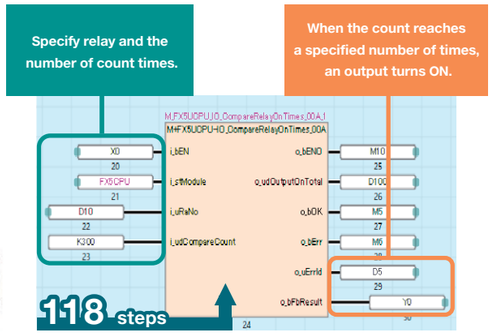
Example of FB for FX5U CPU

Overview: M+FX5UCPU-IO_CompareRelayOnTimes
This function counts (integrates) the number of times the specified relay device number turns ON in the range of 0 to 4294967295.



This function counts the number of operation times and notifies the replacement time.

The number of times the relay output turns ON is counted.



M+FX5UCPU-IO_CompareRelayOnTimes

Operation of FB

The function counts the number of times the relay input turns ON.

When the count reaches a set value, an output frag turns ON.

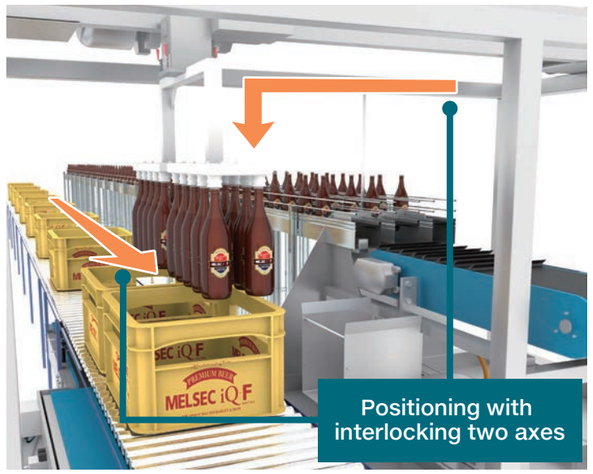
Replacement at a suitable timing can prevent a fault.

Application example ❷

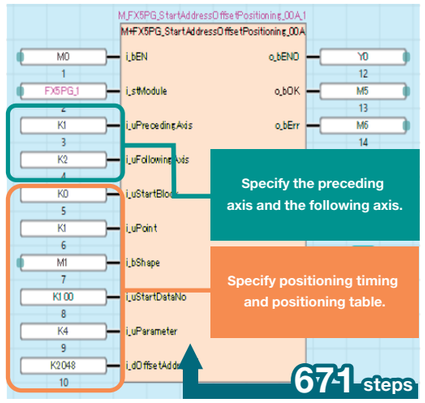
Application in shortening of cycle time

Example of FB for FX5-20PG

Overview: M+FX5PG_StartAddressOffsetPositioning
After one axis starts and moves for the set movement amount, the other axis starts.



A program to shorten cycle time can be easily created.



M+FX5PG_StartAddressOffsetPositioning

Operation of FB

Positioning operation of axis 1 starts.

When axis 1 reaches the specified position, positioning operation of axis 2 starts.

A program interlocking two axes can be easily created.