Show



# A.2.2.2 Integer Type - #H System Variables

| Variable Name | Description | READ | WRITE |
|---|---|---|---|
| #H_AlarmSyncStatus | Alarm Analysis Status | ✓ | ✓ |
| #H_BackLightColor | 2-color Backlight Switching | ✓ | ✓ |
| #H_ChangeScreenNo | Change-To Screen | ✓ | ✓ |
| #H_CounterbySecond | 1-Second Binary Counter | ✓ | - |
| #H_CsvIndex_Control | Create an index file | ✓ | ✓ |
| #H_CsvIndex_Counter | A number of CSV files for index files | ✓ | - |
| #H_CsvIndex_Status | Status of creating an index file. | ✓ | - |
| #H_CsvIndex_Total | The total number of CSV files | ✓ | - |
| #H_CurrentDay | Day Data (Current Value) | ✓ | - |
| #H_CurrentDayofTheWeek | Day (Current Value) | ✓ | - |
| #H_CurrentHour | Hours (Current Value) | ✓ | - |
| #H_CurrentMinute | Minutes (Current Value) | ✓ | - |
| #H_CurrentMonth | Month (Current Value) | ✓ | - |
| #H_CurrentScreenNo | Current Screen Number | ✓ | - |
| #H_CurrentSecond | Seconds (Current Value) | ✓ | - |
| #H_CurrentTokenSpeed | The current value of the time taken for one transfer cycle of a token packet during a Serial Multilink connection. | ✓ | - |
| #H_CurrentYear | Year (Current Value) | ✓ | - |
| #H_DispScanCounter | Display scan counter | ✓ | - |
| #H_DispScanTime | Display scan time | ✓ | - |
| #H_EtherLink_ConstCommuniMemInfo | Total continuous communication (based on number of addresses) between the master display unit and Master/Slave/GP-Viewer EX nodes. | ✓ | - |
| #H_EtherLink_ConstItemCount | Total continuous communication requested by Slave/GP-Viewer EX from the master display unit (in bytes) | ✓ | - |
| #H_Expression_Err_Status | Error status during | ✓ | ✓ |

| | | | |
|---|---|---|---|
| | animation operation | | |
| #H_From_Day | Date data for the From field for a condition input keyboard | ✓ | ✓ |
| #H_From_Hour | Hour data for the From field for a condition input keyboard | ✓ | ✓ |
| #H_From_Minute | Minute data for the From field for a condition input keyboard | ✓ | ✓ |
| #H_From_Month | Month data for the From field for a condition input keyboard | ✓ | ✓ |
| #H_From_Second | Second data for the From field for a condition input keyboard | ✓ | ✓ |
| #H_From_Year | Year data for the From field for a condition input keyboard (last 2 digits of the year) | ✓ | ✓ |
| #H_GlobalWindowControl | Window Control | ✓ | ✓ |
| #H_GlobalWindowNo | Window Number | ✓ | ✓ |
| #H_GlobalWindowPosX | Window Display Position (X) | ✓ | ✓ |
| #H_GlobalWindowPo2sY | Window Display Position (Y) | ✓ | ✓ |
| #H_HistoricalTrendMagnification | The display magnification for the Historical Trend Graph | ✓ | - |
| #H_JpegCaptureFileNo | Screen Capture File | ✓ | ✓ |
| #H_LocalName | Local Name | ✓ | - |
| #H_LockElapsedTime | Elapsed time (seconds) since the start of the Operation Lock | ✓ | - |
| #H_LockRemainderTime | Time remaining (seconds) for the Operation Lock | ✓ | - |
| #H_LockOwnerIPAddr | IP address of the location of Operation Lock | ✓ | - |
| #H_LoginUserID | User ID for current user | ✓ | - |
| #H_MachineNo | Model number set through a conversion adapter | ✓ | - |
| #H_MAXTokenSpeed | The maximum value of the time taken for one transfer cycle of a token packet during a Serial Multilink connection. | ✓ | - |
| #H_RecipeGroupID | Recipe group ID | ✓ | ✓ |

| | | | |
|---|---|---|---|
| #H_RecipeGroupName | Recipe group name | ✓ | - |
| #H_RecipeID | Recipe ID | ✓ | ✓ |
| #H_RecipeLabelSortType | Sort order for the recipe label | ✓ | ✓ |
| #H_RecipeProcessing | Processing status such as for transferring/editing enhanced recipe data | ✓ | - |
| #H_RecipeResultCSV | Import and export processing results of enhanced recipe data | ✓ | - |
| #H_RecipeResultTransfer | Transfer processing results of enhanced recipe data | ✓ | - |
| #H_RemoteHMI_Connect_Status | Remote HMI connection status | ✓ | - |
| #H_RemoteHMI_Touch_Status | Remote HMI operation status | ✓ | - |
| #H_SecurityBackupControl | Control for importing/exporting security data | ✓ | ✓ |
| #H_SecurityBackupStatus | Importing/exporting process status for security data | ✓ | - |
| #H_SecurityFingerprintControl | Control for updating/discarding database for the EZ Fingerprint Recognition unit | ✓ | ✓ |
| #H_SecurityFingerprintStatus | Status of updating/discarding database for the EZ Fingerprint Recognition unit | ✓ | - |
| #H_SecurityWriteControl | Security data write control | ✓ | ✓ |
| #H_SecurityWriteStatus | Security data writing status | ✓ | - |
| #H_SetDay | Day (Preset Value)*1 | ✓ | ✓ |
| #H_SetHour | Hours (Preset Value)*1 | ✓ | ✓ |
| #H_SetMinute | Minutes (Preset Value)*1 | ✓ | ✓ |
| #H_SetMonth | Month (Preset Value)*1 | ✓ | ✓ |
| #H_SetSecond | Seconds (Preset Value)*1 | ✓ | ✓ |
| #H_SetYear | Year (Preset Value)*1 | ✓ | ✓ |
| #H_SignalBuzzerHL_Control *3 *4 | Control of the buzzer tone from the EZ Tower Light | ✓ | ✓*6 |
| #H_SignalBuzzerHL_Status *3 *4 | Status of the buzzer tone from the EZ Tower Light | ✓ | - |
| #H_SignalBuzzerPattern_Control*3 *4 | Control of the buzzer pattern from the EZ Tower Light | ✓ | ✓*6 |
| | Status of the buzzer | ✓ | - |

