

Chapter 2

Run State Screen

Chapter 2 Run State Screen

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2. 1

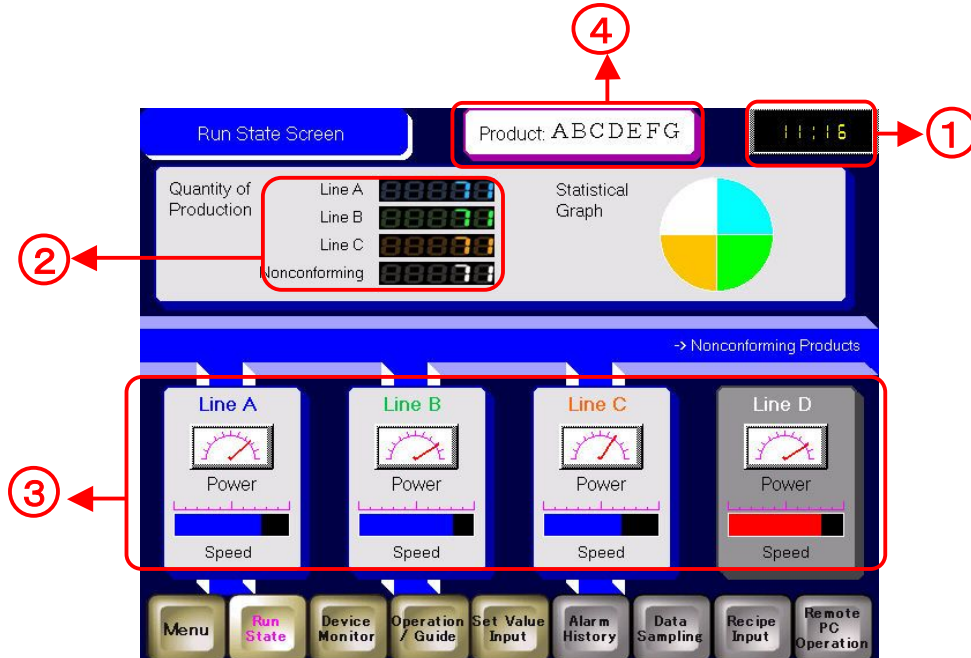
Run State Screen



Run State Screen

Instruction

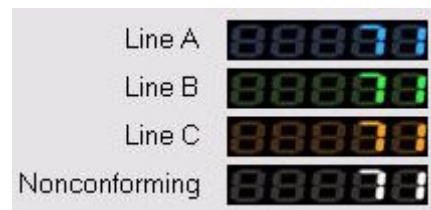
The run state screen is a screen to check or confirm data of a whole device. This section explains how to display the current time, numeric data such as a quantity of productions, and a graph of power/speed data.



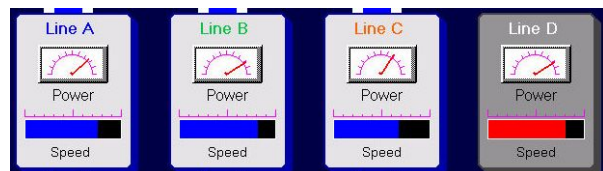
- 1) Display the current time referring to clock data in the GP unit.
(→ See page 2-5.)



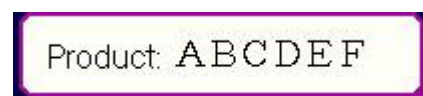
- 2) Display quantities of productions of each line.
(→ See page 2-11.)



- 3) Display power and speed data of each line in a graph.
(→ See page 2-21.)



- 4) Display text data such as a product name or a lot number.
(→ See page 2-29.)



2.2

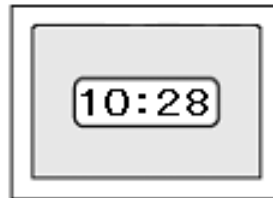
Time Display




Instruction

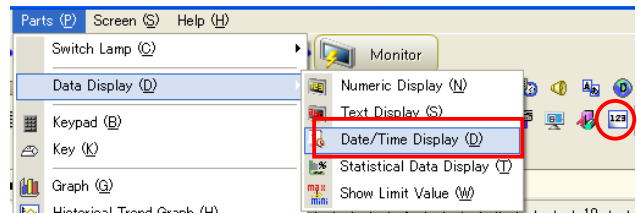
Display Current Time

To display the time on the GP unit, use the “Data Display: Date/Time Display” feature. The Data Display displays the clock data in the GP unit.

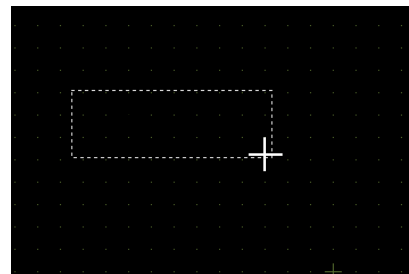


• Procedures of Placement/Setup

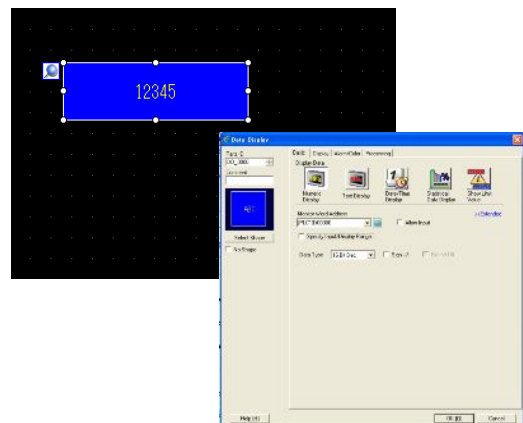
- 1) On the [Parts] menu, select [Data Display] → [Date/Time Display]. Or click the [Data Display]  icon.



- 2) Drag the range to place the data display.



- 3) Double-click the [Data Display] and make settings.



Let's practice on the next page!



Let's Display Current Time

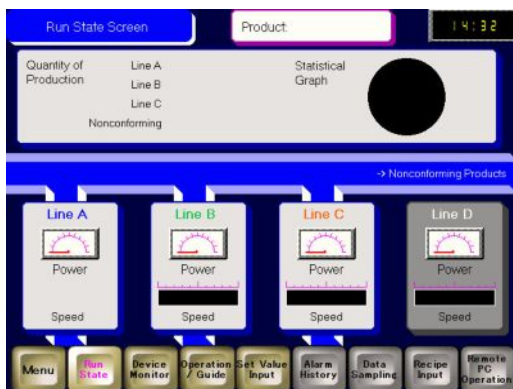
Let's display the current time!

[Setup Procedures]

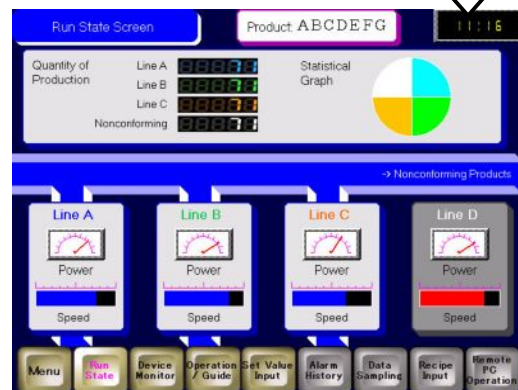
1. Open the base screen "2".
2. Select, place, and set the Data Display: Date/Time Display.

