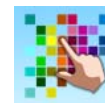


V-SFT Ver. 6.1.1.0 Update Information

	V9	TS	V8(N)	X1
System program	Ver. 2.300	Ver. 2.360	Ver. 2.360	Ver. 1.100 *
OS	Ver. 4.10			



* Please download the update program for X1 from the website. Refer to the "X1 Setup Manual" for the update procedure.

Connection

1 Additional connectable device: Hitachi HIDIC-S10/ABS

Model: V9/TS/V8(N)/X1
PLC Model: Hitachi HIDIC-S10/ABS

2 Additional connectable device: SHINKO TECHNOS PCA1 Series

Model: V9/TS/V8(N)/X1
PLC Model: SHINKO TECHNOS PCA1 Series

3 Connectable device extended specifications: BECKHOFF ADS Protocol (Ethernet) KeepAlive supported

Model: TS/V8i(N)
PLC Model: BECKHOFF ADS Protocol (Ethernet)
BECKHOFF Tag ADS Protocol (Ethernet)

Function

1 N-state lamp

Model: V9/TS/X1

[Outline]

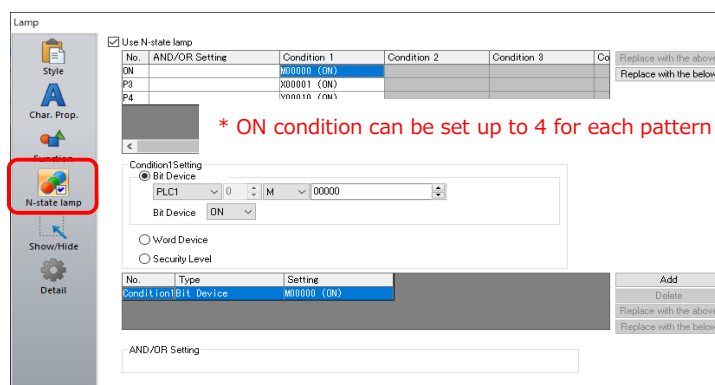
- Any device can be set for each pattern.
- Lamp ON condition can be specified up to 4 without programming macro etc.

Condition: OR, AND, range setting etc.

E.g.) No. of Lamp patterns: 4



Device: M0 M0 X1 Y10
Pattern: OFF ON P3 P4



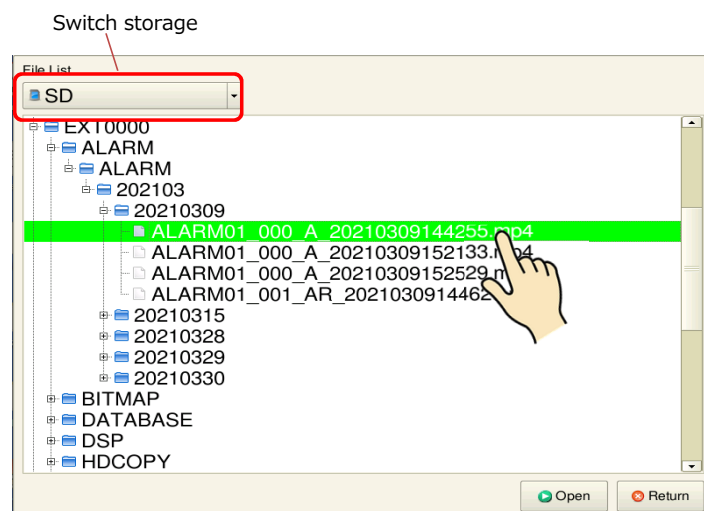
2 Video Player: Storage switching function

Model: V9

[Outline]

It is possible to switch storage (SD/USB) in Video Player.
After selecting the storage, you can freely select a folder/file.
Video files recorded upon alarm occurrence can also be selected and played back.

Default: Access folder/VIDEO

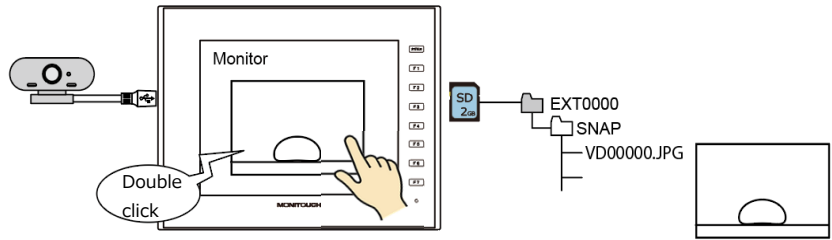


3 USB Camera: Snap function

Model: V9

[Outline]

Real-time display images can be saved as image files by using a USB camera. Macro commands are also supported so it is possible to execute a command at the desired timing of the user.



[File format]

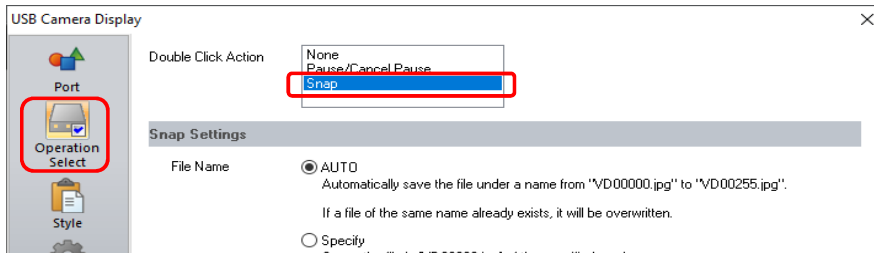
JPEG file

[Execution timing]

- Double click action of USB Camera Display
- USBCAM macro command

[Setting]

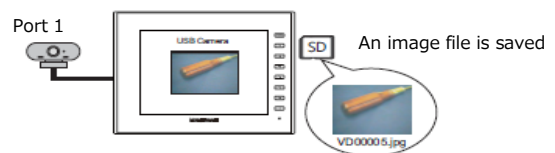
- Double click: USB Camera setting dialog > [Operation Select] > [Double Click Action: Snap]



- USBCAM macro command

	Value
F0	SNAP
F1	PORT1 (Fixed)
F2	VD00000~32767 (File No.)
	Auto

E.g. Execute "USBCAM SNAP PORT1 VD00005"



4 Picture Viewer

Model: V9/X1

[Outline]

Image files stored in the storage can be displayed on the picture viewer. (File type: JPEG, bitmap, and PNG)
Since you can switch a storage and select folder/file on the viewer, not only image files prepared by the user but image files generated by V9, such as snapshots from USB cameras, can be displayed.

