# 14 Data Display & Data Input

This chapter explains how to use "Data Display & Data input" to place data display parts. Please start by reading "14.1 Settings Menu" (page 14-2) and then turn to the corresponding page.

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## 14.1 Settings Menu







## 14.2 Displaying/Inputting Numeric Data

## 14.2.1 Introduction

Displays data stored in a device/PLC



Display data stored in a designated Word Address in the device/PLC as a numeric value. Furthermore, by specifying Input Permission settings, you can display a number pad on the screen and input data to a designated Word Address.

#### 14.2.2 Setup Procedure

NOTE	• Please refer to the Setup Guide for details.
	(Page 14-44)
	• For details of the part placement method and the address, shape, color, and
	label setting method, refer to the "Part Editing Procedure".
	<sup>G</sup> "9.6.1 Editing Parts" (page 9-38)



- 1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Numeric Display (N)], or click the **123** icon, and place it on the screen.
- **2** Double-click the placed Data Display. The following dialog box appears.



**3** Select the Data Display shape from [Select Shape].

4 In [Monitor Word Address], set the address (D100) that will store the Value to display.

When the icon is clicked, an address input keypad will be displayed.

Select device "D", input "100" as the address, and press the "Ent" key.

Monitor Word Address	Input Address     X       Device/PLC     PLC1	Monitor Word Address [PLC1]D00100	<b>-</b>
Click	D 100 Back Cr A B C D E F 4 5 6 1 2 3 0 Ent		

5 Set the type of data that will be displayed (for example "16 Bit Dec") in [Data Type].

Monitor Word Address [PLC1]D00100 🔽 🥅 🗖 Allow Input				
D Specify I	Input/Display	Range		
Data Type	16 Bit Dec 16 Bit Dec 16 Bit Hex 16 Bit Oct 16 Bit BCD 16 Bit Bin 32 Bit Dec 32 Bit Hex 32 Bit Bin		Sign +/-	E Round Off

**6** Select the [Allow Input] check box to display the [Data Entry] tab. Select the [Enable Popup Keypad] check box. You can enter numerical data from the popup keypad.

			6		
	Basic Display	Alarm/Color   Pro	cessing Data B	intry	
	Display Data				
	Numeric Display	Text Display	Date/Time Display	Statistical Data Display	Show Limit Value
	Monitor Word Ad [PLC1]D00100	ddress 💌 🖬 ut/Display Range	Allow	Input	<u>&gt;&gt;Extended</u>
	Data Type 👖	6 Bit Dec 💌	🔲 Sign +/-	🔲 Round Off	
NOTE	• This can	not be set wh	en only nur	meric data is	displayed.

7 As needed, set the Data Display color and text on the [Alarm/Color] tab and [Display] tab, and click [OK].

## 14.3 Displaying/Inputting Text Data

## 14.3.1 Introduction



Display text data stored in a specified Word Address on the device (PLC).

There are two methods for changing Text Data: change the displayed screen, or use a trigger bit.

Furthermore, by specifying Input Permitted settings, you can display a keypad on the screen and input text data to a designated Word Address.

#### 14.3.2 Setup Procedure

NOTE	<ul> <li>Please refer to the Setup Guide for details.</li> <li>"" "14.11.2 Text Display" (page 14-84)</li> </ul>
	• For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".

<sup>(27)</sup> "9.6.1 Editing Parts" (page 9-38)



- 1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Text Display (S)], or click 123 , and place it on the screen.
- **2** Double-click the placed Data Display. The following dialog box appears.

💕 Data Display		×
Parts ID DD_0000 == Comment	Basic Display Color Display Data Numeric Display Text Display Date/Time Display Date/Time Display Date Display Date Display Date Display Date Display Date Display Date Display Date Display	
ABC Select Shape	Monitor Word Address	
Help ( <u>H</u> )	OK (D) Cancel	

- **3** Select the Data Display shape from [Select Shape].
- 4 Click the [Display] tab, and enter the number of characters from 1 to 100 into the [Display Characters] field. When working with double-byte characters, each double-byte character counts as two characters.



5 Click the [Basic Settings]tab, and in [Monitor Word Address], set the address (D100) that will store the Value to display.

When the icon is clicked, an	Select device "D", input "100"
address input keypad will be	as the address, and press the
displayed.	"Ent" key.
Monitor Word Address [PLC1]D00000 Click	Input Address         Monitor Word Address           Device/PLC         PLC1           D         100           Back         Cir           A         B           C         7           A         5           1         2           0         Ent

6 The last address of the Word Address (Monitor Word Address + Display characters) is displayed.

	Monitor Word Address	
	- [[PLC1]D00102	
NOTE	• Use two characters for one word in English single- character for one word in double-byte characters.	byte characters, and o

e

NOTE

7 Select the [Allow Input] check box to display the [Data Entry] tab. Select the [Enable Popup Keypad] check box. You can enter text data from the popup keypad.

Basic Display	Color   Data Entry		1		
Numeric	Text Display	Date/Time	Statistical	Show Limit	
Monitor Word Ad	dress SR00000 💌 🖬			>>Extended	
	- [#INTERNA	LJUSR00002			
- • This	s cannot be se	et when disr	laving text da	ita only.	

8 If necessary, set the Data Display color and text on the [Color] tab and [Display] tab, and click [OK].



## 14.4 Displaying Numerical Data as an Alarm

## 14.4.1 Introduction



Set a range with preset numeric values.

If the numerical data is outside the range, the display color changes and the user is notified (for example, with an alarm).

## 14.4.2 Setup Procedure

NOTE	Please refer to the Setup Guide for details.
NOTE	🆃 "14.11.1 Numeric Display 🔳 Alarm/Color/Basic" (page 14-75)
	• For details of the part placement method and the address, shape, color, and
	label setting method, refer to the "Part Editing Procedure".
	"9.6.1 Editing Parts" (page 9-38)



1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Numeric Display (N)], or click the **123** icon, and place it on the screen.

2 Double-click the placed Data Display. The following dialog box appears.

💕 Data Display	×
Parts ID	Basic Display Alarm/Color Processing
DD_0000	Display Data
Comment	Numeric Display Text Display Text Display
ABC	Monitor Word Address
Select Shape	Specify Input/Display Range
No Shape	Data Type 16 Bit Dec 💌 🗖 Sign +/- 🗖 Round Off
Help (H)	OK (O) Cancel

- **3** Select the Data Display shape from [Select Shape].
- 4 In [Monitor Word Address], set the address (D100) that will store the Value to display.



5 Set the type of data that will be displayed (for example "16 Bit Dec") in [Data Type].



6 Click the [Alarm/Color] tab, and select the [Alarm Settings] check box.

💕 Data Display		×
Parts ID DD_0000	Basic Display Alarm/Color Proessing	<u>≫Extended</u>
Comment	1	
ABC	Border Color           7         Blink         None         Image: Color         Shadow Color           Numeral Value Color         Shadow Color         Image: Color         Shadow Color	
Select Shape	6     ■     Blink     None     ■     7     ■     Blink     No       Plate Color	ne 🔻
No Shape	Pattern	
	Alarm Settings	
	Lower Limit P	
	Numeral Value Color	ne 🔽
Help ( <u>H</u> )	OK @	Cancel

7 In [Alarm Action], select the Upper/Lower Limit Value specification method from [Direct] or [Address] (in this example, [Direct]).

Alarm Action	Direct	Ŧ
	Direct	

8 In [Alarm Range], set the Upper Limit (for example, 100) and Lower Limit (for example, 0).



**9** In [Alarm Color], set the [Numeral Value Color] (for example, Red) and the [Plate Color] (for example, Yellow).



10 If necessary, set the Data Display text on the [Display] tab, and click [OK (O)].

# 14.5 Color-coding and Displaying Multiple Ranges

## 14.5.1 Introduction



By setting colors for each range, values will change colors when they reach the set range. Plate/text color can be changed.

## 14.5.2 Setup Procedure

NOTE	• Please refer to the Setup Guide for details.
NOTE	🐨 "14.11.1 Numeric Display" (page 14-44)
	• For details of the part placement method and the address, shape, color, and
	label setting method, refer to the "Part Editing Procedure".
	"9.6.1 Editing Parts" (page 9-38)



1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Numeric Display (N)], or click the **123** icon, and place it on the screen.

2 Double-click the placed Data Display. The following dialog box appears.

💰 Data Display	×
Parts ID	Basic Display Alarm/Color Processing
DD_0000	Display Data
Comment	
	Numeric Text Display Date/Time Statistical Show Limit
ARC	
	Monitor Word Address
Select Shape	Specify Input/Display Range
🗖 No Shape	Data Type 16 Bit Dec 💌 🗆 Sign +/- 🗖 Round Off
Help ( <u>H</u> )	OK (Q) Cancel

- **3** Select the Data Display shape from [Select Shape].
- 4 In [Monitor Word Address], set the address (D100) that will store the Value to display.



5 Set the type of data that will be displayed (for example "16 Bit Dec") in [Data Type].



NOTE

• Set [Specify Input/Display Range] so the numeric data can be converted comparatively and displayed.

6 Click the [Alarm/Color] tab, and click [Extended].

Data Display	×
Parts ID	Basic Displat Alarm/Color Pocessing
DD_0000 📑	<u>≥&gt;Extended</u>
Comment	4
	Border Color
ABC	7 V Blink None
	Numeral Value Color Shadow Color
Select Shape	6 Blink None 7 Blink None
No Shape	Plate Color
	Pattern
	None
	EliAhan Saulian i
	Alarm Action
	- Maxim Color
	Numeral Value Color
	6 V Blink None
Help ( <u>H</u> )	OK (Q) Cancel

7 In [Ranges], set the number of ranges (for example, 4).

Ranges	4				) s
	BS	CL	.R	Саг	icel
	7	8	9	A	в
1	4	5	6	С	D
	1	2	3	E	F
Bange	0	-		Eľ	٩T

8 Select a method of specifying the range of minimum and maximum values in [Specify Range] from [Constant] or [Address].

		<u>&lt;<basic< u=""></basic<></u>	
Specify Range	Constant	•	

**9** Select 1 from the [Alarm Color Display Bar], set [Range 01]'s Max and Min. (for example, Min =0, Max =2000).

Range Range Number 0 <= Range01 Range01 Min. 0	( 10000			<b>-</b>	
	< 16383	Max.	16383		

10 In [Alarm Color], set [Range 01]'s [Numeral Value Color] (for example, Yellow) and the [Plate Color] (for example, Blue).



11 Select 2 from [Alarm Color Display Bar] and set the [Range 02] Max and Min. (for example, Min = 2000, Max 5000).

	2	3		4	
-Range Range Number	2000 <= Range02 < 32767			•	
Range02 Min.	2000 🗄	Max.	<u>32767</u>		E H
		Max.	5000		- #

12 In [Alarm Color], set [Range 02]'s [Numeral Value Color] (for example, Yellow) and the [Plate Color] (for example, Red).

Numeral Value Colo			Plate Color				
6 🖵	Blink None	-	4	-	Blink	None	-

**13** Select 3 from [Alarm Color Display Bar] and set the [Range 03] Min and Max. (for example, Min 000, Max 8000).

1 2	3	4
Range Range Number Range03 Min.	5000 <= Range03 < 49151 5000	
	Max. 8000	= #

14 In [Alarm Color], set [Range 03]'s [Numeral Value Color] (for example, Black) and the [Plate Color] (for example, Yellow).

Numeral Value Color		Plate Color	
	Blink None 💌	6 🔽	Blink None 💌

15 Select 4 from [Alarm Color Display Bar] and set the [Range 04] Min and Max. (for example, Min 8000).



16 In [Alarm Color], set [Range 04]'s [Numeral Value Color] (for example, Yellow) and the [Plate Color] (for example, Blue).



17 If necessary, set the Data Display text on the [Display] tab, and click [OK].

## 14.6 Displaying the Date and Time

## 14.6.1 Introduction

2005/01/20 (Thu) 09:32

The GP clock and calendar data are stored in a designated area of the System Data Area.

#### 14.6.2 Setup Procedure

NOTE	• Please refer to the Setup Guide for details.
	"14.11.3 Date/Time Display" (page 14-101)

For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".
 "9.6.1 Editing Parts" (page 9-38)

#### 2005/01/20 (Thu) 09:32

- 1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Text Display (S)], or click 123, to place it on the screen.
- **2** Double-click the placed Data Display. The following dialog box appears.

💕 Data Display	
Parts ID	Basic Color
	Numeric Display Numeric Display Numeric Display Numeric Display Numeric Display
	Font Font Type Standard Font 💌 Size 8 x 16 Pixels 💌
Select Shape	Text Attribute Normal
🔲 No Shape	✓ Date yy/mm/dd ▼ ✓ Fixed Position
	☑ Day of the Week
	I✓ Time hh:mm ▼
	Preview
	7-segment Display yy/mm/dd (Mon) hh:mm
Help ( <u>H</u> )	OK (Q) Cancel

- **3** Select the Data Display shape from [Select Shape].
- 4 Choose a font for the date/time in [Font]. (For example, Standard Font, Size = 8X16 dots, Text Attribute = Standard)

Faut Tura Chandroid Faut Int Size Q v 16 Pivolo	
	<b>•</b>
Text Attribute Normal	•

5 Select a date format in [Date]. (For example, 20yy/mm/dd)

🔽 Date	yy/mm/dd 💌
☑ Day of the We	yy/mm/dd dd/mm/yy mm/dd/yy 20yy/mm/dd dd/mm/20yy mm/dd/20yy yy/mm/dd 20yy/mm/dd

- 6 To display the day, select the [Day of the Week] check box. (For example, Display day)
- 7 Select a time format in [Time]. (For example, hh:mm)



8 As needed, set the Data Display color on the [Color] tab, and click [OK].

## 14.7 Preventing Operational Errors Interlock

## 14.7.1 Introduction

The touch action will only be executed if the bit address specified in the Interlock Address meets the Touch Enable Condition.

• When the Touch Enable Condition is "Bit ON". The touch action will only work when the set Interlock Address is ON.