Open the base screen "2".

<Practice Screen>



<Completed Screen>



(1) Select/Place Data Display

- 1) Click the [Data Display] icon on the tool bar.



- 2) Drag the range to place the data display.



★ One Point

If you use Header, you can share parts on multiple screens.
(See the next page)

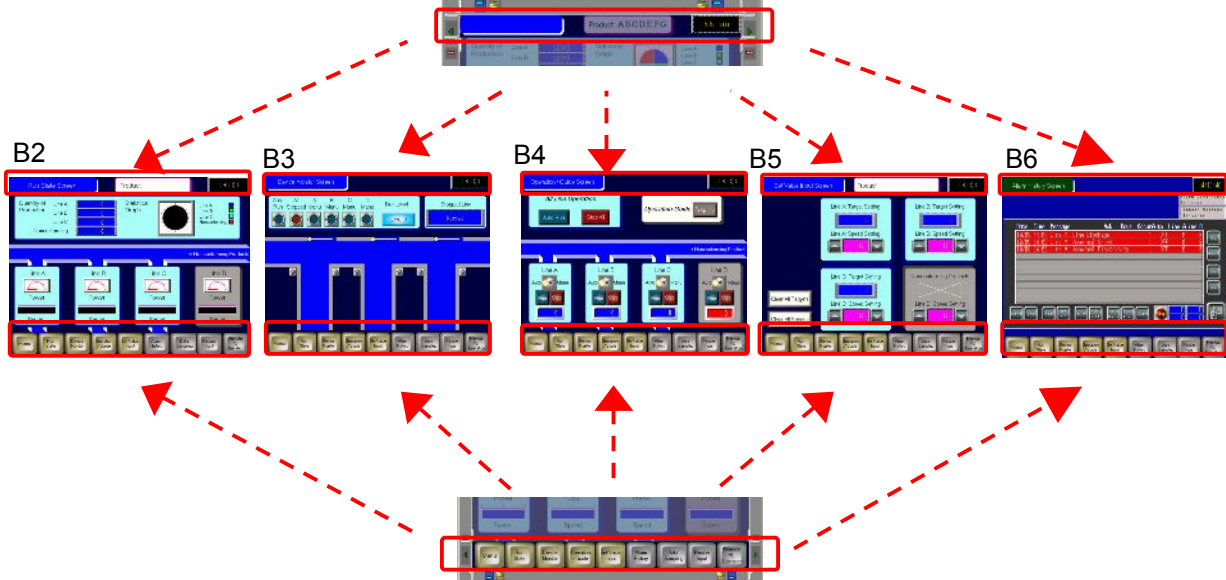
★ One Point

Header and Footer

To use parts or drawings, which are placed on the upper or bottom of a screen, on multiple screens, register the parts and drawings as headers or footers.

Drawing Sample

Title background and clock display on the upper of the screen



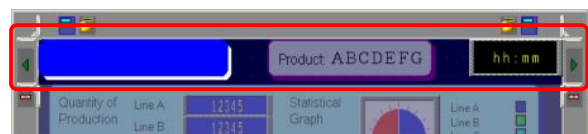
Screen-change switches at the bottom of the screen

- 1) Click the [Edit Header] button on the screen.

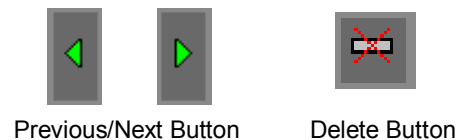


- 2) Place objects to share on other screens.

* Edit the footer in the same way.



- 3) You can switch multiple headers or footers with the Previous/Next buttons at both ends and delete them with the Delete button.

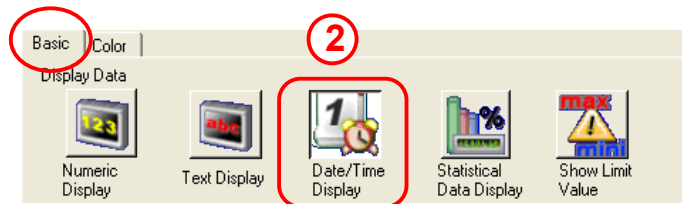


If you drag frames at the corner, you can widen or narrow the header or footer area.



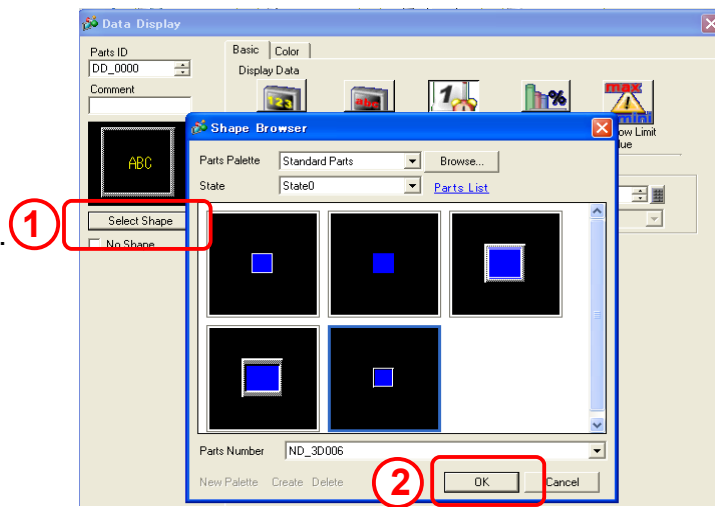
(2) Select Date/Time Display

- 1) Double-click the placed data display.
- 2) In [Display Data], select [Date/Time Display].



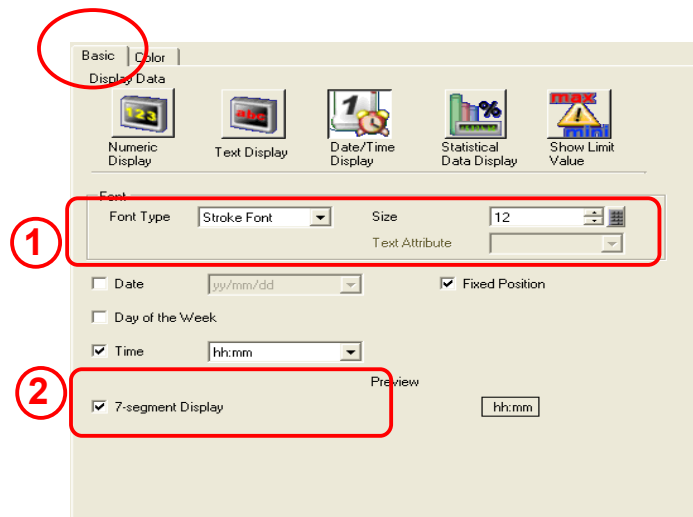
(3) Select Shape

- 1) Click [Select Shape] and select a shape of the display as you like.
- 2) After selecting a shape, click [OK].



(4) Basic Settings

- 1) Set [Font] as you like.
 - 2) Check [Time]. Select how to display the time from the pull-down menu.
- * If you check [Date] and [Day of the Week], the date and the day of the week will be displayed on the data display.



★ **One Point**

If you set [7-segment Display] in the [Basic] tab, the numbers will be displayed like ones displayed on a calculator.



(5) Color Settings

1) Border Color: Select a border color of the data display.

Numeral Value Color: Select a value color of the data display.

