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Mitsubishi Integrated FA Software

MX Component Version 3

MELSOFT

New!

MX Component Version 3 supports your specific requirements with newly added communication paths, compatible OS and functions.

GOT gateway function to access device(s)
• Includes gateway function as new communication path.

Modem communication that realizes remote access
• Includes new functions, telephone line connection and callback.

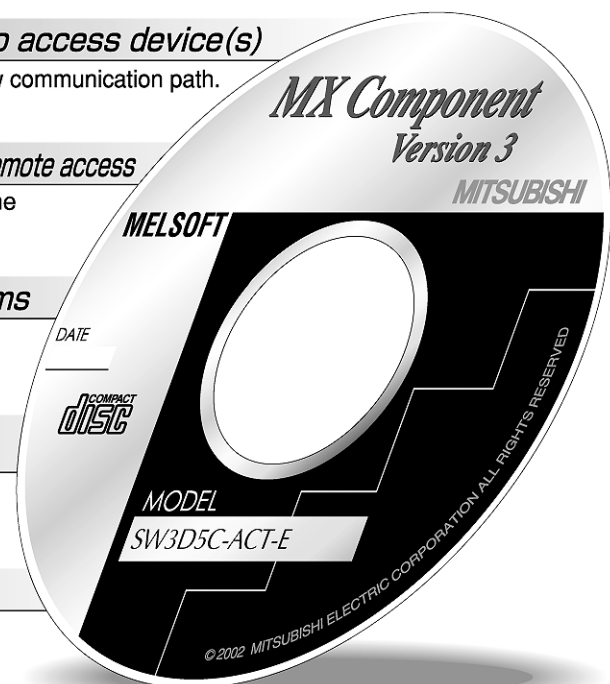**New compatible operating systems**
• Windows XP Home Edition
• Windows XP Professional

New function that displays error definition and the corrective action
• Includes troubleshooting function.

Compatible with Process CPU
• Process CPU (Q12PHCPU, Q25PHCPU)

MX Component Version 3 MITSUBISHI

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DATE

MODEL
SW3D5C-ACT-E

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[Features]

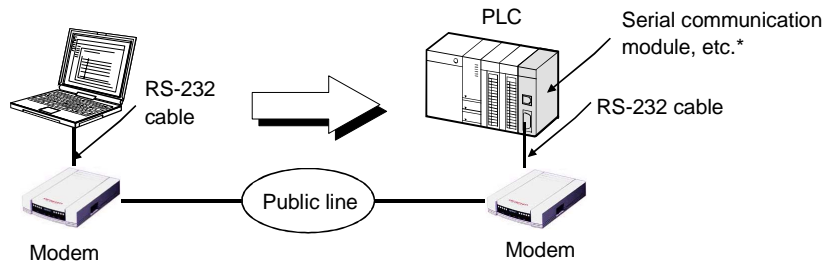●**Gateway function communication**

MX Component gateway function communication enables access from MX Component to GOT gateway devices. Therefore, MX Component can indirectly read/write to the PLC CPU devices being monitored by the GOT.
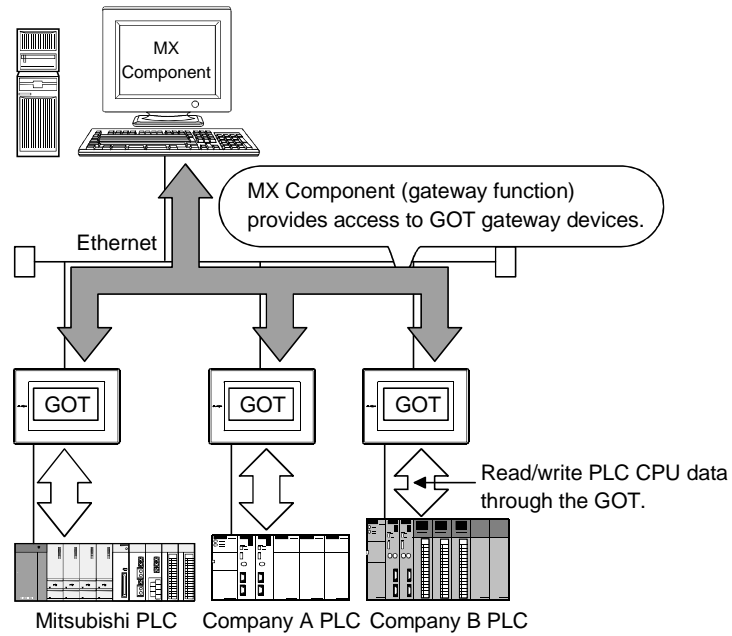
● **Modem communication**

