

TT200303 - FUP - Modules Order Number

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	The article is intended to support the solution of a similar problem.
	If you have any questions, comments or additions, please contact DEOS AG Support.
Title	FUP Modules Order Number (TT200303)
Object	FUP
Reference version	2
Date	03.2020

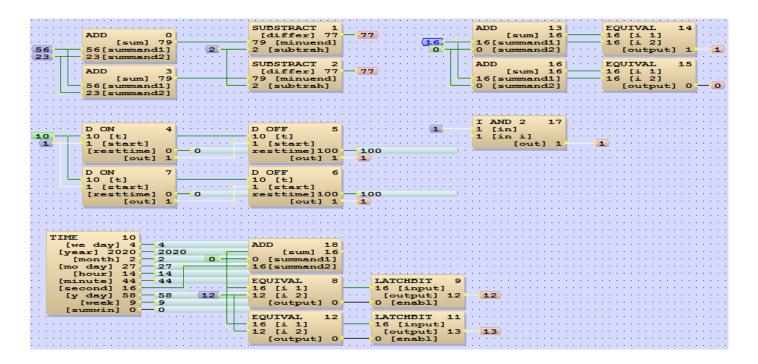
To explain the purpose of the FUP modules order number

Content:

Author

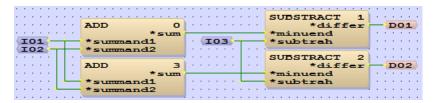
Goal

ΕK



TT200303 - FUP - Modules Order Number

1. You may notice that in each module, there is a number on the top right corner. The number start from 0, and will increase one by one when you add more modules to your FUP page. This is the running order of the module in your FUP page, i.e. the controller will start to run the module with number 0 first, and then 1, and so on



- 2. For an AHU program, normally you don't need to worry about it, as the program run every 1 second, so basically the effect is minimum even though the numbers are not in sequence
- 3. In the example below, you can see the order of the modules 2 and 3 are reversed, but you can still get the same result. The only different is the change is 1 second later than ordered one

```
SUBSTRACT
                           [differ]
ADD
                                       88
                                             88
           90
     [sum]
                               [minuend]
   [summand1]
                             [subtrah]
20 [summand2]
                           SUBSTRACT
                            [differ]
                                      88
                                             88
     [sum]
            90
                               [minuend]
70 [summand1]
                              [subtrah]
20 [summand2]
```

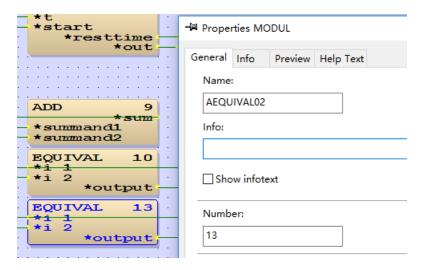
4. In the second example, which is a on/off delay module, you can see the "reversed module" also has 1 second delay than the ordered one. This is also OK for most DDC applications

```
D ON
                                D OFF
10 [t]
0 [start]
                                   [t]
[start]
                                10
[resttime]
                                 [resttime]
                                                     60
 ON
                                D
                                  OFF
10 [t]
0 [start]
                                10
                                   [t]
[start]
                                     sttime
      ttime
                                                     70
```

- 5. However, in some time critical application (e.g. chiller plant sequencing), the order of the module is very important and you've to make sure they're arranged correctly to get the correct result.
- 6. In the example below, we want to show the "second" when it's the same as the input value, 26 in this case. But you can see from the result of the "reversed module" is not correct, so you have to check the order of the modules and correct them manually

```
[we
      day]
                                     ADD
                  2020
[year]
         2020
                                          [sum]
  [month]
                            0
                                        [summand1]
    day]
                  13
                                     15 [summand2]
   [bour]
           1.3
                  13
                  52
                                     EQUIVAL
                                                            LATCHBIT
                                                                          11
minute
                                         [i 1]
[i 2]
           15
73
                                                                [input]
                  73
11
                                                               output]
[enabl]
  y day]
[week]
                          26
                                        [output]
 [sumwin]
                                    EQUIVAL
                                                   13
                                                            LATCHBIT
                                                                          12
                                                              5 [input]
[output]
                                        [output]
                                                                [enabl]
```

7. To change the order, you can double click on the module, and the properties windows will pop up. The "Number" shown is the order number, and you can change it to any number you want



8. After the change, you can close the window and you will see the new order number. You don't need to worry if the number you type is duplicated or not, because you can see below that the order number of the other modules in the FUP page will adjust automatically based on your change. So, it's very easy to arrange the order based on your requirements

```
EQUIVAL 10 | LATCHBIT 11 | *input | *ioutput | *D07 | *enabl | | EQUIVAL 12 | LATCHBIT 13 | *ioutput | *ioutpu
```

9. Sometimes we reverse the module order on purpose, such that we can create some simple logic to perform an action easily in FUP. In the below example, we want to detect if the input is changed. Using the "reversed module" you can see the output will become "0" for 1 second when the input is changed and goes back to 1 afterward. This method is very useful and can help you to build complex application easily if you're familiar with it

10. There is another trick in FUP which can also help you in many areas, by connecting the output directly back to the input

```
I AND 2 18
*in
*in
*in i
*out
D09
```

11. In this example, when the input is set to 1, the output will turn on and off every 1 second. You can notice that we also use this trick in other technical tips to perform different actions