Shadow Color: Set a shadow color behind the value on the data display.

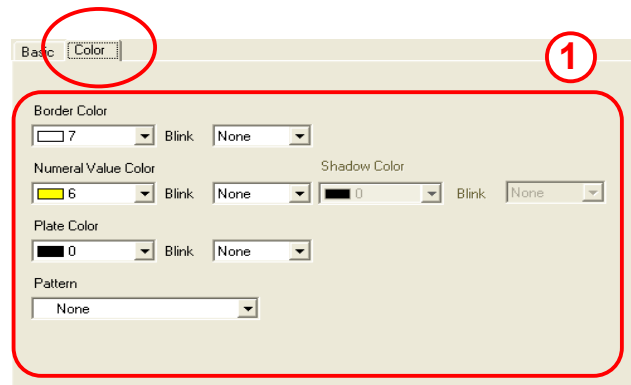
Plate Color: Select a plate color of the data display.

Pattern: Select a plate pattern of the data display.

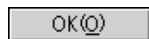
Pattern Color: Select a secondary color of the data display.

Blink: Set a blink speed or none.

Set desired colors.



2) Click [OK] to finish the settings.



MEMO

2.3

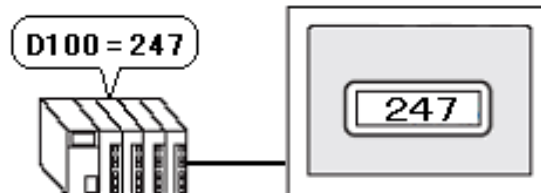
Numeric Display




Instruction

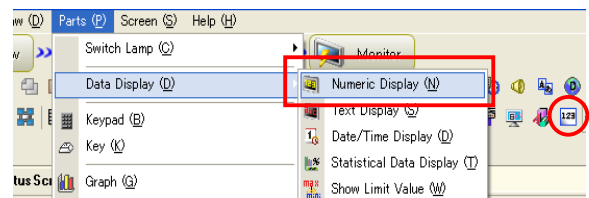
Display Numeric Value

To display numeric values such as a quantity of productions, use the “Data Display: Numeric Display” feature.

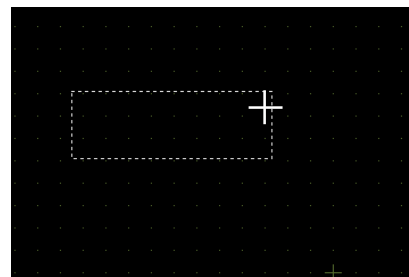


• Procedures of Placement/Setup

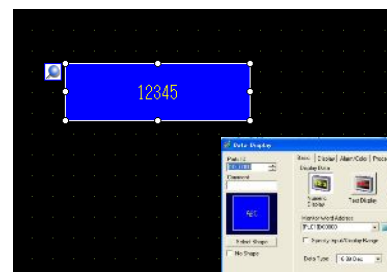
- 1) On the [Parts] menu, select [Data Display] → [Numeric Display].
Or click the [Data Display]  icon.



- 2) Drag the range to place the data display.



- 3) Double-click the data display and make settings.



Let's practice on the next page!



Let's Display Quantity of Production

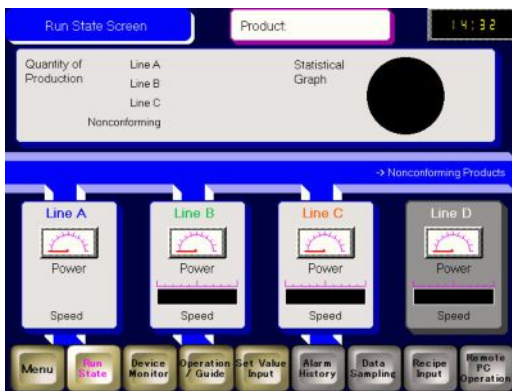
Let's display a quantity of productions of each line numerically.

[Setup Procedures]

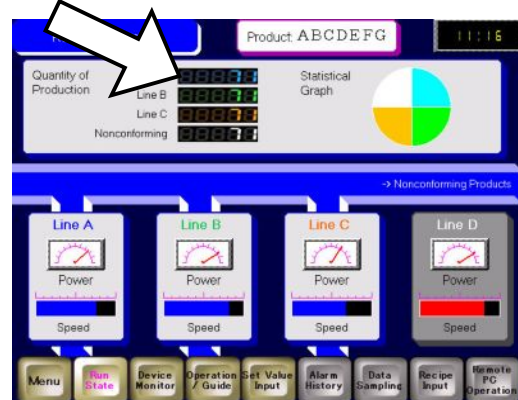
1. Open the base screen "2".
2. Select, place, and set the Data Display: Numeric Display.

Open the base screen "2".

<Practice Screen>



<Completed Screen>

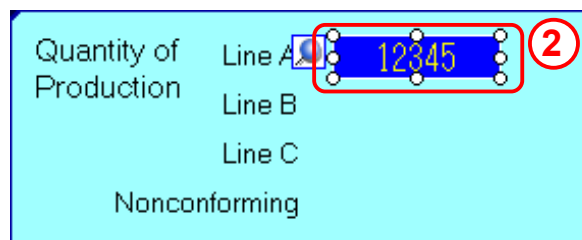


(1) Select/Place Data Display

- 1) Click the [Data Display] icon on the tool bar.

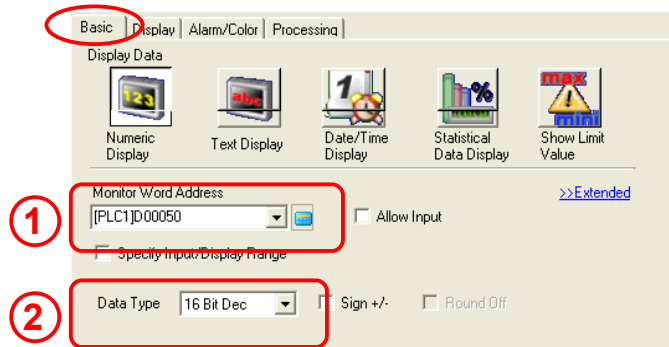


- 2) Drag the range to place the data display.



(2) Basic Settings

- 1) For [Monitor Word Address], set a word address in which the displayed data is stored.
Here, set [Monitor Word Address] to "USR02050".
- 2) For [Data Type], set a type of the stored data.
Here, set "16 Bit Dec".

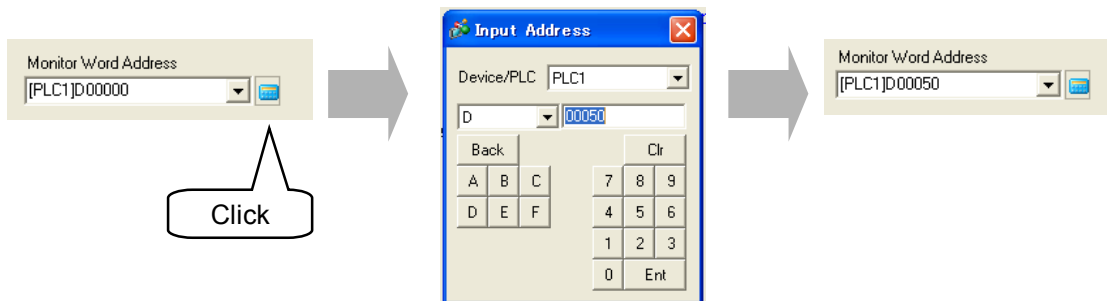


★ One Point

To enter a monitor word address, click  .

e.g.) Set "D50"

Set "D" for the device and "50" for the address.
Then click [Ent].