| | | | |
|---|---|---|---|
| #H_SignalBuzzerPattern_Status *3 *4 | pattern from the EZ Tower Light | | |
| #H_SignalBuzzerVolume_Control *3 *4 | Control of the buzzer volume from the EZ Tower Light | ✓ | ✓*6 |
| #H_SignalBuzzerVolume_Status *3 *4 | Status of buzzer volume from the EZ Tower Light | ✓ | - |
| #H_Signal**Blink_Control *3 *4 *5 | Control of the lighting pattern on the EZ Tower Light. | ✓ | ✓*6 |
| #H_Signal**Blink_Status *3 *4 *5 | Status of the lighting pattern on the EZ Tower Light. | ✓ | - |
| #H_Signal**Color_Control *3 *4 *5 | Control of the lighting color on the EZ Tower Light. | ✓ | ✓*6 |
| #H_Signal**Color_Status *3 *4 *5 | Status of the lighting color on the EZ Tower Light. | ✓ | - |
| #H_TagConsistencyConfig | Tag consistency check mode | ✓ | ✓ |
| #H_TagConsistencyStatus | Tag consistency check status | ✓ | - |
| #H_To_Day | Date data for the To field for a condition input keyboard | ✓ | ✓ |
| #H_To_Hour | Hour data for the To field for a condition input keyboard | ✓ | ✓ |
| #H_To_Minute | Minute data for the To field for a condition input keyboard | ✓ | ✓ |
| #H_To_Month | Month data for the To field for a condition input keyboard | ✓ | ✓ |
| #H_To_Second | Second data for the To field for a condition input keyboard | ✓ | ✓ |
| #H_To_Year | Year data for the To field for a condition input keyboard (last 2 digits of the year) | ✓ | ✓ |
| [PLC*]#H_DriverCycleTime*2 | Cycle time of PLC (Device*) | ✓ | - |
| [PLC*]#H_DriverErrorCode*2 | PLC (Device*) Error Code | ✓ | - |
| [PLC*]#H_DriverErrorCount*2 | PLC (Device*) Error Occurrences | ✓ | - |
| [PLC*]#H_DriverErrorDate*2 | Elapsed time till a date of an error | ✓ | - |

*1 When using WinGP, setting up the Year/Month/Date/Minute will update WinGP and the shared IPC/computer clock.

*2 Enter the [Device Name] set up in the [System Settings] node's [Device/PLC] page, in the [PLC*] area.

*3 This is a system variable that is used for EZ tower light.

*4 Due to USB cable removal or insertion, if values in system variables changed to default values, or to values before connection, first change to a different value and then enter the original value.

*5 ** represents the EZ tower light's lower, middle and upper values. (01: Lower, 02: Middle, 03: Upper level

*6 You cannot write values right after turning ON the EZ tower light. Check if the status value is stored before writing values.

## #H_AlarmSyncStatus

The processing status of alarm analysis is stored. The corresponding bit is turned ON according to the processing status.

When the analysis operation is canceled, all the bits in the system variable #H_AlarmSyncStatus are turned OFF.

| Bit | Description | Details |
|---|---|---|
| 0 | During analysis operation | Analyzing operation<br>From the time when [START] is touched using the search condition input keyboard up to the time of cancelling the state in which the analysis information is maintained, it is turned ON.) |
| 1 | Search in progress | During search processing of the information corresponding to the condition<br>(From the time when the [START] is touched using the search condition input keyboard up to the time of cancelling the state in which the analysis information is maintained, it is turned ON.) |
| 2 | Undisplayed data present | Data not displayed in the analysis data is present (data exceeds 500) |
| 3 | Unable to display past data | Past data display for the historical trend graph is not set |
| 4 | External storage not connected | External storage is not connected to the display unit |
| 5 | External storage not formatted | The external storage is not connected properly |
| 6 | File read error | CSV files for the operation log are damaged. |
| 7 | File format error | CSV files for the operation log are not correct. |
| 8 | Saving of the operation log is in progress | Since saving of the CSV for the operation log function is executed, the search processing is stopped |
| 9 | Window display error | Unable to perform analysis because the search menu or the search condition input keyboard is being displayed with other functions, or because all windows are being used. |
| 10 to 15 | Reserved | - |

NOTE

- When bit 8 or bit 9 is turned ON, the subsequent processing is not performed. Even if each of bits 0 to 7 are turned ON, analysis processing is continued.

## #H_BackLightColor

Changes the display color of the backlight.

This operates only on models that support changing the backlight.
☞ 1.5 Supported Features

When you write "0", it is amber and "1" is red. Do not set other colors.

To change the backlight color on GP-4100 series, please use the following values.

The backlight colors are different from one model to the next.
☞ 1.5.6.1 For Those Using GP-4100 Series

00h: Color as set up in the Base screen's [Screen Attribute]

01h: Green or white

02h: Red

03h: Orange or pink

11h: Green or white (Blink)

12h: Red (Blink)

13h: Orange or pink (Blink)

Other values: Green or white

NOTE

- When the backlight changes to red, the screen display stays on even when the Standby Mode is set to [Screen OFF].
  ☞ 5.4.2.1 Display Unit [Display] - Screen Settings

## #H_ChangeScreenNo

Specify the Screen Number of the Change-to Destination.

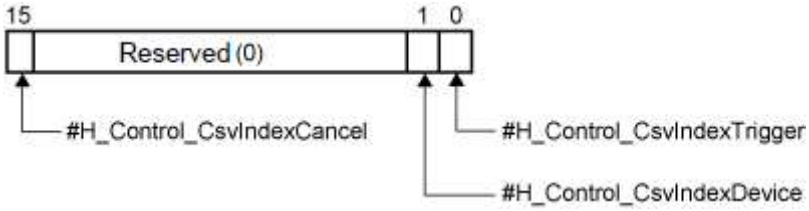
Stored in LS0008 when the communication method is Direct Access or to 0015 when the method is the Memory Link Method.

## #H_CounterbySecond

Increments the elapsed time once every second immediately after the power is turned ON, and is stored in Bin format to LS2035.

## #H_CsvIndex_Control

Create an index file for the recipe (CSV data) during RUN and store it in the external storage.




- **#H_Control_CsvIndexTrigger (Start creating an index file)**

When #H_Control_CsvIndexTrigger is turned ON, start creating an index file in an external storage.

NOTE

- While #H_Control_CsvIndexCancel is ON, an index file will not be created even if #H_Control_CsvIndexTrigger is turned ON.

- **#H_Control_CsvIndexDevice (Index file save location)**

Specify a location to save an index file. Specify the same save location as a recipe (CSV data).

