# 7.1 5 Extended Numeric Tag 12

Extended Numeric Tag is used at displaying logged value or recipe (parameter move) data in the main screen.

Check the attribute of "save the updated logging as first" in general logging and use it when display the word of updated block as numeric tag.

Terminology] The below used 'Block' means that a 0group of word saved by one time in logging or recipe.

# 7.1 5.1 Setting Contents

#### 1) General





(1) Display address: First, select one among Logging 1~8/ Recipe. In case of logging, select one between time & date logged and numbers(data). In case, it is number set up numbers of block and word and in case of time and date can set up one among 6 types, year/month/day/hour/minute/second. Row means word number of a block. The first numbers of block and word is O.

|   | 88 | D'  |     |        |               |       |       |           |             |
|---|----|-----|-----|--------|---------------|-------|-------|-----------|-------------|
|   | Т  | ime | & D | Date 1 | logg          | ed    | Loggi | ng Data ( | (Number)    |
|   |    |     | _   |        | $\overline{}$ |       |       |           | Word Number |
| Y | Μ  | D   | Η   | Μ      | S             | 0     | 1     | 2         |             |
|   |    |     |     |        |               | word  | word  | word      | Direction   |
|   |    |     |     |        |               | 1     | 0     | 0         |             |
|   |    |     |     |        |               | block | block | block     |             |
| Y | Μ  | D   | Η   | Μ      | S             | 0     | 1     | 2         | ▼           |
|   |    |     |     |        |               | word  | word  | word      |             |
|   |    |     |     |        |               | 1     | 1     | 1         |             |
|   |    |     |     |        |               | block | block | block     | Block       |
| Y | Μ  | D   | Η   | Μ      | S             | 0     | 1     | 2         |             |
|   |    |     |     |        |               | word  | word  | word      | Direction   |
|   |    |     |     |        |               | 2     | 2     | 2         |             |
|   |    |     |     |        |               | block | block | block     |             |

#### <In case of Logging>

<In case of Recipe>

| 0 word 0 | 1 word 0 | 2 word 0 | Word Number Increase |
|----------|----------|----------|----------------------|
| block    | block    | block    |                      |
| 0 word 1 | 1 word 1 | 2 word 1 | Block                |
| block    | block    | block    |                      |
| 0 word 2 | 1 word 2 | 2 word 2 | Number               |
| block    | block    | block    | Increase             |

(2) Symbol Display(Signed/Unsigned): Select Display or Non-Display of +/- Symbol

Recipe Data (Number)

(3) Data Type : Select one among DEC, HEX and BCD.

- DEC: Decimal Number
- HEX: Hexadecimal Number. 9h + 1h = ah, fh + 1h = 10h

- BCD: Binary Coded Decimal Number. 9h + 1h = 10h. Clock data is managed by BCD number

(4) Data Size : Select one between 16Bit and 32Bit

|     | Signed         | Unsigned      |
|-----|----------------|---------------|
| DEC | -32768 ~ 32767 | 0 ~ 65535     |
| HEX |                | $0 \sim FFFF$ |
| BCD |                | 0 ~ 9999      |

[Table. Each Data Type and Range in 16 bit]

|     | Signed       | Unsigned                                     |
|-----|--------------|--|
| DEC | -2147483648~ | No Use                                       |
|     | 2147483647   |  |
| HEX |              | $0 \sim FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF$ |
| BCD |              | 0 ~ 99999999                                 |

[Table. Each Data Type and Range in 32 bit]

(5) Number of Display Digit : It means total number of digit displayed at the screen. In case, the data is larger than dedicated number of digit, biggest digit does not displayed.

Example) Four digit display



(6) Decimal Places: It specifies how many digit is allocated to below point. In the main unit, data is not processed as decimal point. Just displayed the decimal point at screen.

Example) Data 12345, Number of Display Digit:5, Decimal Place:1

1234.5

In case, there is a +/- symbol at the data, the number of digit display is one more than specified digit number.

Example) Data –12345, Number of Display Digit :5, Decimal Place:1 -1234.5

(7) Extended Option

It specifies the operation formula of the displayed address value. Default is no Extended Option.