(1) Telephone line connection

Telephone line connection realizes remote access to the PLC from a personal computer through general public line or internal telephone i.e. from a design room or office (The PLC should be installed with a specified modem module, serial communication module or computer link module with modem function).
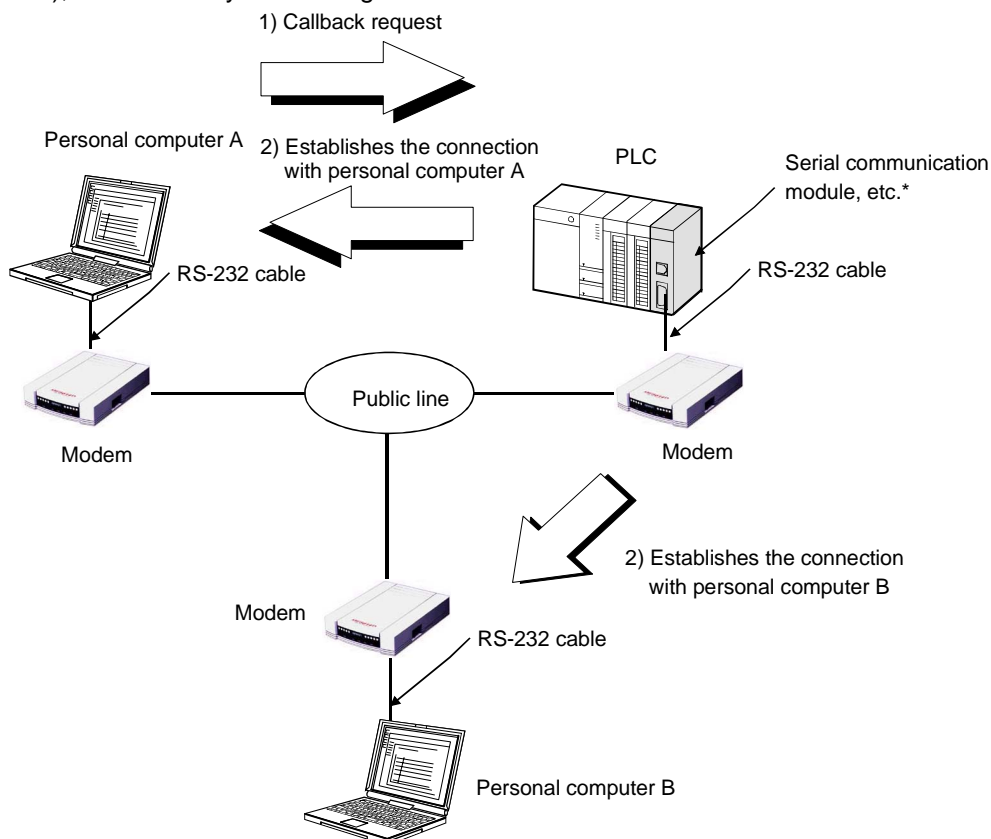

*Select a module from the following table.

PLC	Required module
A Series	Modem module (A6TEL, Q6TEL)
QnA Series	Modem module (Q6TEL) or Computer link module with modem function (AJ71QC24N)
Q Series	Serial communication module (QJ71C24)
FXCPU	Function extension board (FX2N-232-BD)

(2) Callback function

In order to utilize the callback function of the serial communication module with modem function (QJ71C24), refer to the system configuration as shown below.