• When the Touch Enable Condition is "Bit OFF". The touch action will only work when the set Interlock Address is OFF.



## 14.7.2 Setup Procedure



- 1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Numeric Display (N)], or click the 123 icon, and place it on the screen.
- **2** Double-click the placed Data Display. The following dialog box appears.

💕 Data Display	×
Parts ID	Basic Display Alarm/Color Processing
DD_0000	Display Data
Comment	
	Numeric Text Display Date/Time Statistical Show Limit
100	Uispiay Dispiay Data Dispiay Value
ABC	Monitor Word Address
Select Shape	Specify Input/Display Range
No Shape	Data Type 16 Bit Dec 💌 🗖 Sign +/- 🔲 Round Off
Heln (H)	OK (O) Cancel

**3** Select the Data Display shape from [Select Shape].

4 In [Monitor Word Address], set the address (D100) that will store the Value to display.

When the icon is clicked, an address input keypad will be displayed.

Select device "D", input "100" as the address, and press the "Ent" key.



5 Set the type of data that will be displayed (for example "16 Bit Dec") in [Data Type].

Monitor Word Addre	ss			
[PLC1]D00100 🗨 🧰 🗖 Allow Input				
Specify Input/D	isplay Range			
Data Type 16 B 16 B 16 B 16 B 16 B 16 B 16 B 32 B 32 B 32 B 32 B	t Dec 💌 t Hex t Hex t Oct t BCD t Bin t Dec t Hex t Bin 💌	厅 Sign +/-	F Round Off	

**6** Select the [Allow Input] check box to display the [Data Entry] tab. Select the [Enable Popup Keypad] check box. You can enter numerical data from the popup keypad.



7 Click the [Data Entry] tab and click [Extended]. The following dialog box appears.

Data Display	X
Parts ID DD_0000 == Comment	Basic Display Alarm/Color Processile Data Entry
ABC	
Select Shape	Input Mode Auto Clear ON Input Barcode Designated Input Order Input Order Group Interlock Interlock Address Touch Enable Condition
	When Bit is ON      When Bit is OFF      Input Complete Flag      Input Complete Bit Address      Input Complete Bit Address
Help ( <u>H</u> )	OK (Q) Cancel

8 Select the [Interlock] check box, then in the [Interlock Address] field specify the bit address (M100) that will enable touch operations.

Interlock		
Interlock Address		Touch Enable Condition
[PLC1]X00000	-	💽 When Bit is ON 🔿 When Bit is OFF

**9** In the [Touch Enable Condition] field specify the condition that will enable touch operations (for example, "When bit OFF" for the touch operations are enabled when the bit is OFF).

Touch Enable Condition			
$\bigcirc$ When Bit is ON	♥ When Bit is OFF		

10 As needed, set the Data Display color and text on the [Alarm/Color] tab and [Display] tab, and click [OK].

## 14.8 Prevent Entering Data Outside the Allowed Range

## 14.8.1 Introduction



## 14.8.2 Setup Procedure



For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".
 "9.6.1 Editing Parts" (page 9-38)



1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Numeric Display (N)], or click the **123** icon, and place it on the screen.

2 Double-click the placed Data Display. The following dialog box appears.

💰 Data Display	×
Parts ID	Basic Display Alarm/Color Processing
DD_0000	Diepley-Date
Comment	
	Numeric Text Display Date/Time Statistical Show Limit Display Data Display Value
ABC	Monitor Word Address
	[PLC1]D00000
Select Shape	Specify Input/Display Range
	Data Type 16 Bit Dec 💌 🗖 Sign +/- 🗖 Round Off
Help ( <u>H</u> )	OK (Q) Cancel

**3** Select the Data Display shape from [Select Shape].

4 In [Monitor Word Address], set the address (D100) that will store the Value to display.



5 Set the type of data that will be displayed (for example "16 Bit Dec") in [Data Type].



6 Select the [Allow Input] check box to display the [Data Entry] tab. Select the [Enable Popup Keypad] check box. You can enter numerical data from the popup keypad.

Basic Display	Alarm/Color   Pro	cessine   Data E	intry	
Display Data				
Numeric Display	Text Display	Date/Time Display	Statistical Data Display	Show Limit Value
Monitor Word Ac [PLC1]D00100	ldress 💌 💌 t/Display Range		Input	>>Extended
Data Type 16	6 Bit Dec 💌	🔲 Sign +/-	☐ Round Off	

7 Click the [Alarm/Color] tab, and put a check mark in the [Alarm] box.

💕 Data Display		×
Parts ID	Basic Display Alarm/Color Pocessing	
DD_0000		>>Extended
Comment	1	
ABC Select Shape No Shape	Border Color 7	None
	Alarm Settings Alarm Action Direct Alarm Range Lower Limit D Alarm Color Numeral Value Color 6  Blink None	None
Help (H)	OK (O)	Cancel

8 In [Alarm Action], select the Upper/Lower Limit Value specification method from [Direct] or [Address] (in this example, [Direct]).

Alarm Action	Direct	•

9 In [Alarm Range], set the Upper Limit (for example, 100) and Lower Limit (for example, 0).



10 As needed, set the Data Display color and text on the [Alarm/Color] tab and [Display] tab, and click [OK].



# 14.9 8 x16 Dots Sequential Input

## 14.9.1 Introduction



Input data and touch the [Ent] key

The input is confirmed and the next Data Display part in the input order enters the Input Permit state. <sup>?</sup> Input data and touch the [Ent] key

#### 14.9.2 Setup Procedure

NOTE	• Please refer to the Setup Guide for details.
NOTE	🆃 "14.11.1 Numeric Display" (page 14-44)
	• For details of the part placement method and the address, shape, color, and
	label setting method, refer to the "Part Editing Procedure".
	"9.6.1 Editing Parts" (page 9-38)



- 1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Numeric Display (N)], or click the icon, and place it on the screen.
- **2** Double-click the placed Data Display. The following dialog box appears.

💰 Data Display		х
Parts ID	Basic Display Alarm/Color Processing	
DD_0000	Disnlay Data	
	Numeric Display         Text Display         Date/Time Display         Statistical Data Display         Show Limit Value	
ABC	Monitor Word Address ∑Extended [PLC1]D00000 ▼ □ Allow Input	
Select Shape	E Specify Input/Display Range	
🦳 No Shape	Data Type 16 Bit Dec 💌 🗖 Sign +/- 🗖 Round Off	
11-1-710		1

**3** Select the Data Display shape from [Select Shape].

4 In [Monitor Word Address], set the address (D100) that will store the Value to display.

When the icon is clicked, an address input keypad will be displayed.	Select device "D", input "100" as the address, and press the "Ent" key.		
Monitor Word Address [PLC1]D00000 Click	Input Address         Image: Constraint of the second	Monitor Word Address [PLC1]D00100	

5 Set the type of data that will be displayed (for example "16 Bit Dec") in [Data Type].

Monitor Word	l Address			
[PLC1]D0010	00	<b>_</b>	📃 🔲 Allov	v Input
🔲 Specify I	'nput/Display F	Range	-	
Data Type	16 Bit Dec 16 Bit Dec 16 Bit Hex 16 Bit Oct 16 Bit BCD 16 Bit Bin 32 Bit Dec 32 Bit Hex 32 Bit Bin		∏ Sign +/-	n Round Off

6 Select the [Allow Input] check box to display the [Data Entry] tab. Select the [Enable Popup Keypad] check box. You can enter numerical data from the popup keypad.

Basic Display	Alarm/Color   Pro	cessin t   Data E	intry	
Display Data				
Numeric Display	Text Display	Date/Time Display	Statistical Data Display	Show Limit Value
Monitor Word Address [PLC1]D00100 Specify Input/Display Range			>>Extended	
Data Type 16	i Bit Dec 💌	🗖 Sign +/-	E Round Off	

7 Click the [Data Entry] tab, and select the [Designated Input Order] check box.

Designated Input Order

8 In [Input Order], set the order the part will enter input status (for example, 1).

Input Order	1	= =	
-------------	---	-----	--

**9** As needed, set the Data Display color and text on the [Alarm/Color] tab and [Display] tab, and click [OK].

NOTE	• In the same way, to set the 2nd Data Display that will enter the Input
NOTE	Permitted state, set [Monitor Word Address] to "D101", and [Input Order] to
	"2". For the 3rd Data Display that will enter the Input Permitted state, set
	[Monitor Word Address] to "D102", and [Input Order] to "3".
	• For information about the Input Order settings, refer to "14.13.1 Set Input
	Order" (page 14-113).
## 14.10 Changing Values by Adding/Subtracting

#### 14.10.1 Introduction



When you use a word switch's Add/Subtract Data function, the directly referenced data in a Data Display can be modified. This is useful for fine-tuning and small-scale adjustments. This setup is an option for increasing or decreasing values. When the value rolls over, it carries over changes to other digits.

#### 14.10.2 Setup Procedure

NOTE

- Please refer to the Setup Guide for details.
- For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".
   "9.6.1 Editing Parts" (page 9-38)



1 On the [Parts (P)] menu, select [Data Display (D)] and then click [Numeric Display (N)], or click the icon, and place it on the screen.

2 Double-click the placed Data Display. The following dialog box appears.

💰 Data Display		×
Parts ID	Basic Display Alarm/Color Processing	
DD_0000	Display Data	
Comment	Numeric Display         Text Display         Date/Time Display         Statistical Date Display         Show Limit Value	
AEC	Monitor Word Address	
Select Shape	Specify Input/Display Range	
► No Shape	Data Type 16 Bit Dec 💌 🗖 Sign +/- 🗖 Round Off	
Help ( <u>H</u> )	OK (Q) Cancel	

- **3** Select the Data Display shape from [Select Shape].
- 4 In [Monitor Word Address], set the address (D100) that will store the Value to display.



5 Set the type of data that will be displayed (for example, "16 Bit Bin") in [Data Type].

Data Type	16 Bit Dec 💌
	16 Bit Dec
	16 Bit Oct
	16 Bit Bin
	32 Bit Dec 32 Bit Hex
	32 Bit Bin 🛛 💌

- 6 As needed, set the Data Display color and text on the [Alarm/Color] tab and [Display] tab, and click [OK].
- 7 Next, set the switch which will operate the addition action. Select the [Parts (P)] menu [Switch Lamp] option
  - [Word Switch] command, or click  $\bigcirc$ , and place it on the screen.
- 8 When the placed Switch part is double-clicked, the settings dialog box will open.

💰 Switch/Lamp		x
Parts ID SL_0000 == Comment Normal Select Shape No Shape	Switch Feature       Switch Common       Lamp Feature       Color       Label         Switch Feature       Multi-function List       Image: Color Switch Change       Image: Color Switch Change       Image: Color Switch Swit	
Help ( <u>H</u> )	OK (Q) Cancel	

- 9 Select the Switch shape from [Select Shape].
- 10 Set the address (D100) where you want to write data when you touch the switch in [Word Address].

Word Address	
[PLC1]D00100	-

11 Choose [Add Data] from [Word Action].

W	Word Action	
ļ	Add Data	•

12 Set the address (D100) which will add the data in [Addition Base Word Address].

Addition Base Word Address		
[PLC1]D00100	<b>_</b>	

**13** Set [Data Type] to [Bin] and [Constant] to "1" and click [OK]. The addition action's Word switch function is now set.

	Data Type
	Bin 💌
	Constant
+	
	🔲 Continuous Add Feature
	D00100 = D00100 + 1

- 14 Next, set the switch which will operate the subtraction action. From the [Parts (P)] menu, point to [Switch Lamp] and select [Word Switch], or click 🥌 and place it on the screen.
- 15 When the placed Switch part is double-clicked, the settings dialog box will open.

💰 Switch/Lamp	×
Switch/Lamp Parts ID SL_0000 Comment Comment Select Shape No Shape No Shape	Switch Feature       Switch Common       Lamp Feature       Color       Label         Image: Switch Feature       Multi-function List       Image: Screen Screen Switch       Special Switch         Image: Switch Switch       Bit Switch Screen Switch       Special Switch       Selector Switch         Image: Word Address       Image: Screen Switch       Special Switch       Selector Switch         Image: Word Address       Image: Screen Switch       Image: Screen Switch       Selector Switch         Image: Screen Switch Switch       Image: Screen Switch Switch       Selector Switch       Selector Switch         Image: Screen Switch Switch Switch Switch Switch       Image: Screen Switch Switch Switch       Selector Switch       Selector Switch         Image: Screen Switch Sw
Help ( <u>H</u> )	OK ( <u>0</u> ) Cancel

- 16 Select the Switch shape from [Select Shape].
- 17 Set the address (D100) where you want to write data when you touch the switch in [Word Address].

Word Address		
[PLC1]D00100	-	

18 Choose [Subtract Data] from [Word Action].

Word Action	
Subtract Data	-

19 Set the address (D100) which will subtract the data in [Subtraction Base Word Address].

Subtraction Base	Word Address
[PLC1]D00100	-

20 Set [Data Type] to [Bin] and [Constant] to "1" and click [OK]. The subtraction action's Word switch function is now set.



# 14.11 Data Display Settings Guide

💰 Data Display	×
Parts ID	Basic Display Alarm/Color Processing
DD_0000 🚍	Display Data
Comment	
	Numeric
	Display Display Data Display Value
ABC	Monitor Word Address <u>&gt;&gt;Extended</u>
	[PLC1]D00000
Select Shape	🗖 Specify Input/Display Range
No Shape	
$\underline{\qquad}$	Data lype To Bit Dec 💌 📋 Sign +/- 📔 Round Off
Help ( <u>H</u> )	OK (Q) Cancel

Setting	Description
Part ID	Placed parts are automatically assigned an ID number. Data Display's ID: DD_ ****(4 digits) The letter portion is fixed. The number portion can be modified from 0000 to 9999.
Comment	The comment for each Part can be up to 20 characters long.
Shape Display	Displays the shape and status of the Part selected in [Select Shape].