[Supported file format]

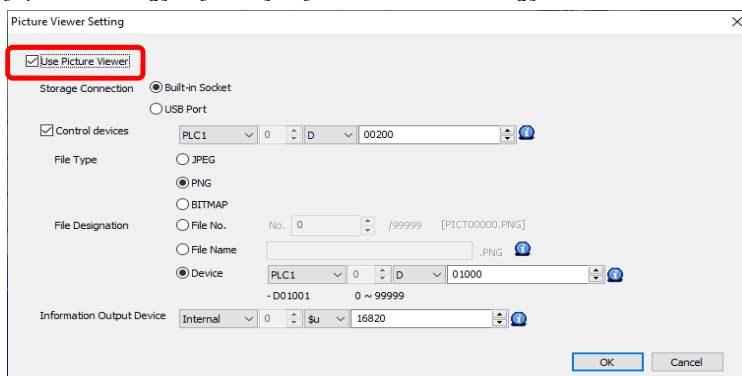
- JPEG file (*.JPG)
- Bitmap file (*.BMP)
- PNG file (*.PNG)

[How to display the viewer]

- "Picture Viewer" switch in system menu (can also be displayed in local menu)
- Switch function "Picture Viewer Display"
- PLC command

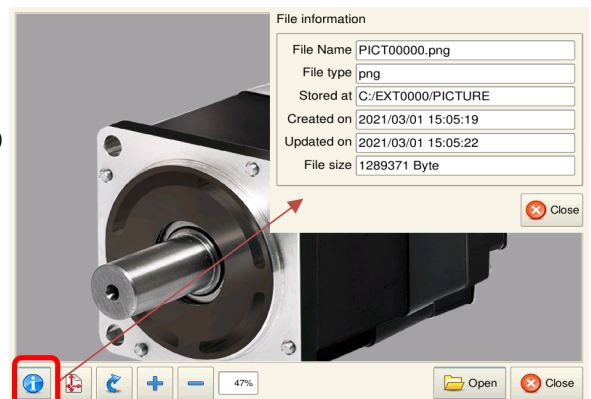
[Setting]

[System Setting] > [Other] > [Picture Viewer Setting]



Picture viewer

File information can be confirmed.



Function

5 Touch switch emulation (RGB input): Windows 10 supported

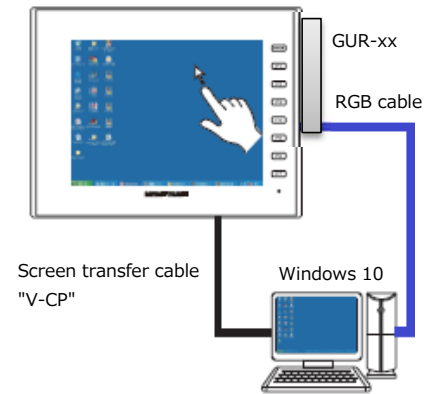
Model: V9+GUR-xx (RGB-IN)

[Outline]

When using a Windows 10 PC, touch switch emulation is available with the DMC touch panel driver "DMT-DD".

[Requirement]

DMC touch panel driver "DMT-DD"



6 Trend Graph (historical display) function expanded

Model: V9/X1

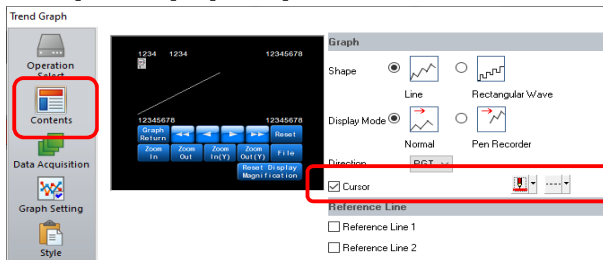
[Outline]

- You can specify the color and line type of the cursor as you like.
- The display order of back up files can be set.

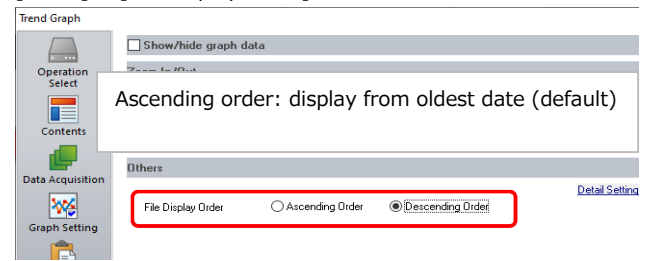
[Setting]

Settings for the color and line type of the cursor and the display order of backup files are available on the trend item dialog.

- The color and line type of the cursor:
Check [Contents] > [Cursor]



- Display order:
[Detail] > [File Display Order]



E.g. Descending order

Select date and time.	
2021/03/11	23:42:14
2021/03/10	23:41:05
2021/03/09	15:39:17
	15:38:11

7 Multi-language: 32 languages supported

Model: V9/X1

[Outline]

The number of languages, specified in [System Setting] > [Font Setting] > [Interface Language], has been extended from 16 to 32. It can be set up to 32 languages also for V-SFT menu, Language changeover switch or SYS(CHG_LANG) macro command.

SYS (CHG_LANG) macro command

	Value
F0	CHG_LANG
F1	0: Language 1
	1: Language 2
	:
	31: Language 32

8 PDF Viewer: Zoom in/zoom out

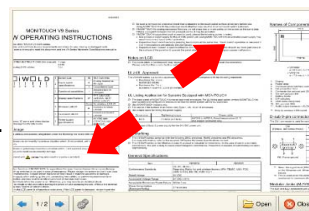
Model: V9 Advanced (Capacitance model)

[Outline]

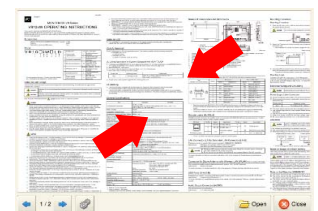
In addition to the zoom in/out on the viewer by switch function, it is now possible by pinch-in and pinch-out.

Available magnification: 50 to 200%

Pinch-out



Pinch-in



Function

9 AXIS network camera: Free size specification of display area supported

Model: V9

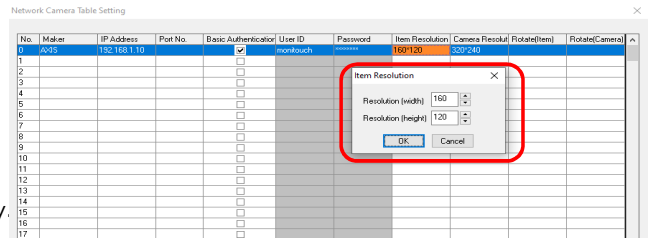
Camera Model: AXIS network camera

[Outline]

The display area on V9 can be set to any size.

