

B. GMWIN Glossary

(A)

Access Variable	A variable name to be used in a local station during the communication between PLC's in Function Block.
Action	A block having a program to be performed actually in SFC language.
Allocation	If a user declares only the variable name and type in the declaration of the symbolic variable, the memory area is allocated automatically by GMWIN (←→User defined memory allocation).
Array	An aggregate that consists of data objects, with identical attributes.
Automatic Memory	
Automatic Variable	A variable to be allocated as the automatic memory.(←→ User defined variable, Direct variable)

(B)

Branch	To divide control flow in SFC language. There are parallel branch and selective branch.
Break point	The position at which a user wants to stop when debugging a program element (Program block, Function Block or Function).

(C)

Cell	A unit of LD component element such as contact, coil, function, and function block in LD language.
Cold Restart	One of restart modes. Erase all data to 0 except the variable that is declared for the initial value.
Communication Port	Serial port in PC to connect GMWIN and GLOFA-GM.
Compile	To translate PLC program, which user creates, into the machine language equivalent or an intermediate form, which a user can execute in PLC.
Configuration	An language element corresponding to one PLC system as software model in GMWIN.

Configuration Global Variable

A variable that can be used in common between resources (between CPUs in the multi CPU system). It includes the symbolic variable that is declared as the configuration global. It has one memory area on the coordinator module.

It is used after declaring symbolic variable with a same name for 'VAR_EXTERNAL' when a user creates each program block.

(D)

Data type

Features of data that represents the declared variable
SINT, INT, DINT, USINT, UNIT, UDINT, ULINT, REAL, LREAL,
TIME, DATE, TIME_OF_DAY, STRING, BOOL, BYTE, WORD,
DWORD, LWORD, DATE_AND_TIME.

Direct Variable

A variable to use without the declaration of the name/data type.
I, Q, and M area. (%I*0.02, %QW1.2.1, %MD1234, etc)

(E)

Ethernet

A network technology is applied to the upper network for observation and control of system. And to send/receive data by using TCP/IP (Transmission Control Protocol/Internet Protocol) as the upper protocol and selecting CSMA/CD (Carrier Sense Multiple Access with Collision Detection) as the media access formula.

(F)

Flash Memory

An auxiliary memory module to be used in GLOFA PLC.

Forced I/O setup

A method to have a constant value without a care of the execution of program by taking the special value in I/O forcibly.

Function

Program organization unit to output operating results for the input without storing the results into the internal area. (Arithmetic operation, Comparison, etc)

Function Block

Program organization unit to store the operating results into the internal area. (Timer, Counter, etc)

(G)

Global variable	A variable which can be used in all resources within a project or all programs within a resource(←→ local variable).
GLOFA Fnet	It is the lowest network which connects a control device or instrumentation device, and the standard which adapted three layers among seven layers of OSI. Three layers consist of <i>Physical layer</i> , which consists of H2 (1Mbps electric), H1 (31.23Kbps electric), Optical, Wireless, etc, <i>Data link layer</i> , which adapted Scheduled and Circulated token bus, and <i>Application layer</i> , which take the responsibility of the application role. This standard, additionally, adapted User's layer.

(H)

High Speed link	A communication method to send/receive the data through GLOFA Mnet, Fnet modules
Hot Restart	One of the restart modes. It reconstructs all data and performed elements to the previous status and performs them.

(I)

Input/Output Variable	A variable to define input/output of the function/function block.
Instance	Assembled data to use in the program blocks or the function blocks.
Interrupt	During the normal execution of the program, If a user want to execute any program firstly after stopping the normal program, a user can define the program as Interrupt execution.

(L)

Library	Files to assemble several functions or function blocks as an executive code form.
Library Manager	A manager to execute the function of addition/deletion of a function or a function blocks in the Library.
Local Connect	A method to connect to RS-232C port in CPU module when a user tries to download, monitor or debug a program. (←→ Remote connect)

Local Variable A variable to be effective only in one program element. It is declared in each program element and used in the program of the declared program element. It is impossible to read/write in the other program element. (←→ Global variable)

(M)

Make A work to compile program blocks in a project and to make One executive file, which PLC can execute, by linking each object files

Modem A device that you can send/receive a data at a long distance between PC installed GMWIN and GLOFA-PLC mounted computer link module by using a PSTN.

Module A component having an independent function. It is used by adding it up onto baseboard. (CPU module, power module, input/output module, special function module, communication module, etc).

(O)

Operator A symbol that represents the action to be performed in an operation. LD, ST, AND, OR, CAL, JUMP, EQ, etc.

(P)

Partial compile To compile a modified part only when you modify a part of one program element which finished compiling before. You can reduce a compile time. (←→ Total compile)

PLC System The system that has the complete configuration element for the PLC operating and can control the target system by the user program.

Power Flow Suppose that the power is supplied on the left power line and this power is transferred to the right by the logic in LD language.

Priority A number to designate which task is executed firstly when several tasks to execute wait. '0' is a high priority.

Program A code to execute PLC, which is reserved in the program area of the PLC. (Program block, Function and Function block)
On the other hand, it is called program organization unit.

Program organization unit Function and Function block or Program block

Project It is the executive element of GMWIN that includes a program that is needed in PLC that composes one PLC system, a system configuration,

parameter and communication.
One project consists of one PLC system

(Q)

Qualifier The executive condition of the action in SFC language.

(R)

Remote connect A method to connect to CPU module that user tries to download, monitor or debug a program through GLOFA Fnet, Mnet with connecting GMWIN to RS-232C port of other CPU module.

Resource One CPU module having the saving area of a program and data.

Resource Global variable A common variable among several programs in Resource. It includes the symbolic variable that is declared as a direct variable and resource global. It has one memory area physically. A direct variable can be used in each program and you can use a symbolic variable after you declare variable kinds of symbolic variable having a same name as 'VAR_EXTERNAL' when making each program block.

Restart Mode An operating start mode for the user's program at the restart of PLC system. There are three restart modes, which are cold, warm and hot.

Rung Program element that does not have a line to be connected to up/down in LD program.
The horizontal line located between the left and right power rails of LD program where the elements are placed.

(S)

Scan Total time to execute input refresh, user program execution, and output refresh in Run mode.

Scan Break The debug method to stop PLC after the designated scan amount is executed.

Scan Watchdog Time The longest scan time to be permitted by PLC. If scan time is longer than designated one, scan watchdog error is occurred and PLC stops the execution.

Step The control element of the procedure in SFC language.

Step Into Step Into is executed in where you want to call for debugging the function/function block or action/transition.

Step Out To return to the calling program element from function/function block or action/transition when the function/function block or action/transition is

debugged.

Step Over To execute debugging for the program element as a minimum unit of the language (by step unit).

(T)

Task An execution control element for starting condition of the program. (Interval task, Single task, Interrupt task and Scan task)

Task Program Program containing the execution control element as Task.

Total compile To compile one program element from beginning to end. (←→ Partial compile)

Transition The condition to perform the next step in SFC language.

(U)

Upload Program A program that is compressed to store the program, which a user created, in PLC. You can call the upload program in PLC by using 'Open From PLC' function in Project menu of GMWIN.

User defined memory allocation A method to designate memory area to be matched as the direct variable form when a user declares a variable on the declaration of a symbolic variable.

(V)

Variable Break A debugging method to stop the execution when the value of specified variable meets the designated value or function to read/write the variable is executed.

(W)

Warm Restart One of the restart mode. It erases all data to 0, except variable that is declared for retention of the previous value and the initial value.