*Select a module from the following table.

| PLC	Required module
A Series	N/A
QnA Series	N/A
Q Series	Serial communication module (QJ71C24)
FXCPU	N/A

●**Compatible with Windows XP and Office XP**

MX Component Version 3 is compatible with a wide range of OS including Windows XP Professional and Windows XP Home Edition, as well as Office XP (Excel 2002 and Access 2002) to work on your OS and applications.

●**Troubleshooting function**

MX Component Version 3 is compatible with the ActSupport control dedicated to troubleshooting function. Error definition and corrective action appear within the user application by only specifying the error code. This eliminates the need of referring to the programming manual for the error definition or corrective action, if an error occurs in ACT control.

<Example of dialog box displaying error definition>
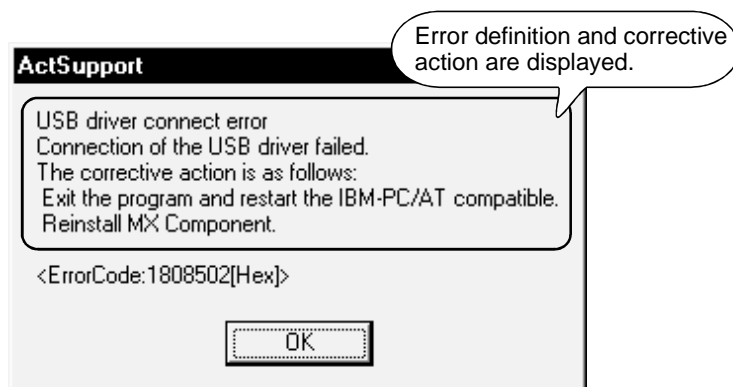
●**Compatible with Process CPU**

MX Component Version 3 is compatible with Process CPU (Q12PHCPU and Q25PHCPU).
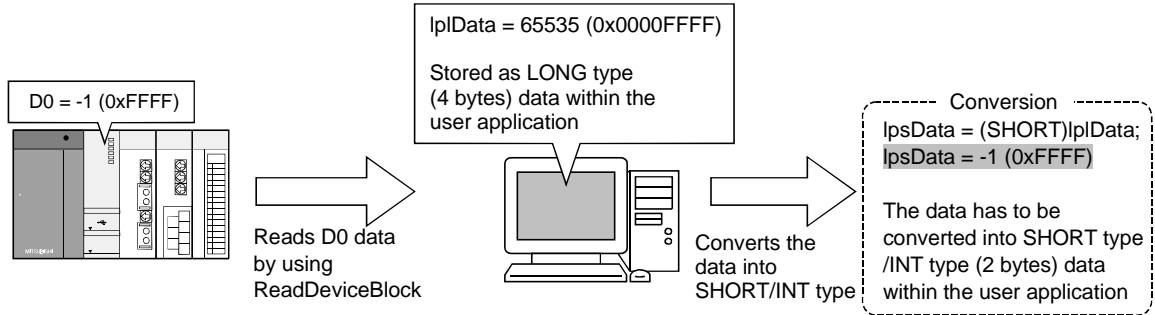
● **SHORT/INT type function**

When reading/writing a negative device value by using the SHORT/INT type function, it is not required to convert the device value in advance.