Setting	Description
Select Shape	Open the Select Shape dialog box to choose the Part shape.
	💰 Shape Browser 🔀
	Parts Palette Standard Parts Browse
	State 0
	Parts Number
	New Palette Oreate Delete OK Cancel
Display Data	<ul> <li>Select the Data Display type.</li> <li>Numeric Display <ul> <li>Displays the numeric data stored in the Word Address.</li> <li>"14.11.1 Numeric Display" (page 14-44)</li> </ul> </li> <li>Text Display <ul> <li>Displays the character string stored in the Word Address.</li> <li>"14.11.2 Text Display" (page 14-84)</li> </ul> </li> <li>Date/Time Display <ul> <li>Refers to the GP clock data and displays the date/time.</li> <li>"14.11.3 Date/Time Display" (page 14-101)</li> </ul> </li> <li>Statistical Data Display <ul> <li>Takes statistics from the successive values of multiple Word Addresses, and displays the numeric value.</li> <li>"14.11.4 Statistical Data Display" (page 14-104)</li> </ul> </li> <li>Show Limit Value <ul> <li>Displays the set Alarm values (the displayed data's upper/lower limit</li> </ul> </li> </ul>
	values) on the same screen as a Numeric Display with [Alarm].
No Shape	Select whether or not the part will be transparent with no shape.

#### 14.11.1 Numeric Display

#### ■ Basic Settings/Basic

Display numeric data stored in a specified Word Address in a device/PLC.

💰 Data Display	Basis Diartau (Alaus (Alaus (Paranaine))
Parts ID D_0000 😁 Comment ABC Select Shape No Shape	Basic       Display       Alarm/Color       Processing         Display       Display       Display       Display         Numeric       Text Display       Date/Time       Statistical       Show Limit         Display       Monitor Word Address       Statistical       Show Limit         [PLC1]D00000       Image: Color Colo
Help ( <u>H</u> )	OK (Q) Cancel

Setting	Description		
Monitor Word Address	The data stored in this Word Address will be displayed in real-time as a numeric value		
	NOTE		
	• Real variables cannot be displayed because they are 64 bits in length.		
Input Permitted	Set whether keypad and barcode reader input will be accepted by the Data		
	Display.		
	NOTE		
	• This cannot be set if the [Display Format] option is set on the [Display]		
	tab's [Details] screen.		
	Input Permitted/Basic" (page 14-57)		
Specify Input/	Specify an input/display range and [Monitor Word Address] data will		
Display Range	automatically convert to correspond with the input and display range. The		
	resulting numeric values can be displayed.		

Setting	Description					
Data Type	Select the type of data to be displayed.					
	Bit Length Data Type					
		16 Bit	Dec, Hex, Oct, Bin, BCD			
		32 bit	Dec, Hex, Bin, BCD, Float			
	<ul> <li>NOTE</li> <li>When using 32-bit data, the relationship of high order and low or Word data will differ according to the device/PLC type. For more information, refer to your device/PLC manual.</li> </ul>					
Sign +/-	Select whether or not to attach a sign to displayed data. Select this if you will be using negative data. Negative numbers are handled with a complement of 2. This can only be set when the [Data Type] is [Dec].					
Round Off	Select whether or not fractions will be rounded off when data is displayed. Fractions will be discarded if rounding off is not selected. This can only be set when the [Data Type] is [Float].					

Set numeric data to be displayed as relative values.

Setting		Description		
Specify Inp Range	ut/ Display	Specify an input/display range and [Monitor Word Address] data will automatically convert to correspond with the input and display range. The resulting numeric values can be displayed. (Display relative values) For example, Input Range Display Range 1027 is stored in the Display Word Address		
Data Type		Select the type of data to be displayed.Bit LengthData Type16 BitDec, Hex, Oct, Bin, BCD32 bitDec, Hex, Bin, BCD, Float		
Bit Length		Specify the address' valid bit length from 1 to 16. Selectable only when [Data Type] is specified as [16 Bits].		
Input Range	Input Specification	<ul> <li>Choose how the input range max and min values will be specified.</li> <li>Constant <ul> <li>Constant as the Min/Max value. (Direct Specification)</li> </ul> </li> <li>Address <ul> <li>Designate the address where the Min/Max values are stored.</li> <li>(Indirect Specification)</li> </ul> </li> </ul>		
	Input Sign	<ul> <li>Specifies whether data that has been input will be able to handle negative numeric data.</li> <li>None Only positive numeric data.</li> <li>2's Complement Negative numbers are handled with a complement of 2.</li> <li>MSB Sign Negative numbers are handled with MSB sign.</li> </ul>		

Setting		Description			
	Display Specification	<ul> <li>Choose how the max and min values of the display range will be specified.</li> <li>Constant <ul> <li>Designate a set constant as the Min/Max value. (Direct Specification)</li> <li>Address <ul> <li>Designate the address where the Min/Max values are stored. (Indirect Specification)</li> </ul> </li> </ul></li></ul>			
Display Range	Round Off	Select whether or not fractions get rounded off when data is displayed.			
	Display Sign +/-	Specify whether or not negative numbers will be displayed. This can be set when the [Data Type] is [Dec]. For example, When the data "-123" has been written Sign +/- Sign +/- Negative numbers displayed Negative numbers not displayed			
Input Range/ Display Range	Min. Value/ Max. Value	Select the input range and display range for the numeric display data. If [Input Specification] or [Display Specification] is [Constant], you can input a min/max value. If [Address] is set, specify the Word Address where the min/max value will be stored. Each [Data Type], [Input Sign], and [Display Sign +/-] has a different size range.			

Setting		Descri	iption				
Input	Min. Value/						
Range/	Max. Value	D.1					
Display		Bit Length	Data Type	Input Sign	Input Range	Display Sign +/-	Display Range
Range		16 Bit	Dec	None	0 to 65535	Cleared	0 to 65535
						Selected	-32,768 to 32,767
				2's	-32,768 to 32,767	Cleared	0 to 65535
				Complement		Selected	-32,768 to 32,767
				MSB Sign	- 32767 to 73276	Cleared	0 to 65535
						Selected	-32,768 to 32,767
			Hex	None	0 to 65535	-	0 to FFFF(h)
				2's Complement	-32,768 to 32,767	-	0 to FFFF(h)
				MSB Sign	-32767 to 32767	-	0 to FFFF(h)
			Oct	None	0 to 65535	-	0 to 177777(o)
				2's Complement	-32,768 to 32,767	-	0 to 177777(o)
				MSB Sign	-32767 to 32767	-	0 to 177777(o)
			BCD	-	0 to 9999	-	0 to 9999
			Bin	None	0 to 65535	-	0 to FFFF(h)
				2's Complement	-32,768 to 32,767	-	0 to FFFF(h)
				MSB Sign	-32767 to 32767	-	0 to FFFF(h)
		32 bit	Dec	None	0 to 4294967295	Cleared	0 to 4294967295
						Selected	-2147483648 to 2147483647
				2's	-2147483648 to	Cleared	0 to 4294967295
				Complement	2147403047	Selected	-2147483648 to 2147483647
				MSB Sign	-2147483647 to	Cleared	0 to 4294967295
					2147403047	Selected	-2147483648 to 2147483647
			Hex	None	0 to 4294967295	-	0 to FFFFFFF(h)
				2's Complement	-2147483648 to 2147483647	-	0 to FFFFFFF(h)
				MSB Sign	-2147483647 to 2147483647	-	0 to FFFFFFF(h)
			BCD	-	0 to 99999999	-	0 to 99999999
			Bin	None	0 to 4294967295	-	0 to FFFFFFF(h)
				2's Complement	-2147483648 to 2147483647	-	0 to FFFFFFF(h)
				MSB Sign	-2147483647 to 2147483647	-	0 to FFFFFFF(h)
			Float	-	- 9.9e <sup>16</sup> to 9.9e <sup>16</sup>	-	- 9.9e <sup>16</sup> to 9.9e <sup>16</sup>
					•		

NOTE

• Input range and display range determine how to display the input value with automatic conversion. If the value outside the input range is input, the value is converted and displayed.

#### Basic Settings/Detail

You can indirectly specify the address for the numeric data display. There are two ways to do this.

💣 Data Display	×
Parts ID	Basic Display Alarm/Color Processing
DD_0000 📑	Display Data
Comment	
	Numeric T I Date/Time Statistical Show Limit
	Display Display Data Display Value
ABC	Address Type Address 💌 🗖 Allow Input <u>Kasic</u>
	Monitor Word Address Base Address Offset Value Specification Address
Select Shape	[PLC1]D00001
☐ No Shape	
	Specify Input/Display Range
	Data Type T6 Bit Dec 💌 📋 Sign +/- 📋 Round Off

Setting		Description	
Address T	уре	You can define the display address (Monitor Word Address) in the following ways: [Direct Specification], [Address], or [Device Type & Address].	
Allow Inpu	t	<ul> <li>You can accept input from a keypad, bar code reader, or a two-dimensional bar code reader. Select this check box to display the [Data Entry] tab.</li> <li>NOTE</li> <li>This cannot be set if the [Display Format] option is set on the [Display] tab's [Details] screen.</li> <li>* * Display/Details" (page 14-69)</li> </ul>	
Monitor Word Address		You can have a real-time numeric display of data stored in the Word Address specified here. To indirectly specify the Monitor Word Address, in the [Address Type] list, select [Address] or [Device Type & Address].	
	Address	Indirectly designates to the device specified in [Base Address].	

Setting			Description
Setting	Address	Base Address Offset Address	Description         Address Type       Address         Monitor Word Address       Offset Value Specification Address         Base Address       Offset Value Specification Address         [PLC1]D00000       [PLC1]D00000         Im       Base Address]         becomes the standard indirectly         designated address.         In [Offset Value Specification Address], set the address         that stores the offset value from the [Base Address].         For example,         [Monitor Word Address] is D35, Indirectly designated         [Base Address] = D10 [Offset Value Specification         Address] = D100         The data in [Offset Value Specification Address] is handled as the offset value from the [Base Address].
			In the device/PLC GP unit $D100 \boxed{25}$ $D10 \boxed{****}$ $GP$ unit $D35 \boxed{40}$ $+25$ $I10$
		Bin, BCD	Choose the type of data stored in the [Offset Value
		,	Specification Address] from [Bin] or [BCD].
	Device Typ	be & Address	Indirectly designates both the device and address.
		Device/PLC	When [Address Type] is [Device Type & Address], select which device/PLC's address to indirectly designate.

Setting			Description
Setting Monitor Word Address	Device Type & Address	Device Specification Start Address	Description         Address Type Device Type Address I allow Input Classic         Monitor Word Address         Device/PLC PLCT         Device Specification Start Address         Input the start address of the Word Address in order for the [Device Specification Start Address] to designate the display address. The [Device Specification Start Address] to designate the display address. The [Device Specification Start Address] stores the address mode. The Address Mode is the mode that decides whether the device address is the internal device or outside (PLC) device. The [Device Specification Start Address] stores the device code and address code in three consecutive Words. It displays the Word Addresses that house the device code and address code.         For example,       [Monitor Word Address] is CN35, Indirectly designated         [Device Specification Start Address] = D100       [Address Mode] = External (PLC) Device
			In the device/PLC GP unit D100 0 Address Mode <sup>*1</sup> CN35 40 D101 0061 Device Code <sup>*2</sup> D102 35 Address Code(L) D103 0 Address Code(H) *1 Address Mode 0: External (PLC) Device 1: Internal Device In the above case, 0 is stored. *2 Please see the "GP-Pro EX Device/PLC Connection Manual" for device codes. If you select an internal device, the device codes are LS area: 0000 and USR area: 0001. The address designated by D100, D101, D102, and D103 is CN35. Its data, "40" is displayed.
NO	• I c a	f the indirectly-decommunication er n error occurs, cl	esignated address is out of range or does not exist, a ror will occur. An error can affect the screen update. When heck the indirectly-designated data and write the correct

value to the device/PLC address to restore the screen update.

On the [Basic] tab's Detail screen, when you set [Address Type] to [Address] or [Device Type & Address], and set the [Input Display]'s [Input Specification] and [Display Specification] to [Address], the address that stores the max/min values for the Input Range/Display Range will be automatically allotted to the addresses following the Monitor Word Address.