- 0 : CF Card (or SD Card)
- 1 : USB storage

- **#H_Control_CsvIndexCancel (Cancel index file creation)**

When #H_Control_CsvIndexCancel is turned ON during the index file creation, the creation process will be cancelled. The index file being created will be deleted.

IMPORTANT

- **Do not turn off the power of the display unit while creating an index file. It may not only stop the index file creation process but it may damage the data saved in the external storage.**

NOTE

- To use #H_CsvIndex_Control, select the [Transfer CSV Data] setting in the [Transfer CSV Data (Condition)] tab. #H_CsvIndex_Control will not operate if [Transfer CSV Data] is disabled.
  For details regarding the Common Settings [Transfer CSV Data (Condition)], please refer to the following.
  ☞ 26.8.1 Transfer CSV Data (Condition)
- If an index file is created using the system variable, the display unit's performance deteriorates as the number of CSV files for index file increases. If you don't want to deteriorate the display unit's performance, create an index file in offline mode or in GP-Pro EX.
- During the CSV data transfer, an index file cannot be generated. To use the index file creation, make sure that the transfer start bit of the CSV data transfer is OFF.
- When starting the transfer of CSV data, if "no external storage" or "CF card error" occur, index file creation processing will not run. Turn OFF the transfer start bit of the Transfer CSV Data.
- During the index file creation, CSV data transfer is not permitted.
- If the following actions are taken during the index file creation, the creation process will be cancelled.
- Going to offline mode
- Run screen transfer
- Remove a USB storage device
- If the index file is already saved, it will be overwritten when the creation of a new index file is completed.
- During the index file creation, change to the values of "#H_Control_CsvIndexTrigger" and "#H_Control_CsvIndexDevice" are disabled and the creation process continues.

## #H_CsvIndex_Counter

The total number of CSV files subjected to the index file will be stored.

## #H_CsvIndex_Status

The process status of the index file creation will be stored.

| | |
|---|---|
| 0000h | Before creating an index file |
| 0001h | Creating an index file |
| 0002h | Complete the index file creation successfully |
| 0010h | #H_Control_CsvIndexCancel is turned ON and the index file creation is interrupted. |
| 0100h | The external storage device is not inserted to the display unit or not formatted properly. |
| 0200h | No CSV files are stored in the external storage device or the data in the CSV file is invalid. |
| 0400h | No space in the external storage device or data cannot be overwritten since the index file is read-only. |

**NOTE**

- When ending normally, turning OFF #H_Control_CsvIndexTrigger clears to zero the value stored in #H_CsvIndex_Statusstart.
- When #H_Control_CsvIndexCancel is turned OFF, #H_Control_CsvIndexTrigger is automatically turned OFF. The value stored in #H_CsvIndex_Status is also cleared to zero.

## #H_CsvIndex_Total

The total number of CSV files that are stored in the external storage device at the index file creation will be stored.

## #H_CurrentDay

The "Date" of the date information is stored in BCD format in LS2050.

## #H_CurrentDayofTheWeek

The current value for the day is stored in LS9310. The day is calculated from the Year, Month, and Day of the IC (RTC) clock mounted on the display unit.

☞ A.1.1.4 LS9000 Area (Direct Access Method)

## #H_CurrentHour

The "Hour" of the time information is stored in BCD format in LS2051.

## #H_CurrentMinute

The "Minute" of the time information is stored in BCD format in LS2052.

## #H_CurrentMonth

The "Month" of the date information is stored in BCD format in LS2049.

## #H_CurrentScreenNo

Stores the screen number being displayed.

When the communication method is Direct Access, it is stored in LS0000, and when the method is the Memory Link Method, it is stored in 0015.

## #H_CurrentSecond

The "Seconds" of the time information is stored in BCD format in LS2053.

## #H_CurrentTokenSpeed

Used only during a Serial Multilink connection.

The current value of the time taken for one transfer cycle of a token packet (a Command Right for PLC) through multiple connected Displays. The unit is 10 milliseconds. The data is updated every time the maximum value is changed or when the screen is changed. The data's initial value is "0". There is an error of +/-10 ms. Stored in LS2041.

## #H_CurrentYear

The "Year" of the date information is stored in BCD format in LS2048.

The stored value is the last 2 digits of year.

## #H_DispScanCounter

The counter increments each time the Part set on the display screen processes.

The value is updated when all processing for the target Parts has finished and is stored in Bin format to LS2038.

## #H_DispScanTime

The display time starts from the first Part set on the display screen to the end of the last Part.

Data is stored to LS2036 in Bin format, in millisecond units. The data is updated when all processing for the target Parts has finished. The data's initial value is 0, and there is an error of +/- 10 milliseconds.

## #H_EtherLink_ConstCommuniMemInfo

Can be used only for Master display unit.

Stores the total value of the Continuous Communication Amount of the Master/Slave/GP-Viewer EX stations. For computing the number of addresses, refer to the following.

☞ 7.6.2 Procedure - How to Calculate the Communication Traffic

## #H_EtherLink_ConstItemCount

Can be used only for Master display unit.

The total value of the Continuous Communication Amount actually requested by the Master/Slave/GP-Viewer EX from the Master display unit is stored in bytes. 16-bit, 32-bit, and bit addresses are calculated as 2 bytes, 4 bytes, and 2 bytes, respectively.

## #H_Expression_Err_Status

Stores the operation error status of the animation function.

The #H_Expression_BCD_Err, #H_Expression_Division_Err, and #H_Expression_Overflow error statuses are stored in Bit 0, Bit 1, and Bit 2, respectively. For more details, please refer to the following.

☞ A.2.2.1 Bit Type - #H System Variables

## #H_From_Year/#H_From_Month/#H_From_Day/#H_From_Hour/#H_From_Minute/#H_From_Second

Data for "year" (last 2 digits of the year), "month", "day" "hour", "minute", and "second" for the From field of the search condition input keyboard are stored.

☞ 20.10.3 Entering Search Conditions

NOTE

- This feature cannot run on models that do not support the Refine Search/Sort function.

## #H_GlobalWindowControl

The Global Window is displayed when bit 0 of LS0016 is turned ON, and is hidden when the bit is turned OFF.

When bit 1 of LS0016 is turned ON, the display order of the Global Window can be changed.

## #H_GlobalWindowNo

The indirectly selected Global Window registration number is stored in LS0017.

Stored values are in Bin or BCD format and range from 1 to 2000.

## #H_GlobalWindowPosX

The indirectly selected X coordinate display position in the top left corner of the Global Window is stored in LS0018.

Values are in Bin or BCD format.