Relevant function: ReadDeviceBlock2, WriteDeviceBlock2, ReadDeviceRandom2

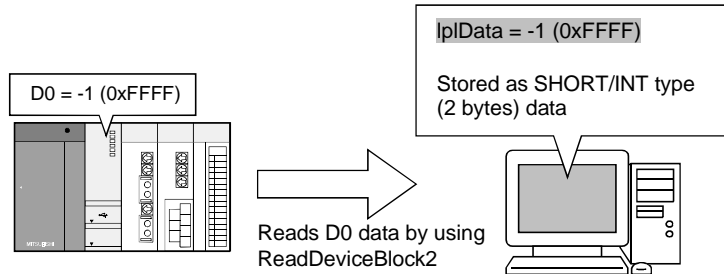WriteDeviceRandom2, SetDevice2, GetDevice2

<Example>

When reading a device data including negative value

[Relevant for ReadDeviceBlock (in conventional method)]

D0 = -1 (0xFFFF)

Reads D0 data
by using
ReadDeviceBlock

lplData = 65535 (0x0000FFFF)

Stored as LONG type
(4 bytes) data within the
user application

Converts the
data into
SHORT/INT type

------- Conversion -------
lpsData = (SHORT)lplData;
lpsData = -1 (0xFFFF)

The data has to be
converted into SHORT type
/INT type (2 bytes) data
within the user application

[Relevant for ReadDeviceBlock2 (in new method)]

D0 = -1 (0xFFFF)

Reads D0 data by using
ReadDeviceBlock2

lplData = -1 (0xFFFF)

Stored as SHORT/INT type
(2 bytes) data

[Operating Environment]

●MX Component Version 3

Item		Description
Personal computer	IBM PC/AT compatible personal computer	Pentium 133MHZ or higher[*1] IBM-PC/AT-compatible personal computer[*2] installed with applicable OS.
	PC CPU module	MELSEC-Q Series Corresponding PC CPU module (CONTEC CO., LTD.)
Applicable operating systems		Microsoft Windows 95 Operating System (English version), Microsoft Windows 98 Operating System (English version), Microsoft Windows Millennium Edition Operating System (English version), Microsoft Windows NT Workstation Operating System Version 4.0 (English version)[*3], Microsoft Windows 2000 Professional Operating System (English version), Microsoft Windows XP Professional Operating System (English version)[*4], Microsoft Windows XP Home Edition Operating System (English version)[*4]
Required memory		32MB or more[*5]
Available hard disk space		100MB or more
Disk drive		CD-ROM disk drive
Display resolution		Resolution: 800 × 600 pixels or higher
Programming language [*6]		**Programming language** / **Development software** table below

Programming language	Development software
Visual Basic	Microsoft Visual Basic 6.0 (English version)
Visual C++	Microsoft Visual C++ 6.0 (English version)
VBScript [*7, *8]	Text editor and general HTML tool
VBA	Microsoft Excel 2000 (English version), Microsoft Excel 2002 (English version), Microsoft Access 2000 (English version) or Microsoft Access 2002 (English version)

*1: Pentium 150MHz processor or higher is recommended when using Windows Me, and Pentium 300MHz processor or higher is recommended when using Windows XP Professional or Windows XP Home Edition.

*2: This product does not work with a multiprocessor IBM-PC/AT-compatible personal computer, because the driver is not compatible with it.

*3: Service Pack3 or higher is required when using Windows NT Workstation 4.0.

*4: MX Component does not work in XP-compatible mode.

*5: 64MB or more is recommended when using Windows 2000 Professional, and 128MB or more is recommended when using Windows XP Professional or Windows XP Home Edition.

*6: User programs created in the English environment work only in the English environment.

*7: Internet Explorer (version 5.00.2919.6307or later) is required for VBScript.

*8: ASP function is not available when using Windows Me or Windows XP Home Edition.

[Communication Path]

●MX Component Version 3 (English version)

The following table explains the communication paths for MX Component Version 3

Refer to the MX Component Version 3 Operating manual for details of compatible CPU.

