CLSM3 AC7
Millenium 3 Software Tool

Self Training on AC7 Release : New Features

« Improvements Simplification & Optimization »

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Sommaire

- Key benefits
- Attention : New firmware
- Simplify and optimize
- New arrangement of tabs
- Standard Tabs
- Appearance icons
- Custom Tabs
- Macro tab
- Increased number of Slots
- Software & Hardware compatibility

Key benefits

- **Improved ergonomy and efficiency of programming**
  - Optimized distribution of the 124 FB
    - To more easily find Function blocks in the tabs

  - 1 Tab to manage a Macro library
    - Can better manage them and more easily reuse

  - 6 Tabs dedicated to users
    - To arrange for its convenience the FB and Macros favorites
    - We can thus use its macros as FB

- **More power for application programs**
  - More memory slots for the specific functions ($64 \Rightarrow 76$)
    - a benefit for complex applications

- **Windows 7 (32 bit & 64 bit) Compatibility**

Attention !

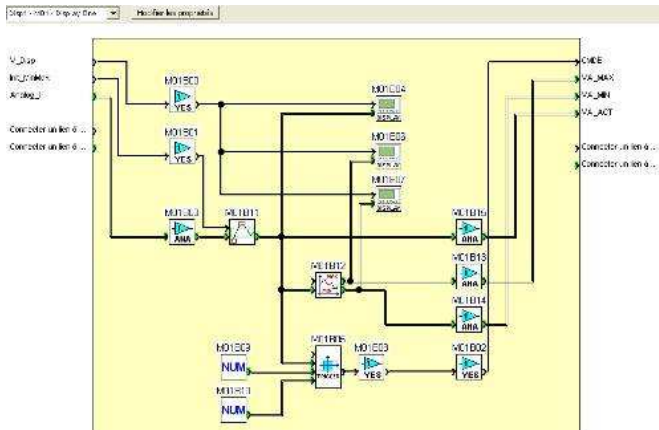It is mandatory for all Millenium3 customers to update their software to version AC7 V2.5.

Due to the integration of new electronic components this release includes the new firmware that is needed to program Millenium3 produced from june 2011 onwards.

If you do not upgrade to software to version AC7 V2.5 you will be unable to program any Millenium 3 manufactured after this date.
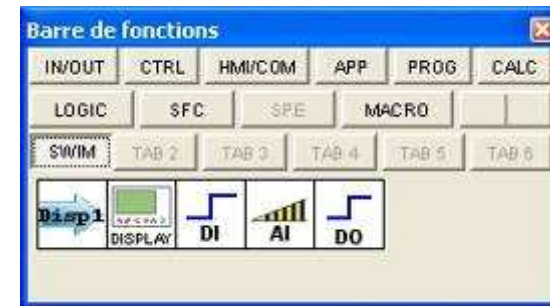
The millenium 3 with the new hardware can be identified by (H1.0.10) printed onto the right hand side of the product.

Simplify and optimize (1/2)

Increase efficiency with Macros

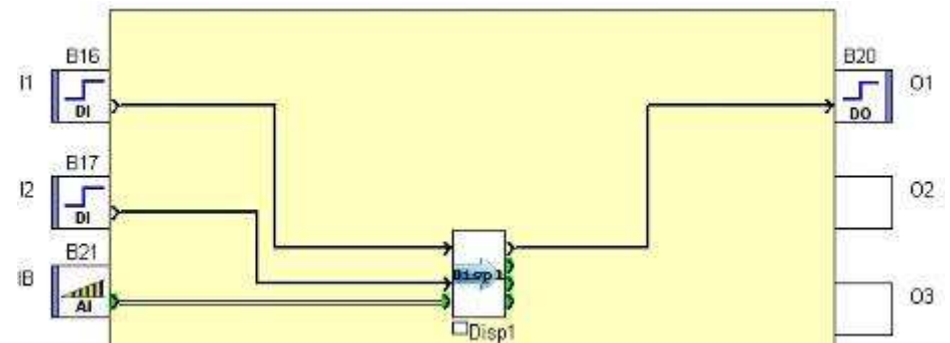**1 - Create a Macro with a valid program**

