This powerpoint will show you the programming functions of MTPWIN, it will take you to open MTP01 and Millenium3 programs to discover the mode of its operation.

MTP01 screen & Millenium3

Contents

- **Software installation and wiring**

- **The various functionalities of the MTP01** (links to the program descriptions)

- **Basics**
  - Addressing
  - Configurating the address zone to pilot MTP01 by Millenium3 (M3)

- **MTP01 presentation**
  - Introducing MTPWIN
  - Wiring and commissioning an M3 – MTP01 data exchange
  - Read/write word/bit
  - Recipe
  - Pilot MTP01 by M3
  - Read/write parameters M3
  - Line graph
  - Messages
  - Bitmaps
  - Reading out sample data
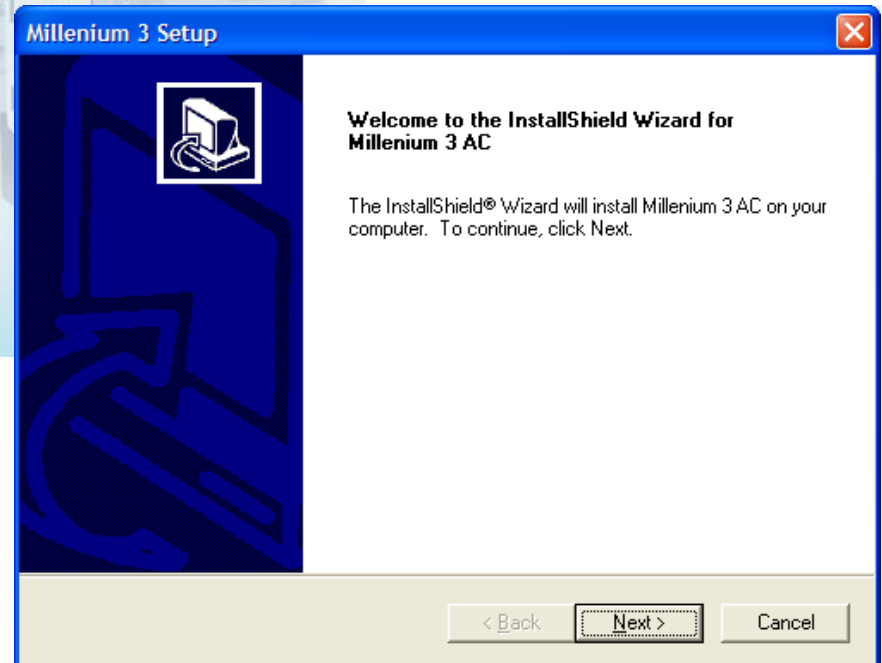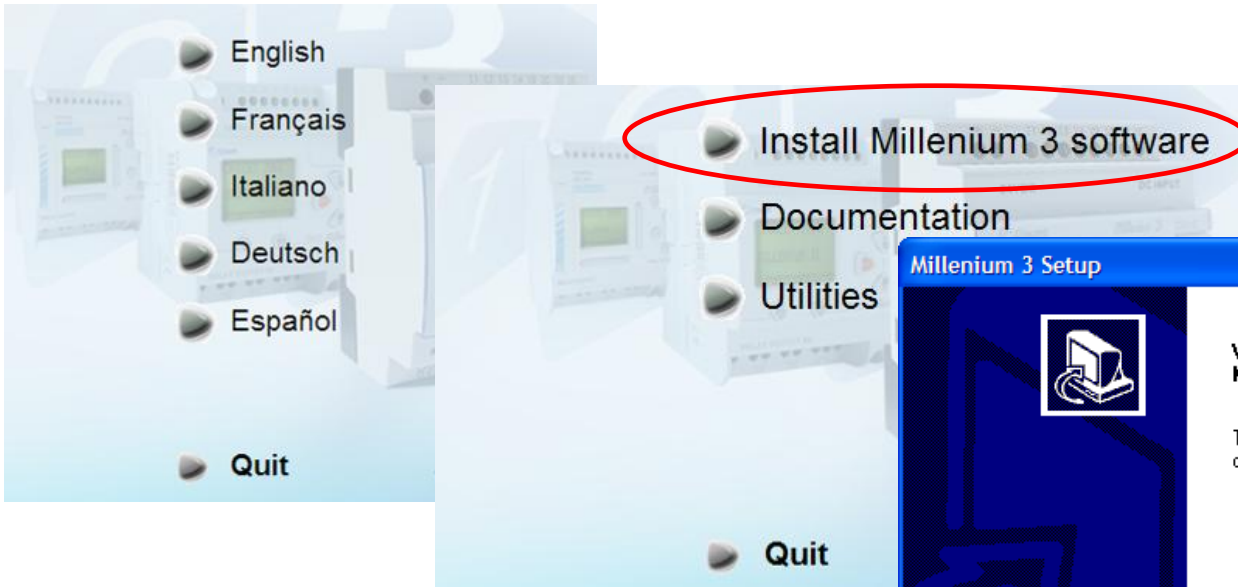 - Links to MTP01 / M3 programs