💣 Data Display	×
Parts ID	Basic Display Alarm/Color Processing
DD_0000	Display Data
	Numeric Display Numeric
ABC	Address Type Address  Monitor Word Address  Address
	Base Address Offset Value Specification Address
Select Shape	[PLC1]D00001
🗖 No Shape	● Bin ● BCD
	Specify Input/Display Range         Input/Display Settings         Data Type       16 Bit Dec         Bit Length       16         Input Range       Individual Settings         Input Range       Display Range         Input Specification       Constant         Input Sign       None         Min.       Image         Max.       \$5535         Specification       Max.
Help (H)	OK (0) Cancel

Setting	Description		
Specify Input/ Display Range	Specify an input/display range and [Monitor Word Address] data will automatically convert to correspond with the input and display range The resulting numeric values can be displayed. (Display relative values) For example,		
	Input Range Display Range		
	1027 is stored in the Display Word Address		
Data Type	Select the type of data to be displayed.		
	Bit Length Data Type		
	16 Bit Dec, Hex, Oct, Bin, BCD		
	32 bit Dec, Hex, Bin, BCD, Float		

Setting	Description
Bit Length	Specify the address' valid bit length from 1 to 16.
	Selectable only when [Data Type] is specified as [16 Bits].
Indirect Area Specification	<ul> <li>If [Input Specification] and [Display Specification] are both [Address], choose the indirect designation method from [Individual Settings] or [Area After Display Address] for the Word Addresses that will store the Input Range and Display Range's upper/lower limit value.</li> <li>If either [Input Specification] or [Display Specification] is set to [Constant], the setting will be fixed as [Individual Settings].</li> <li>Individual Settings Specify the value or Word Address for [Min.] and [Max.] individually.</li> <li>Area After Display Address The input and display ranges are automatically allocated according to the indirectly specified display data address. The allocated addresses follow consecutively after the [Monitor Word Address]: (Input Range - Max.) →(Input Range - Min.) → (Display Range - Max.) → (Display Range - Min.)</li> <li>For example, When [Indirect Area Specification] is set to [Area After Display Address], the min/max values for the input/display range will be as follows:</li> </ul>
	<pre>[Base Address] = D10, [Offset Value Specification Address] = D100 [Monitor Word Address] = D35 [Input Specification] = [Address], [Display Specification] = [Address]</pre>
	Offset Value Specification Address       25       Base Address D10       ****       +25         D100       Monitor Word Address       Display Data       +25         Monitor Word Address       Display Data       +25         D36       Input Range       D37         D38       Display       Display         D39       Display       Display

Setting		Description
	Input Specification	<ul> <li>Choose how the input range max and min values will be specified.</li> <li>Constant <ul> <li>Designate a set constant as the Min/Max value. (Direct Specification)</li> </ul> </li> <li>Address <ul> <li>Designate the address where the Min/Max values are stored. (Indirect Specification)</li> </ul> </li> </ul>
Input Range	Input Sign	<ul> <li>Specifies whether data that has been input will be able to handle negative numeric data.</li> <li>None Only positive numeric data.</li> <li>2's Complement Negative numbers are handled with a complement of 2.</li> <li>MSB Sign Negative numbers are handled with MSB sign.</li> </ul>
	Display Specification	<ul> <li>Choose how the max and min values of the display range will be specified.</li> <li>Constant <ul> <li>Designate a set constant as the Min/Max value. (Direct Specification)</li> </ul> </li> <li>Address <ul> <li>Designate the address where the Min/Max values are stored.</li> <li>(Indirect Specification)</li> </ul> </li> </ul>
Display Range	Round Off	Select whether or not fractions get rounded off when data is displayed.
	Display Sign +/-	Specify whether or not negative numbers will be displayed. This can be set when the [Data Type] is [Dec]. For example, When the data "-123" has been written Sign +/- Sign +/- Sign +/- Negative numbers displayed Negative numbers not displayed

Setting		Description					
Input Range/ Display Range	Min. Value/ Max. Value	Select the input range and display range for the If [Input Specification] or [Display Specificati can input a min/max value. If [Address] is set, specify the Word Address v value will be stored. Each [Data Type], [Input Sign], and [Display Sign- range.					eric display data. [Constant], you the min/max s a different size
		Bit Length	Data Type	Input Sign	Input Range	Display Sign +/-	Display Range
		16 Bit	Dec	None	0 to 65535	Cleared	0 to 65535
				2's	-32,768 to 32,767	Cleared	0 to 65535
				Complement		Selected	-32,768 to 32,767
				MSB Sign	- 32767 to 73276	Cleared	0 to 65535
						Selected	-32,768 to 32,767
			Hex	None	0 to 65535	-	0 to FFFF(h)
				Complement of 2	-32,768 to 32,767	-	0 to FFFF(h)
				MSB Sign	-32767 to 32767	-	0 to FFFF(h)
			Oct	None	0 to 65535	-	0 to 177777(o)
				2's Complement	-32,768 to 32,767	-	0 to 177777(o)
				MSB Sign	-32767 to 32767	-	0 to 177777(o)
			BCD	-	0 to 9999	-	0 to 9999
			Bin	None	0 to 65535	-	0 to FFFF(h)
				2's Complement	-32,768 to 32,767	-	0 to FFFF(h)
				MSB Sign	-32767 to 32767	-	0 to FFFF(h)

Setting		Description					
Input Range/	Min. Value/						
Display		Bit Length	Data Type	Input Sign	Input Range	Display Sign +/-	Display Range
Range		32 bit	Dec	None	0 to 4294967295	Cleared	0 to 4294967295
						Selected	-2147483648 to 2147483647
				2's	-2147483648 to	Cleared	0 to 4294967295
				Complement	2147483647	Selected	-2147483648 to 2147483647
1				MSB Sign	-2147483647 to 2147483647	Cleared	0 to 4294967295
						Selected	-2147483648 to 2147483647
			Hex	None	0 to 4294967295	-	0 to FFFFFFF(h)
				2's Complement	-2147483648 to 2147483647	-	0 to FFFFFFF(h)
				MSB Sign	-2147483647 to 2147483647	-	0 to FFFFFFF(h)
			BCD	-	0 to 99999999	-	0 to 99999999
			Bin	None	0 to 4294967295	-	0 to FFFFFFF(h)
		F		2's Complement	-2147483648 to 2147483647	-	0 to FFFFFFF(h)
				MSB Sign	-2147483647 to 2147483647	-	0 to FFFFFFF(h)
			Float	-	- 9.9e <sup>16</sup> to 9.9e <sup>16</sup>	-	- 9.9e <sup>16</sup> to 9.9e <sup>16</sup>
				-	·		·

NOTE

• Input range and display range determine how to display the input value with automatic conversion. If the value outside the input range is input, the value is converted and displayed.

#### Input Permitted/Basic

Data Display		×
Parts ID DD_0000 Comment	Basic Display Alarm/Color Processing Data Entry	
ABC Select Shape No Shape	Enable Popup Keypad     Designated Input Order     Input Order	<u>&gt;&gt;Extended</u>
Help ( <u>H</u> )	OK (Q)	Cancel

Setting	Description
Input Permitted Methods	<ul> <li>Select the method that will change the Data Display to input state (cursor display state).</li> <li>Touch When the Data Display is touched, it will change to the Input Demitted state</li> </ul>
	Show Cursor! Cursor is displayed Touch!

Continued

Setting	Description
Input Permitted Methods	NOTE
	• If you touch a Data Display while inputting data into another Data Display, the data that has been input will revert to its previous data, and the most recently touched part will enter the Input Permitted state.
	Cursor is displayed Input State
	Touch Data Display 1 and without deciding touch Data Display 2 and Data Display 2 Input State
	• Bit When the Allow Input Bit Address is ON, the Data Display is in the Input Permitted state.
	Show Cursor! Input Permit Input Permit Input Permit Input Permit Input Permit Input State Cursor is displayed Input State Cursor is displayed Input State Cursor is displayed Input State Enter Cancel
	<ul> <li>NOTE</li> <li>If the [Allow Input Bit Address] is turned OFF while inputting data in a Data Display, the Input Permitted state is canceled, and the input data is erased.</li> </ul>
Touch	© Touch O Bit 
	Enable Popup Keypad.     Designated Input Order     Input Order

Setting		Description
Touch	Enable Popup Keypad	Select whether or not a popup keypad will display when you touch the Data Display part.
		Show Keypad!
		<ul> <li>NOTE</li> <li>A popup keypad cannot be used when the Data Display is placed on a Window screen.</li> </ul>
	Designated Input Order	When you will be inputting into multiple Data Displays in sequence, select the order in which they will enter the input state. ** "14.13 How Data Input Order Works" (page 14-113)
	Input Order	Select the order, from 1 to 384, in which the Part will enter the input state.
Bit		C Touch C Bit >>Extended Allow Input Bit Address [PLC1]x00000 ■ ■ Input Order
	Allow Input Bit Address	When the bit address set here turns ON, the Data Display enters the input state.

Setting		Description
Bit	Input Order	<ul> <li>Select the order from 1 to 384 that the Part will enter the Input Permitted state if multiple [Input Permitted Bit Addresses] turn ON at the same time (when a bit address has been registered to multiple Data Display parts, or when different bit addresses turn ON at the same time).</li> <li><b>NOTE</b></li> <li>If more than one [Allow Input Bit Address] is turned ON at the same time, the Data Displays will enter the input state according to their [Input Order] settings. If the [Input Order] settings are the same, the input state order will be determined by the order the parts were placed.</li> <li>If the [Allow Input Bit Address] of Data Displays placed on the Base Screen and Window Screen turn ON at the same time, the Base Screen. When placing Data Displays on both the Base and Window screen, make sure to set a different [Allow Input Bit Address].</li> </ul>

#### Input Permitted/Details

💣 Data Display	X
Parts ID DD_0000	Basic   Display   Alarm/Color   Processing   Data Entry   • Touch C Bit
ABC	Enable Popup Keypad.     System Keypad     Specify Location     C Enable     C Disable
	Input Mode Auto Clear ON 🔽 🔽 Input Barcode
	Interlock Interlock Address Touch Enable Condition  C C When Bit is ON C When Bit is OFF
	Input Complete Flag
	Input Complete Bit Address

Setting		Description	
	Enable Popup Keypad	<ul> <li>Select whether or not a popup keypad will display when you touch the Data Display part.</li> <li>NOTE</li> <li>A popup keypad cannot be used when the Data Display is placed on a Window screen.</li> </ul>	
Touch	Keypad Type	<ul> <li>System Keypad Use the standard keypad registration for GP-Pro EX. Use this in normal cases.</li> <li>User Keypad Create a user-defined keypad with the Keypad part. This keypad allows for customized input.</li> <li>"16.4.2 Setup Procedure Displaying the Customized Keypad as Popup" (page 16-15)</li> </ul>	

Setting			Description
	System Keypad		Display the prepared standard keypad registration in GP-Pro EX.
			The input value is displayed when the user pushes the [Enter] key.
	User Keypad	Keypad	Set the number of the custom-made keypad.
Touch	h Specify Location		<ul> <li>Select whether or not to set the popup keypad display position. If [Do] is selected, the popup keypad Display Area can be selected and moved after the Data Display part is positioned.</li> <li><b>NOTE</b></li> <li>You cannot select or move the popup keyboard display area when you group the data display parts and other objects.</li> </ul>
	Designated Input Order		When you will be inputting into multiple Data Displays in sequence, select the order in which they will enter the input state. * "14.13 How Data Input Order Works" (page 14-113)
	Input Order		Select the order, from 1 to 384, in which the Part will enter the input state.
		Group Number	Divide the Data Displays into groups for continuous data input. The cursor will move in turn to each successive Data Display registered in the same group, according to the input order, setting them into the Input Permitted state. The Group Number can be from 1 to 10.
	Interlock		This function only allows input when a bit designated via [Interlock Address] is in a state that has been selected via [Touch Enable Condition]. Select whether or not to use the Interlock function. <sup>(C)</sup> "14.7 Preventing Operational Errors Interlock" (page 14-25)
	Interlock Address		Select the bit address that will designate the enable condition, to allow input to be entered. This address state will determine if touch is enabled or disabled.

Setting		Description		
Touch	Touch Enable Condition	Select the condition that will enable the part to be touched, to allow input to be entered.		
		Touch Enable Condition	Interlock Address Status	Touch Enabled/ Disabled
		When Bit is	ON	Touch enabled
		ON	OFF	Touch disabled
		When Bit is	ON	Touch disabled
		OFF	OFF	Touch enabled
Bit		Interlock will r	© Bit	at is completed.
		Allow Input Bit [[PLC1]X00000 Input Mode Input Order Input Comp	Address  Auto Clear ON  Auto Clear O	T Input Barcode
	Allow Input Bit Address	When the bit add the input state.	lress set here turns ON	N, the Data Display enters

Setting		Description
Bit	Input Order	<ul> <li>Select the order from 1 to 384 that the Part will enter the Input Permitted state if multiple [Input Permitted Bit Addresses] turn ON at the same time (when a bit address has been registered to multiple Data Display parts, or when different bit addresses turn ON at the same time).</li> <li><b>NOTE</b></li> <li>If more than one [Allow Input Bit Address] is turned ON at the same time, the Data Displays will enter the input state according to their [Input Order] settings. If the [Input Order] settings are the same, the input state order will be determined by the order the parts were placed.</li> <li>If the [Allow Input Bit Address] of Data Displays placed on the Base Screen and Window Screen turn ON at the same time, the Base Screen. When placing Data Displays on both the Base and Window screen, make sure to set a different [Allow Input Bit Address].</li> </ul>
Input Moo	de	<ul> <li>Auto Clear OFF New data will build on previously data that has been input. Pressing [CLR] on the keypad clears the value. </li> <li>Auto Clear ON The first key pressed (except [ENT], [DEL], or [BS]) will clear the previously data that has been input. </li> <li>Auto Clear ON + Input Check When using barcode input, checks whether the number of input digits coincides with the [Total Display Digits] when an automatic clear occurs. If they do not coincide, the data will not be written to the Word Address.</li></ul>
Input Bar	code	A setting that allows input from a barcode reader. *** "8.2.2 Setup Procedure" (page 8-5)
Input Cor	nplete Flag	Detects and notifies you when input has been completed.
		300 D100=300 D100=300 Input Completion Bit Address is ON

Setting	Description
Input Complete Flag Bit Address	Sets the bit address that will turn ON when input has been completed.
	Input State
	Input Completion Bit Address
	• Please return this bit to OFF after input has been completed.

#### Display/Basic

Sets the font and attributes of the Numeric Display.

💣 Data Display		×
Parts ID DD_0000	Batic Display Aarm/Color Processing Font Font Type Standard Font	Data Entry
ABC Select Shape	Total Display Digits ■ ■ ■ ■ ■ ■ Fixed Position Display Style ■ ■ ■	Text Attribute Normal 💌 Decimal Places P 🚍 🎬
	<ul> <li>✓ Zero Suppress</li> <li>✓ Zero Display</li> <li>✓ 7-segment Display</li> </ul>	Preview 12345
Help ( <u>H</u> )		OK ( <u>O</u> ) Cancel

Setting		Description	
Font		Sets a font for the numeric values.	
	Font Type	Select a font type for the numeric values from [Standard Font] or [Stroke Font].	
	Character Size	Chooses a font size for the numeric values. Standard Font: (8 to 64) x (8 to 128) Standard Font (Fixed Size): [6x10], [8x13], [13x23] Stroke Font: Select from 6 to 127.	
	Text Attribute	Select the font text attributes. Standard Font: Choose from [Standard], [Bold], [Shadow] Standard Font (Fixed Size): Choose from [Standard], [Shadow] Stroke Font: Choose from [Standard], [Bold], [Outline] NOTE • If [7-s7-segment Display] is set, [Text Attribute] cannot be set.	