[Notes]

Set the resolution to the one supported by the network camera.
If the resolution is not supported, the image will not be displayed properly.



10 Table Data Display: Background color transparent

Model: V9/X1

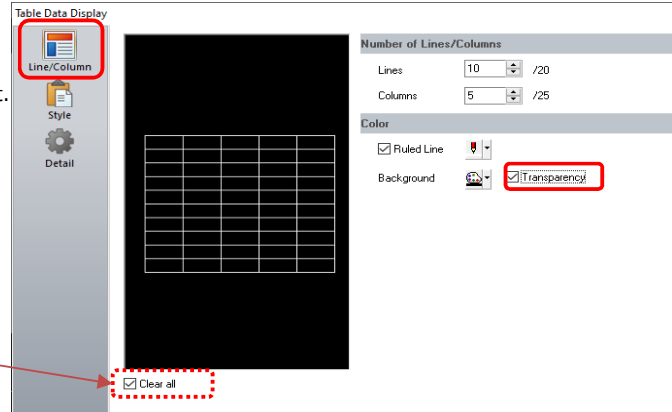
[Outline]

The background color of table data display can be transparent.

[Setting]

Table Data Display setting dialog
Check [Line/Column] > [Transparency]

If checked, all cells will be empty (text) and they can be used as ruled lines.



11 Memo pad function expanded

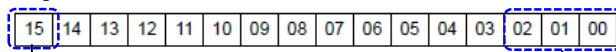
Model: V9/X1

[Outline]

By using \$s, you can specify the display page number of memo pad and pen color.
You can also erase the data of the specified page No. and display it.

[Specifications]

\$s106



Delete the page when switching screens
1: Delete the specified page No.
* 1->0 after the deletion

Memo pad No.0-7
Store the currently displayed page No. (->V9/ X1)
Specify the display page No. (<-V9/ X1)

\$s719

- Specify the pen color (<-V9/X1) * Effective only when switching screens.
- Store the pen color specified by the switch function (->V9/X1)

Pen color 0: Black
1: Blue
2: Red
3: Purple
4: Green
5: Light blue
6: Yellow
7: White (Default)

Others can be specified with 128 palette colors.
Refer to "V9 Reference Manual 1" for details.

[Usage Example]

1. Specify \$s106=8001HEX by a macro
2. Switch to the screen where memo pad is placed
3. Delete the current data of page No.1 and display page No.1 (\$s106 becomes 0001HEX)

12 Extended Data Sheet: Additional items

Model: V9/X1

[Outline]

Additional items can be placed in the extended data sheet [Registration Item] > [Data Sheet].

[Supported items]

- Trend graph
- Memo pad (output the page No. specified in \$s106)

13 Entry mode specification improved

Model: V9/X1

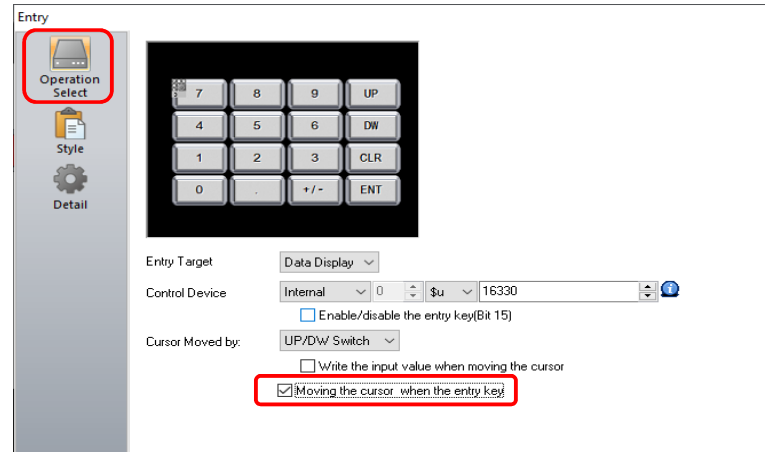
Setting the cursor movement with the ENT key

[Outline]

You can move the cursor to the next entry target with the ENT key without using Bit 14 of the control device (automatic cursor movement). It is the same for an entry target on the overlap.

[Setting]

Entry setting dialog > [Operation Select] > [Moving the cursor when the entry key]



Copy and paste function

[Outline]

You can copy the currently selected text, save it to the clipboard, and paste it into another entry target. This reduces the need for typing when entering the same characters. Also, since the last copied character is retained during RUN mode, it can also be pasted to a char. display placed on another screen.

[Item]

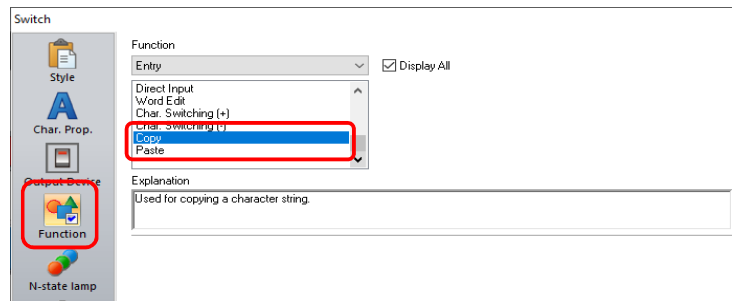
Character display (Function: Entry target)

[Setting]

- Switch function: [Copy] and [Paste] of [Entry]
- Switch ID No.: Match with the ID No. of the entry mode

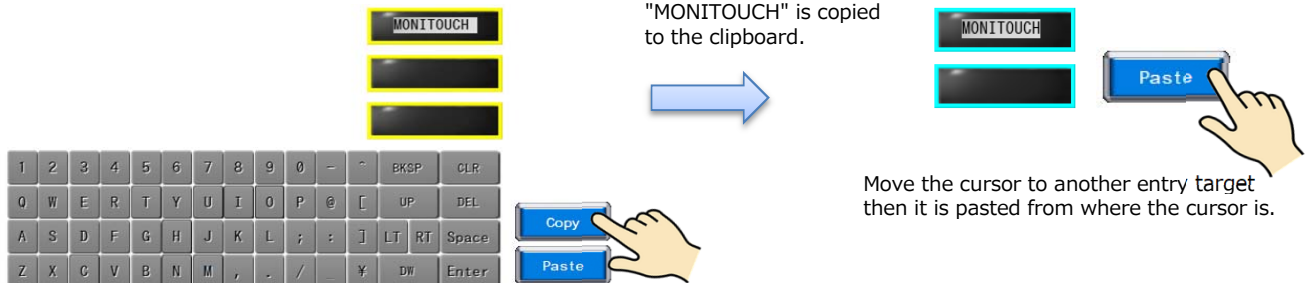
[Operating procedure]

1. Select the char. display of the copy source
2. Press the copy switch (switch function: Copy)
3. Select the char. display (entry target) to be copied, and press the paste switch (switch function: Paste)



[Note]

Paste is not allowed during Japanese conversion.