(3) Basic Settings

- ① For the [Font Setting], set the font of numerical values to be displayed.

Standard Font

Displays values at the same size horizontally and vertically like 8 x 16 dots, 16 x 16 dots.

Stroke Font

Displays values at the free size in the range of 6 to 127 dots.

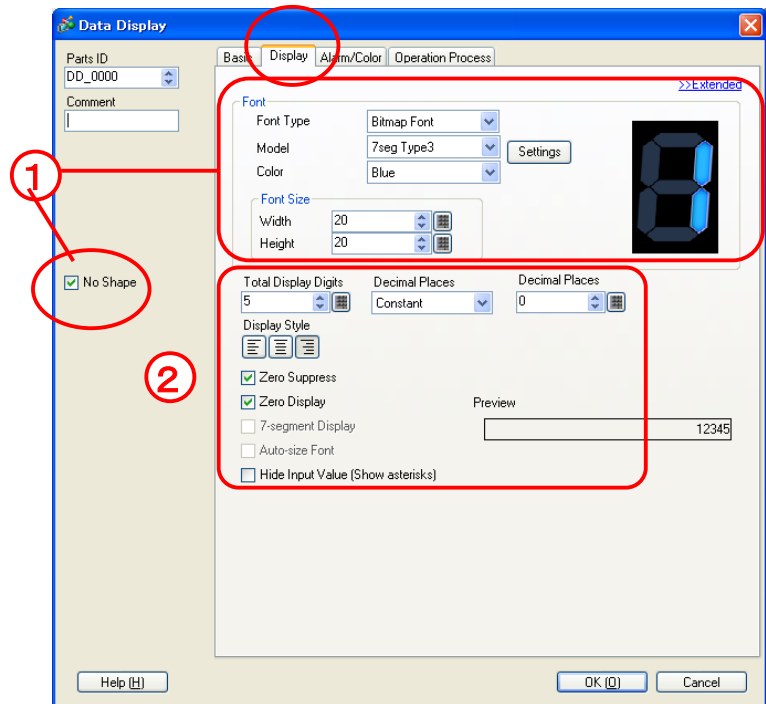
Bitmap Font

Neon-style or LED-style vivid display is possible.

(See the One Point below)

Here, set [Bitmap Font] for [Font Type], [7seg Type3] for [Model], [Blue] for [Color], [20] of Width and [20] of Height for [Font Size].

And check [No Shape].

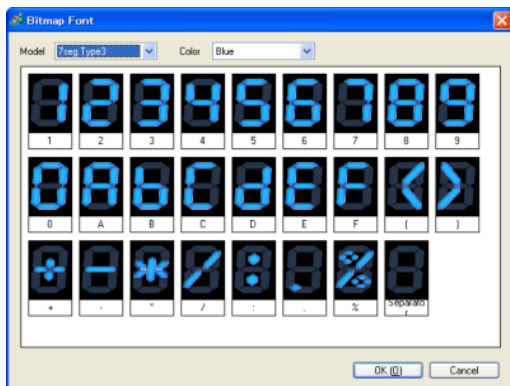


- ② Set [5] for [Total Display Digits], [Constant] for [Decimal Places], [0] for [Decimal Places]. Check [Zero Suppress], [Zero Display], etc if you need. (See the next page)

★ **One Point**

Bitmap Font

In addition to 7 seg type, there are various models such as Neon, LED, Metal. 6 types of colors such as whitish, reddish, greenish, yellowish, orangish, and bluish can be selected for each model.



Neon



Meter



Acrylic



LED

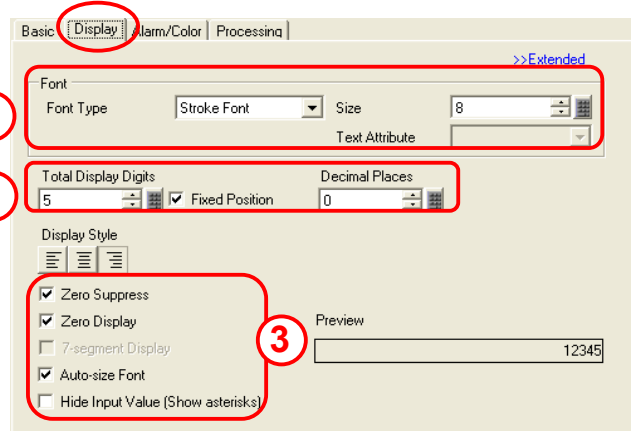
Click [OK] to check each model's image.

(4) Display Settings

1) Select a font type to display the numerical values in.

- **Standard Font**
Small sized text also displays well if placed in full scale (original size), such as “8 × 16 pixels”, or “16 × 16 pixels”.
- **Stroke Font**
can be freely enlarged within the range between 6 and 127 dots and displays well.

Here, set “Stroke Font” for [Font Type] and “8” for Size].

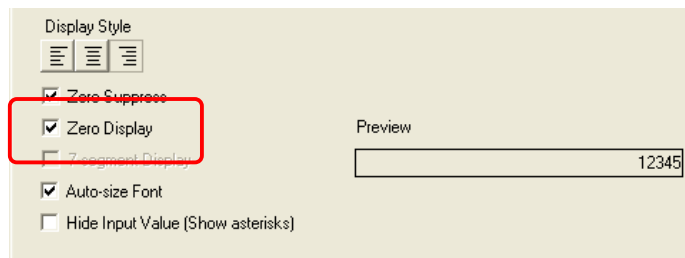


2) Set [Total Display Digits] to “5” and [Decimal Places] to “0”.

3) Check [Auto-size Font] to display the value full sized to the display area.

★ One Point


To change the display style of the values, make the following settings.



Display Style: Select the alignment of the numeric value in the numeric display area: “Align Right”, “Align Center”, or “Align Left”.

Zero Suppress: Set to display leading zeros or not.
e.g.) Total Display Digit = 5
Checked: 123
Not Checked: 00123

Zero Display: Set to display “0” or not when the data is “0”.
e.g.) Checked: 0
Not Checked: Not Displayed

7-segment Display: Displays values like ones on a calculator. 

Auto-size Font: Displays values in stroke fonts without the top and bottom margins. This option is unavailable when the [7-segment Display] is selected.

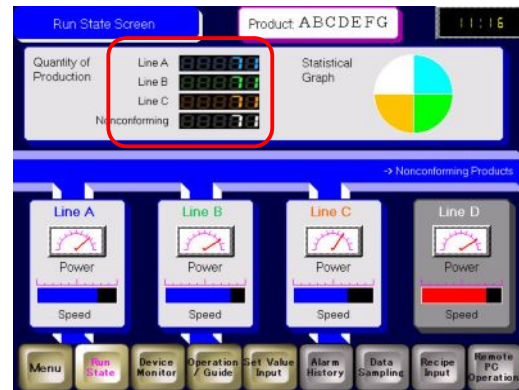
Hide Input Value (Show asterisks): Displays the input values as asterisks. This option can be used for password input.