Setting	Description				
Total Display Digits Decimal Places	Select the number of digits to display in the numeric display with [Total Display Digits]. Numbers after the decimal point are included in the display digits. However, the decimal point is not included in the display digits. Select the number of digits after the decimal point with [Decimal Places]. This can only be set when the [Data Type] is [Dec], [BCD], or [Float]. For example, When the Total Display Digits is 5, and the Number of Decimal Places is 2, it will look as follows:				
	Data Length	Data Type	Total Display Digits	Decimal Places	
			Setting Range	1	-
	16 Bit	Dec	1 to 11	0 to 10	
		Hex	1 to 11	—	
		BCD	1 to 11	0 to 10	
		Oct	1 to 11	—	
		Bin	1 to 16	—	
	32 bit	Dec	1 to 11	0 to 10	1
		Hex	1 to 11	—	1
		BCD	1 to 11	0 to 10	
		Bin	1 to 32	—	
		Float	1 to 17	0 to 16	]
Fixed Position	Set whether or r the Part.	not the Numeri	c Value will be	fixed in the cer	nter of
Display Style	Select the align [Align Right], [	ment of the nur Align Left], or	neric display an [Align Center]	rea's numeric va	alue:

Setting	Description		
Zero Suppress	If this option is selected, leading zeros are not displayed.		
	For example, When Total Display Digits = 4 $0025$		
	Iv Zero Suppress		
	Leading zeroes are not displayed	Zeroes are added to correspond to the length of Display Digits	
Zero Display	Displays "0" when the data is zero.		
7-segment Display	Data will be displayed using the 7-segment display setting.		
	NOTE		
	• This cannot be set if the [Display Format] option is set on the		
	[Basic] tab's [Details] screen.		
Preview	Displays the data image according to the settings.		

### Display/Details

Setti	ng	Description	
Font		Sets a font for the numeric values.	
	Font Type	Select a font type for the numeric values from [Standard Font] or [Stroke Font].	
	Character	Chooses a font size for the numeric values.	
	Size	Standard Font: (8 to 64) x (8 to 128)	
		Standard Font (Fixed Size): [6 x 10], [8 x 13], [13 x 23]	
		Stroke Font: 6 to 127	
Text Attribute		Select the font text attributes.	
		Standard Font: Choose from [Standard], [Bold], [Shadow]	
		Standard Font (Fixed Size): Choose from [Standard], [Shadow]	
		Stroke Font: Choose from [Standard], [Bold], [Outline]	
		NOTE	
		• If [7-segment Display] is set, [Text Attribute] cannot be set.	

Setting	Description							
Total Display Digits	Select the number of digits to display in the numeric display with [Total							
Decimal Places	Display Digits]. Numbers after the decimal point are included in the							
	display digits. However, the decimal point is not included in the display							
	digits.							
	Select the number of digits after the decimal point with [Decimal Places].							
	I have a set when the [Data Type] is [Dec], [BCD], or [Float].							
	When the Total Display Digits is 5 and the Number of Decimal Places is							
	2, it will look as follows:							
	123.45							
	Each digit number range is different, depending on the [Data Type].							
	Data Length	Data Type	Total Display Digits	Decimal Places				
			Setting Range					
	16 Bit	Dec	1 to 11	0 to 10				
		Hex	1 to 11	—				
		BCD	1 to 11	0 to 10				
		Oct	1 to 11	—				
		Bin	1 to 16	—				
	32 bit	Dec	1 to 11	0 to 10				
		Hex	1 to 11	—				
		BCD	1 to 11	0 to 10				
		Bin	1 to 32	—				
		Float	1 to 17	0 to 16				
Fixed Position	Set whether or i	not the Numeri	c Value will be	fixed in the ce	nter of the			
	Part.							
Display Style	Select the alignment of the numeric display area's numeric value: [Align							
	Right], [Align Left], or [Align Center].							
Zero Suppress	If this option is selected, leading zeros are not displayed.							
For example, When Total Display Digits $= 4$								
	Zero Suppress 25							
	Leading zeroes are not displayed		Zeroes are added to correspond to the length of Display Digits					

Settir	ng	Description					
Zero	Display	Displays "0" when the data is zero.					
7-seg	ment Display	Data will be displayed using the 7-segment display setting.					
		NOTE					
		• This cannot be set if the [Display Format] option is set on the [Basic]					
		tab's [Details] screen.					
		• This cannot be set when [Size] is [Fixed Size].					
Preview		Displays the data image according to the settings.					
Display Format		Select whether or not to use a Display Format.					
		NOTE					
	• This option cannot be selected when, in the [Basic] tab, [Allow Inpu selected.						
		• This option cannot be set when [Data Type] is [Bin] on the [Basic] tab.					
	Truncated	Designate how many numeric data digits to truncate (0 to 10). This can					
	Digits	only be set when the [Data Type] is [Dec] or [BCD] on the [Basic] tab.					
When there are no digits to truncate, a value of zero is set.							
	Format	an asterisk "*" Together with the format character portion, it must not					
		exceed 80 characters. The numeric value displays in the asterisks "*" from					
the lowest position.							
		Select the settings so that the Total Display Digits - Truncated digits = N					
		ot "*". For example					
		[Total Display Digits] = 6, [Truncated Digits] = 2, [Display Style] = Align Right [Zero Suppress] = OFF, [Format] = ***Kg *00g					
		Format text portion					
		Display Data Disp.					
		$1 2 3 4 5 0 \rightarrow 123 \underline{82002}$					
		1 2 3 → 000Kg100 g					
		$1$ $2$ $3$ $4$ $5$ $6$ $7$ $2$ $\rightarrow$ $345$ Ke600 $q$					
		Data is entered starting from the lowest asterisk [*] field position.					
		However, [Truncated Digits] is set to [2], so data is entered starting from					
		the 3rd right-side digit.					
	Digits - Truncated	Displays the calculation method which computes the number of asterisks					
	digits = Data	in the Display Politiat.					
	Display						
	Length						

Setting	Description								
Time-Base	Defines whether or not to use the Time-Base Function.								
	This works only when the following devices are selected:								
	• Siemens AG: SIMATIC S7 3964(R)/RK512								
	Siemens AG: SIMATIC S7 MPI direct								
	Siemens AG: SIMATIC S7 Ethernet								
	• PROFIBUS International: PROFIBUS DP slave								
	If the [Time-Base] check box is selected, data is displayed in the following								
	formats.								
	Word Address								
	15	12 11		0					
	MODE	Value	Value	Value s					
	Using the defined Word Address, the four most-significant bits specify								
	decimal point. Each four bit that follows specifies a number for up to three								
	positions to the right of the decimal point. Displays the 4-digit value (including decimal points, spaces, and 0s) + "s"								
	(5th digit).								
	When entering values other that 09h, displays as follows.								
	Mode	Disp.	0Ah	Space					
	0020h	0.01s	0Bh	:					
	0011h	0.1s	0Ch	e					
	0012h	1s	0Dh						
	3h	10s	0Eh	+					
	Other than 0-	10s	0Fh	-					
Example: When Value 1=1, Value 2=2, and Value 3=3									
	12'3'5' 123'5'								
	Mode:1 Mode:2								
			Mode.2						
Setti	ng	Description							
--------	-------------	---	--	--	-------------------------------	----------------------------------	------------------------------	--	--
	Fixed Input	Speci • Whe	fy if the decient	imal position	is fixed whe	n inputting v	alues.		
		Decimal point is fixed. When you input a decimal point, you can move the cursor before or after the decimal point. You can also move the cursor by pressing the " $\leftarrow$ " or " $\rightarrow$ " keys.							
		For example:							
		Input "2" Input . Input "3" Input "2" Input . 1. $23s \rightarrow 2$ . $23s \rightarrow 2$ . $23s \rightarrow 2$ . $33s \rightarrow 2$ . $32s \rightarrow 2$ . $32s$							
			Input Value	Value display	ed in the Data	a Display			
				Mode0 (0.01s)	Mode1 (0.1s)	Mode2 (1s) <sup>*1</sup>	Mode3 (10s) <sup>*1</sup>		
			0	0.00s	_0.0s	0_s	0s		
			2	2.00s	_2.0s	2_s	20s		
3ase			1.2	1.20s	_1.2s	Input Not Possible	Input Not Possible		
Time-E			1.23	1.23s	_1.3s <sup>*2</sup>	Input Not Possible	Input Not Possible		
			12	2.00s <sup>*3</sup>	12.0s	_12_s	_120s		
			12.3	2.30s <sup>*4</sup>	12.3s	Input Not Possible	Input Not Possible		
			123	3.00s <sup>*5</sup>	23.0s <sup>*4</sup>	123_s	1230s		
			*1 Mode 2 a	and 3 do not a	allow decima	l input.			
			*2 Because value e	the number of th	f decimal dig overwritten.	gits is 1, the f	irst decimal		
		*3 Because the number of integral digits is 1, the first entered value (1) is overwritten.							
			*4 Because the cursor does not move to a decimal position until a decimal point is input, the input (1) is ignored.						
			*5 Because a decin ignored	the cursor do nal point is in 1.	es not move put, the inpu	to a decimal j ts ("1" and "2	position until 2") are		

Setti	ng	Desc	ription			
	Fixed Input	When Input input input The Input Inpu	en Disabled uts a 4-digit ut enables hig cursor posit	value, which gher precision ion starts at f	includes the n of display v ar right wher	decimal point. This type of values. Data Display accepts inputs.
			Input Value	Value to display	Mode	
			0	0.00s	0	
Ð			0.0	0.00s	0	
Time-Base			1	1.00s	0	
			1.2	1.20s	0	
			1.23	1.23s	0	
			12	12.0s	1	
			12.3	12.3s	1	
			123	123_s	2	
			1230	1230s	3	
			1234	Input Not Possible	-	
				•		

### ■ Alarm/Color/Basic

Settings for the Numeric Display's color and numeric data.

💰 Data Display		×
Parts ID	Basic Display Alarm/Color Processing Data Entry	
	>>Extended	
	1	
ABC	Border Color 7 Blink None Shadow Color	
Select Shape	6 Jink None 7 Blink None	
No Shape	Plate Color	
	Pattern	
	None	
	Alarm Settings Alarm Action	
	Alarm Color Numeral Value Color 6 Blink None	
Help ( <u>H</u> )	OK (Q) Cancel	

Setting	Description
Border Color	Select the border color for the Numeric Display.
Numeral Value Color	Set the color for the Numeric Display's numeric data.
Shadow Color	Set the background color for the Numeric Display's numeric value.
	NOTE
	• This can only be set when [Shadow] is set on the [Text Attribute] in the [Display] tab's [Font].
Plate Color	Set a background color for the Numeric Display part.
Pattern	Set a background pattern for the Numeric Display.
Pattern Color	Set a pattern color for the Numeric Display.
Blink	You can choose different blink settings for the [Border Color], [Numeral Value Color], [Shadow Color], [Plate Color], and [Pattern Color].
	<ul> <li>There are cases where you can and cannot set Blink depending on the Main Unit and System Settings [Color].</li> <li>"9.5.1 Setting Colors" List of Available Colors" (page 9-34)</li> </ul>

Setting	Description			
Indirect Area Specification	<ul> <li>If the [Alarm]'s [Alarm Action] is [Address], choose the designation method for the Word Addresses which will store the alarm's upper/lower limit value.</li> <li>Area After Display Address The lower→upper limit values are automatically allocated to consecutive addresses in order starting from the [Monitor Word Address] designated in the [Basic] tab.</li> </ul>			
	Monitor Word AddressDisplay Data+1Lower Limit+2Upper Limit::			
	<ul> <li>For example, When [Monitor Word Address] is "D100" The Lower Limit will be "D101", and the Upper Limit will " "D102".</li> <li>Individual Settings The [Lower Limit] and [Lower Limit] will be separately set Word Address.</li> </ul>	be to a		
Alarm	The color can be set to change when the value goes outside of a specified range. Select whether or not to designate [Alarm].			
	<ul> <li>NOTE</li> <li>The alarm settings can only be set when the number of ranges one. When the number of ranges is one, the contents of the Bascreen will also be displayed on the Detail screen.</li> <li>On the [Basic] tab, when you select [Allow Input], you can input a value outside the warning range.</li> </ul>	s is asic not		
Alarm Action	<ul> <li>Choose the Alarm Action.</li> <li>Direct Write a set constant as the Alarm' upper/lower limit value.</li> <li>Address Designate the address where the Upper/Lower Limit values stored.</li> <li>Change Color When the [Alarm Bit Address] turns ON, the color changes an alarm displays.</li> </ul>	are and		

Setting		Description					
	Alarm Bit Address	When the [Alarm Action] is [Change Color], input the bit address					
		Which will act as a trigger for the color change. When this bit turns ON, the color change will occur.					
	Alarm Range Upper Limit/ Lower Limit	If [Alarm Act for the alarm If [Alarm Act	tion] is [Direc range. tion] is [Addr	t], you can se ess] and [Ind	et an upper/lower limit value ividual Settings] is selected,		
		specify the Word Address where the upper/lower limit value will be stored. Each [Data Type] and [Sign +/-] has a different size range.					
		Data Type	Data Length	Sign +/-:	Alarm Range Settings		
		Dec	16 Bit	Cleared	0 to 65535		
				Selected	-32,768 to 32,767		
			32 bit	Cleared	0 to 4294967295		
				Selected	-2147483648 to 2147483647		
		Bin	16 Bit	00000000(16 bit) to 11111111(16 bit)			
			32 bit				
_		BCD	16 Bit	0 to 9999			
Narn			32 bit	0 to 99999999			
4		Hex	16 Bit	0 to FFFF(h)			
			32 bit	0 to FFFFF	FF(h)		
		Oct	16 bit only	0 to 177777(	(0)		
		Float	32 bit only	- 9.9e <sup>16</sup> to 9	9.9e <sup>16</sup>		
	Alarm Color	Sets the alarm color.					
	Numeral Value Color	Select an alarm display color for numeric values from among 2 colors.					
	Plate Color	Select an alarm display background color for numeric values from among 256 colors.					
	Pattern Color	Select an alarm display pattern color for numeric values from among 256 colors.					
	Blink	Select whethe	r or not the Pa	rt blinks and t	the blink speed. You can		
		choose differe	nt blink settin	gs in [Numera	al Value Color], [Plate Color]		
		and [Pattern C	lolor].				
				1			
		• There are cases where you can and cannot set Blink depending on the Main Unit and System Settings [Color]					
		<sup>©</sup> "9.5.1 S	etting Colors	List of Availa	ble Colors" (page 9-34)		

### Alarm/Color/Detail

The displayed color will change depending on the numeric data range.