- **Glossary**

- ## Installing the MTPWIN software
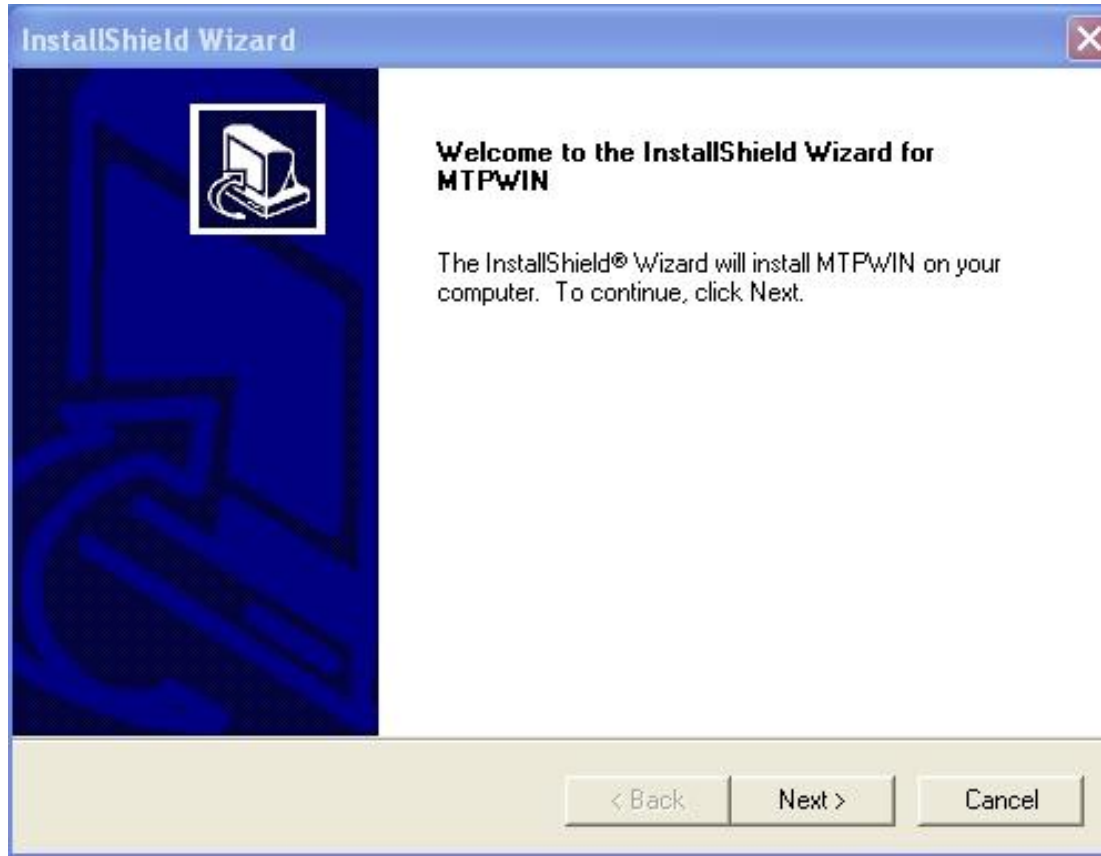
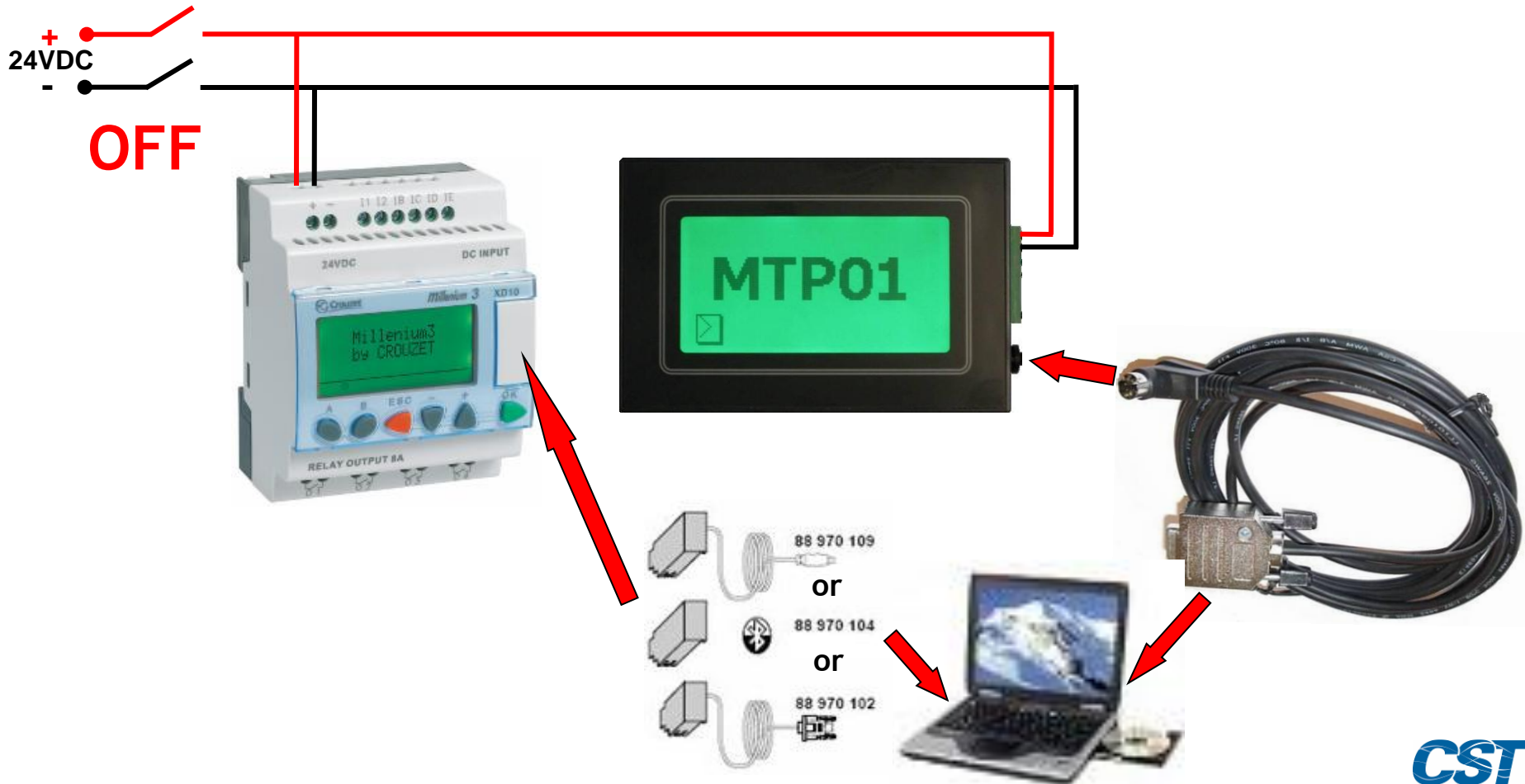**Restart your PC after installation**

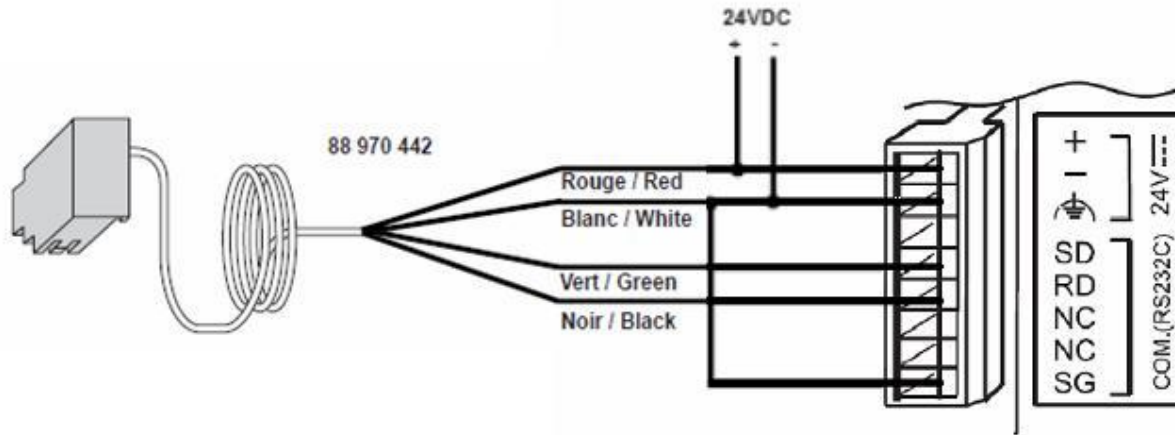# • Installing the software Millenium3

Wiring for program transfer

⚠️ *Disconnect the power whenever inserting or extracting the programming cable into/from Millenium3 or MTP01 !*
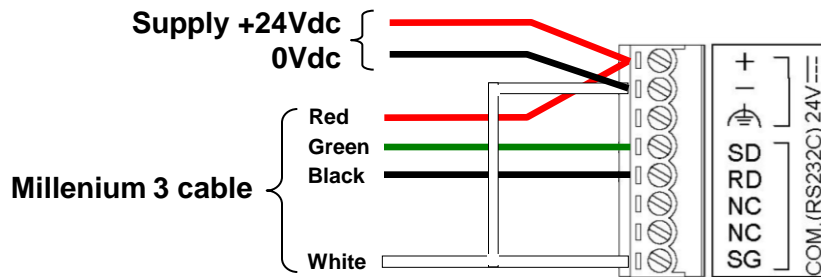
Program transfer

24VDC +
-

ON

MTP01

88 970 109

or

88 970 104

or

88 970 102

The data exchange cable Millenium3 ⇔ MTP01

88 970 442

Rouge / Red
Blanc / White
Vert / Green
Noir / Black

24VDC

Wiring cable 88 970 442 to the connector of MTP01

Supply +24Vdc
0Vdc

Millenium 3 cable
Red
Green
Black
White

⚠️ Wiring for use / data exchange

Disconnect the power whenever inserting or extracting the Millenium3 - MTP01 data exchange cable !