[In case of No Extended Option]

[In case of Extended Option]

Operand: It can specify maximum three Operands. Even the extended option is executed, the real value of displayed address does not change.

Operand Types : It can select device of external equipment or system buffer or constant Operator has following types

NA : Not available

- + : Data in operand buffer plus the data in next operand
- -: Data in operand buffer minus the data in next operand
- $\boldsymbol{x}:$  Data in operand buffer multiplies the data in next operand
- $/: \ensuremath{\mathsf{Data}}$  in operand buffer divide by the data in next operand
- & : Seek Boolean AND of Data in operand buffer and the data in next operand
- : Seek Boolean OR of Data in operand and the data in next operand
- ^ : Seek Boolean XOR of Data in operand and the data in next operand
- << : Shift the bit of data in operand buffer to left as much as the data in next operand Example) 2 shift 1101 0111 0010 0110 to left becomes 0101 1100 1001 1000
- >> : Shift the bit of data in operand buffer to right as much as the as the data in next operand

Example) 2 shift 1101 0111 0010 0110 to right becomes 0011 0101 1100 1001.

#### (8) Use Scaling

: Same as the one in numeric tag. Specify the range of actual value and displaying value. In case actual value varies among  $[0 \sim 1000]$ , it can be displayed among  $[-50 \sim +50]$ .

## (2) Display

For the details of fonts, character size, display color and alignment, refer to the Common Use in Tag of Chapter 7.

| Exmumenc                                 | × |
|--|---|
| General Display Range                    |   |
| Font Pixel<br>(* (165/16)<br>(* 32/32    |   |
| Charater Size                            |   |
| Display Color<br>Text Color<br>Bg. Color |   |
| Alignment<br>C Left @ Right C '0'Filled  |   |

[Display Tab of Extended Numeric]

#### (3) Range

According to range value, different color is displayed. In case, this setting is not done, extended numeric tag is displayed by the text color and back ground color selected at display tab. And if the value is in the non-specified range, selected color at display tab is displayed.

| ExNumeric                            | ×         |
|--------------------------------------|-----------|
| 1) General   Display Range           |           |
|                                      |           |
| No, Of Ranges 8 - (3)                | $\square$ |
| Range Value and Color Setting 6)     |           |
| (5) Min. Max Color Color             |           |
| 🔤 🔽 🔇 <= Rangel <= 🔽 🔽 💌             |           |
| 🖬 🔲 101 <= Range2 <= 🛛 200 🖬 📃 💌     |           |
| 🔛 🔽 201 <= Range3 <= 🗍 300 🔛 📃 💌 🔤   |           |
| 📷 🛛 301 <= Range4 <= 🛛 400 📷 🗮 💌 🖤   |           |
| 🔟 🚺 💜 <= Range5 <= 🗍 500 💷 📃 🗨       |           |
| 🔟 🔽 501 <= Range6 <= 🛛 600 🔟 💻 🗨     |           |
| 📷 🛛 501 <= Range7 <= 📄 700 📷 📃 🗨 🗨   |           |
| 📷 🔽 701 <= Range8 <= 🖉 800 📷 📃 🗨 💽 💌 |           |
|                                      |           |
|                                      |           |
|                                      |           |

- 1) Use Range : Do not select if each different color is not required at each range.
- 2) Range Number : Minimum one to Maximum 8 is available.
- 3) Text Color : Specify the text color of displayed data.
- 4) Back Ground Color : Specify the back ground color of displayed data.
- 5) Minimum Value : Set the starting value of the range.
- 6) Maximum Values : Set the ending value of the range.
- 7) After setting, click [OK].

## Caution

There should be no overlapping set in each range.

# 7.1 5.2 Example of Extended Numeric setting

Check the attribute of "save the updated logging as first" in logging 1 and register extended numeric tag if you want to display the updated first and second block values as numbers. Specify one block save five word data in logging and register other condition as you want.

The data is 16 bit, DEC value, no +/- symbol, total 5 digits and 2 digits below '.'. Register extended numeric tag; In case, the logging 1 values is between 0 and 200, the text color is blue and background color is yellow. And in case of the other values, the text color is black and background color is red.