Communication path		Details	Compatible OS[1]					
			95	98	Me	NT	2000	XP
Computer link communication (Serial communication)		Standard/Extension COM port	○	○	○	○	○	○
Ethernet communication		General Ethernet board	○	○	○	○	○	○
CPU COM communication		Standard/Extension COM port	○	○	○	○	○	○
CPU USB communication		Standard USB port	×	○	○	×	○	○
MELSECNET/10 communication [1]	Applicable board	A70BDE-J71QLP23 (Optical loop) A70BDE-J71QLP23GE (Optical loop and GI cable) A70BDE-J71QBR13 (Coaxial bus) A70BDE-J71QLR23 (Coaxial loop)•	○	○	×	○	×	×
	Applicable driver	SW2DNF-MNET10 or later						
MELSECNET/H communication [1]	Applicable board	Q80BD-J71LP21-25(Optical loop) Q80BD-J71LP21G (Optical loop and GI cable) Q80BD-J71LP21GE (Optical loop and 62.5GI cable) Q80BD-J71BR11 (Coaxial bus)	○	○	×	○	○	×
	Applicable driver	SW0DNC-MNETH-B or later						
CC-Link communication [1]	Applicable board	A80BDE-J61BT11, A80BDE-J61BT13	○	○	×	○	○	×
	Applicable driver	SW2DNF-CCLINK or later						
CC-Link G4 communication		Standard/Extension COM port AJ65BT-G4(-S3)	○	○	○	○	○	○
CPU board communication [1]	Applicable board	A80BDE-A2USH-S1	×	×	×	○	○	×
	Applicable driver	SW0DNF-ANU-B or later						
GX Simulator communication [1]		GX Developer (SW5D5C-GPPW-E or later) GX Simulator (SW5D5C-LLT-E(Ver.B or later))	○	○	○	○	○	×
Q Series bus communication [1]	Applicable personal computer	PC CPU module	×	×	×	○	○	×
	Applicable driver	PPC-DRV-01						
Modem communication		General modem	○	○	○	○	○	○
Gateway function communication		General Ethernet board	○	○	○	○	○	○

○: Compatible   ×: N/A

95: Windows 95   NT: Windows NT Workstation 4.0
98: Windows 98   2000: Windows 2000 Professional
Me: Windows Me   XP: Windows XP Professional/XP Home Edition

*1: This table is effective when using the latest software package and network I/F board.
Please refer to MX Component Version 3 Operating Manual for more information.

[What is MX Component?]

MX Component is an ActiveX control library that supports various communication paths, from the PC to the PLC, and enables communication via simple processing without being aware of different protocols used by various communications.

MX Component contributes to the efficiency of development works by greatly reducing the communication program's man-hour, because speedy system/reconstruction is required at the field from various requirements.

MX Component also enables the development of a wide variety of applications by supporting various languages, such as Visual Basic, Visual C++, VBA and VBScript of Access and Excel.
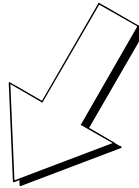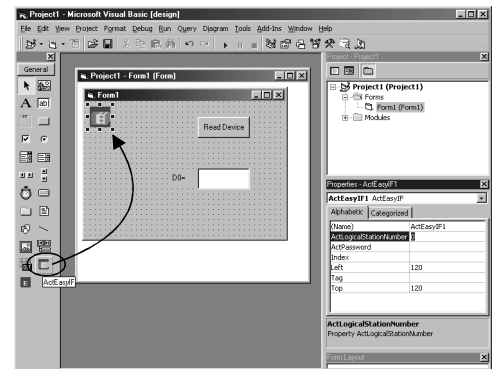
[Creating a user program]

(1) Creating procedure

1) Set communication as instructed by the Wizard.
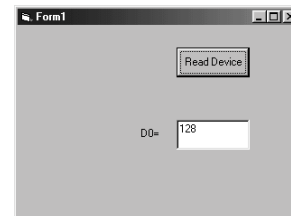   (Control that sets the program without using the Wizard are also available.)
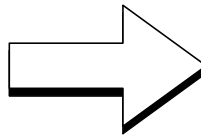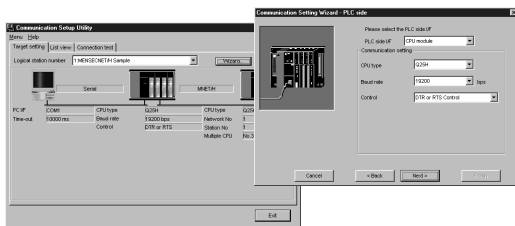
2) Paste the ACT control icon into the form, and set the logical station No. set in (1) as the property for that control.