OFF

Connecting

ON

Data exchange
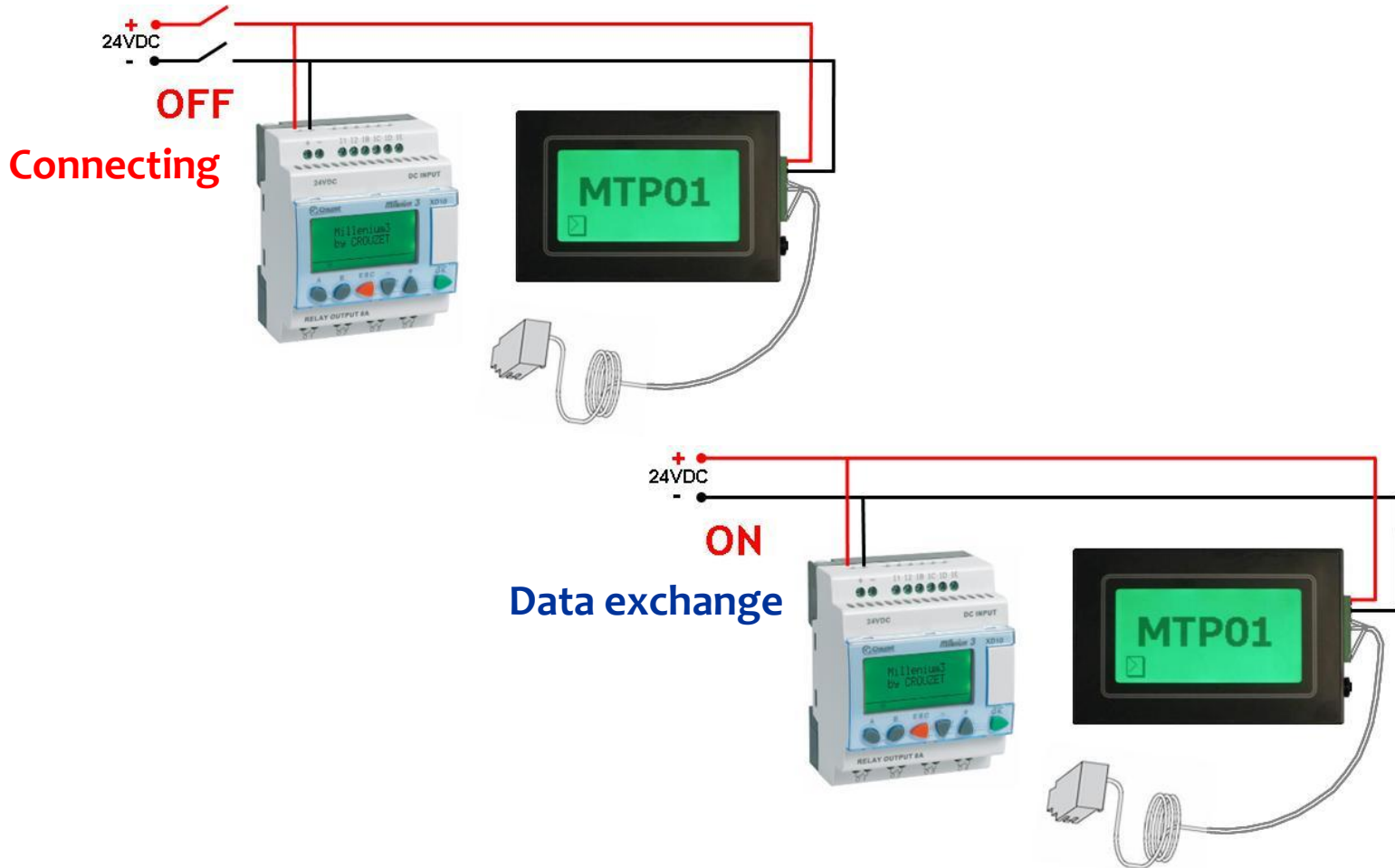
The various MTP01 functionalities

Links:

- **Read/write Word – Bit**
- **Recipe management**
- **Piloting MTP01 by M3**
- **Reading the M3 status**
- **Reading/writing the M3 clock**
- **Line Graph**
- **Bargraph**
- **Messages**
- **Bitmaps**
- **Scrolling messages**
- **Conditions/comparator (Write Device)**

BASICS

- ## Addressing
    - » ### Example
    - » ### Address area
        - – BSLIN
        - – BSLOUT
    - – ## Configurating the address zone to pilot MTP
        - » ### Internal address area (MTP)
        - » ### External address area (M3)
            - – Details of the area used by M3

Definitions:
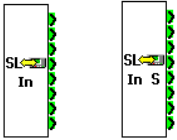
SLIn = *Serial Link In* → Function block that allows M3 to <u>read</u> 8 words by using the M3 programming port.

3 blocks with 8 words each can be used (addresses 1-8, 9-16, 17-24)

SLIn S → Same as SLIn but saves values at power failure.

(Use *either* SLIn *or* SLIn S in a program, do <u>not</u> mix both types)

SLOut = *Serial Link Out* → Function block that allows M3 to <u>write</u> 8 words by using the M3 programmimg port.

3 blocks with 8 words each can be used (addresses 25-32, 33-40, 41-48)

M3 → **Millenium3**

MTP = *Millenium Touch Panel* → **Screen of the M3**

MTPWIN → **Programming software of the MTP01**

WSLIN → **Word address in MTPWIN related to an SLIn function block**
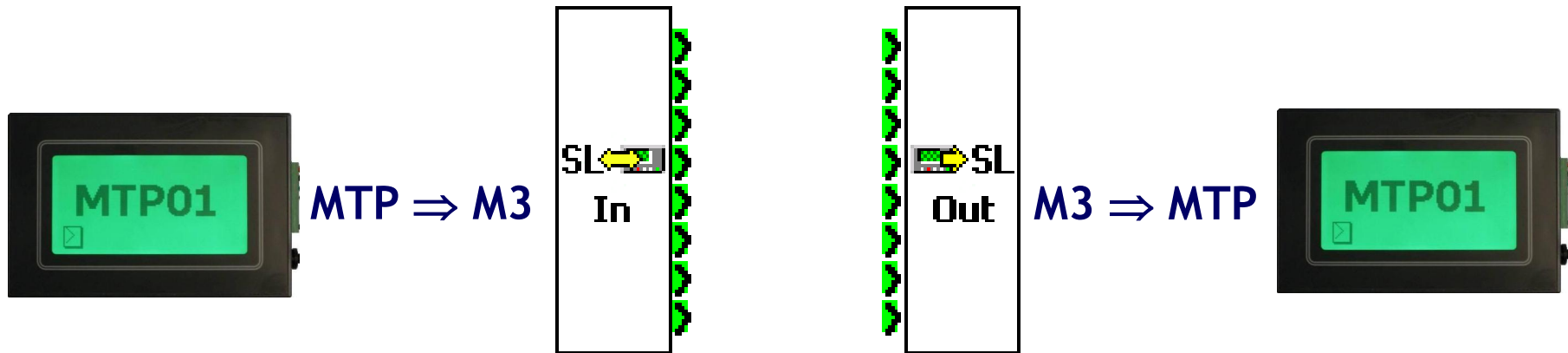
WSLOUT → **Word address in MTPWIN related to an SLOut function block**

BSLIN → **Bit address in MTPWIN related to an SLIn function block**

BSLOUT → **Bit address in MTPWIN related to an SLOut function block**

Addressing

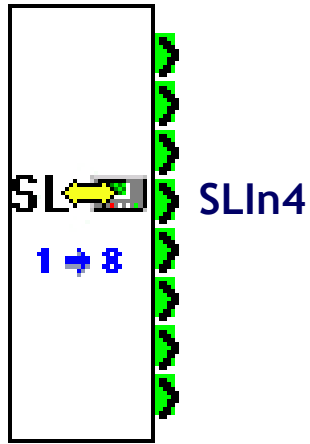**Words and Bits are used for the data exchange between MTP01 and M3.**

MTP $\Rightarrow$ M3   SL⇐ In   ⇒SL Out   M3 $\Rightarrow$ MTP

Word address area:

Millenium3: SLIn 1 - 24 $\Rightarrow$ MTPWIN: WSLIN 1 - 24

Millenium3: SLOut 25 – 48 $\Rightarrow$ MTPWIN :   WSLOUT 25 - 48

Word addressing example

M3: SLIn4 ⇒ MTPWIN: WSLIN4

SLIn4

1 → 8

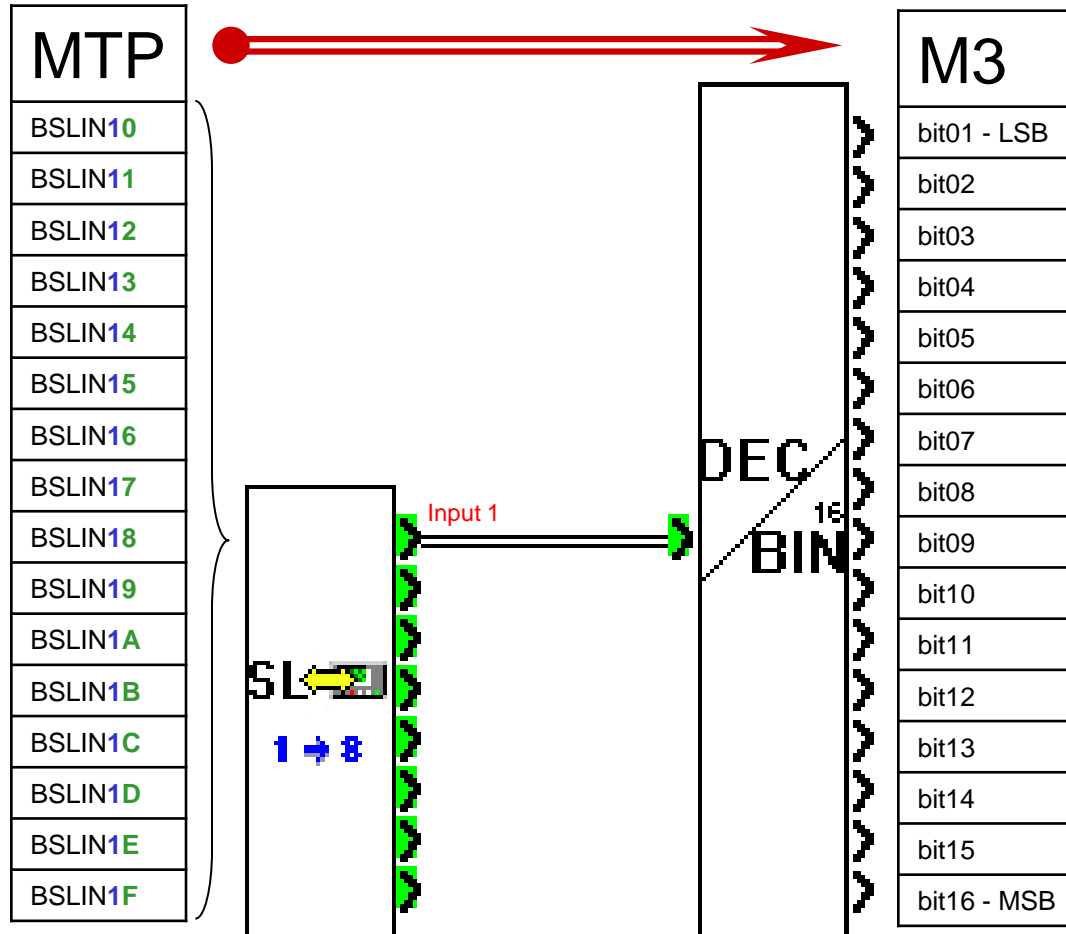Reference Device

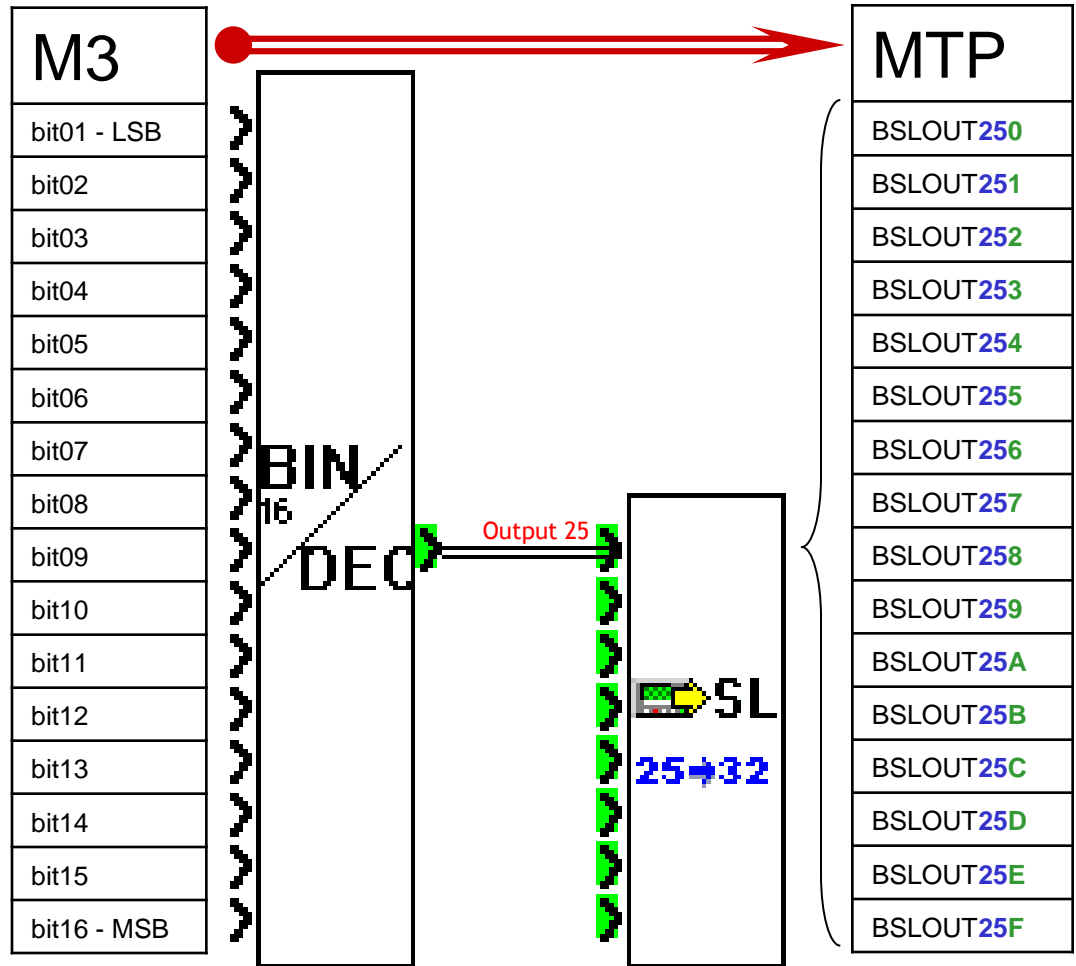WSLIN4

M3: SLOut31 ⇒ MTPWIN: WSLOUT31

25 → 32
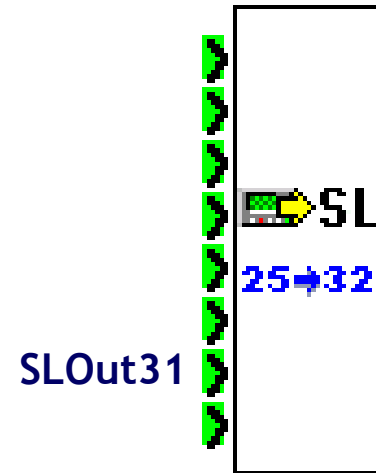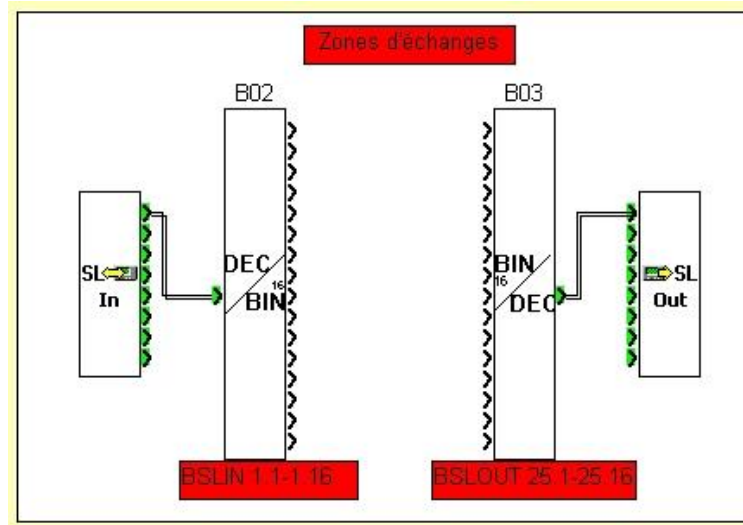
SLOut31