## #H_GlobalWindowPosY

The indirectly selected Y coordinate display position in the top left corner of the Global Window is stored in LS0019.

Values are in Bin or BCD format.

## #H_HistoricalTrendMagnification

The status of Zoom In/Out Display for the Historical Trend Graph is stored. A value is stored in this system variable when zoom in/zoom out is executed, and when a Historical Trend Graph with the [Default Magnification] set is displayed by Screen Change or Window Display.

0 : Thin Out Mode

1 : Original Size

2 : x 2

4 : x 4

8 : x 8

**NOTE**

- When multiple Historical Trend Graphs are displayed, the Display Magnification for the last Historical Trend Graph for which you used zoom in or zoom out is stored.
- When a Historical Trend Graph without the [Default Magnification] set is displayed as a result of a Screen Change or Window Display, the value in the system variable may not match with the Display Magnification of the Historical Trend Graph on display.

## #H_JpegCaptureFileNo

When the "Save In" location is any location other than [FTP server], the file number for the screen capture to be obtained is specified as LS2074.

You can use this field when the [Auto Increment File Number] check box is selected. From the [System Settings], click [Display Unit] and in the [Mode] tab see the [Screen Capture] area.

## #H_LocalName

Stores the name of the display unit.

In the [Video/Movie] settings, select the [Save to CF/USB] check box and for the [User Set String] select the [Indirect] option. You can copy the station name to the address configured in the [User Set String], and then when the [Control Address] is set ON, use the station name as the destination folder name.
When saving data from multiple display units, defining the folder this way makes it easier to distinguish the location of image data.
28.10.1 Video / Movie Settings

## #H_LockElapsedTime

In the [System Settings] node's [Display Unit], when [Enable Operation Lock] is set up on the [Extended Settings] page's [Operation Lock] area, this variable stores the elapsed time (in seconds) from the start of operation lock.

## #H_LockRemainderTime

In the [System Settings] node's [Display Unit], when [Timeout] is set up in the [Extended Settings] page's [Operation Lock] area, this variable stores the time remaining (in seconds) until operation lock is unlocked.

## #H_LockOwnerIPAddr

Obtains the IP address of the display unit acting as the Operation Lock.

## #H_LoginUserID

Stores the User ID of persons currently logged in.

## #H_MachineNo

Stores the model number of the conversion adaptor for Handy-type display units only.

After the power is turned ON, until the model number of the conversion adapter is read, the value is 0.

To enable, below the [System Settings] node click [Display Unit]. In the [Mode] tab, enable [Conversion Adapter]. You can configure the operation switch in Offline Mode as well.
Refer to the Maintenance/Troubleshooting Guide for Offline Mode configuration details.

## #H_MAXTokenSpeed

Used only during a Serial Multilink connection.

The current value of the time taken for one transfer cycle of a token packet (a Command Right for PLC) through multiple connected Displays. Each unit is 10 milliseconds. The data is updated every time the maximum value is changed or when the screen is changed. The data's initial value is "0". There is an error of +/-10 ms. Stored in LS2040.

## #H_RecipeGroupID

The Group ID for the enhanced recipe is specified. It is used when transferring/receiving and importing/exporting the enhanced recipe data.

**NOTE**

- The values for this system variable become the Group ID to be displayed on the enhanced recipe list.

## #H_RecipeGroupName

The Group Name for the enhanced recipe is stored.

**NOTE**

- When the #H_RecipeGroupID value is invalid or is 0, 0 is stored in #H_RecipeGroupName.

## #H_RecipeID

The Recipe ID for the enhanced recipe is specified. It is used when transferring/receiving the enhanced recipe data.

- The Recipe ID for the enhanced recipe that imports/exports the enhanced recipe data as a CSV file is specified.
- The Recipe ID for the recipe label that is selected in the enhanced recipe list is stored.
- The Recipe ID for the element data belonging to the displayed enhanced recipe data list is specified.

**NOTE**

- The values for this system variable become the Recipe ID to be displayed on the enhanced recipe list.

## #H_RecipeLabelSortType

The display order for the recipe label to be displayed on the enhanced recipe list is specified.

0 : Recipe ID order

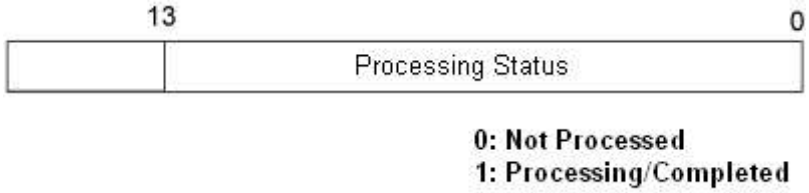
1 : Recipe label (ascending order)

2 : Recipe label (descending order)

## #H_RecipeProcessing

Each processing status such as transferring/editing of the enhanced recipe data is stored.

When #H_RecipeControlSend and #H_RecipeControlUpload are turned ON, the processing status is stored in #H_RecipeProcessing.

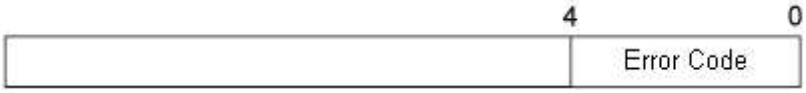



| Bit | Description | Details |
|---|---|---|
| 0 | Transferring bit | The transfer status from the display unit to the connecting device is stored |
| 1 | Transfer Complete Flag | |
| 2 | Receiving bit | The transfer status from the connecting device to the display unit is stored |
| 3 | Receiving Completion Flag | |
| 4 | Exporting bit | The CSV output status to the external storage is stored |
| 5 | Export Completion Flag | |
| 6 | Importing bit | The import status from the external storage is stored |
| 7 | Import Completion Flag | |
| 8 | Updating bit of the enhanced recipe list | The update status of the enhanced recipe list is stored |
| 9 | Copying bit of the enhanced recipe list | The processing status of editing, copying, and deleting the recipe label is stored |
| 10 | Deleting bit of the enhanced recipe list | |

| | | |
|---|---|---|
| 11 | Editing bit of the enhanced recipe list | |
| 12 | Reloading bit of the enhanced recipe list | The update status of the enhanced recipe list is stored |
| 13 | Saving bit of the enhanced recipe list | The save status of the results by which the element values are edited is stored |

## #H_RecipeResultCSV

The processing results by which the enhanced recipe data is imported/exported as CSV files are stored.