(6) Place Data Displays for Others

Place data displays for “Line B”, “Line C”, and “Nonconforming Product”.

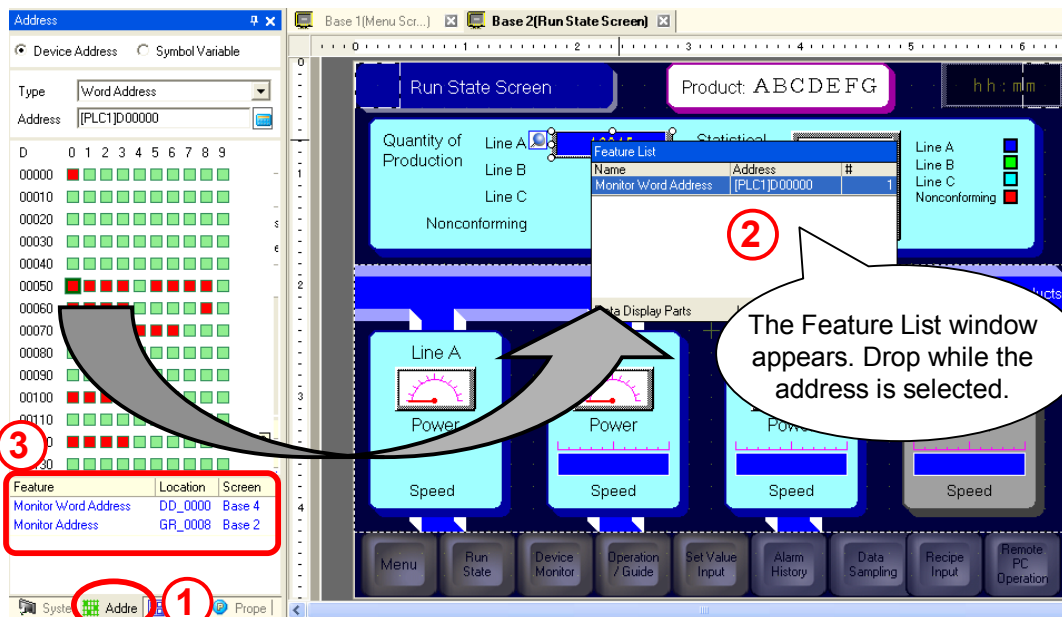
Set addresses as follows.

- Line B: USR02051
- Line C: USR02052
- Nonconforming: USR02053



★ **One Point**

You can set addresses in the Address settings window.



- 1) Select the Address settings window in the Work Space.
- 2) Drag and drop a cell of the address to be allocated on the part on the screen when the address in the Feature List window is selected.
- 3) The parts and screens, on which addresses of selected cells are used, are displayed under the address map.



Customize Numeric Display

Display Operation Result

Processing: Performs an arithmetic operation on the data stored in the Monitor Word Address and displays the result.

Operation Data Specification: Select the method to set the data to be operated.

Constant: Set a constant value as data to be operated.

Address: Set an address which stores data to be operated.

Indirect Area Specification: When selecting [Operation Data Specification] to “Address”, specify the specification method from either “Individual Settings” or “Area After Display Address”.

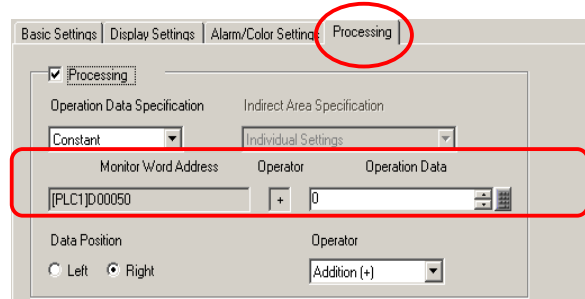
Individual Settings: Select an individual word address for the operation data.

Area After Display Address: Stores operation data in the next following address after [Monitor Word Address].

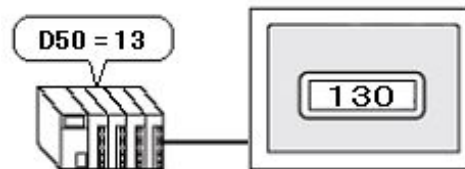
Operation Data: Enter operation data directly when [Operation Data Specification] is set to “Constant”. Specify an address to store operation data in when “Address” is selected.

Data Position: Set the position to display operation data.

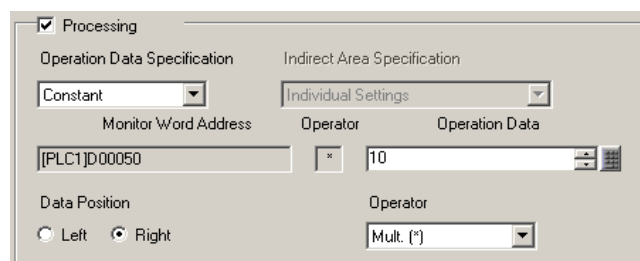
Operator: Select an operator from “Addition (+)”, “Subtraction (-)”, “Multiple (*)”, “Division (/)”, “Logical AND (&)”, “Logical OR (|)”, and “Exclusive (^)”.



e.g.) Multiply stored data by 10 and display it.



- 1) Check [Processing].
- 2) Set [Operation Data Specification] to “Constant”.
- 3) Select “Multiple (*)” in [Operator].
- 4) Specify “10” in [Operation Data].



2.4

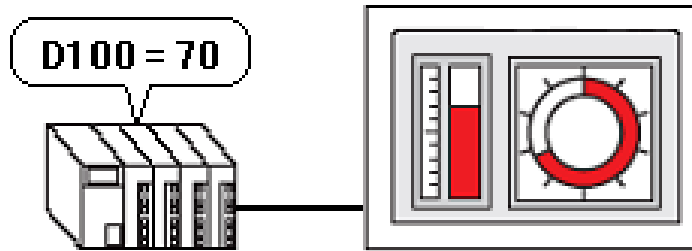
Graph Display




Display Graph

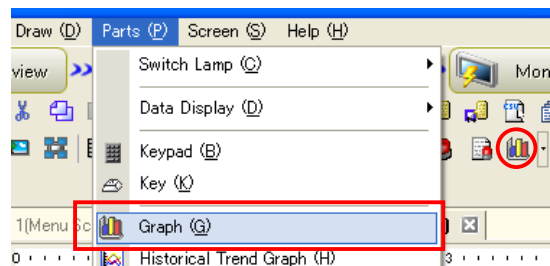
Instruction

This section explains how to set the “Graph: Normal Graph / Statistical Graph / Meter Graph” feature, which is often used to display data of speed or power.



• Procedures of Placement/Setup

- 1) On the [Parts] menu, select [Graph].
Or click the [Graph]  icon.

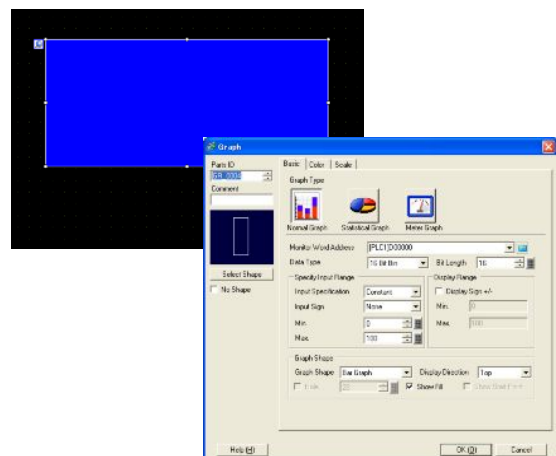


- 2) Drag the range to place the graph.