14 Display type "HEX" supported

Model: V9/TS/V8(N)/X1

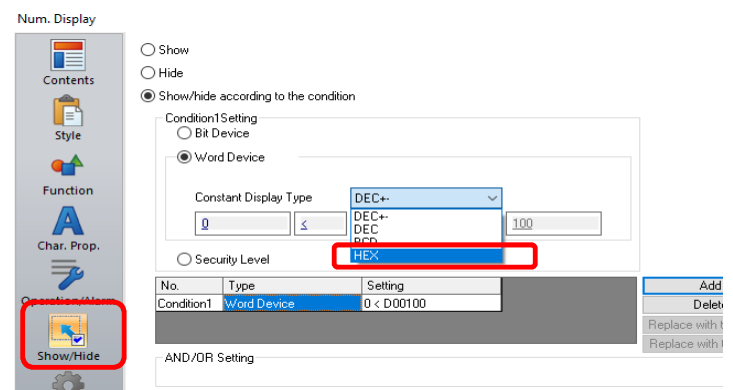
[Outline]

The display type "HEX" is now supported in the show/hide setting and the interlock condition setting.

[Item]

- Show/Hide setting of each item
- Interlock of switch

E.g. Show/Hide setting of Num. display



15 Alarm / Operation / Scaling supported

Model: V9/X1

Tag Database

[Outline]

The alarm, operation, and scaling functions can be applied to the devices set as tags.

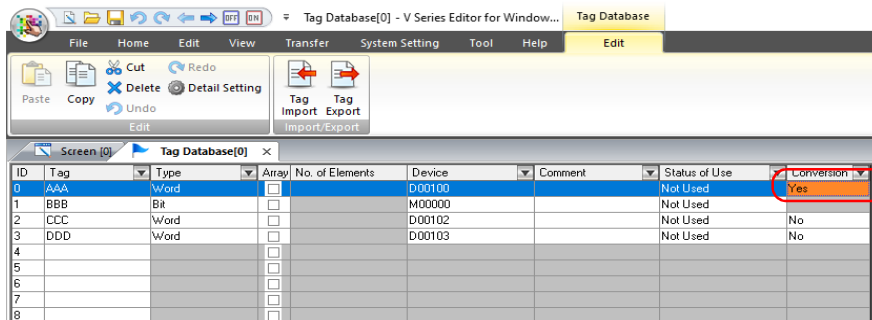
This allows for a reduction in man-hours, as data requiring arithmetic operations no longer need to be processed on the PLC or by macros, and only changes on the tag database are required even when used in multiple locations.

[Item]

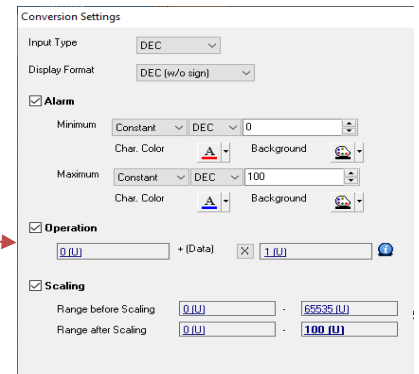
- Numerical data display
- Logging server

[Setting]

- Tag Database: [Home] > [Registration Item] > [Tag Database] > [Conversion]



* Alarm is only for num. display



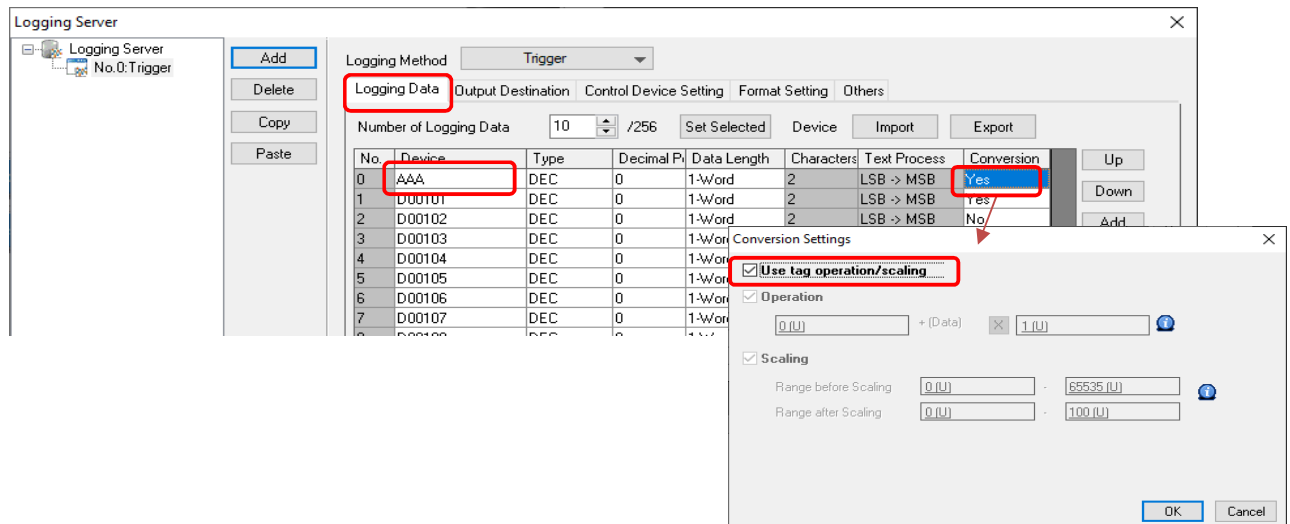
- Each item setting E.g. Tag AAA

- Num. display: [Contents] > [Device to Display] > check [Use tag operation/scaling/alarm]



* When checked, [Operation/Alarm] of num. display cannot be specified.

- Logging Server: [System Setting] > [Logging Server] > [Logging Data] > [Conversion] > check [Use tag operation/scaling]



Operation/scaling for Logging server (PLC, internal devices)

[Outline]

When the logging server is set to a PLC or internal device, you can set operation/scaling.

All including graph display, CSV output, etc. can be handled with the converted data.