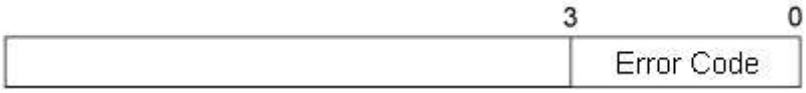

| Error Code | Description | Details |
|---|---|---|
| 0 | Completed Successfully | |
| 1 | Incorrect #H_RecipeGroupID value | |
| 2 | Reserved | |
| 3 | Import unsuccessful | CSV file format discrepancy |
| 4 | Import unsuccessful | Absence of CSV files to be replaced |
| 5 | Import unsuccessful | Insufficient number of columns for CSV file format |
| 6 | Import unsuccessful | Excessive number of columns for CSV file format |
| 7 | Import unsuccessful | Excessive number of rows for CSV file format |
| 8 | Import unsuccessful | Excessive number of element value characters (character string is too long), or invalid characters mixed in. |
| 9 | Import unsuccessful | Values other than the character string of the element values are invalid (exceed the set range) |
| 10 | Import stopped | Because the element values are being edited with the enhanced recipe data |
| 11 | Absence of files to be imported | External storage, which is the"save in" location of files to be imported, is not connected |
| 12 | Generation of export files unsuccessful | ▪ File attribute is set to read-only<br>▪ Capacity shortage in the external storage, which is the"save in" location of files to be exported |
| 13 | Write Error | Write unsuccessful. Transfer again. |
| 14 | Write Error | Write unsuccessful. Transfer again. |
| 15 | Insufficient capacity | Cannot update due to insufficient space in the screen area |

**NOTE**

- During export and import, when #H_Control_USBDetachTrigger and #H_Control_SDDetachTrigger are turned ON, errors for either 3 to 9 or 12 are stored.

## #H_RecipeResultTransfer

Transfer processing results for the enhanced recipe data are stored.




| Error Code | Description | Details |
|---|---|---|
| 0 | Completed Successfully | |
| 1 | Incorrect #H_RecipeGroupID value | |
| 2 | Incorrect #H_RecipeID value | |
| 3 | Access error to the device occurs during transfer/reception | |
| 4 | Receiving processing is cancelled due to values outside the setting range being included in the received element values. | |
| 5 | Receiving processing is cancelled due to the element values being cancelled. | Occurs when both #H_RecipeStatusEdit and #H_RecipeControlUpload are turned ON |
| 6 | Receiving processing is cancelled due to invalid characters being included among the received element values. | |
| 7 to 12 | Reserved | |
| 13 | Write Error | Write unsuccessful. Transfer again. |
| 14 | Write Error | Write unsuccessful. Transfer again. |
| 15 | Insufficient capacity | Cannot update due to insufficient space in the screen area |

## #H_RemoteHMI_Connect_Status

Stores the Pro-face Remote HMI client and server connection status.

| Value (Dec) | Description |
|---|---|
| 0 | Client and server are not connected |
| 1 | Connecting in synchronous mode |
| 2 | Connecting in asynchronous mode |

## #H_RemoteHMI_Touch_Status

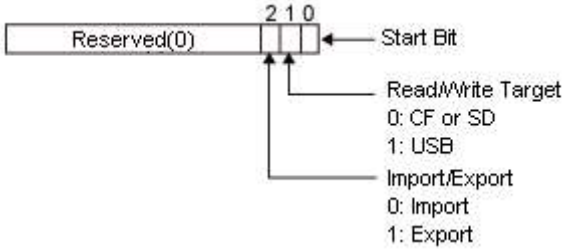
Stores the status of monopolize touch on the Pro-face Remote HMI.

| Value (Dec) | Description |
|---|---|

| | |
|---|---|
| 0 | Touch operation is not monopolized |
| 1 | Touch operations possible only on the server side |
| 2 | Touch operations possible only on the client side |

## #H_SecurityBackupControl

Imports or exports security data.




Write the operation type (import/export) in bit 2, and the location to save security data in bit 1.

When bit 0 turns ON, the operation set in bit 2 and 1 is processed.

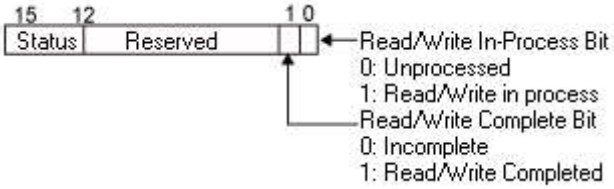
The exported security data is saved in the [Security] folder of the external storage specified as the location to save, with the file name [SecFPDat.bin].

When you import security data from the [Security] folder of the specified external storage, the file name should also be [SecFPDat.bin].

You can import exported security data and security data created with the Fingerprint Recognition Setting Tool.

## #H_SecurityBackupStatus

Stores the status when security data is imported/exported.




### Status details

| Bit 12 to 15 | Description | Details |
|---|---|---|
| 0 | Completed Successfully | Read/write is successfully completed |
| 1 | Level Mode Error | The password setting is set to the Level Mode. (The setting needs to be changed to the User ID Mode.) |
| 2 | Security Data Error | Incorrect security settings (User ID is duplicated or no User ID or Password is set.) |
| 3 | Reserved | - |
| 4 | No external storage | External storage is not available. Or, the CF card cover is open. |
| 5 to 8 | Reserved | - |
| 9 | Read/write | Unsuccessful to read from/write to display unit or external |

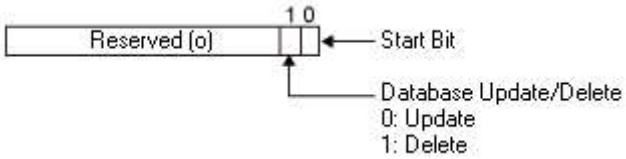
| | | |
|---|---|---|
| | error | storage |
| 10 to 15 | Reserved | - |

When an error has occurred during security data import or export, the error status is stored.

- The Reading/Writing bit turns OFF automatically when read/write is completed, and, at the same time, the Read Completion/Write Completion bit turns ON. By turning the start bit of #H_SecurityBackupControl OFF, the completion bit also turns OFF automatically.
- When an error has occurred during reading/writing, the completion bit does not turn ON. The Reading/writing bit turns to OFF when an error has occurred and then the error status is stored in #H_SecurityBackupStatus. The status is not cleared when the start bit of #H_SecurityBackupControl is turned OFF. It will be cleared next time the process is completed successfully.

## #H_SecurityFingerprintControl

Update or destroy the EZ fingerprint recognition unit database.