Reference Device

WSLOUT31

Addressing a bit - BSLIN

Addressing a bit - BSLOUT

Addressing bits in M3 is done with these function blocks:

How to address a bit in MTPWIN:

The bits (BLSOUT or BSLIN) are described like this: **N word + N°bit**
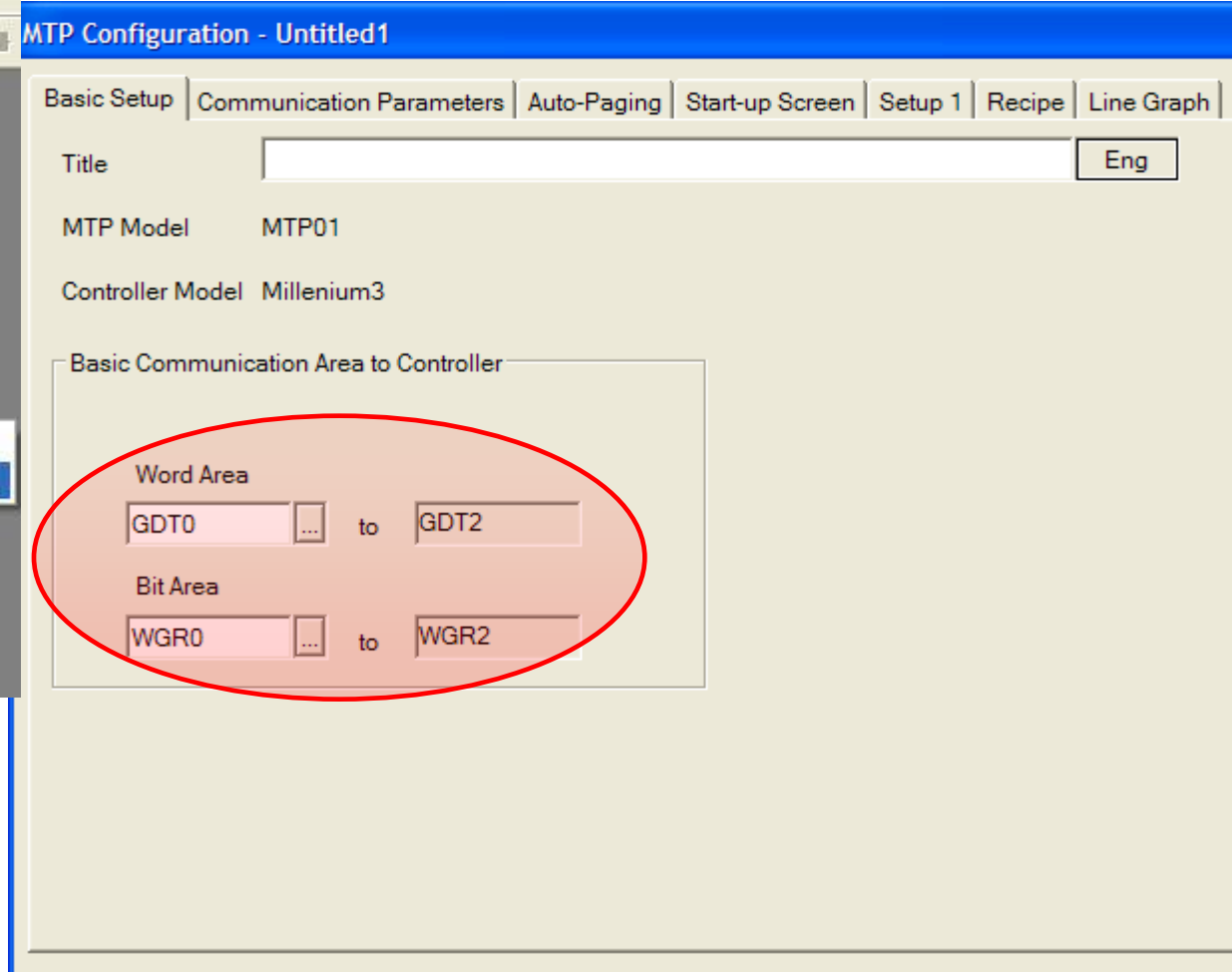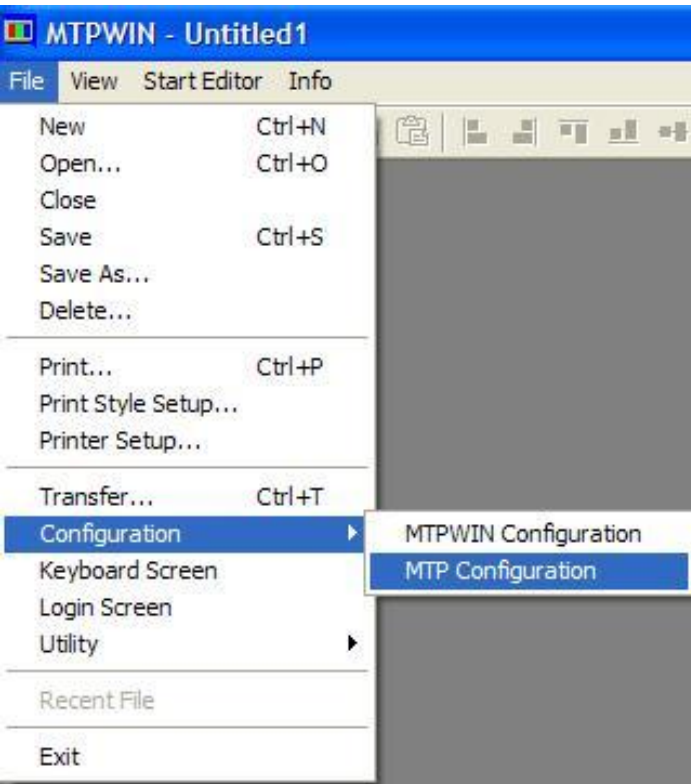
Example: To work with bit 15 on SLOut12, it will be noted as BSLOUT**12E**.