[Setting]

[System Setting] > [Logging Server] > [Logging Data] > [Conversion]

16 Recipe: Display of list dialog improvement

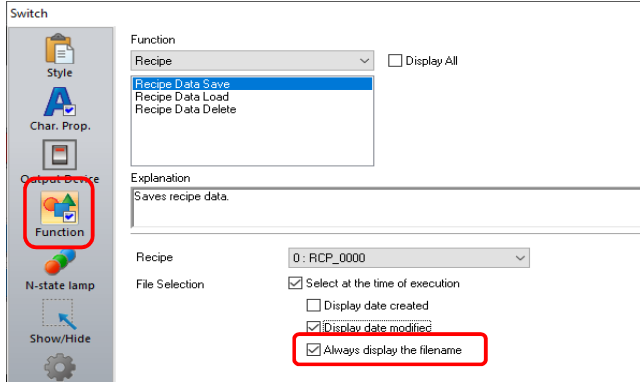
Model: V9/X1

[Outline]

Long file names can be fully displayed.
This makes it easier to find recipe file names that differ only in the end of the file name.

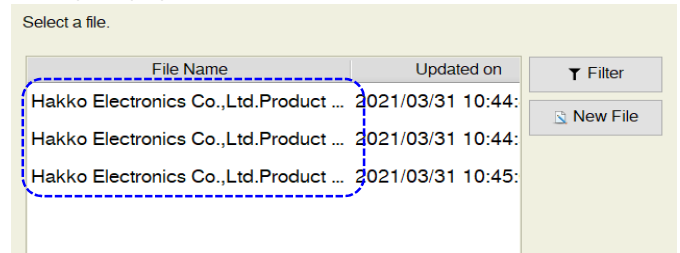
[Setting]

Check [Always display the filename] option of the switch dialog

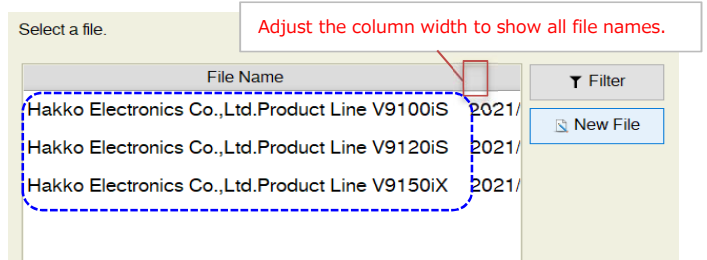


E.g. When displaying the update date and time

- [Always display the filename] : Unchecked



- [Always display the filename] : Checked



17 Backup folder deletion function

Model: V9/X1

[Outline]

This function automatically deletes backup folders for logging, alarm, and datasheet, leaving the folders of the last specified number of days. This saves you from having to manually delete backup folders that are no longer needed, and prevents write errors due to full folders. It counting from the current day of the V9 calendar.

[Functions]

Backup folders created by the following functions:

- Logging server "LOGGING" folder
- Alarm server "ALARM" folder
- PDF output of datasheet "LIST" folder

[Setting]

Specify the number of days in

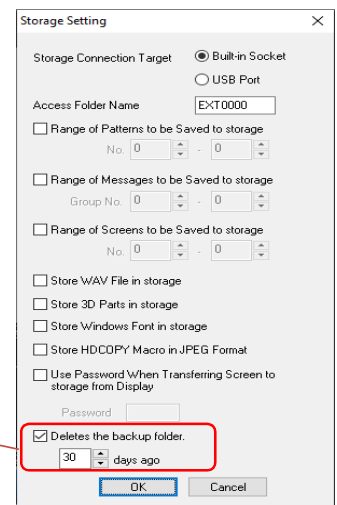
[System Setting] > [Other] > [Storage Setting] > [Delete the backup folder]

[Example] Setting as 30 days and transfer the data to the V9

V9 calendar: March 30th, 2021

Backup folders before February 2021 will be automatically deleted
(folders of March 1st to 30th, 2021 will remain)

Range: 30 to 2000 days



[Note]

Auto deletion is also possible with the options of [System Setting] > [Unit Setting] > [General Settings]

- [Delete folders from the oldest if Storage is lacking in space for backup]
- [Delete folders from the oldest when the remaining storage space is less than 100MByte]

Function

18 Macro command for comparison: IF(MULTI), SELECT_CASE supported

Model: V9/X1

[Outline]

The macro commands for comparison, IF(MULTI) and SELECT_CASE, are supported. This is useful when there are multiple conditions

[Specifications]

- IF(MULTI)

```
IF(F0 (condition) F1) AND (F2 (condition) F3) THEN
  (1)
ELSE
  (2)
ENDIF
```

If the conditions of F0 and F1 are satisfied, and the conditions of F2 and F3 are satisfied, then execute (1). If not, execute (2).

* ELSE and (2) can be omitted.

* F0 to F3 can be specified with PLC devices.

```
IF(F0 (condition) F1) OR (F2 (condition) F3) THEN
  (1)
ELSE
  (2)
ENDIF
```

If the conditions of F0 and F1 are satisfied, or the conditions of F2 and F3 are satisfied, then execute (1). If not, execute (2).

* ELSE and (2) can be omitted.

* F0 to F3 can be specified with PLC devices.

- SELECT_CASE

```
SELECT_CASE F0
CASE (condition) F0
  (1)
CASE (condition) F0
  (1)
CASE_ELSE
  (2)
ENDSELECT
```

Compare the conditions of F0 and the CASE macro, and execute CASE (1) that satisfies the conditions. If the condition is not satisfied, execute (2).

* CASE_ELSE and (2) can be omitted.

* The maximum number of CASEs is 10.

* SELECT_CASE and CASE are word comparisons.

- In case of "SELECT_CASE~CASE~ENDSELECT"

```
Macro Block No. 0 ( ) [No Title.V9] - Macro Editor
File Edit View User Level Help
0 SELECT_CASE $u00100 (W)
1 CASE == 5
2 $u00101 = 1 (W)
3 CASE == 10
4 $u00101 = 2 (W)
5 CASE == 15
6 $u00101 = 3 (W)
7 CASE_ELSE
8 PLC1[D00100] = PLC1[D00100] + 1 (W)
9 ENDSELECT
10
```

If \$u100 is 5, transfer 1 to \$u101.

If it is 10, transfer 2 to \$u101.

If it is 15, transfer 3 to \$u101.

If none of the above is true, increment D100 by 1.

[Example]

- In case of "IF THEN AND~ELSE~ENDIF"

```
Screen No.0 OPEN Macro [No Title.V9] - Macro Editor
File Edit View User Level Help
0 IF($M00000 < $u00010) AND ($M00001 < $u00100) THEN (W)
1 $M00000 = $M00000 + 1 (W)
2 ELSE
3 PLC1[M00005] (ON)
4 ENDIF
5
```

If \$M0 < \$u10 and \$M1 < \$u100 are both true, increment \$M0 by 1.
If not, set M5 ON.