💰 Data Display	X
Parts ID	Basic Display Alarm/Color Processing Data Entry
DD_0000	Ranges T 📰 🗰 Specify Range Constant 💌
ABC	1
	Range Number 0 <= Range01 <= 65535
Select Shape	Range 01 Min. 🛛 🗮 🧱 Max. 🕫 5535 📰 🧱
No Shape	Color Specification Direct 💌 Numeral Value Color Plate Color
	C 6 ▼ Blink None ▼ 1 ▼ Blink None ▼ Pattern None ▼
	Border Color Shadow Color
	Alarm Settings Alarm Bit Address
	Alarm Color Numeral Value Color Blink None
Help ( <u>H</u> )	OK (Q) Cancel

Setting	Description
Ranges	Set the number of ranges to be color-coded for the numeric display 1 to 16.
Specify Range	<ul> <li>If [Ranges] is more than "2", select the method to specify the minimum and maximum for each range. If [Ranges] is "1", [Constant] is fixed.</li> <li>Constant Designate a set constant as the Min/Max value. (Direct Specification)</li> <li>Address Designate the address where the Min/Max values are stored. (Indirect Specification)</li> </ul>

Setting		Description				
Indirect Area Specification		<ul> <li>If [Specify Range] is [Address], select the method to specify the address for storing the minimum and maximum numeric values.</li> <li>Area After Display Address Allocated in order from Min. → Max. from the specified address in [Monitor Word Address] on the [Basic] tab.</li> </ul>				
		Mc +1 +2	onitor Word	I Address	Display Data Min Max :	
		<ul> <li>For example, If [Monitor Word Address] is "D100", Min. is "D101", Max. is "D102".</li> <li>Individual Settings Specify a Word Address for [Min.] and [Max.] individually.</li> </ul>				
	Range Number	Select the range for setting minimum and maximum and color within the range of 1 to 16 in [Ranges]. The value set for [Min.] and [Max.] is displayed. For example, Min. < = Range** < Max.				
Range Min. Value/Max. Value		Set the minumum and maximum values for the range selected in [Range Number]. If [Specify Range] is [Constant], input the minimum and maximum, and if it is [Address], specify the address stored in the minimum and maximum value. The setting range varies according to [Data Type] on the [Basic] tab and the presence or absence of a sign.				
		Data Type		Sign +/-	Range	
		16 Bit	Dec	Cleared	0 to 65535	
				Selected	-32,768 to 32,767	
			Hex	—	0 to FFFF(h)	
			Oct	—	0 to 177777(o)	
			Bin	—	0 to FFFF(h)	
			BCD	—	0 to 9999	
		32 bit	Dec	Cleared	0 to 4294967295	
				Selected	-2147483648 to 2147483647	
			Hex	-	0 to FFFFFFF(h)	
			Bin	<u> </u>	0 to FFFFFFF(h)	
			BCD	<u> </u>	0 to 99999999	
			Float	—	- 9.9e <sup>10</sup> to 9.9e <sup>10</sup>	

Setting		Description		
Range	Color Specification	<ul> <li>Select the set range's color and pattern designation method. If the [Ranges] is 2 or greater or [Color Stack] is set, this will be fixed as [Direct].</li> <li>Direct The [Display Color], [Pattern], and [Pattern Color] of the range specified in [Range Number] will be directly chosen and set. (Direct Specification)</li> <li>Address Specify the address where the color code will be stored. (Indirect Specification)</li> </ul>		
	Numeral Value Color	Set the color for the Numeric Display's numeric data.		
	Plate Color	Set a background color for the Numeric Display part.		
	Pattern	Set a background pattern for the Numeric Display.		
	Pattern Color	Set a pattern color for the Numeric Display.		
Border Co	lor	Select the border color for the Numeric Display.		
Shadow C	olor	Set a shadow color for the Numeric Display text.		
Blink		<ul> <li>Select whether or not the Part will blink, and the blink speed. You can choose different blink settings for the [Numeral Value Color], [Plate Color], [Pattern Color], [Border Color], and [Shadow Color].</li> <li>NOTE</li> <li>There are cases where you can and cannot set Blink depending on the Main Unit and System Settings [Color].</li> <li>* "9.5.1 Setting Colors ■ List of Available Colors" (page 9-34)</li> </ul>		

#### Processing

You can perform an arithmetic operation on the data read from the device/PLC, and display the resulting data.

💰 Data Display			×
Parts ID	Basic Display Alarm/Color Proc	cessing   Data Entry	
Parts ID DD_0000 📻 Comment	Basic Display Alarm/Colc Proc Processing Operation Data Specification Constant Monitor Word Address [FLC1]D00000 Data Position C Left  Right	Dera Entry	
Help ( <u>H</u> )		OK	( <u>O</u> ) Cancel

Setting	Description		
Processing	Set whether or not to perform an arithmetic operation on the data stored in [Monitor Word Address] and display the result.		
	<ul> <li>In the following cases, [Processing] cannot be set:</li> <li>When [Specify Input/Display Range] is set.</li> <li>When [Alarm] are set.</li> </ul>		
Operation Data Specification	<ul> <li>Select the method to set the data to operate.</li> <li>Constant <ul> <li>Write a set constant as the data to operate. (Direct Specification)</li> </ul> </li> <li>Address <ul> <li>Designate the address which stores the data to operate. (Indirect Specification)</li> </ul> </li> </ul>		

Setting		Description					
	Indirect Area Specification	<ul> <li>If the [Operation Data Specification] is [Address], choose the designation method for the address which will store the data to operate.</li> <li>Area After Display Address Arithmetic operations take place using the values stored in the [Monitor Word Address], and the address that follows.</li> <li>For example, When [Operation Data Specification] is [Address], [Indirect Area Specification] is [Area After Display Address]. [Operator] is "+".</li> </ul>					
		In the c	berator Constantion Word Address + [P1C1] CONTOR	Data Operation	GP unit Monitor Word Address D100 40 → 45		
bu	Monitor Word	<ul> <li>Individual Settings Select a separate Word Address for the operation data.</li> <li>The [Monitor Word Address] specified on the [Basic] tab is displayed.</li> </ul>					
Address       Address         Operation       For [Word Address] data, set the other data.         Data       If the [Operation Data Specification] is set to [Const.         operation data here. Each [Data Type] on the [Basic]       size range. If [Address] is set, specify the address wh         will be stored.       Will be stored.			other data. on] is set to [Constant], enter the ype] on the [Basic] tab has a differencify the address where the operation	nt data			
		Data Type		Sign +/- :	Range		
		16 Bit	Dec	Cleared	0 to 65535		
				Selected	-32.768 to 32.767		
			Hex	_	0 to FFFF(h)		
			Oct	_	0 to 177777(o)		
			Bin	—	0 to FFFF(h)		
			BCD	1_	0 to 9999	-	
		32 bit	Dec	Cleared	0 to 4294967295		
				Selected	-2147483648 to 2147483647		
			Hex	—	0 to FFFFFFF(h)	-	
			Bin	—	0 to FFFFFFF(h)		
			BCD	—	0 to 99999999		
			Float	_	$-9.9e^{16}$ to 9.9e <sup>16</sup>		

Setti	ng	Description
	Data Position	Select the Operation Data or Destination Word Address display position from [Right] or [Left].
		Right: The Monitor Word Address is left, the Operation Data or Destination Word Address is right Word Address
		Operation Base Word Address Operator Constant [PLC1]D00010  AND  70
sing		
oces.		Left: The Operation Data or Destination Word Address is left, the Monitor Word Address is right
Ē		Operation Data     Operator     Monitor Word Address       70     Image: Compared to the second s
	Operator	Choose an operator from [Addition (+)], [Subtraction (–), [Mult. (*) ], [Division (/) ], [Logical (AND)], [Logical OR ( )], or [Exclusive OR (^) ].
		NOTE
		• When the data format for a calculation is 32 bit Float, only addition, subtraction, multiplication and division can be performed.
		Any overflowing digits resulting from an arithmetic operation will be
	NOTE is	gnored. For example, When [16 Bit Hex] is set, the result of "FFFF(h) + (h)" would be "0000(h)".
	• I f	f division produces a remainder, an error may occur as a result of rounding
	• F b c a	Results of base address + offset value calculations are always handled as 16 it Bin values, regardless of the data length and data format settings. If a alculation result exceeds 16 bits (exceeds 65,535), bit 0 to bit 15 are handled s the valid bits, and higher-order bits are discarded.

#### 14.11.2 Text Display

#### ■ Basic Settings/Basic

Display string data stored in a specified Word Address in a device/PLC. (14.3 Displaying/Inputting Text Data" (page 14-8)

💰 Data Display	×
Parts ID DD_0000 📻 Comment Select Shape No Shape	Basic Display Color Data Entry Display Data Wumeric Display Numeric Display Numeric Display Numeric Display Numeric Display Nonitor Word Address PICCI JD00000 C Allow Input - [PICCI JD00002
Help ( <u>H</u> )	OK (O) Cancel

Setting	Description
Monitor Word	The data stored in this Word Address will be displayed in real-time as text.
Address	NOTE
	• The relationship of high order and low order Word data will differ according to the device/PLC type.
Input Permitted	Set whether keypad and barcode reader input will be accepted by the Text
	Display.
Monitor Word	Displays the address of Monitor Word Address + Number of Used Word
Address' Last	Addresses (changes by the Display Characters).
Address Display	For example,
	When the [Display] tab's [Display characters] is "5" and the [Monitor
	Word Address] is "D100", the last address will become "D102".

### Basic Settings/Detail

You can indirectly specify an address for the Text Display, or set up an update condition for displayed text.

💣 Data Display	x
Parts ID DD_0000 Comment Comment Select Shape No Shape	Basic       Display       Color       Data Entry         Display       Data       Display       Display       Display         Numeric       Display       Date/Time       Statistical       Show Limit         Address       Type       Direct Specification       Image: Allow Input       Image: Allow Input         Monitor       World Address       Image: Allow Input       Image: Allow Input       Image: Allow Input
	Display Update Condition
Help (H)	OK (Q) Cancel

Settin	ng	Description
Address TypeSelect how you want to define the display add Address): [Direct Specification], [Address], o Address].		Select how you want to define the display address (Monitor Address): [Direct Specification], [Address], or [Device Type Address].
Input	Permitted	You can accept input from a keypad, bar code reader, or a two- dimensional bar code reader. Select this check box to display the [Allow Input] tab.
Monitor Word Address		You can have a real-time numeric display of data stored in the Word Address specified here. To indirectly specify the Monitor Word Address, in the [Address Type] list select [Address] or [Device Type Address].
	Address	Indirectly designates to the device specified in [Base Address].

Setting			Description
Monitor Word Address	Address	Base Address Offset Value Specification Address	Address Type Address I Address I Address AddressImage: Address I Base Address I (PICI)D0000The [Base Address] becomes the standard indirectly designated address.In [Offset Value Specification Address], set the address that stores the offset value from the [Base Address].Example: When you indirectly specify [Monitor Word Address]D35[Base Address] = D10 [Offset Value Specification Address] = D100The data in [Offset Value Specification Address].In the device/PLCOP unitIn the device/PLCOP unitImage: D10 [D10 Image I
		Bin, BCD	Choose the type of data stored in the [Offset Value Specification Address] from [Bin] or [BCD].
	Devic Addre	e Type &	Indirectly designates both the device and address.
		Device/PLC	When [Address Type] is [Device Type & Address], select which device/PLC's address to indirectly designate.

		Description
Monitor Word Address Device Type Address	Device Specification Start Address	Address Type Orevice Type Address I Allow Input Statis         Monitor Word Address         Device/PLO         Price Specification Start Address]. Store the Address         Mode in [Device Specification Start Address]. Store the Address         Mode in [Device Specification Start Address]. Address Mode is the mode to determine if the Device Code and the Address Code in the three Words following [Device Specification Start Address]. The Word Address specified with the Device Code and the Address Code will be displayed.         Example: When you indirectly specify [Monitor Word Address]         CN35         [Device Code] = CN: 0061         In the device/PLC         D100       Address Mode <sup>11</sup> D101       Oddress Code(1)         Place See the "GP-Pro EX Device/PLC Connection Manual" for device codes are LS area: 0000 and USR area: 0001.         *1       Address designated by D100, D101, D102, and D10 3 is CN35. Its data, "40", is displayed.
	Device	<ul> <li>D102 35 Address Code(L)</li> <li>D103 0 Address Code(H)</li> <li>*1 Address Mode 0: External (PLC) Device 1: Internal Device In the above case, 0 is stored.</li> <li>*2 Please see the "GP-Pro EX Device/PLC Connection Manual" for device codes. If you select an internal device, the device codes are LS area: 0000 and USR area: 0001.</li> <li>The address designated by D100, D101, D102, and D10 3 is CN35. Its data, "40", is displayed.</li> <li>NOTE</li> <li>If the indirectly-designated address is out of range or does not exist, a communication error will occur. An error can affect th screen update. When an error occurs, check the indirectly-designated data and write the correct value to the davice/PLC</li> </ul>

Setting	Description
Display Update Condition	Designate the condition which will update the display. This can
	only be set on the Detail screen.
	• Data Change
	The display is updated when a change occurs in the data stored in
	the [Monitor Word Address] on the [Basic] tab.
	Bit ON
	The display is updated when a bit stored in the [Monitor Word
	Address] on the [Basic] tab turns ON.
	Bit Change
	The display is updated when a bit stored in the [Monitor Word
	Address] on the [Basic] tab changes state from ON to OFF or
	from OFF to ON.
Display Update Bit	Defines the ON/OFF trigger bit address for when [Display Update
Address	Condition] is set to [Bit ON] or [Bit Change].
Read After Startup	When the text data has a large volume or many Text Display parts
	are set on the single screen, select this check box for each Text
	Display to increase other tags' display speeds. However, when this
	is checked, Text Display speeds will decrease.