3) Describe the program for reading the device.


```
Private Sub Command1_Click()

  ret = ActEasyIF1.GetDevice("D0", lpData(0))
  Label1.caption = lpData(0)

End Sub
```


Completed!!

8
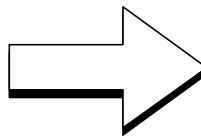
(2) Utilities

Communication Setup Utility and PLC Monitor Utility enables communication settings, communication test and device monitor.

(a) Communication Setup Utility

This utility sets the logical station number, displays a list and tests a communication required for the utility setting type programming.
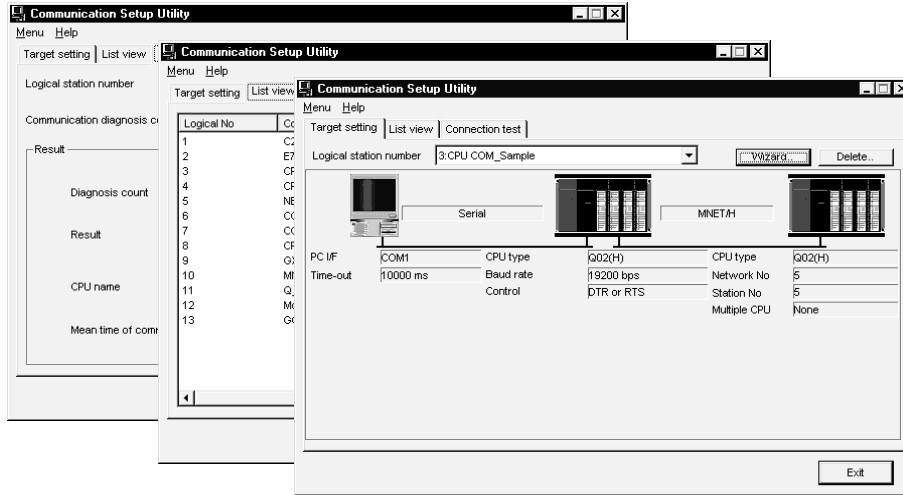
(b) PLC Monitor Utility

This utility monitors the devices/buffer memory, and reads/writes clock data of the PLC CPU.

(3) Functions

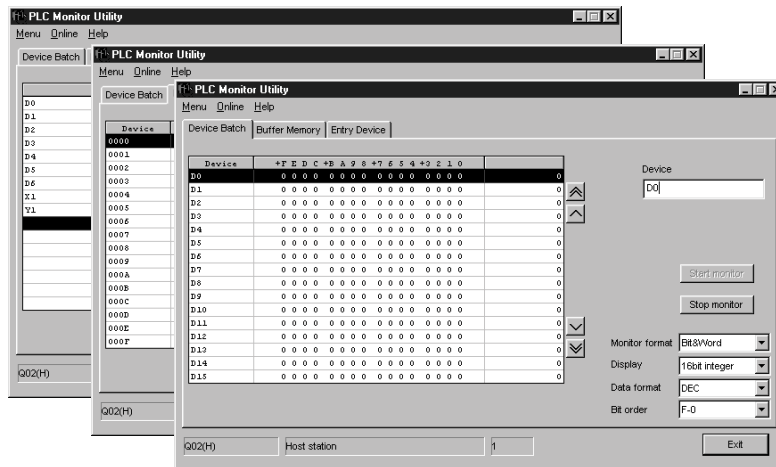MX Component includes functions needed to communicate data with PLC, such as Open/Close of the communication line and Batch-read/write of the device, to realize the easy development of multifunctional communication program.