19 E-mail function: Encryption "STARTTLS" supported

Model: V9/X1

[Outline]

The E-Mail function of the V9 series supports encryption "STARTTLS"

It is possible to receive e-mails from mail servers with security enhanced by STARTTLS encryption.

[Supported mail servers]

- smtp.outlook.com or smtp.office365.com of Microsoft365(previous office365)
- smtp.gmail.com (two-step app password) of Gmail

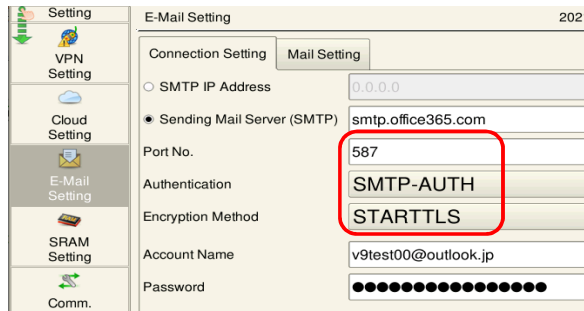
[Supported functions]

- Alarm History / Event History / Real Time
- Data Transfer Service (upload)

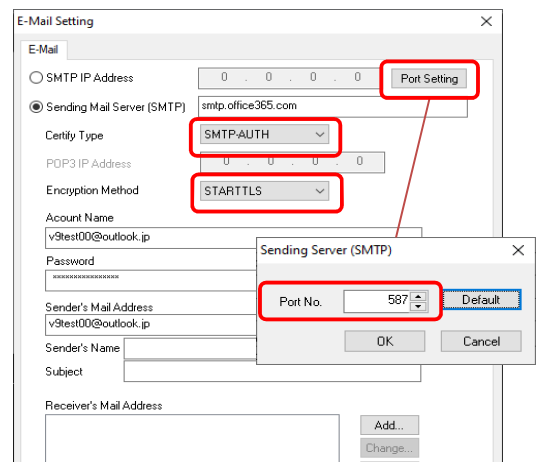
[Setting]

- E-Mail Setting
- "Certify Type: SMTP-AUTH"
- "Encryption Method: STARTTLS"
- Port No.: 587

- In case of the local menu



- In case of the editor



[Note]

For Gmail, you need to set up a two-step password in Google's security settings.

20 MES Standalone supported

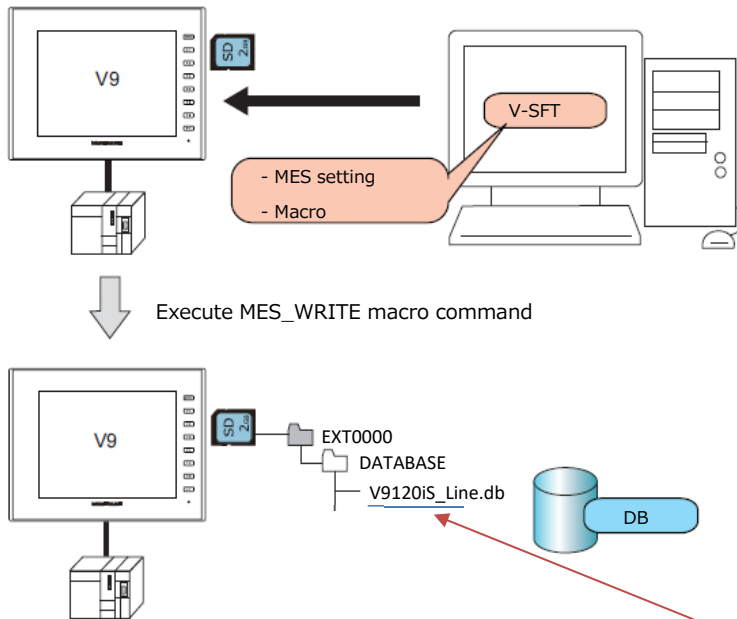
Model: V9/X1

[Outline]

The MES function can be used for database files in the storage.

Since there is no need to prepare a V-Server or Ethernet environment, it can be easily realized with just MONITOUCH.

In addition, the database file can be newly created by MES_WRITE macro command, so there is no need to build a database.



[Setting]

[System Setting] > [Other] > [MES Setting] > check [Use as stand-alone]

* Other settings are the same as the existing MES settings. See "V9 Reference Manual 2" for details.

	Header	Write	Read	Search condition	Total				
MES WRITE	[128]	[21]	+	0	+	0	=	149	/ 2000
MES READ	[128]	+	0	+	[0]	+	[0]	=	128 / 2000
MES DEL	[128]	+	0	+	0	+	[0]	=	128 / 2000
MES UPDATE	[128]	+	[21]	+	0	+	[0]	=	149 / 2000

The database name becomes the file name.
E.g. V9120iS_Line.db

[Storage location of database files]

(Access folder name)/DATABASE

[How to create a database file]

Execute the MES_WRITE macro command.

The DATABASE folder and (database name).db will be created in the storage.

21 Web Machine Interface specification improvement

Model: V9

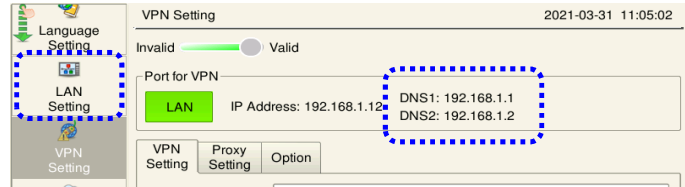
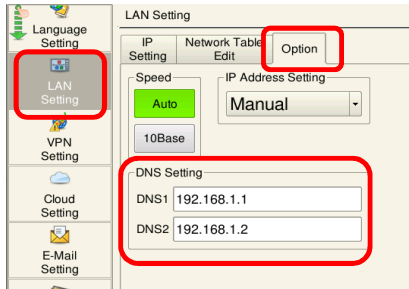
Domain connection with DNS

[Outline]

Currently, Web Machine Interface function of the V9 series uses the global IP address of the authentication server for authentication and connection. When the contracted cloud server is stopped or discontinued, it is necessary to reconfigure the connection to a new server. For future maintenance and convenience, we have supported for connecting domain names with DNS. By setting up DNS in the V9, even if a server is changed in the future, the connection will be automatically switched.