2 - Backup it in the Macros tab

3 - Includes the FB / Macros favorites in a personalized tab

4 - Reuse my FB / Macros favorites at will

Increase efficiency with Macros

5 - Create a library of macros to facilitate the achievement of my applications

New tab organization

An easier and more logical storage for FB and Macros

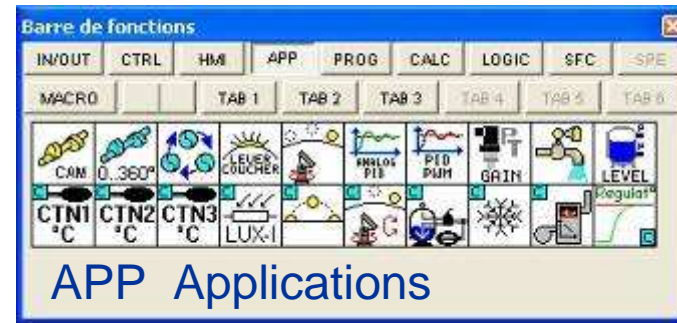- **10 standards tabs**

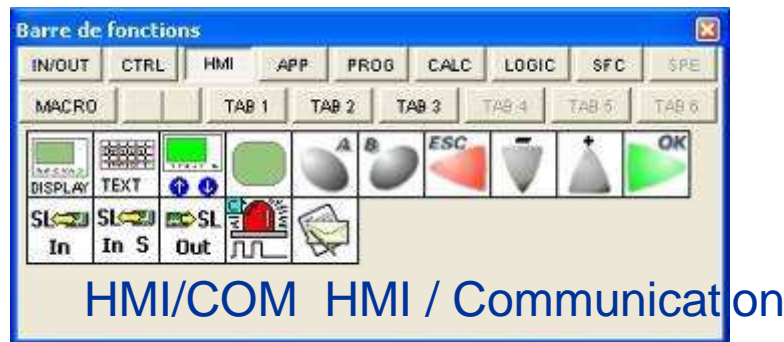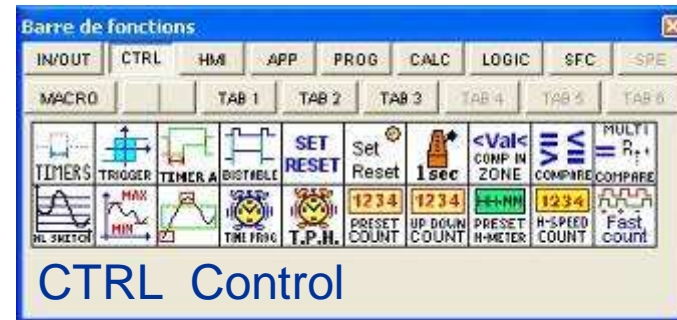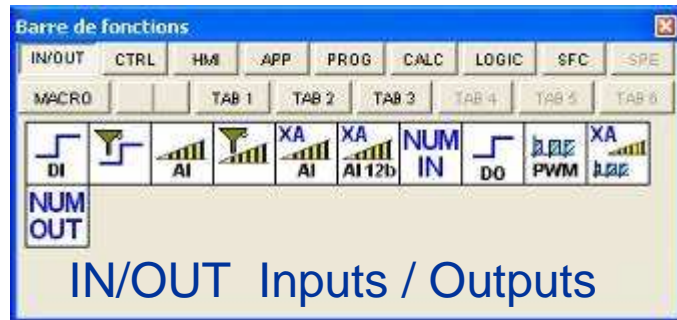   - IN/OUT   Inputs / Outputs
    - CTRL   Control
    - HMI/COM   HMI / Communication
    - APP   Applications
    - PROG   Programming
    - CALC   Calculation
    - LOGIC   Logic
    - SFC   SFC/Grafcet
    - SPE   Specific FB (normaly empty)
    - MACRO   User Macros

- **6 customizable tabs**
  Allowing users to store macros and FB at their convenience