The address area ranges from 1 to 48 and is defined as follows:

Bit SLIn 1.1 - 24.16 of M3 ⇒ BSLIN **10** to **24F** in the MTPWIN

| BSLIN | ▼ | 10 |

Bit SLOut 25.1 – 48.16 of M3 ⇒ BSLOUT **250** to **48F** in the MTPWIN

| BSLOUT | ▼ | 250 |

Basic communication Area to PLC (M3):

Internal addresses reserved to pilot the MTP01

Internal pilot area (MTP01):

N ex: GDT0	Change screen (hexadécimal)
N+1 ex: GDT1	Not used
N+2 ex:GDT2	Number of the screen actually in use (hexadécimal)

Position	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
n +BIT ex: WGR0F = 1 (buzzer on)	Buzzer	Force view	Backlight on/off	Blinking backlight	Backlight color											
N+1 ex: WGR1	Not used															
N+2 ex:WGR2	Not used															

Backlight colors (default = green)		
Bit	B	A
Off	0	0
Green	0	1
Red	1	0
Orange	1	1

One can use keys in the screen to pilot the MTP01

Link: **MTP01_Internal_ScreenContr.IOP**

The M3 data zone reserved by default (not adjustable):

WSLOUT45	from M3
WSLOUT46	from M3
WSLIN23	to M3

WSLOUT47	from M3
WSLOUT48	from M3
WSLIN24	to M3

To pilot MTP01 by Millenium3

The M3 data zone reserved by default:

WSLOUT45	from M3	→ Change the MTP01 page
WSLOUT46	from M3	→ Use prohibited
WSLIN23	to M3	→ Use prohibited

WSLOUT47	from M3	→ Pilot the MTP01 screen
WSLOUT48	from M3	→ Copy of WSLOUT47
WSLIN24	to M3	→ Use prohibited

Position (WSLOUT47)	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
n +BIT ex: 47+F (buzzer)	Buzzer	Force view	Backlight On/Off	Flashing backlight	Backlight color											

Bit	B	A
Off	0	0
Green	0	1
Red	1	0
Orange	1	1

Links:

Screen_Control.pm3

MTP01_ScreenControl.IOP

MTPWIN presentation

- **PRESENTATION**

  - Screen management
  - First start with MTPWIN
  - Creating a new program
  - The important menus
  - Transfer parameters

Launching MTPWIN the 1st time
(creating a new program).

MTPWIN 1.2

Tick here to start the video

Tick here to start the flash

The MTPWIN programming window

Programming screen

Parts library

Screen manager

Screen management

MTP01

1

prog5.IOP - Screen M...

Page:00

Open

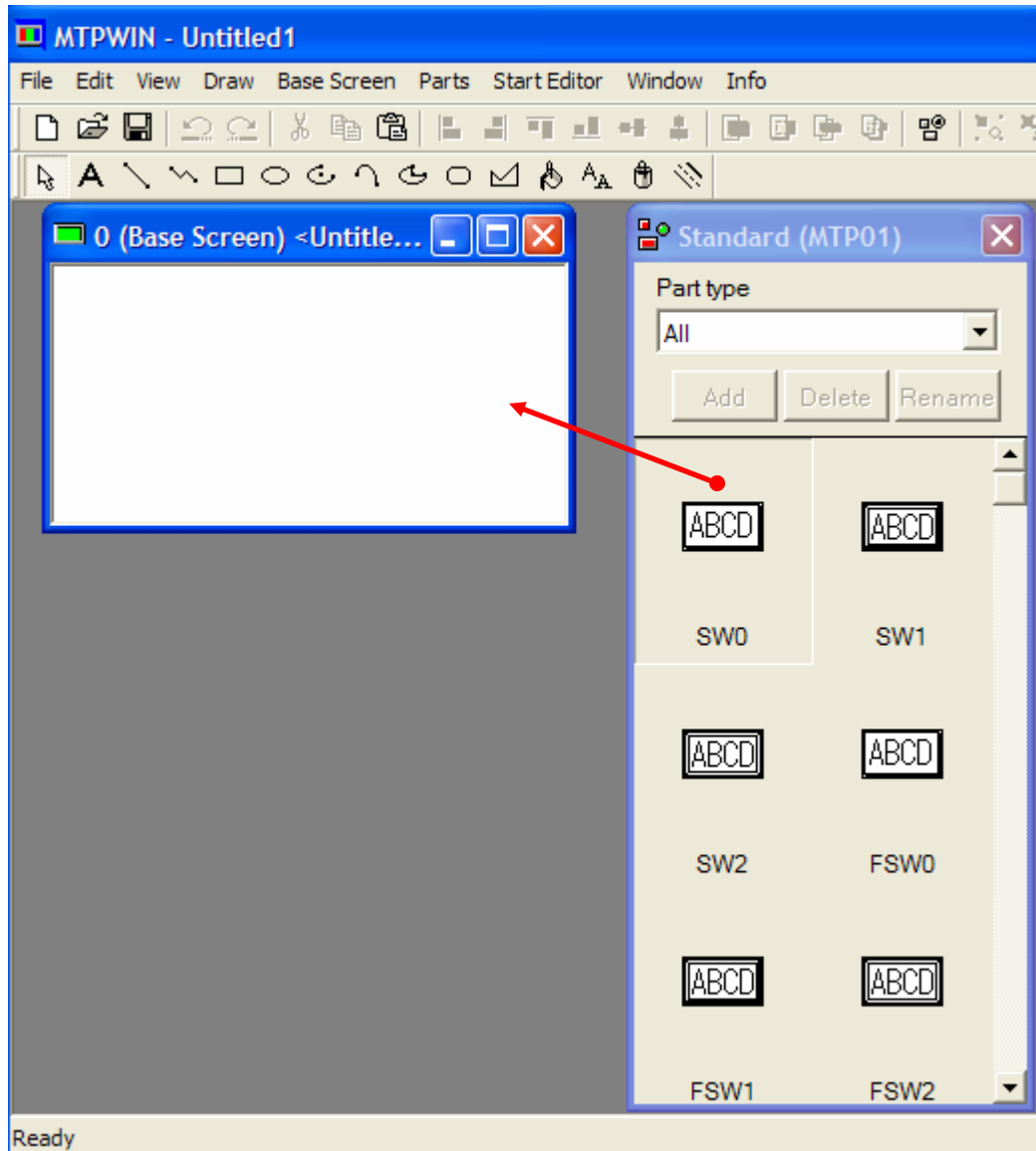Copy | Cut | Paste | Delete
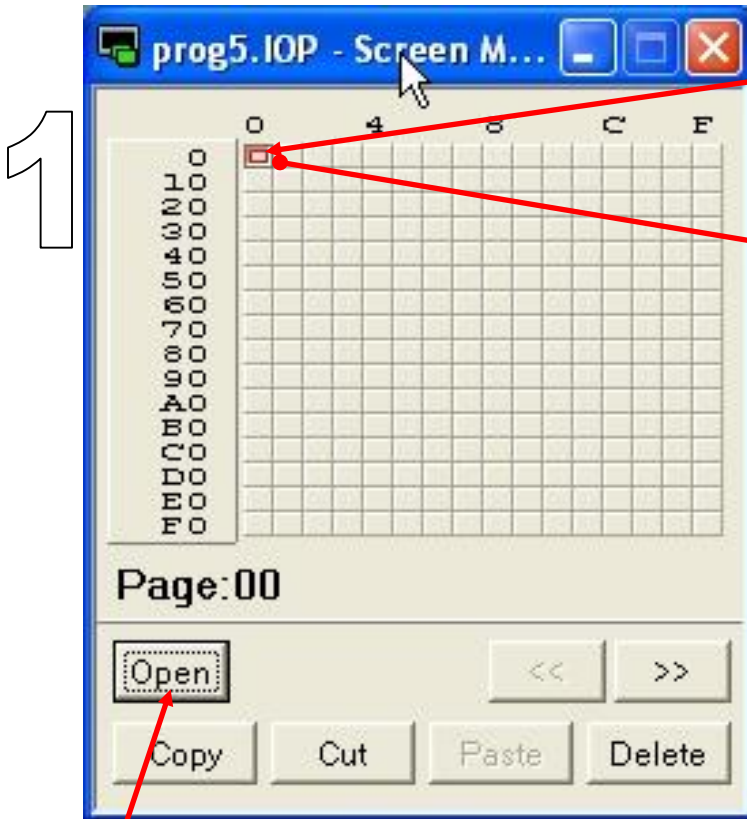
The screen management is done by double-clicking here
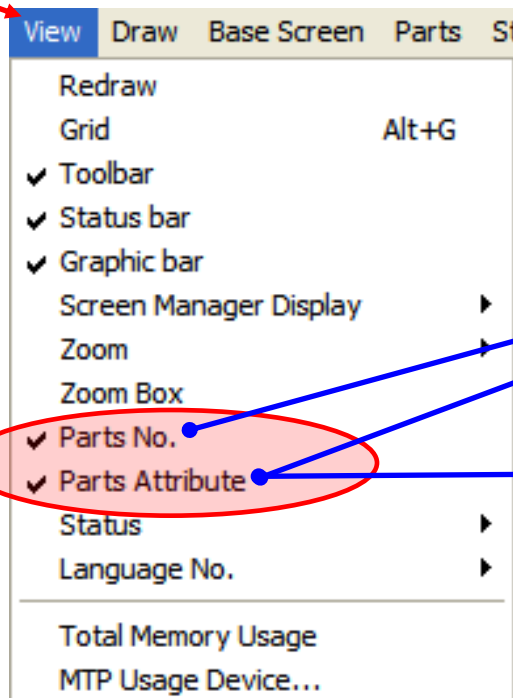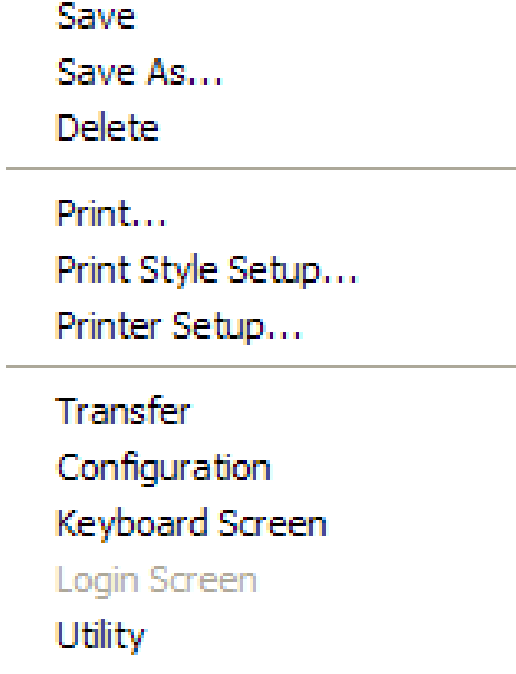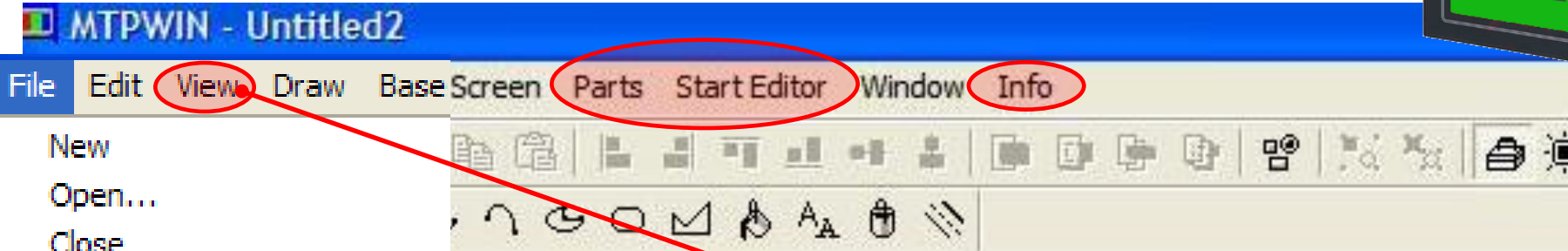
2