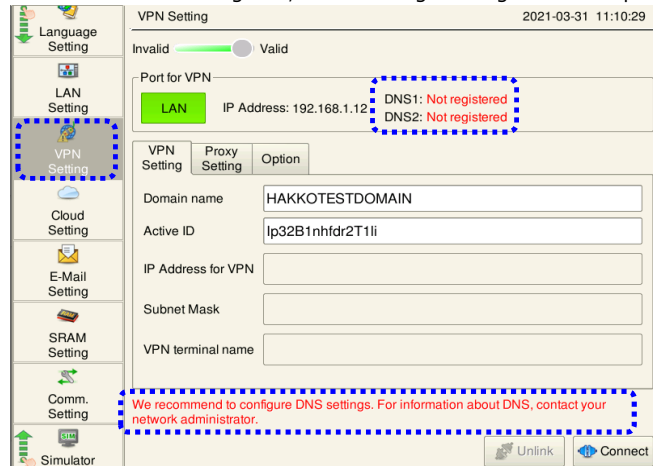
[Setting]

V9: [LAN/LAN2/WLAN Setting] used for VPN or cloud connection > [Option] > [DNS Setting]



Check with your network administrator for the IP address to set for DNS.

*When DNS is not configured, the following message will be displayed.



Monitoring setting expanded

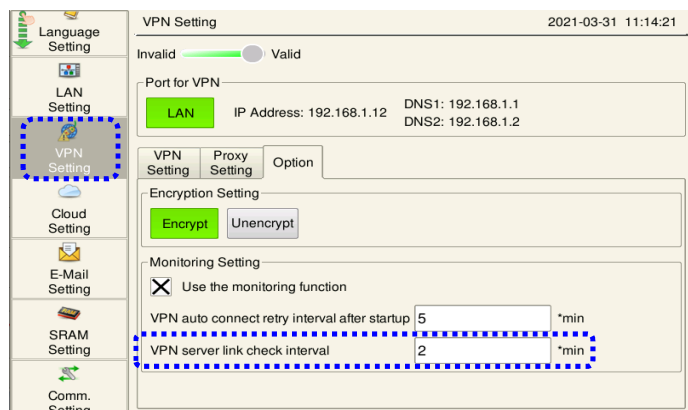
[Outline]

When the VPN connection is disconnected, the authentication server now automatically authenticates the VPN server and reconnects. Also, \$s1679, which stores the link status with the VPN server, is always updated.

[Reconnect timing]

[VPN Setting] > [Option] >

[VPN server link check interval]



Function

22 MITSUBISHI ELECTRIC Q170 ladder monitor upload function supported

Model: V9/X1
 PLC Model: - Q170MCPU (Multi CPU)
 - Q170 series (Multi CPU)(Ethernet)

23 YOKOGAWA PLC (Ethernet connection) ladder monitor supported

Model: V9/X1
 PLC Model: - FA-M3/FA-M3R(Ethernet UDP/IP)
 - FA-M3/FA-M3R(Ethernet UDP/IP ASCII)
 - FA-M3/FA-M3R(Ethernet TCP/IP)
 - FA-M3/FA-M3R(Ethernet TCP/IP ASCII)
 - FA-M3V(Ethernet)
 - FA-M3V(Ethernet ASCII)

Note: Uploading comments is not supported.

24 Siemens S7-1200/1500 (Ethernet ISOTCP) STRING type supported

Model: V9/TSi/V8i(N)/X1
 PLC Model: Siemens S7-1200/1500 (Ethernet ISOTCP)

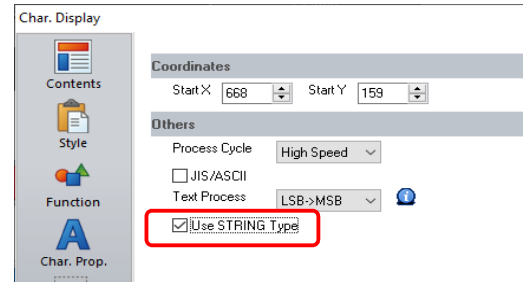
[Outline]

Reading and writing of DB devices with STRING data type at the PLC side.
 Each corresponding item must be set to "STRING type".

[Item]

- Character display
- Char.display of table data display
- Data display of data sampling (display area)
- Alarm server: parameter table (V9/X1 only)
- Logging server (V9/X1 only)
- Recipe (V9/X1 only)
- Buffering area: parameter table of alarm (TSi/V8i(N) only)
- Buffering area: trend (TSi/V8i(N) only)

E.g. Char. Display setting > [Detail]



25 Processing Cycle: Constant cycle function

Model: V9/X1

[Outline]

The processing cycle set for each item can be changed to a fixed cycle.
 A maximum of 3 (constant cycle 1, 2, and 3) can be set for each screen.

[Setting]

[Screen Setting] > [Screen Setting] > [PLC Device Transfer] > [Processing Cycle setting]

- Unchecked
 - Constant Cycle 1: 100msec (fixed)
 - Constant Cycle 2: 200msec (fixed)
 - Constant Cycle 3: 1000msec (fixed)
- Checked
 - Setting range: 1 to 3600 (unit: *100mSec)

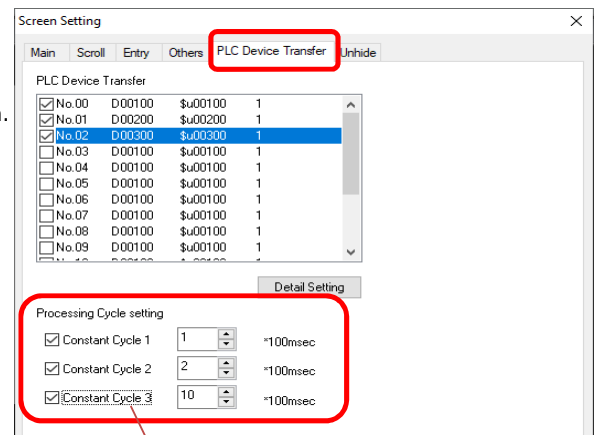
[Setting]

[Detail] > [Process Cycle] of each item

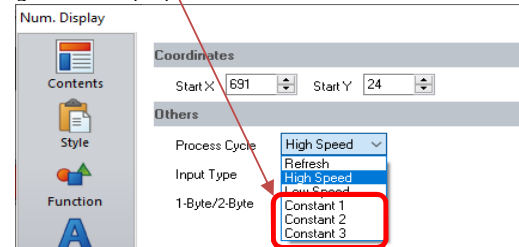
[Note]

Each constant cycle time of the currently displayed screen is stored in the following \$s.

\$s1647: Constant Cycle 1 (unit: *100mSec)
 \$s1648: Constant Cycle 2
 \$s1649: Constant Cycle 3



E.g. Num. Display



26 Initial screen number designation by "Read/Write area" (V8 compatible)

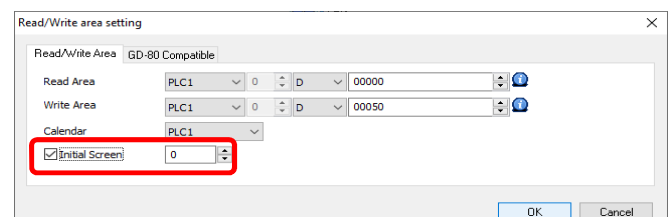
Model: V9/X1

[Outline]

When converting a V8 or previous model (with PLC connection) to a V9 or X1, the "Initial Screen" No. can be specified in the same way as when creating a new V9/X1 data.