    - TAB1 .. TAB6
    - To be renamed by user
    - 8 characters max
    - e.g.: HVAC
    - Gray when empty

Standard tabs 1/2

IN/OUT Inputs / Outputs

CTRL Control

HMI/COM HMI / Communication

APP Applications

To simplify the research, the FB and Macros are grouped by type of function in the 10 standard tabs

PROG Programming

CALC Calculation

LOGIC Logic

SFC SFC/Grafcet

SPE Specific functions
(normaly empty)

Macros

Icon appearance
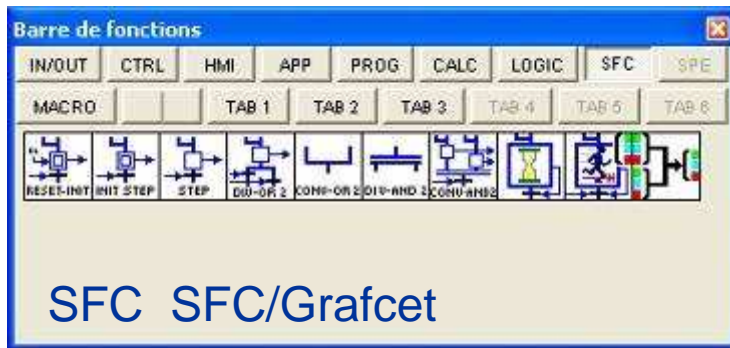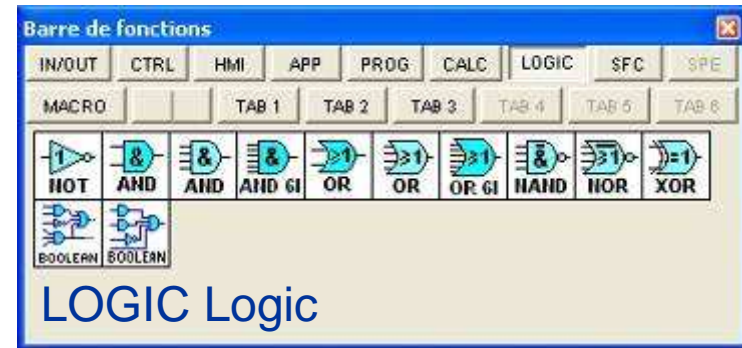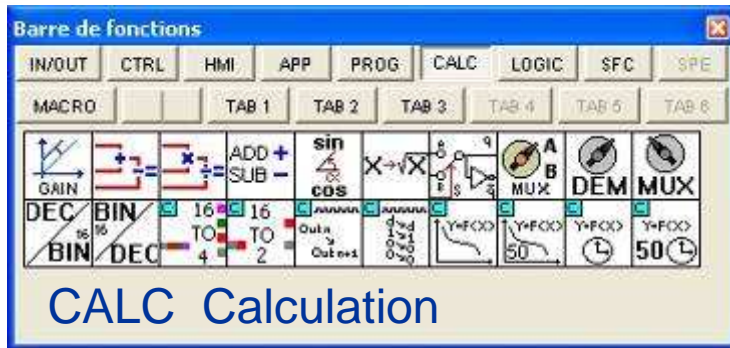
> For clarity, the icons on the toolbar can have three different states:

- **Colored**
  - The FB is available for use with the selected controller.

- **Light gray**
  - It is a FB that is only valid for a limited number of times and has already reached this limit. (e.g. High speed counter).

- **Dark gray**
  - It is a FB or a macro available in another version of our general product offer
    - Example: some FB are not available on Essential version, some others are not available on a 230Vac version
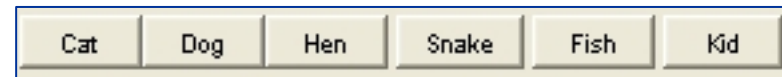 - The user can evaluate the available features by changing the type of controller.