In addition, it is easy to change the communication path of the exiting program, because the functions are common to controls. (Available functions depend on the ACT controls)

Function name	Feature
Connect	Connects to a telephone line.[*1]
Open	Opens a communication line.
Close	Closes a communication line.
Disconnect	Disconnects a telephone line. [*1]
GetErrorMessage	Displays an error definition and the corrective action.[*1]
ReadDeviceBlock	Batch-reads data to devices. (LONG type)
WriteDeviceBlock	Batch-writes data from devices. (LONG type)
ReadDeviceBlock2	Batch-reads data to devices. (SHORT/INT type)[*1]
WriteDeviceBlock2	Batch-writes data from devices. (SHORT/INT type) [*1]
ReadDeviceRandom	Random-reads data to devices. (LONG type)
WriteDeviceRandom	Random-writes data from devices. (LONG type)
ReadDeviceRandom2	Random-reads data to devices. (SHORT/INT type)[*1]
WriteDeviceRandom2	Random-writes data from devices. (SHORT/INT type)[*1]
SetDevice	Sets one device. (LONG type)
GetDevice	Acquires the data of one device. (LONG type)
SetDevice2	Sets one device. (SHORT/INT type) [*1]
GetDevice2	Acquires the data of one device. (SHORT/INT type) [*1]
ReadBuffer	Reads buffer memory.
WriteBuffer	Writes buffer memory.
GetClockData	Reads clock data from PLC CPU.
SetClockData	Writes clock data to PLC CPU.
GetCpuType	Reads PLC CPU type.
SetCpuStatus	Performs remote RUN/STOP/PAUSE of PLC CPU.
EntryDeviceStatus	Registers device status monitor.
FreeDeviceStatus	Deregisters device status monitor.
OnDeviceStatus	Notifies an event.

[*1]: Only MX Component Version 3 includes these functions.

[SHORT/INT type function]

Using SHORT/INT type function enables read/write of negative device values without converting them in advance.

[Telephone line connection/disconnection function]

This function enables/disables a connection to the general public line.

[Error display function]

This function displays an error definition and the corrective action.

[Compatibility]

- The user programs created by MX Component Version 1(SW0D5C-ACT-E) or MX Component Version 2(SW2D5C-ACT-E) are compatible with MX Component Version 3 (SW3D5C-ACT-E).
- Please note that the user programs created by MX Links (SWnD5F-CSKP-E) do not work with MX Component Version 3.
- The user programs created in the English environment work only in the English environment.

[Product Configuration]

●**Single license product**

Product name	Type	Remarks
MX Component Version 3 (English version) Single license product	SW3D5C-ACT-E	CD-ROM(SW3D5C-ACT-E) × 1 [Including manual (English version)] License agreement × 1 Software license agreement × 1 Software registration form × 1

●**Volume license product**

The following table gives an example just for reference.

You can specify 2+ volume licenses.

Please contact your local Mitsubishi service or representative for details.

Product name	Type	Remarks
MX Component Version 3 (English version) Volume license product	SW3D5C-ACT-EA	CD-ROM(SW3D5C-ACT-E) × 1 [Including manual (English version)] License agreement × 1 Software license agreement × 1 Software registration form × n [1]

*1: "n" is the same as the number of licenses.

●**Additional license product**

Product name	Type	Remarks
MX Component Version 3 (English version) Additional license product	SW3D5C-ACT-EAZ	License agreement × 1 Software license agreement × 1 Software registration form × n [1]

*1: "n" is the same as the number of licenses.

[Manual]

● MX Component Version 3 (English version)

Manual name	Manual supply status	IB/SH No.	Model code
MX Component Version 3 Operating Manual (Startup)	Sold separately[1]	SH-080270	13JU31
MX Component Version 3 Operating Manual	Sold separately[1]	SH-080271	13JU32
MX Component Version 3 Programming Manual	Sold separately[1]	SH-080272	13JF66

*1: This product includes the manual data in PDF format.

(In addition, Acrobat Reader, the software needed to view PDF format document on a personal computer is included.)

The printed manual is available separately.

Notes

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