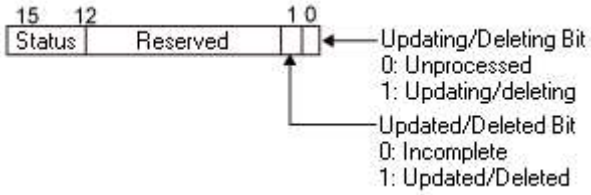



Set the operation type (update/discard) in bit 1. When bit 0 turns ON, the data base is updated or discarded.

Update the database when using a new EZ Fingerprint Recognition Unit. Also, update the database when using an EZ Fingerprint Recognition Unit which was used with other display unit.

## #H_SecurityFingerprintStatus

Stores the error status, when an error has occurred during updating/discarding the EZ Fingerprint Recognition Unit's database.




### Status details

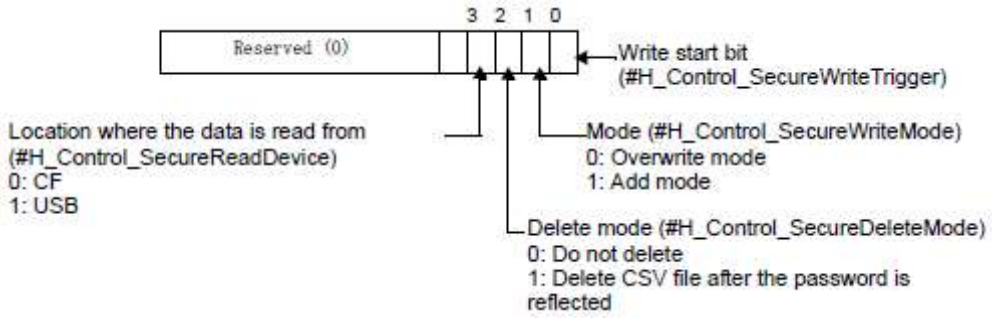
| Bit 12 to 15 | Description | Details |
|---|---|---|
| 0 | Completed Successfully | Occurs when the database has been updated/discarded successfully |
| 1 | EZ Fingerprint Recognition Unit Connection Error | Occurs when the EZ Fingerprint Recognition Unit is not connected |
| 2 | When fingerprint data does not exist | When security data does not exist in the specified folder during database update |
| 3 to 15 | Reserved | - |

- The Updating/Discarding bit turns OFF automatically when update/discard is completed, and at the same time, the Update Completion/Discard Completion bit turns ON. By turning the start bit of #H_SecurityFingerprintControl OFF, the completion bit also turns OFF automatically.

- When an error occurs while updating/discarding, the completion bit does not turn ON. In that case, the Updating/Discarding bit turns OFF, and the error status is stored in #H_SecurityFingerprintStatus. The status is not cleared when the start bit of #H_SecurityBackupControl is turned OFF. It will be cleared next time the process is completed successfully.

## #H_SecurityWriteControl

Stores the execution status and "Save in" location of online writing of passwords.




The password of the CSV file is reflected on the display unit by setting bit 0, OFF to ON.

- **Write error check**

When writing to the display unit, check the following items for Level Mode/User ID Mode and Write Mode.
O: Check errors X: Do not check errors

| Contents to be checked | Level Mode | | User ID Mode | |
|---|---|---|---|---|
| | Overwrite | Append | Overwrite | Append |
| External storage is mounted on the body | O | O | O | O |
| CSV file has a designated path and file name. | O | O | O | O |
| CSV file is in a designated format. | O | O | O | O |
| Password data of the CSV file is free of the following error. | - | - | - | - |
| • Password (including the level and user ID) is described using up to eight single-byte characters. | O | O | O | O |
| • Password (including the level and user ID) does not include a space. | O | O | O | O |
| • Level, password and user ID have no spaces (if they | X | X | O | O |

| | | | | |
|---|---|---|---|---|
| are described with spaces only, they are regarded as being deleted, instead of being an error). | | | | |
| • Levels are within range, 1 to 15. | X | X | O | O |
| The number of set user IDs is not more than 100.*1 | X | X | O | O |
| Level Mode /User ID Mode of the CSV file is consistent with that on the display unit. | O | O | O | O |
| User ID (password) is not duplicated.*2 | O | O | O | O |

The contents to be checked are different depending on Write Mode.

*1 Checking the number of set User IDs

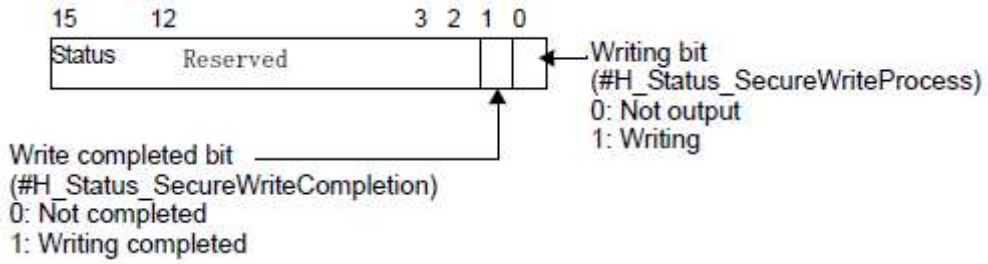
| | |
|---|---|
| Overwrite | Check the number of settings in the file for writing. |
| Append | Check the sum of the number of settings in the data to write and the existing data. |

*2 Checking data duplication

| | | |
|---|---|---|
| Level Mode | Overwrite | Check that the password is not duplicated within the file for writing. |
| | Append | Check if the password is not duplicated in the write file, and check if any passwords are duplicated between the write data and existing data. |
| User ID Mode | Overwrite | Check that the ID is not duplicated within the file for writing. |
| | Append | Check if the ID is not duplicated in the write file, and check if any IDs are duplicated between the write data and existing data. |

## #H_SecurityWriteStatus

When an error has occurred during online writing of a password, the error status is stored.