Customizable tabs 1/3

6 customizable tabs to store FB and Macros that you use regularly

The title of these tabs is changeable

- Select the tab: click left
- Rename the title (8 characters maximum)
- Rename the tooltip (pop-up)

Rename a tab

| Tab name | TAB 2 |
| Tool tip for the tab | base2 |

OK   Cancel

| Heating | Ventil. | Air Cond | Acces Ct | Water Tr | Solar PV |

Ventilation

| Sarah | Peter | John | William | Suzan | Andrew |

| Cat | Dog | Hen | Snake | Fish | Kid |

Customizable tabs 2/3
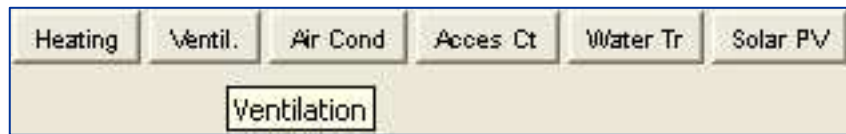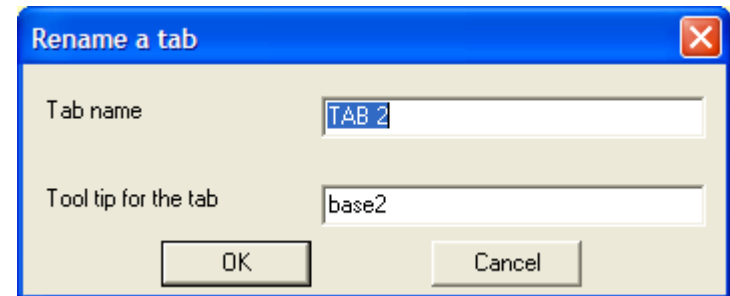
3 methods for storing FB and Macros in custom tabs
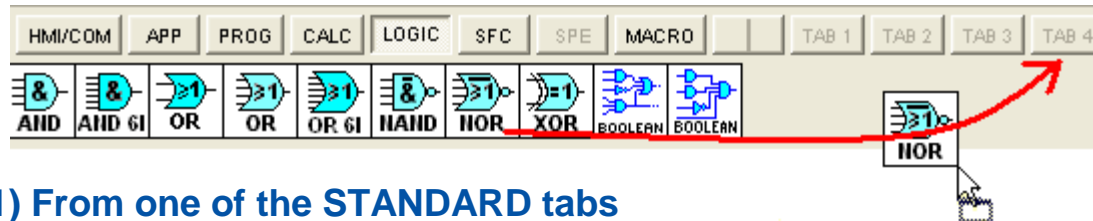
1) From one of the STANDARD tabs
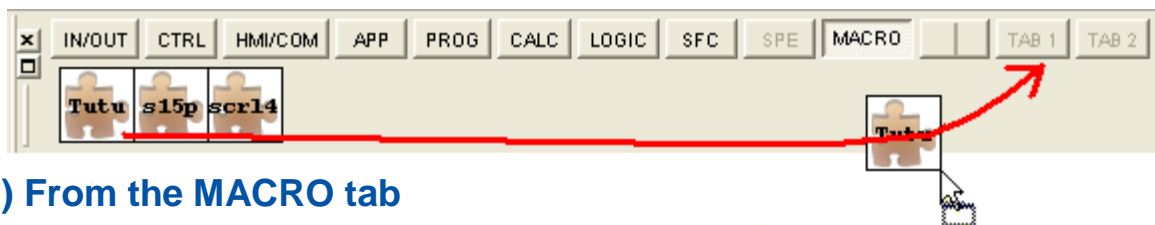
2) From the MACRO tab

To copy a FB to a custom tab, drag the icon by pressing the **shift key and left mouse click** from a standard tab (macros included) to the tabs in the toolbar and drop by releasing the mouse click.