#### NOTE

• After the data has been changed in the monitor address, please change the [Display Update Bit Address] so the text displays. If the changing order is reversed, the text may not display properly.

• If the [Display Update Bit Address] changes immediately after the text data changes in the device/PLC, there may be instances where the text does not display correctly. In this case, program the device/PLC to use the send wait to slightly delay the trigger bit change.

The send wait period depends on the amount of placed parts, scan time, baud rate, and the number of characters used.

## Data Entry/Basic

💰 Data Display			×
Parts ID	Basic Display Color Data Entry		
Parts ID DD_0000 Comment ABC Select Shape No Shape	Basic Display Color Data Entry		≥Extended
Help ( <u>H</u> )		OK (Q)	Cancel

Setting	Description
Data Entry Methods	<ul> <li>Select the method that will change the Data Display to input state (cursor display state).</li> <li>Touch When the Data Display is touched, it will change to the Allow Input state. </li> </ul>
	Show Cursor! Cursor is displayed Touch! Cursor is Cursor is displayed Touch! Cursor is Cursor is Cur



Setting		Description	
Touch	Enable Popup	Select whether or not a popup keypad will display when you touch	
	Keypad	the Data Display part.	
		Show Keypad!	
		A     I     I     IIII     IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	
		NOTE	
		• A popup keypad cannot be used when the Data Display is placed on a Window screen.	
	Designated Input Order	When you will be inputting into multiple Data Displays in sequence, select the order in which they will enter the input state.	
	Input Order	Select the order, from 1 to 384, in which the Part will enter the	
		input state.	
Bit			
		C Touch C Bit	
		≫Extended	
		Allow Input Bit Address	
		injuk order ji 🔄 📠	
	Allow Input Bit	When the bit address set here turns ON, the Data Display enters	
	Address	the input state.	
	1	Continued	

Setting		Description
Bit	Input Order	<ul> <li>Select the order from 1 to 384 that the Part will enter the Input Permitted state if multiple [Input Permitted Bit Addresses] turn ON at the same time (when a bit address has been registered to multiple Data Display parts, or when different bit addresses turn ON at the same time).</li> <li><b>NOTE</b></li> <li>If more than one [Allow Input Bit Address] is turned ON at the same time, the Data Displays will enter the input state according to their [Input Order] settings. If the [Input Order] settings are the same, the input state order will be determined by the order the parts were placed.</li> <li>If the [Allow Input Bit Address] of Data Displays placed on the Base Screen and Window Screen turn ON at the same time, the Window Screen. When placing Data Displays on both the Base and Window screen, make sure to set a different [Allow Input Bit Address].</li> </ul>
		SETTING Window MENU Multiple [Input Permit Bit Addresses] turn ON simultaneously

# Data Entry/Details

Data Display	X
Parts ID DD_0000 == Comment	Basic   Display   Alarm/Color   Processing   Data Entry   © Touch   C Bit
ABC	C User Keypad     C User Keypad
Select Shape	Input Mode Auto Clear ON  Input Barcode Input Order Input Order Input Order Input Order Input Order
	Interlock Interlock Address Touch Enable Condition  C C When Bit is ON C When Bit is OFF
	Input Complete Flag Input Complete Bit Address
Help ( <u>H</u> )	OK (0) Cancel

Setting		Description
	Enable Popup Keypad	<ul> <li>Select whether or not a popup keypad will display when you touch the Data Display part.</li> <li>NOTE</li> <li>A popup keypad cannot be used when the Data Display is placed on a Window screen.</li> </ul>
Touch	Keypad Type	<ul> <li>System Keypad Use the standard keypad registration for GP-Pro EX. Use this in normal cases.</li> <li>User Keypad Create a user-defined keypad with the Keypad part. This keypad allows for customized input.</li> <li>"16.5.1 Keypad Settings Guide User Keypad" (page 16-22)</li> </ul>

Setting	ng		Description		
	System Keypad		Display the prepared standard keypad registration in GP-Pro EX.		
			$A = \frac{1}{3} \frac{1}{5} $		
	User Keypad	Keypad	Set the number of the custom-made keypad. <sup>(27)</sup> "16.5.1 Keypad Settings Guide ■ User Keypad" (page 16-22)		
	Specify Location		Select whether or not to set the popup keypad display position. If [Do] is selected, the popup keypad Display Area can be selected and moved after the Data Display part is positioned. NOTE • You cannot select or move the popup keyboard display area when you group the data display parts and other objects.		
	Designated Input Order		When you will be inputting into multiple Data Displays in sequence, select the order in which they will enter the input state.		
		Input Order	Select the order, from 1 to 384, in which the Part will enter the input state.		
Touch		Group Number	Divide the Data Displays into groups for continuous data input. The cursor will move in turn to each successive Data Display registered in the same group, according to the input order, setting them into the Input Permitted state. The Group Number can be from 1 to 10. ** "14.13.2 Set Input Order by Group" (page 14-114)		
		Interlock	This function only allows input when a bit designated via [Interlock Address] is in a state that has been selected via [Touch Enable Condition]. Select whether or not to use the Interlock function. <sup>(C)</sup> "14.7 Preventing Operational Errors Interlock" (page 14-25)		
		Interlock Address	Select the bit address that will designate the enable condition, to allow input to be entered. This address state will determine if touch is enabled or disabled.		

Setting		Description			
Touch		Touch Enable Condition	Select the condition that will enable the part to be touched, to allow input to be entered.		
	er	Condition	Touch Enable Condition	Interlock Address Status	Touch Enabled/ Disabled
	Örd		When Bit is	ON	Touch enabled
	put		ON	OFF	Touch disabled
	드		When Bit is	ON	Touch disabled
	atec		OFF	OFF	Touch enabled
	Design		<ul> <li>NOTE</li> <li>When the Interlock [Touch Enable Condition] is disabled during input, the Data Display will remain in the Input Permitted state. Interlock will not work until the input is completed.</li> </ul>		
Bit			C Touch C Bit Allow Input Bit Address [PLC1]X00000 Input Mode Auto C Input Order 1	lear ON	<u>≪Basic</u> Input Barcode
Allow Input Bit Address			When the bit ad enters the input	dress set here turn state.	s ON, the Data Display

Setting		Description
Bit	Input Order	<ul> <li>Select the order from 1 to 384 that the Part will enter the Input Permitted state if multiple [Input Permitted Bit Addresses] turn ON at the same time (when a bit address has been registered to multiple Data Display parts, or when different bit addresses turn ON at the same time).</li> <li><b>NOTE</b></li> <li>If more than one [Allow Input Bit Address] is turned ON at the same time, the Data Displays will enter the input state according to their [Input Order] settings. If the [Input Order] settings are the same, the input state order will be determined by the order the parts were placed.</li> <li>If the [Allow Input Bit Address] of Data Displays placed on the Base Screen and Window Screen turn ON at the same time, the Base and Window screen, make sure to set a different [Allow Input Bit Address].</li> <li><b>SETTING</b></li> <li>Multiple [Input Permit Bit Addresses] turn ON simultaneously</li> </ul>
Input Mode		<ul> <li>Auto Clear OFF New text data will build on previously data that has been input. Pressing [CLR] on the keypad clears the value.</li> <li>Auto Clear ON The first key pressed (except move cursor, [ENT], [DEL], or [BS]) will clear the previously input text data.</li> <li>Auto Clear ON + Input Check When using barcode input, check whether the number of input digits coincide with the [Display characters]. If they do not coincide, the data will not be written to the Word Address.</li> </ul>
Input Bar	code	A setting that allows input from a barcode reader. ** "8.2.2 Setup Procedure" (page 8-5)

Setting	Description
Input Complete Flag	Detects and notifies you when input has been completed.
	AB I - BS SSC C I I P - OWERT VICE OF AV AS DE CHARLES IN ENT ENT D100=4142 4 1 4 2 A B Input Completion Bit Address is ON
Input Complete Flag Bit Address	Sets the bit address that will turn ON when input has been
	completed.
	Input State
	Input Manually set! Manually set! Completion Bit Address
	NOTE
	• Please return this bit to OFF after input has been
	completed.

## Display

Set the Text Display's font and attributes.

💰 Data Display	×
Parts ID DD_0000 Comment	Bas Display Coor Font Font Type Standard Font V Size 8 x 16 Pixels V Display Language ASCII V Text Attribute Normal V
ABC Select Shape	Display Characters ■ ■ ■ ■ Fixed Position Display Style ■ ■ ■
_ No Shape	
Help ( <u>H</u> )	OK (Q) Cancel

Setting		Description		
Font		Set a font for the text.		
	Font Type	Choose a font type for the text from [Standard Font] or [Stroke Font].		
	Character	Choose a font size for the text.		
	Size	Standard Font: (8 to 64) x (8 to 128)		
		Standard Font (Fixed Size): [6x10], [8x13], [13x23]		
		Stroke Font: Select from 6 to 127.		
Display		Select the display language: [Japanese], [ASCII], [Chinese (Simplified)],		
Language Text Attribute		[Chinese (Traditional)], [Korean], [Cyrillic], or [Thai].		
		Select the font text attributes.		
		Standard Font: Choose from [Standard], [Bold], [Shadow]		
		Standard Font (Fixed Size): Choose from [Standard], [Shadow]		
		Stroke Font: Choose from [Standard], [Bold], [Outline]		
Display characters		Set the number of characters to be displayed from 1 to 100.		
Fixed Position		Set whether or not the text will be fixed in the center of the Part.		
Display Style		Select the alignment of the text display area's text: [Align Right], [Align		
		Left], or [Align Center].		

## ■ Color/Basic

Select the Text Display's color.

💰 Data Display		×
Parts ID	Basic Display Color Data Entry	
DD_0000 🚍		>>Extended
Comment	Border Color	
	7 Blink None	
	Text Color Shadow Color	
ABC	6 J Blink None J 7 J Blink None	~
	Plate Color	
Select Shape	1 J Blink None	
 ☐ No Shape	Pattern	
	None	
Help ( <u>H</u> )	ОК (Q)	Cancel

Setting	Description
Border Color	Select a border color.
Text Color	Select a text color.
Shadow Color	Select a text background color.
Plate Color	Select a background color.
Pattern	Select a background pattern.
Pattern Color	Select a background pattern color.
Blink	<ul> <li>Select whether or not the Part will blink, and the blink speed. You can choose different blink settings for the [Border Color], [Text Color], [Shadow Color], [Plate Color], and [Pattern Color].</li> <li>NOTE</li> <li>There are cases where you can and cannot set Blink depending on the Main Unit and System Settings [Color].</li> </ul>
	<sup>I</sup> "9.5.1 Setting Colors ■ List of Available Colors" (page 9-34)

#### Color/Details

Select how the text color changes when the bit turns ON.

💰 Data Display		×
Parts ID DD_0002	Basic Display Color	<u>≪Basic</u>
ABC	Border Color 7 J Blink None J Text Color Shadow Color 6 J Blink None J 7 J Blink None	<b></b>
Select Shape	Plate Color Plate Color Pattern None	
	Change Color Bit Address [PLC1]x0000  Text Color 6 Blink None Plate Color Blink None	
	Pattern None	
Help ( <u>H</u> )	OK (Q)	Cancel

Setting		Description		
Change Color		Select whether or not a different color will be displayed when the		
		designated [Bit Address] turns ON.		
	Bit Address	When the address set here turns ON, the color change will occur.		
	Text Color	When the [Bit Address] turns ON, this text color will be displayed.		
	Plate Color	When the [Bit Address] turns ON, this background color will be		
		displayed.		
	Pattern	Select a background pattern.		
	Pattern Color	Select a background pattern color.		
	Blink	Select whether or not the Part will blink, and the blink speed. You can		
		choose different blink settings for the [Text Color], [Plate Color], and		
		[Pattern Color].		
		NOTE		
		• There are cases where you can and cannot set Blink depending on the		
		Main Unit and System Settings [Color].		
		<sup>I</sup> "9.5.1 Setting Colors ■ List of Available Colors" (page 9-34)		

## 14.11.3 Date/Time Display

#### Basic Settings

Displays the current date and time.

💰 Data Display	X
Data Display   Parts ID   DD_0000   Comment     ABC     Select Shape     No Shape	Basic Color   Display Data   Image: Numeric Display   Numeric Display   Text Display   Text Display   Font   Font Type   Standard Font   Size   B x 16 Pixels   Text Attribute   Normal   Preview T-segment Display   Yy/mm/dd   Yy/mm/dd <
Help ( <u>H</u> )	OK (Q) Cancel

Setting		Description		
Font		Set a font for the date/time.		
	Font Type	Choose a font type for the date/time from [Standard Font] or [Stroke Font].		
	Character Size	Choose a font size for the date/time. Standard Font: (8 to 64) x (8 to 128)		
		Standard Font (Fixed Size): [6x10], [8x13], [13x23] Stroke Font: Select from 6 to 127.		
	Text Attribute	Select the font text attributes. Standard Font: Choose from [Standard], [Bold], [Shadow] Standard Font (Fixed Size): Choose from [Standard], [Shadow] Stroke Font: Choose from [Standard], [Bold], [Outline]		
		• If [7-segment Display] is set, [Text Attribute] cannot be set.		