- 3) Double-click the graph and make settings.

Let's practice on the next page!





Let's Display Line Speed in Graph

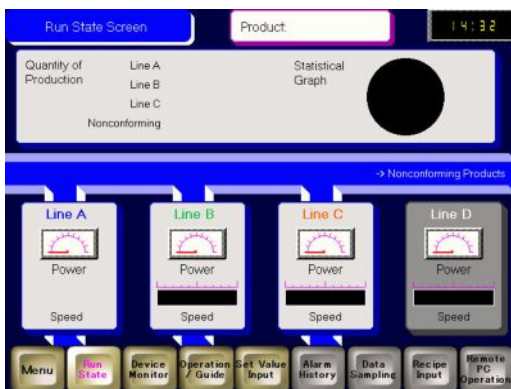
Let's display speed data of each line in a bar graph!

[Setup Procedures]

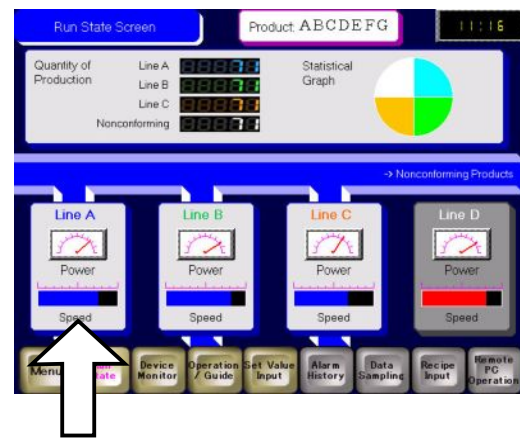
1. Open the base screen "2".
2. Select, place, and set the Graph: Normal Graph.

Open the base screen "2".

<Practice Screen>



<Completed Screen>

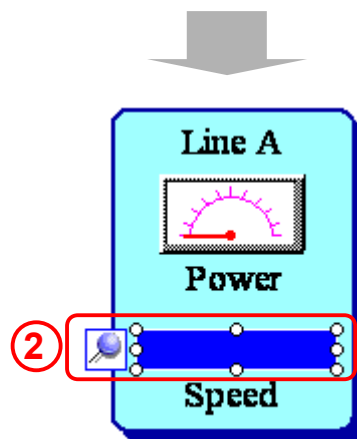


(1) Select/Place Graph

- 1) Click the [Graph] icon on the tool bar.



- 2) Drag the range to place the graph.

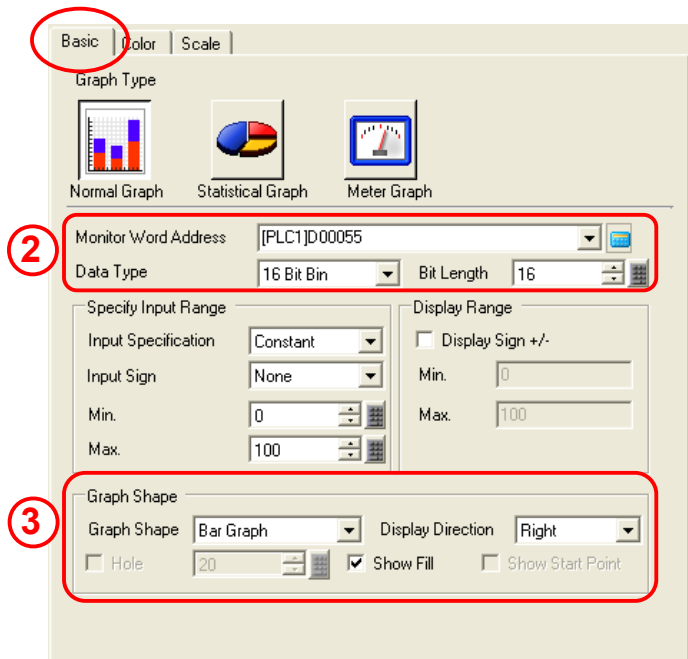


(2) Basic Settings

- 1) Double-click the placed graph.
- 2) **Monitor Word Address:**
Set a word address in which the displayed data is stored.
- Data Type:**
Set a type of stored data.

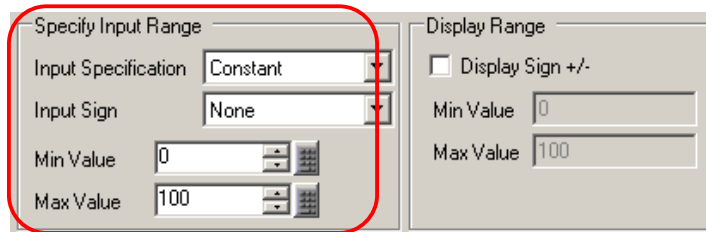
Here, set [Monitor Word Address] to "USR02055" and [Data Type] to "16 Bit Bin".

- 3) Select "Bar Graph" in [Graph Shape] and "Right" for [Display Direction].



★ One Point

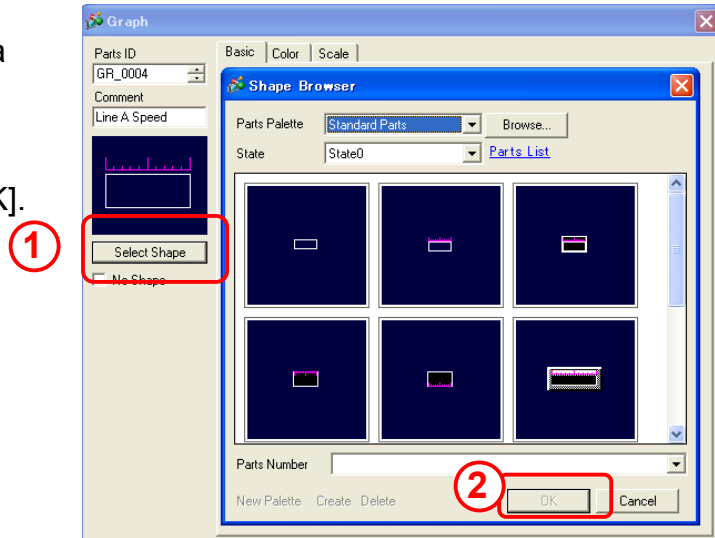
To change the data range to display, make settings in [Specify Input Range] in the [Basic] settings.



- Input Specification:** Specify "Constant" when the minimum and maximum values are fixed, or "Address" when they are variable.
- Input Sign:** Select a sign or none.
- Min./Max.:** Set the minimum and maximum values of the input range. When you select "Address" for [Input Specification], specify addresses to store values in.