Rules:
- The same icon can be stored in multiple tabs
- No limit on the number of icons in tabs
- Moving / copying possible between customizable tabs
- Delete an icon in a personalized tab with a right click "delete"

Customizable tabs 3/3
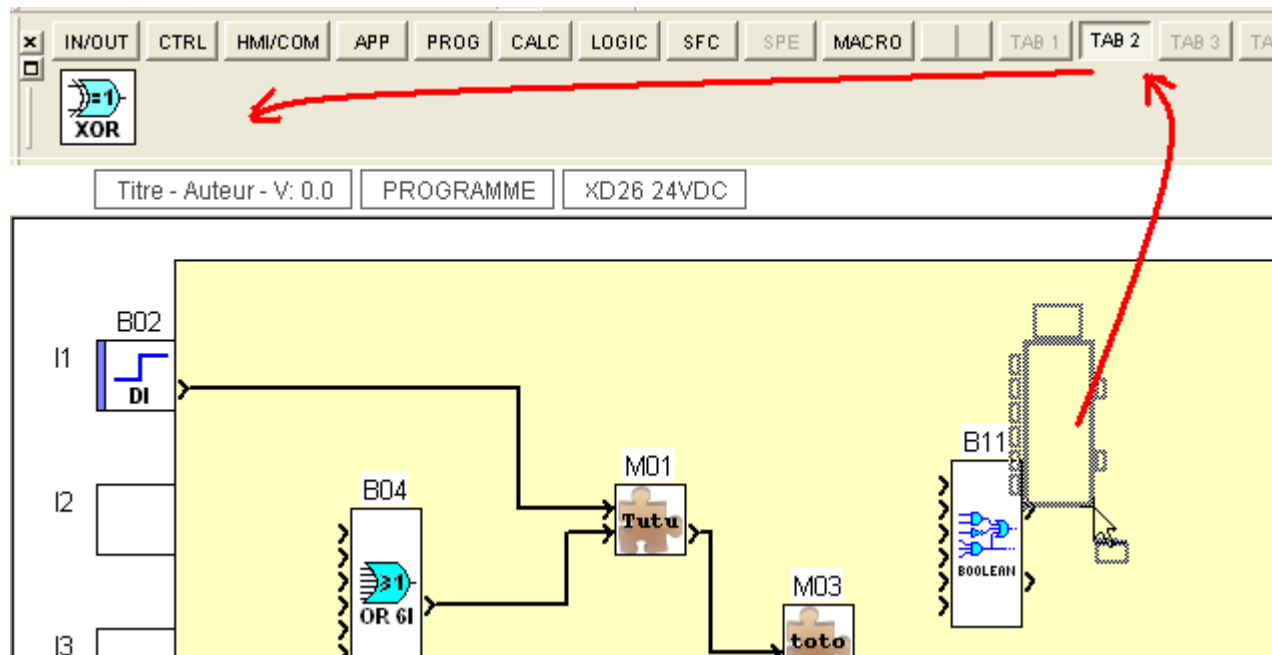
3) From the worksheet (except for macros)

To copy a FB to a custom tab, drag the icon by pressing the **shift key and left mouse click** from the worksheet to the custom tab in the toolbar and drop it by releasing the mouse click.

- **Rules:**
- The same icon can be stored in multiple tabs
- No limit on the number of icons in tabs
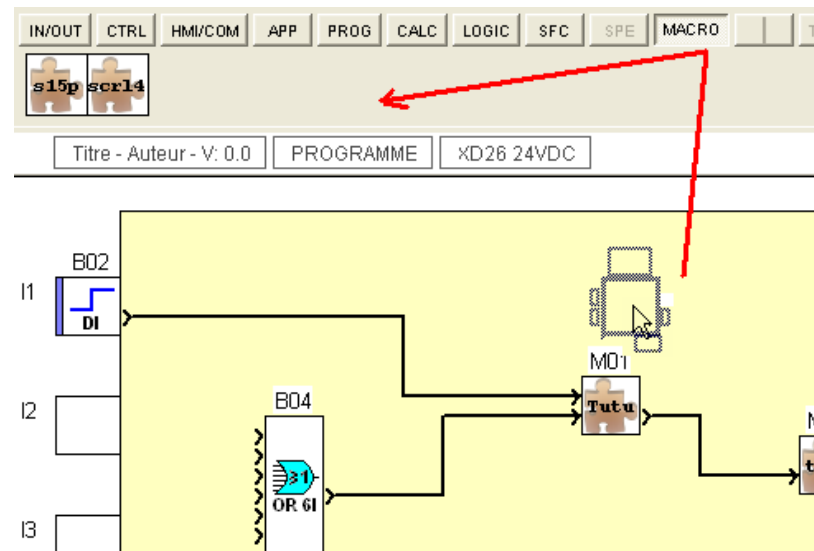- Moving / copying possible between customizable tabs