### Status details

| Bit | Description | Details |
|---|---|---|

| **Combination 15 - 12** | | |
|---|---|---|
| 0000 | Completed Successfully | Writing to the display unit is successfully completed |
| 0001 | Reserved | |
| 0010 | Reserved | |
| 0011 | Reserved | |
| 0100 | No external storage | When writing to the body, the external storage is not connected, or the CF Card cover is open |
| 0101 | Delete Error | Unsuccessful to delete the CSV file. |
| 0110 | Reserved | |
| 0111 | Reserved | |
| 1000 | User IDs out of range | The number of user IDs exceeded 100 when writing to the display unit. |
| 1001 | Write data error | Unsuccessful to write data to NAND. |
| 1010 | CSV file name or path error | CSV file does not have a designated path or file name. |
| 1011 | CSV file Formatting error | CSV file is not in a designated format. |
| 1100 | CSV data error | There is an error in the password data. |
| 1101 | Mode error | evel Mode or User ID Mode does not match that on the display unit. |
| 1110 | Duplication error | Password is duplicated (Level PS Mode).<br>User ID is duplicated (User ID Mode). |

- When writing is completed, the writing bit automatically turns OFF and the write completed bit turns ON at the same time.
  When the user turns OFF the write start bit, the completed bit automatically turns OFF.
- Even when you turn OFF the write start bit before the write completed bit turns ON, the write completed bit is automatically turned OFF.
- When an error has occurred when writing, the completed bit does not turn ON. The writing bit turns OFF, and an error status is stored in HMI system variable #H_SecurityWriteStatus. Even if the write start bit is turned OFF, the status is not cleared automatically. It will be cleared next time the process is completed successfully.

## #H_SetDay

The "Date" value of the date information is stored in BCD format in LS2058.

The stored value is 2 digits and ranges from 01 to 31. By rewriting this value using a data part, you can change the "Date" of the time data. However, out-of-range values cannot be stored.

## #H_SetHour

The "Hour" value of the time information is stored in BCD format in LS2059.

The stored value is 2 digits and ranges from 00 to 23. By rewriting this value using a data part, you can change the "Hour" of the time data. However, out-of-range values cannot be stored.

## #H_SetMinute

The "Minute" value of the time information is stored in BCD format in LS2060.

The stored value is 2 digits and ranges from 00 to 59. By rewriting this value using a data part, you can change the "Minutes" of the time data. However, out-of-range values cannot be stored.

## #H_SetMonth

The "Month" value of the date information is stored in BCD format in LS2057.

The stored value is 2 digits and ranges from 01 to 12 (Month). By rewriting this value using a data part, you can change the "Month" of the time data. However, out-of-range values cannot be stored.

## #H_SetSecond

The "Seconds" value of the time information is stored in BCD format in LS2061.

The stored value is 2 digits and ranges from 00 to 59 (Seconds). By rewriting this value using a data part, you can change the "Seconds" of the time data. However, out-of-range values cannot be stored.

## #H_SetYear

The "Year" value of the date information is stored in BCD format in LS2056.

The stored value is the last 2 digits of year (00 to 99). By rewriting this value using a data part, you can change the "Year" of the time data. However, out-of-range values cannot be stored.

## #H_SignalBuzzerHL_Control

Set the buzzer sound tone to be heard from the EZ tower light.

| | |
|---|---|
| 0000h | Default |
| 0001h | High |
| 0002h | Low |

## #H_SignalBuzzerHL_Status

Stores the processing status of the buzzer tone setting for the EZ Tower Light.

| | |
|---|---|
| 0000h | Disconnected |
| 0001h | High |
| 0002h | Low |

## #H_SignalBuzzerPattern_Control

Set the buzzer sound pattern to be heard from the EZ tower light.

| | |
|---|---|
| 0000h | Default |
| 0001h | Buzzer OFF |
| 0002h | Continuous (beep.....) |
| 0003h | Intermittent (beep, beep, beep) |
| 0004h | Intermittent 2 (beep/beep/beep/beep/beep/beep/beep/beep) |
| 0005h | Intermittent tone 3 (5 short beeps, 5 short beeps) |

## #H_SignalBuzzerPattern_Status

Stores the processing status of the buzzer pattern setting from the EZ Tower Light.

| | |
|---|---|
| 0000h | Default |
| 0001h | Buzzer OFF |
| 0002h | Continuous (beep.....) |
| 0003h | Intermittent (beep, beep, beep) |
| 0004h | Intermittent 2 (beep/beep/beep/beep/beep/beep/beep/beep) |
| 0005h | Intermittent tone 3 (5 short beeps, 5 short beeps) |

## #H_SignalBuzzerVolume_Control

Sets the buzzer volume for the EZ Tower Light.

| | |
|---|---|
| 0000h | Default |
| 0001h | High |
| 0002h | Medium |
| 0003h | Low |

## #H_SignalBuzzerVolume_Status

Stores the processing status of the buzzer tone setting for the EZ Tower Light.

| | |
|---|---|
| 0000h | Disconnected |
| 0001h | High |
| 0002h | Medium |
| 0003h | Low |

## #H_Signal**Blink_Control

Sets the flashing pattern for the EZ Tower Light.

| | |
|---|---|
| 0000h | Default |
| 0001h | Does not light up |
| 0002h | Normally lit |
| 0003h | Flashes On/Off every 500ms (1 second cycles) |
| 0004h | Flashes On/Off every 250ms (500ms cycles) |

NOTE

- Corresponding to below, the number in "**" indicates the bottom, middle or top of the EZ Tower Light:
  01 : Bottom
  02: Middle
  03: Upper level

## #H_Signal**Blink_Status

Stores the flashing pattern for the EZ Tower Light.

| | |
|---|---|
| 0000h | Disconnected |
| | |

| | |
|---|---|
| 0001h | Does not light up |
| 0002h | Normally lit |
| 0003h | Flashes On/Off every 500ms (1 second cycles) |
| 0004h | Flashes On/Off every 250ms (500ms cycles) |

NOTE

- Corresponding to below, the number in "**" indicates the bottom, middle or top of the EZ Tower Light:
  01 : Bottom
  02: Middle
  03: Upper Level

## #H_Signal**Color_Control

Sets the flashing color for the EZ Tower Light.

| | |
|---|---|
| 0000h | Default |
| 0001h | Does not light up |
| 0002h | Red |
| 0003h | Green |
| 0004h | Blue |
| 0005h | Yellow |

NOTE

- Corresponding to below, the number in "**" indicates the bottom, middle or top of the EZ Tower Light:
  01 : Bottom
  02: Middle
  03: Upper Level

## #H_Signal**Color_Status

Stores the setting status of flashing color for the EZ Tower Light.