(3) Select Shape

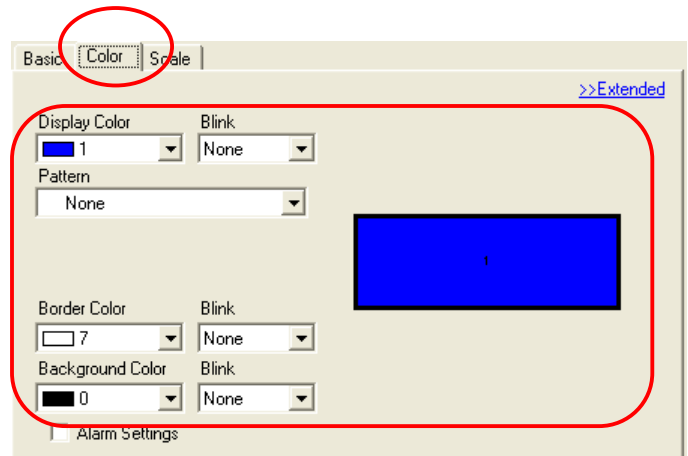
- 1) Click [Select Shape] and select a shape of the graph as you like.
- 2) After selecting a shape, click [OK].



(4) Color Settings

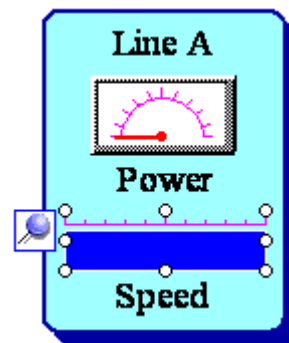
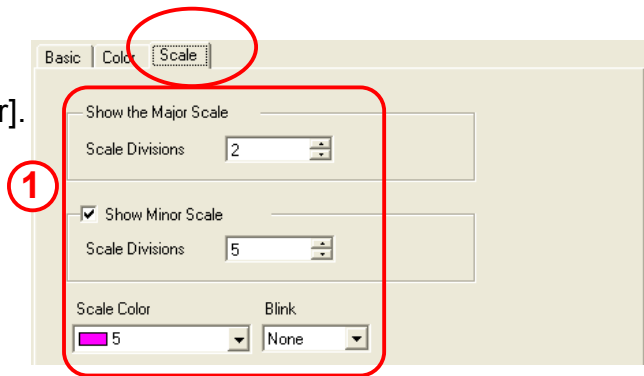
- Display Color:** Select a color of the graph.
- Pattern:** Select a pattern of the graph.
- Border Color:** Select a border color of the graph.
- Background Color:** Select a background color of the graph.
- Blink:** Set a blink speed or none.

Set [Color] as you like.



(5) Scale Settings

- 1) Set [Scale Divisions] and [Scale Color].
- 2) Click [OK] to finish the settings.





Customize Bar Graph

(1) Change Color of Graph when Value gets to Alarm Value

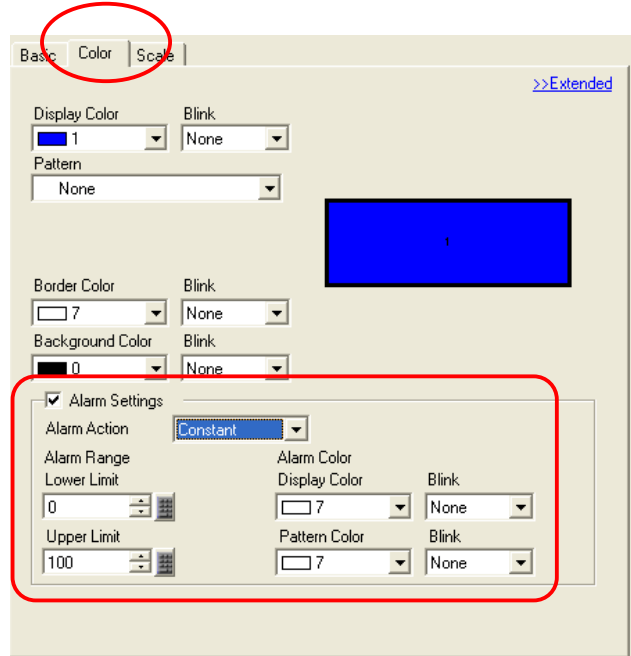
Alarm Settings: The value can be displayed in a different color when it is out of the specified range.

Alarm Action: Select an alarm action either “Constant” or “Address”.

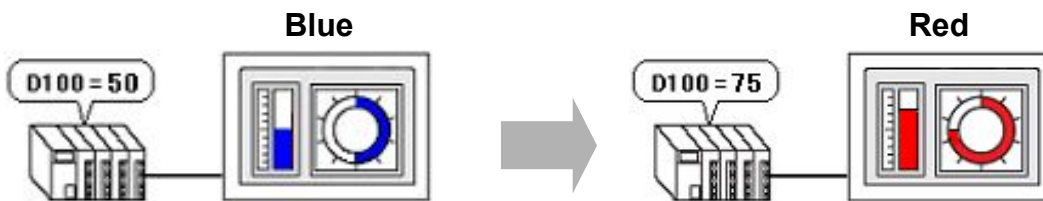
Constant: Set the upper and lower limit with a constant directly.

Address: Specify addresses to set the upper and lower limit.

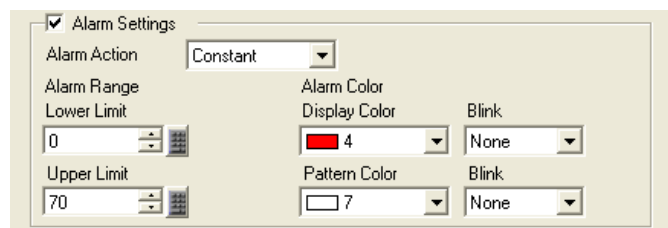
Alarm Color: Set an alarm color.

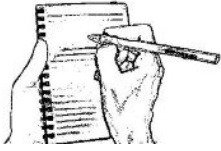


e.g.) Display a graph in red when displayed data is 71 or above.



- 1) Check [Alarm Settings].
- 2) Select “Constant” for [Alarm Action].
- 3) Set [Lower Limit] to “0” and [Upper Limit] to “70” for [Alarm Range].
- 4) Set [Display Color] to “Red: 4” in [Alarm Color].





MEMO

2.5

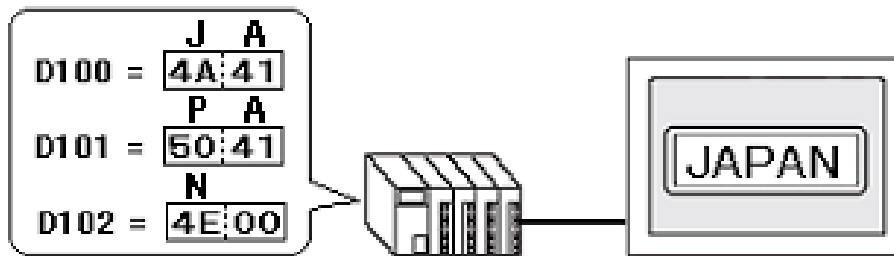
Text Display



Instruction

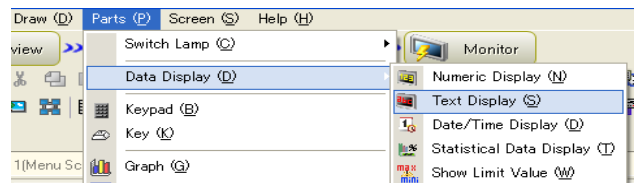
Display Text Data

To display text by reading text data stored in a device/PLC, use the “Data Display: Text Display” feature.