Setting	Description
Date	Set whether or not to display the date, and select the display format from [yy/mm/dd], [dd/mm/yy], [mm/dd/yy], [20yy/mm/dd], [dd/mm/20yy], or [mm/dd/20yy].
	• When working with a double-byte character language and you select a format that includes the year, month or date, numerals use double-byte characters. However, if you select [7-segment Display], numerals use single-byte characters.
Day of the Week	Select whether or not to display the day.
Time	<ul> <li>Specify whether or not to display the time and select the time format from [hh:mm] or [hh:mm:ss].</li> <li>NOTE</li> <li>When working with a double-byte character language and you select a format that includes the hours, minutes, or seconds, such numerals will be displayed as double-byte characters. However, if you select [7-segment Display], the numerals will be displayed as single-byte characters.</li> </ul>
Fixed Position	Set whether or not the Date/Time Display Area will be fixed in the center of the Part.
7-segment Display	<ul> <li>Data will be displayed using the 7-segment display setting.</li> <li>NOTE</li> <li>This cannot be set when [Size] is [Fixed Size].</li> <li>This can be set only when [Text Attribute] is selected as [Standard].</li> </ul>
Preview	Displays the data image according to the settings.

#### ■ Color

Select the colors for the Date/Time Display on this screen. "14.6 Displaying the Date and Time" (page 14-23)

Maria and	
🔊 Data Display	
DD_0000	
Comment	Border Color
	Diraci Color ☐ 7    Blink None
	Numeral Value Color Shadow Color
ABC	6 V Blink None V 7 V Blink None V
	Plate Color
Select Shape	1 I Blink None
└── No Shape	Pattern
	None
Help ( <u>H</u> )	OK (Q) Cancel

Setting	Description
Border Color	Select a border color.
Numeral Value Color	Select a text color.
Shadow Color	Select a text shadow color.
Plate Color	Select a background color.
Pattern	Select a background pattern.
Pattern Color	Select a pattern color.
Blink	Select whether or not the Part will blink, and the blink speed. You can choose different blink settings for the [Border Color], [Numeral Value Color], [Shadow Color], [Plate Color], and [Pattern Color]. NOTE • There are cases where you can and cannot set Blink depending on the
	Main Unit and System Settings [Color].
	"9.5.1 Setting Colors ■ List of Available Colors" (page 9-34)

#### 14.11.4 Statistical Data Display

This function takes statistics from the values of successive Word Addresses, and displays them as numeric values. This is mainly used to display statistical graph data set in a Graph. The statistical data settings can be set independently, even without using the Graph's settings.

#### Basic Settings

💕 Data Display		×
Parts ID	Basic Display Color	
DD_0000	Display Data	
Comment	🔄 📷 14 ( 🚾 ) 🏋	
ABC	Numeric Display Text Display Date/Time Display Date Display Show Limit Date Display Date Display Value	
Select Shape	Word Address	
No Shape	[PLC1]D00000 🗾 🖬 - [PLC1]D00001	
	Data Type	
	16 Bit Bin	
Help ( <u>H</u> )	OK (Q) Cancel	

Setting	Description				
Data Divisions	Set the no. of Data shown in the Statistical Data Display. The value can be				
	from 2 to 16.				
Word Address	Set the initial Word Address for the data from the statistical data display.				
	The address for divisions is allocated from the specified address for				
	statistical data display automatically. When you use Statistical Data				
	Display of a Statistical Graph, specify to match the [Monitor Word				
	Address] of the statistic graph.				
Data Type	Select the type of data to be displayed.				
	Bit Length Data Type				
	16 Bit Bin, BCD				
	32 bit Bin, BCD, Float				
	NOTE				
	• Bin, BCD, and Float data cannot be mixed on a single Statistical Data Display.				

## Display

Set the Statistical Data Display's font and attributes.

💰 Data Display	×
Parts ID DD_0000 === Comment	Base Display Color   Font Font Type Standard Font V Size 8 × 16 Pixels V Text Attribute Normal V
ADC Select Shape	Display Format Total Display Digits Decimal Places Percentage Display Style
I_ No Shape	Zero Suppress       Preview         7-segment Display       100%
Help (H)	OK (Q) Cancel

Setting		Description			
Font		Set a font for the text.			
	Font Type	Choose a font type for the statistical data from [Standard Font] or [Stroke			
		Font].			
	Character	Choose a font size for the statistical data.			
	Size	Standard Font: (8 to 64) x (8 to 128)			
		Standard Font (Fixed Size): [6x10], [8x13], [13x23]			
		Stroke Font: Select from 6 to 127.			
	Text Attribute	Select the font text attributes.			
		Standard Font: Choose from [Standard], [Bold], [Shadow]			
		Standard Font (Fixed Size): Choose from [Standard], [Shadow]			
		Stroke Font: Choose from [Standard], [Bold], [Outline]			
		NOTE			
		• If [7-segment Display] is set, [Text Attribute] cannot be set.			
Displa	ay Format	There are three ways of displaying statistical data: [Percentage], [Numeric			
		Value], and [Numeric Value + Percentage].			
		IMPORTANT			
		• When [Percentage] has been selected, the division operation may create results that, when totaled, do not add up to exactly 100%.			

Setting	Description	Description					
Total Display Digits Decimal Places	Select the number of digits to display in the numeric display with [Total Display Digits]. Numbers after the decimal point are included in the display digits. However, the decimal point is not included in the display digits. Each data format has a different size range. Select the number of digits after the decimal point with [Decimal Places]. This can only be set when the [Data Type] is [Dec] or [Float]. Each digit number range is different, depending on the [Data Type]. For example, When the Total Display Digits is 5, and the Decimal Places is 2, the Numeric Display will appear as follows.						
	Data Length	Data Type	Total Display Digits	Decimal Places			
	16 Bit	Bin	1 to 11	1 to 10			
		BCD	-				
	32 bit	Bin	1 to 11	1 to 10			
		BCD					
		Float	1 to 17	1 to 16			
Display Style	There are three ways of positioning statistical data: [Align Right], [Align Left], and [Align Center].						
Zero Suppress	If this option is	selected, leadi	ng zeros are not displa	ayed.			
	When Total D	) isplay Digits =	= 4				
	Zero Suppress 25						
	Leading zeroes are not Zeroes are added to displayed correspond to the length of Display Digits						
7-segment Display	Data will be displayed using the 7-segment display setting.						
	NOTE						
	<ul> <li>This cannot be set when [Size] is [Fixed Size].</li> <li>This can be set only when [Text Attribute] is selected as [Standard]</li> </ul>						
Preview	Displays the da	ta image accor	ding to the settings.	Displays the data image according to the settings.			

### ■ Color

Select colors for the Statistical Data Display.

Parts ID Basic Display Color	
Comment	16
Border Color 7 V Blink None V	
ABC Text Color 6 Slink None S	
Shadow Color 🔽 7 💌 Blink None 💌	
Salast Shane Plate Color Blink None V	
I No Shape	

Setting	Description		
Select State Bar	Displays the division range number selected in [Data Divisions].		
Border Color	Set the border color.		
Text Color	Set the text color.		
Shadow Color	Set the shadow color.		
Plate Color	Select the background color.		
Blink	<ul> <li>Select whether or not the Part will blink, and the blink speed. You can choose different blink settings for the [Border Color], [Text Color], [Shadow Color], and [Plate Color].</li> <li>NOTE</li> <li>There are cases where you can and cannot set Blink depending on the Main Unit and System Settings [Color].</li> </ul>		
	<sup>™</sup> "9.5.1 Setting Colors ■ List of Available Colors" (page 9-34)		

### 14.11.5 Show Limit Value

Displays the set Alarm values (the displayed data's upper/lower limit values) on the same screen as a Numeric Display part with alarms set.

#### Basic Settings

<mark>∲ Data Display</mark> Parts ID [DD_0000 <u>—</u> Comment	Basic Display Data Numeric Display Text Display Text Display Date/Time Display Date /Time Display Data Display Statistical Data Display
	Font Font Type Standard Font  Size 8 x 16 Pixels  Font Type Standard Font  Max Value Color
	Numeral Value Color     Numeral Value Color       Image: Solid Color     Numeral Value Color       Image: Solid Color     Image: Solid Color       Plate Color     Plate Color
	Image: Organization of the second
	☐ 7-segment Display
115 40	

Setting			Description		
Font			Set the font.		
	Font Type		Choose a font type for the Limit Value from [Standard Font] or [Bitmap Font].		
Character Size		Size	Choose a font size for the Limit Value. Standard Font: (8 to 64) x (8 to 128) Standard Font (Fixed Size): [6X10], [8X13], [13X23] Stroke Font: Select from 6 to 127.		
	Text Attribute		Select the font text attributes. Standard Font: Choose from [Standard], [Bold], [Shadow] Standard Font (Fixed Size): Choose from [Standard], [Shadow] Stroke Font: Choose from [Standard], [Bold], [Outline]		
Maximum Value/ Minimum Value Color		Numeral Value Color	Set a color for the min value/max value.		
		Plate Color	Set the background color for the max/min value.		
		Shadow Color	Set the shadow color for the Limit Value.		
Setting	Description				
---	--	--	--	--	--
7-segment Display	Data will be displayed using the 7-segment display setting.				
	NOTE				
	• This cannot be set when [Size] is [Fixed Size].				
	• This can be set only when [Text Attribute] is selected as				
	[Standard].				
Blink	Select whether or not the Part will blink, and the blink speed.				
	You can choose different blink settings for the [Numeral Value				
	Color], [Plate Color], and [Shadow Color].				
	NOTE				
	• There are cases where you can and cannot set Blink				
	depending on the Main Unit and System Settings [Color].				
	<sup>☞</sup> "9.5.1 Setting Colors ■ List of Available Colors" (page 9-34)				
<b>NOTE</b> • The input ra data type.	• The input range's (Limit Value's) data type depends on the Numeric Display' data type.				
• If there are no [Alarm] in a Data Display in the Input Permitted stat					
there is no I	is no Data Display part, the value range will be displayed as a blank.				

## 14.12 Restrictions

### 14.12.1 Text Display Restrictions

- It may take longer to transfer text strings because text is larger than other data types. You can change the text display faster with one of the following procedures:
  - If the text is short, set [Display Update Condition] to [Data Change] and display without using [Display Update Bit Address].
  - If the text is long, select [Bit ON] or [Bit Change], and [Display Update Bit Address].
- A NULL code or Display characters (no. of bytes) is recognized at the end of a text string. If the actual number of displayed characters is smaller than the number of characters set in [Display characters], please store NULL="00(h)" (In Unicode, Null="0000(h)" in the leftover portion of the device/PLC's address. If there is still room left after the NULL, a SPACE (u)="20(h)" character will be stored.

For example, Display characters = 6 Actual Number of Displayed Characters ("ERROR") = 5



For example, Display characters = 6 Actual Number of Displayed Characters ("STOP") = 4



• The relationship of high order and low order Word data will differ according to the device/PLC type.

If the text is not displayed correctly, as in the following example, change the character code's store order in the device/PLC.



• When you input the text to a display with integer variables, the data sequence is displayed as follows regardless of the text data mode of the device/PLC.

For example, Display Characters: 4, Allow Input is specified, Input Character "ABCD"

	31	24	23	16	15	8	7	0
HEX	44		43		42		41	
ASCII	D		С		В		А	

#### Character Input

 If the number of input characters is less than the [Display characters], a SPACE ( )="u20(h)" character will be stored in the remaining portion.

Display characters= 6 Inputted Characters = 4 (when using a 16-bit device)

ſ	'A'	'B'	'C'	'D'	'u'	'u'
L						

Display characters= 5 Inputted Characters = 4 (when using a 16-bit device)

'A'	'B'	'C'	'D'	'u'	NULL

### 14.12.2 Limitations of Time-Base Function

- If the device specified in the [Basic Settings] workspace's [Monitor Word Address] field is not compatible, the Time-Base function will not work.
- If you select the [Time-Base] check box, you cannot change the following items:

Category	Item	Fixed Value		
Basic Settings	Address Type	Direct Specification		
	Input/Display Range Definitions	Disable		
	Data Type	16 Bit Dec		
	Sign +/-	Disable		
	Round Off	Disable		
Display	Total Display Digits	3		
	Decimal Places	0		
	Display Style	Right Align		
	Zero Suppress	Enable		
	Zero Display	Enable		
	Display Format	Disable		
Alarm/Color <sup>*1</sup>	Ranges	1		
	Specify Range	Constant		
	Range Number	Min: 0		
		Max: 999		
	Alarm Action	Direct		
Processing	Processing	Disable		
Input Permitted	Input Barcode	Disable		

\*1 If the [Allow Input] check box is selected in the [Basic Settings] tab and the [Fixed Input] check box is cleared in the [Time-Base] group, you cannot change [Alarm] in the [Alarm/Color] tab. You can set the [Alarm Range] with a value from 0 to 999.

• If you change the mode in the specified address during input on the GP, the input mode will not change. The change is not updated in real time.

# 14.13 How Data Input Order Works

key

## 14.13.1 Set Input Order

After confirming the input in a given Data Display (and pressing the [ENT] key), the Data Display part registered with the next [Input Order] number enters the Input Permitted state.



Input data and touch

the [ENT] key



The input is confirmed and the next Data

Display part in the input order enters the Input

Permit state. ? Input data and touch the [ENT]

69 123 455 123 0.23 0.23



The input is confirmed and the Data Display part at the top of the input order once again enters the Input Permit state.

#### **Ending sequential input**

For [Touch], when inputting is complete either touch the keypad's [CANCEL] key, or touch the currently selected Data Display part a second time. For [Bit], the input is completed by turning OFF the [Allow Input Bit Address].

#### Sequential input targets

For [Touch], the Data Displays that have a [Designated Input Order] set become targets for sequential inputting.



For [Bit], there is a setting for inputting the order of all data display parts. In practice, the only target of sequential input is the [Allow Input Bit Address] being ON.



## 14.13.2 Set Input Order by Group

For [Touch], sequential input Data Displays can be divided up into groups on the Detail screen. Sequential input then takes place inside each group.



#### NOTE

If there is an interlocked data display part set in [Input Order], skip the interlocked part to the next number of the data display part in an acceptable state for input. In the following figure, the order is 1→3→4→1.



- If you press the [↑][↓] arrow keys while inputting, the current input will be canceled, the previous data will appear, and the next Data Display in the order will enter the Input Permitted state (displayed by the cursor).
- In the figure below, when the second Data Display Part of the [Input Order] becomes available for input, you can input data in the following order:
  2→3→4→1→2