-Setting in Logging 1

| Logging  | × |
|--|---|
| General Operation  |   |
| logging Interval   |   |
| Every I v Day I v Hour I v Minute                        |   |
| Logging Times  |   |
| Legging Source<br>Station Na, Start Address No. Of Words |   |
| Total Logging Times 4                                    |   |
| 확인 취소 도용알  |   |

- Display Address: Numeric Data (Block 0, Word 0) ~ (Block 0, Word 4) of logging 1
   Numeric Data (Block 1, Word 0) ~ (Block 1, Word 4) of logging 1
- Code Display: No +/- Code
- Data Size : 16 bit
- Data Type : DEC
- Display Format : Number of Display Digit: 5, Decimal Place: 2

| ExNumeric   | × |
|---|---|
| General   Display   Range   |   |
| Description   |   |
| 0 X 0     0 X 4       1 X 0     1 X 4       Block     Word   Column Data Type Column |   |
| Data Size   |   |
| Display Format<br>No, of Display 5 - Decimal 0 -<br>Digits, Places  |   |
| Exteneded,  |   |
| Use scaling   |   |

[Example, General Tab in Extended Numeric Tap]

- Font Pixel : 16\*16
- Size : 1x1
- Color: Text Black, Background Red
- Alignment : Right

| Numeric<br>General Display   Range | 2 |
|------------------------------------|---|
| Font Pixel<br>(* 16306<br>(* 32232 |   |
| Charater Size                      |   |
| Display Color                      |   |
| Text Color 📃 💌                     |   |
| Alignment                          |   |

[Example. Display Tab in Extended Numeric Tap]

- Number of Range:1
- Range 1 : Minimum Value 0, Maximum Value 200, Text Color Blue, Background Color Yellow

| ExNumeric  | × |
|--|---|
| General   Display Range  |   |
| 🔽 Use Range  |   |
| No, Of Ranges 📔 💌  |   |
| Range Value and Color Setting<br>Min, Max, Color Color<br>Color <= Range1 <= 200 📾 💽 💭 |   |

[Example. Range Tab in Extended Numeric Tap]

| ExNumeric Tag<br>↓                                  | in S/W  | $\Rightarrow \begin{array}{c} 0 \ge 0 \\ \hline 0 \otimes 0 \\ 1 \ge 0 \\ \hline 0 \otimes 0 \\ \hline 0 \otimes 0 \\ \hline 0 \otimes 0 \\ \hline 0 \\ $ | 0 X 1 0 X<br>999.99<br>1 X 1 1 X<br>999.99<br>699.99<br>699 | 1     0     X     3       3     6     6     6       4     1     X     3       5     6     6     6       6     6     6     6 | 0 X 4<br>999 - 99<br>1 X 4<br>999 - 99 |  |  |  |
|---|---|---|---|---|--|--|--|--|
|   | No. 0 Word  | No. 1 Word  | No. 2 Word  | No. 3 Word  | No. 4 Word                             |  |  |  |
| Block 0<br>(Most newly<br>logged block)             | 48682   | 48682   | 48682   | 48682   | 48682                                  |  |  |  |
| Block 1<br>(Logged Block<br>just before block<br>0) | 48682   | 48682   | 48682   | 48682   | 48682                                  |  |  |  |
|   |   |   |   |   |  |  |  |  |
|   | < Actual data block memorized at logging 1 of main unit > |   |   |   |  |  |  |  |

|                                |               | 0 X 0                | 0 X 1  | 0 X 2  | 0 X 3  | 0 X 4                |
|--------------------------------|---------------|----------------------|--------|--------|--------|----------------------|
| The result when transferred to | $\Rightarrow$ | <mark>486.8</mark> 2 | 486.82 | 486.82 | 486.82 | <mark>486.8</mark> 2 |
| main unit                      |               | 1 X 0                | 1 X 1  | 1 X 2  | 1 X 3  | 1 X 4                |
|                                |               | 486.82               | 486.82 | 486.82 | 486.82 | 486.82               |

+/- CODE is account for one place among total places