Macro tab 1/2

Create your macro library for easy macro reuse

To store a macro in the tab "MACRO",

- **Right click** on that select the macro and select "Save Macro"

- Or drag the icon by pressing the **shift key and left click mouse** from the worksheet to the MACRO tab and drop it by releasing the mouse click.

Notes:

- No systematic storage when the macro is created.
- The macro is defined by its identifier, there can be only one icon by ID
- The text of the identifier is included in the icon. (Reminder: 1 to 5 characters)
- The name of the macro appears when placing the mouse on the icon (pop-up).
- If a FB is no longer present in the workshop, the macro cannot be reconstructed at software start and the according icon disappears after a warning message.
- The tab configuration is saved with the MACRO workshop context
- One can not store a macro from a sheet whose macros are protected by password, if the password has not been entered when opening the worksheet.

- You can delete an icon from the MACRO tab or a customizable tab by selecting it, then right click "Delete", but this action does not delete the associated FB or macro.

- You can rename an icon by selecting the macro, and then right click "Reconfigure",
  this action brings up the window "Configuring the macro".

Rules:

- If a macro icon is deleted from the MACRO tab, it is also deleted from all the custom tabs it has been copied to.

- If a macro is delected from the edit page, the icon is not deleted and remains in the tab(s).

- Renaming the identifier of the macro in the application worksheet, does not change the identifier of the macro in the MACRO toolbar.

Tip:

To copy a macro without modifying the original macro, you must save it in the toolbar, rename the ID and put it back on the edition sheet.

Increased number of Slots

More slots available for better powerful applications

Some functions use many slots
(e.g. Sunrise Sunset: 36   2-axis solar tracking: 57)

- For the Millenium 3 Essential expandable or Smart :
  - The number of slots increases from 64 to 76 (+ 12 slots)

	Used	Available
Parameters zone (bytes)	0	4096
Digital data, SFC token, Boolean (number) zone	0 (0 + 0)	576 (368 + 208)
Other data zones (bytes)	0 (0 + 0)	400 (200 + 200)
Program zone (bytes)	2 (1 + 1)	8192 (4096 + 4096)
Application-specific function zone (slots)	0	76

- For the Millenium 3 Essential Compact :
  - The number of slots increases from 32 to 44 (+ 12 slots)

	Used	Available
Parameters zone (bytes)	0	2048
Digital data, SFC token, Boolean (number) zone	0 (0 + 0)	576 (368 + 208)
Other data zones (bytes)	0 (0 + 0)	400 (200 + 200)
Program zone (bytes)	2 (1 + 1)	4096 (2048 + 2048)
Application-specific function zone (slots)	0	44

- The scale measuring the number of slots used is replaced by a numerical value / Max

41/76

Other improvements

- Integrating new names "Smart" & "Essential"
    - A specific communication will be sent for more precisions on that topic

- Memorizing the size of the floating toolbar

- On Function Blocs:
    - FB Boolean 2 outputs :
        - setting window smaller for Notebook
    - FB Bit & Word Shift Registers :
        - new version with power failure backup

- On CD :
    - New look of the installation process
    - Updating notices
    - Library updated with the workshop AC7
    - Removing Adobe acrobat and Internet Explorer

Software & Hardware compatibility

- Windows Operating System
  - Microsoft **Windows 7 32 bits & 64 bits**,
  - Microsoft Windows XP, 2000, NT SP6 32 bits

- Installation on 32-bit or 64-bit PC
  - Pentium 300MHz (Pentium II 600MHz recommended)
  - 128MB Ram (256MB Ram recommended)
  - Free space on hard disk : 80MB (170MB recommended)
  - VGA 800x600 screen or more