[Note]

It has priority over the initial macro.



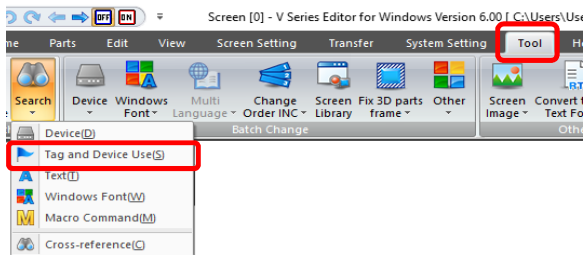
1 List of memory use: Table format supported

[Outline]

You can display device usage in a table format.
The selected cell will turn blue and its usage will be shown at the bottom.
You can also double-click to jump to the usage area.

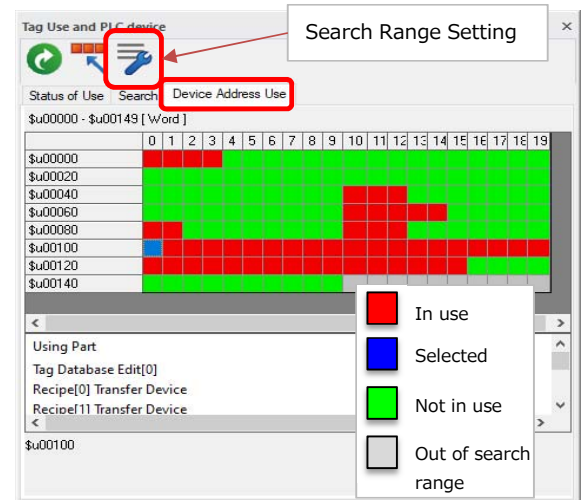
[Operation]

1. [Tool] > [Search] > click [Tag and Device Use]



2. [Tag Use and PLC device] is displayed
Select [Device Address Use]
3. Set the search range and click [OK]

Search results are displayed in a table format.

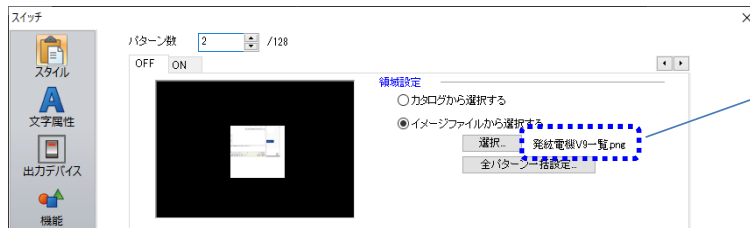


2 Unicode supported for image file names

[Outline]

User-defined image files can be used for parts such as switches and lamps. These file names can be handled in Unicode.
Even if OS-dependent characters are used, they can be used without being garbled in other language OS.
In addition, error checks can be used to identify file names that use OS-dependent characters, so it can prevent their use itself.

E.g. PC with Japanese OS: when using a file named "発注電機V9一覧.PNG" for a switch



These are Japanese OS dependent characters

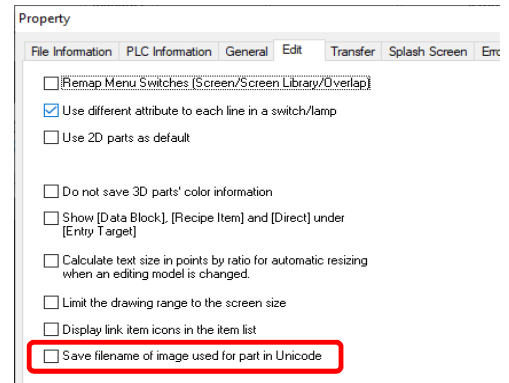
[Item]

Parts ([Select from image files] is selected)

[Setting]

[File] > [Property] > [Edit] >
Check [Save filename of image used for part in Unicode]

*If you already have image file names with OS-dependent characters in multiple places on the screen data, it is recommended to check this option.

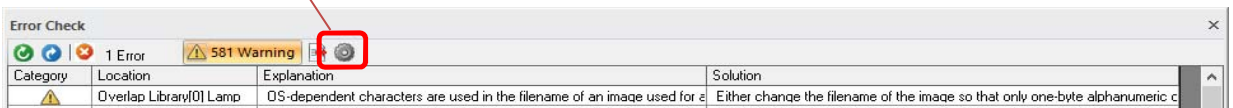


To search for OS dependent characters in image file names:

[Tool] > [Error Check]

* [Property] > [Error Check] > [Detect OS-dependent characters in filename of image used for part] is required.
(Default: checked)

Warning

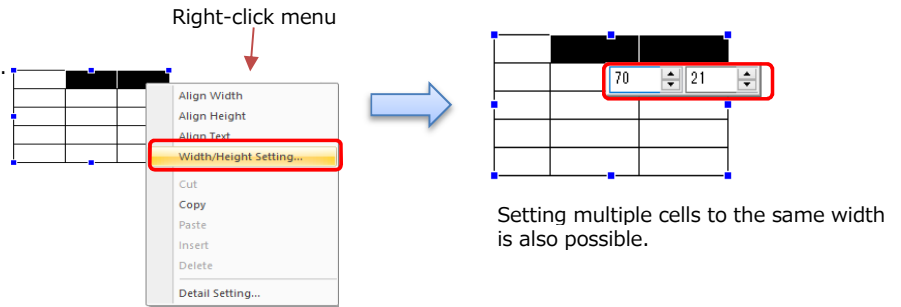


Editor

3 Table Data Display: Direct modification of cell width and height

[Outline]

The width and height of cells can now be changed directly from the right-click menu.

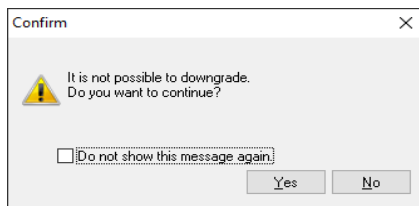


4 Warning message when opening an existing screen data of X1 and V9

Model: V9/X1

[Outline]

The warning message that appears when creating a new V9 or X1 screen data also appears when opening an existing V9 or X1 data.



If "Do not show this message again." is checked, this dialog will not be displayed on that PC from the next startup.