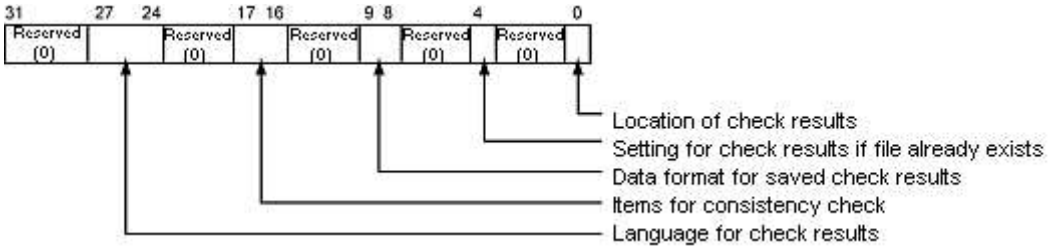
| | |
|---|---|
| 0000h | Default |
| 0001h | Does not light up |
| 0002h | Red |
| 0003h | Green |
| 0004h | Blue |
| 0005h | Yellow |

NOTE

- Corresponding to below, the number in "**" indicates the bottom, middle or top of the EZ Tower Light:
  01 : Bottom
  02: Middle
  03: Upper Level

## #H_TagConsistencyConfig

The action for the tag consistency check is set.



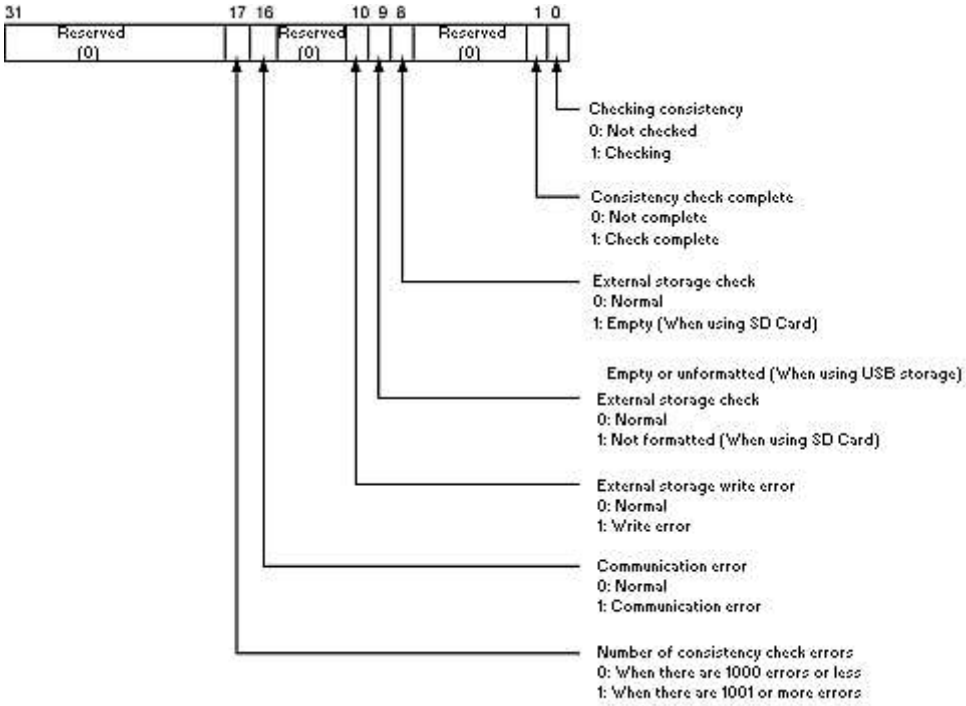

| Bit | Description |
|---|---|
| 0 | Location of check results<br>ON: USB storage<br>OFF: SD card |
| 4 | Setting for check results if file already exists<br>ON: Do not overwrite<br>OFF: Overwrite |
| 8 to 9 | Date format for saved check results<br>00 : yy/mm/dd<br>01 : mm/dd/yy<br>10 : dd/mm/yy<br>11 : mm/dd |
| 16 to 17 | Items for consistency check<br>00 or 11: All the tags registered in the GP-Pro EX<br>01 : Tags used in parts or common settings<br>10 : Tags registered, but not used |
| 24 to 27 | Language for check results<br>0000 : ASCII<br>0001 : Japanese<br>0010 : Chinese (Traditional)<br>0011 : Chinese (Simplified)<br>0100 : Korean<br>0101 : Russian (Cyrillic)<br>0110 : Thai<br>Other than those above: Europe and the United States |

**NOTE**

- For cases in which log file attributes are read-only, files cannot be overwritten even if bit 4 is turned OFF. Bit 10 for the consistency check status (#H_TagConsistencyStatus) is turned ON.
- For cases in which Japanese is selected for the [Language] in the [Option Setting]GP-Pro EX [Option Setting], if languages other than Japanese are selected in bit 27 to 24, the error message is not displayed properly. Please set [Language] to English.

## #H_TagConsistencyStatus

The processing status of tag consistency check is stored.




**NOTE**

- When #H_TagConsistencyTrigger (tag consistency check start) is turned OFF, bits for #H_TagConsistencyStatus are all turned OFF. However, during the consistency check, all the bits are turned OFF after the consistency check is completed (after bit 1 is turned ON).
- If either bit 8 or 9 is turned ON, the consistency check is stopped.
- Even if bit 10 is turned ON, the consistency check is continued.

## #H_To_Year/#H_To_Month/#H_To_Day/#H_To_Hour/#H_To_Minute/#H_To_Second

Data for "year" (last 2 digits of the year), "month," "day," "hour," "minute," and "second" for the To field of the search condition input keyboard is stored.

☞ 20.10.3 Entering Search Conditions

**NOTE**

- This feature cannot run on models that do not support the Refine Search/Sort function.

## [PLC*]#H_DriverCycleTime

Stores the time from when the display unit requests data from the device/PLC, until the display unit receives the data in a unit of 1ms.

The name of the device obtaining the value is entered in [*]. Values for the device/PLC Communication Cycle Times 1 to 32 are stored in order in LS9400 to LS9431. The same applies to the following, with the values for PLC 2, 3, 4 stored in LS9432 to LS9527.

**NOTE**

- The device/PLC name is specified in the device/PLC settings.
- H system variables store content from the 33rd item and beyond.
- You can check the address for storing communication cycle time in the internal device addresses from the [System Settings], [Peripheral List] page's [List of Device/PLC Management Addresses].
  ☞ 5.4.13 System Settings [Peripheral List] Settings Guide

## [PLC*]#H_DriverErrorCode

Stores any error code that has occurred. The bottom 8 bits store the last 3 digits of the error code. (For example, when the code is "RHxx006", "006"is stored.)

The name of the device obtaining the value is entered in [*].

Please refer to the following for error codes.

☞ T.7.1 Settings common to all Display models

## [PLC*]#H_DriverErrorCount

Stores the number of errors that has occurred. The name of the device obtaining the value is entered in [*].

## [PLC*]#H_DriverErrorDate

The elapsed time from Jan 1, 1970 00:00:00 till the date and time of error is stored in a unit of second.

The name of the device obtaining the value is entered in [*].