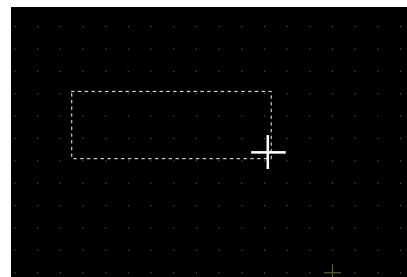


• Procedures of Placement/Setup

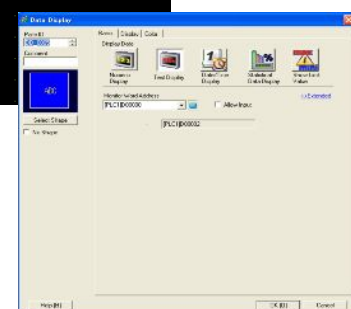
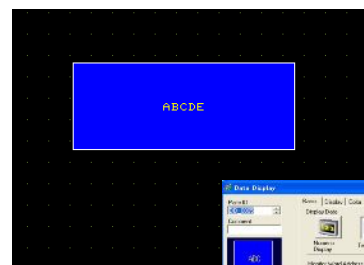
- 1) On the [Parts] menu, select [Data Display] → [Text Display]. Or click the [Data Display] icon.



- 2) Drag the range to place the data display.



- 3) Double-click the data display and make settings.



Let's practice on the next page!



Let's Display Product Name

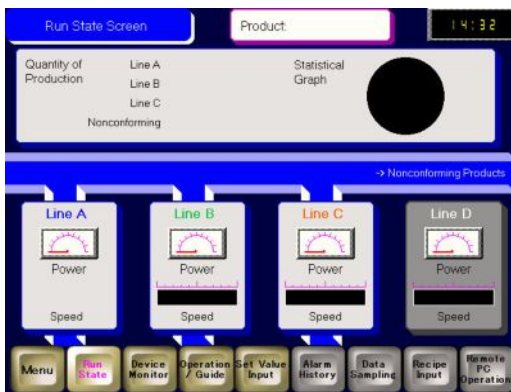
Let's display a product name!

[Setup Procedures]

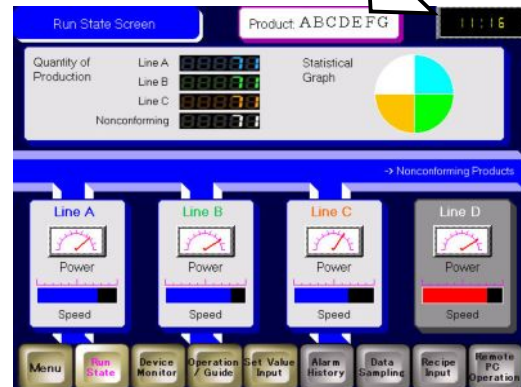
1. Open the base screen "2".
2. Select, place, and set the Data Display:Text Display.

Open the base screen "2".

<Practice Screen>



<Completed Screen>



(1) Select/Place Data Display

- 1) Click the [Data Display] icon on the tool bar.



- 2) Drag the range to place the data display.

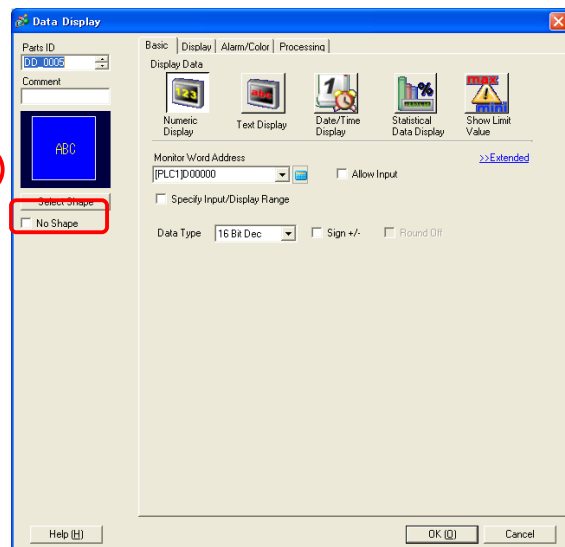


(2) Select Shape

- 1) Double-click the placed data display.

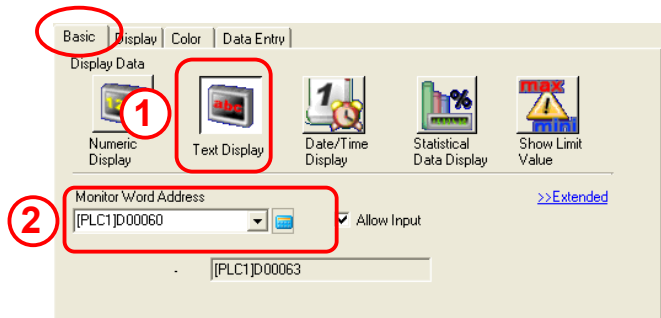


- 2) Check [No Shape].



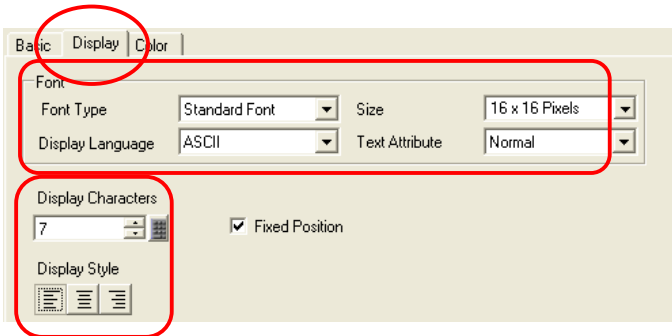
(3) Basic Settings

- 1) Select [Text Display].
- 2) For [Monitor Word Address], set a top word address which stores text data to display. Here, set "USR02060".



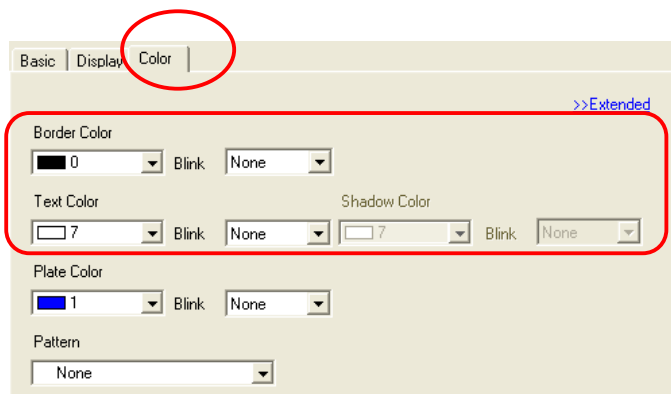
(4) Display Settings

- 1) Set a text font to display in [Font].
 Font Type: Standard Font
 Size: 16 × 16 Pixels
 Display Language: ASCII
 Text Attribute: Normal
- 2) Set [Display Characters] to "7" and select "Left Align" for [Display Style].

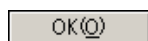


(5) Color Settings

- 1) Set [Text Color] to "Black: 0" and [Plate Color] to "White: 7".



- 2) Click [OK] to finish the settings.



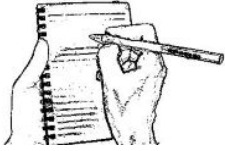


Let's Transfer Data to GP and Check Performance

<Completed Screen>



Touch the hidden switch in the upper left for one second, and the value will count up.



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