0 (Base Screen) <Untitle...
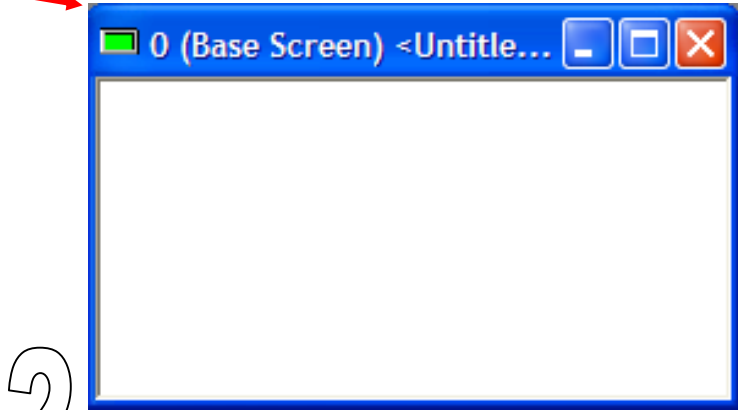
Or :

mark screen and tick 'Open'

Placing a component (part) on the screen

To place a part on the screen, click on the part with the left mouse key, hold the key, drag the part to the screen and release the key where you want to place it. (Drag and drop)   Like with the Millenium3 software.
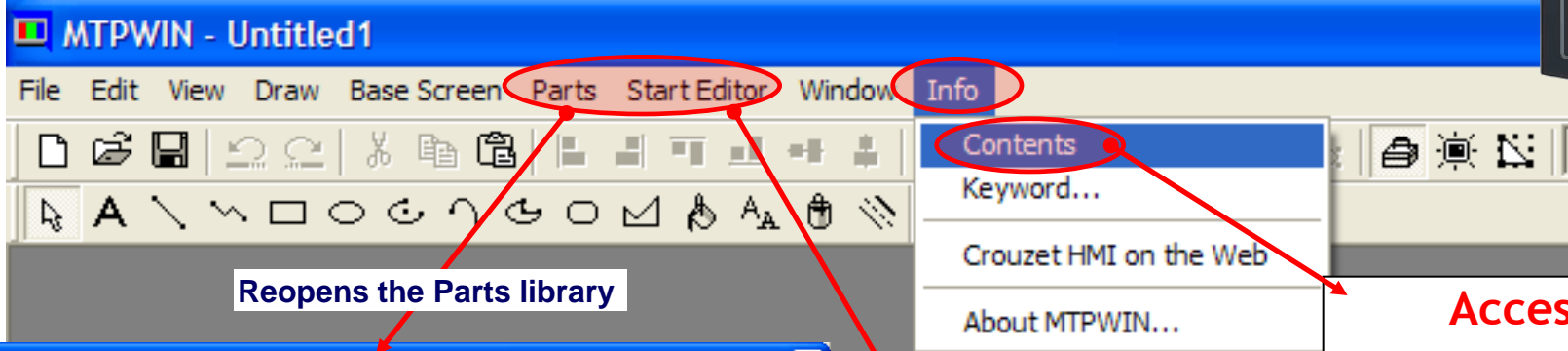
The main menus 1

MTP01

MTPWIN - Untitled2

File Edit View Draw Base Screen Parts Start Editor Window Info

File menu:
- New
- Open…
- Close
- Save
- Save As…
- Delete
- Print…
- Print Style Setup…
- Printer Setup…
- Transfer
- Configuration
- Keyboard Screen
- Login Screen
- Utility

View menu:

View Draw Base Screen Parts St
- Redraw
- Grid   Alt+G
- ✔ Toolbar
- ✔ Status bar
- ✔ Graphic bar
- Screen Manager Display   ▶
- Zoom   ▶
- Zoom Box
- ✔ Parts No.
- ✔ Parts Attribute
- Status   ▶
- Language No.   ▶
- Total Memory Usage
- MTP Usage Device…
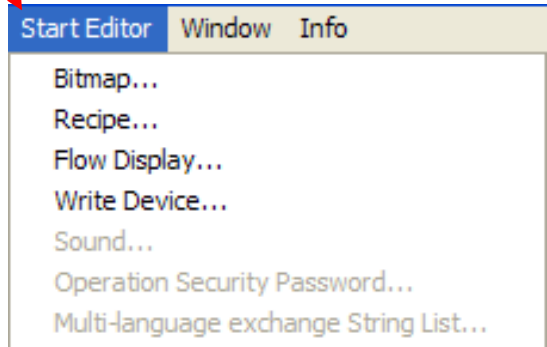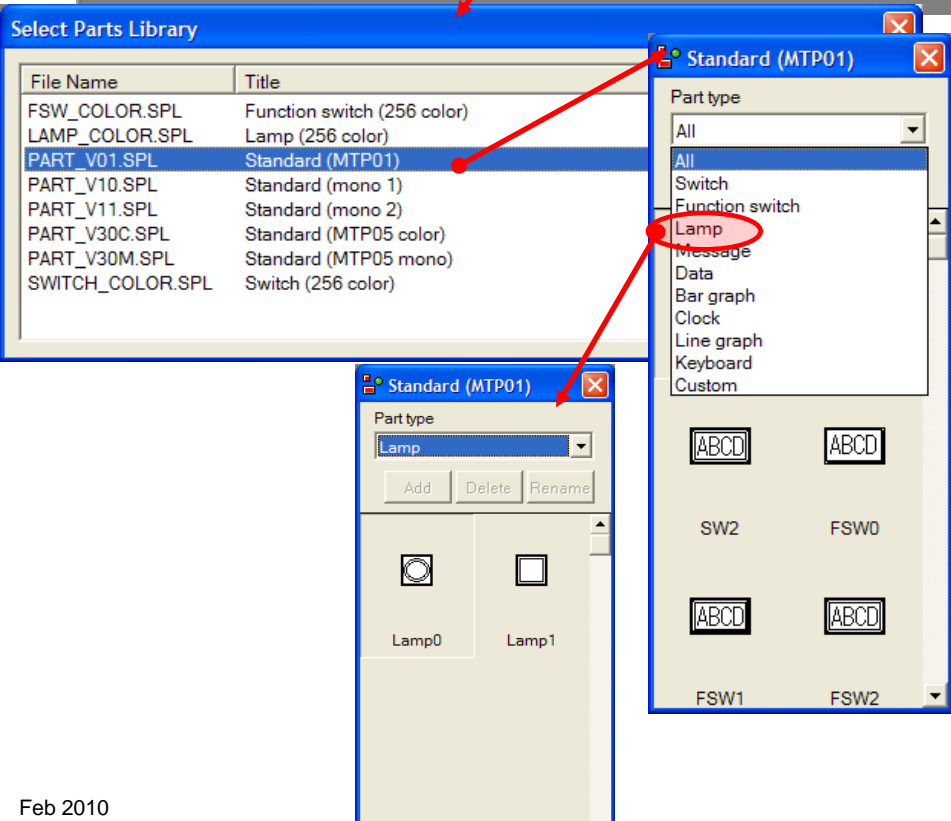
0 (Base Screen) <Untitled1>

SW0
BSLIN8C
ABCD

This shows the address of a part
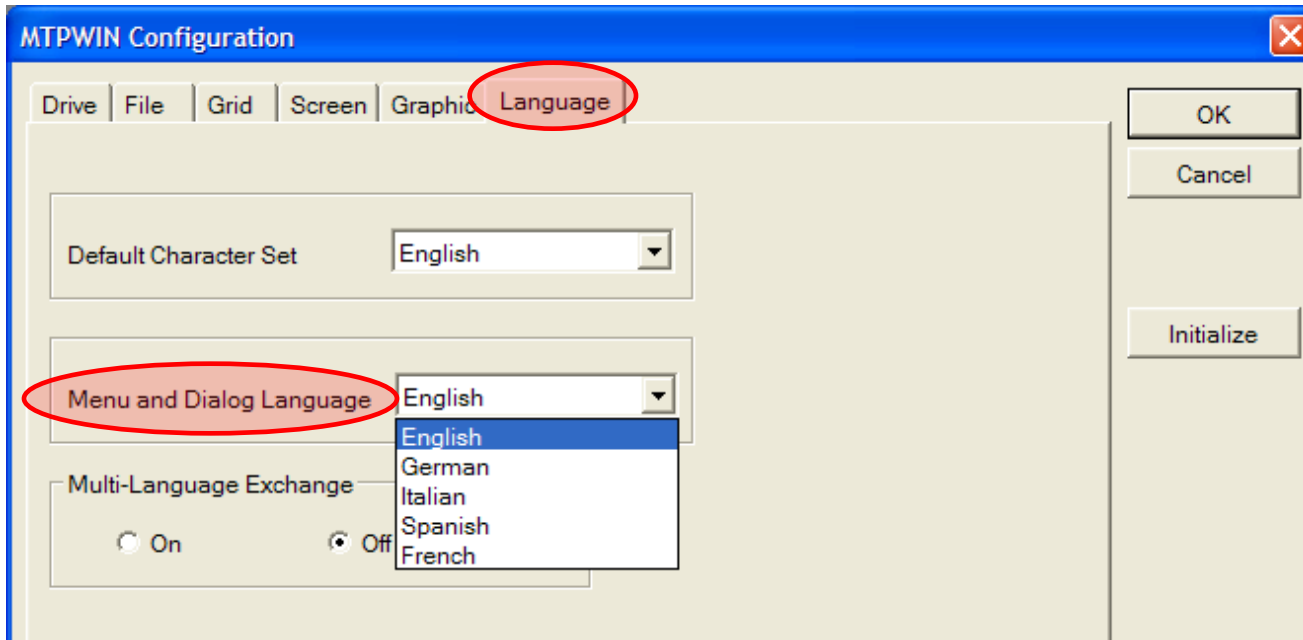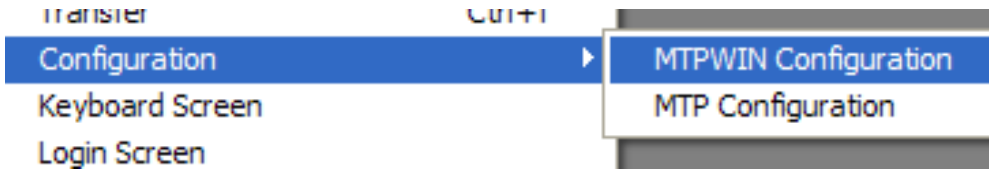
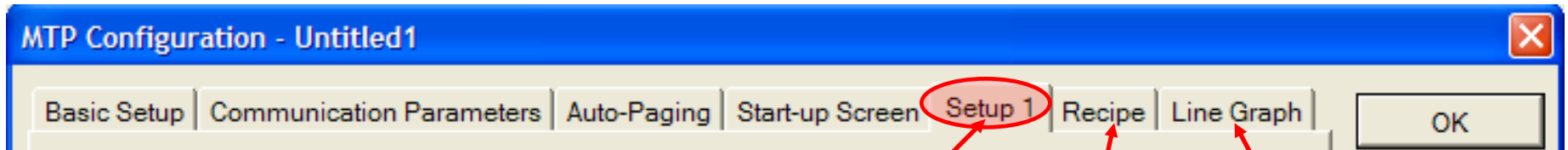# The main menus 2

Reopens the Parts library

Access to the Help file !

MTPWIN configuration menu

MTP01

Transfer	Ctrl+T	
Configuration	▶	MTPWIN Configuration
Keyboard Screen		MTP Configuration
Login Screen		

MTPWIN Configuration

Drive | File | Grid | Screen | Graphic | **Language**

OK

Cancel

Default Character Set: English

Initialize

Menu and Dialog Language: English

English
German
Italian
Spanish
French

Multi-Language Exchange
○ On   ⦿ Off

CST
CUSTOM SENSORS & TECHNOLOGIES

MTP configuration menu

- ➢ **Reading M3 clock (On or Off)**
- ➢ **Backlight brightness setting**
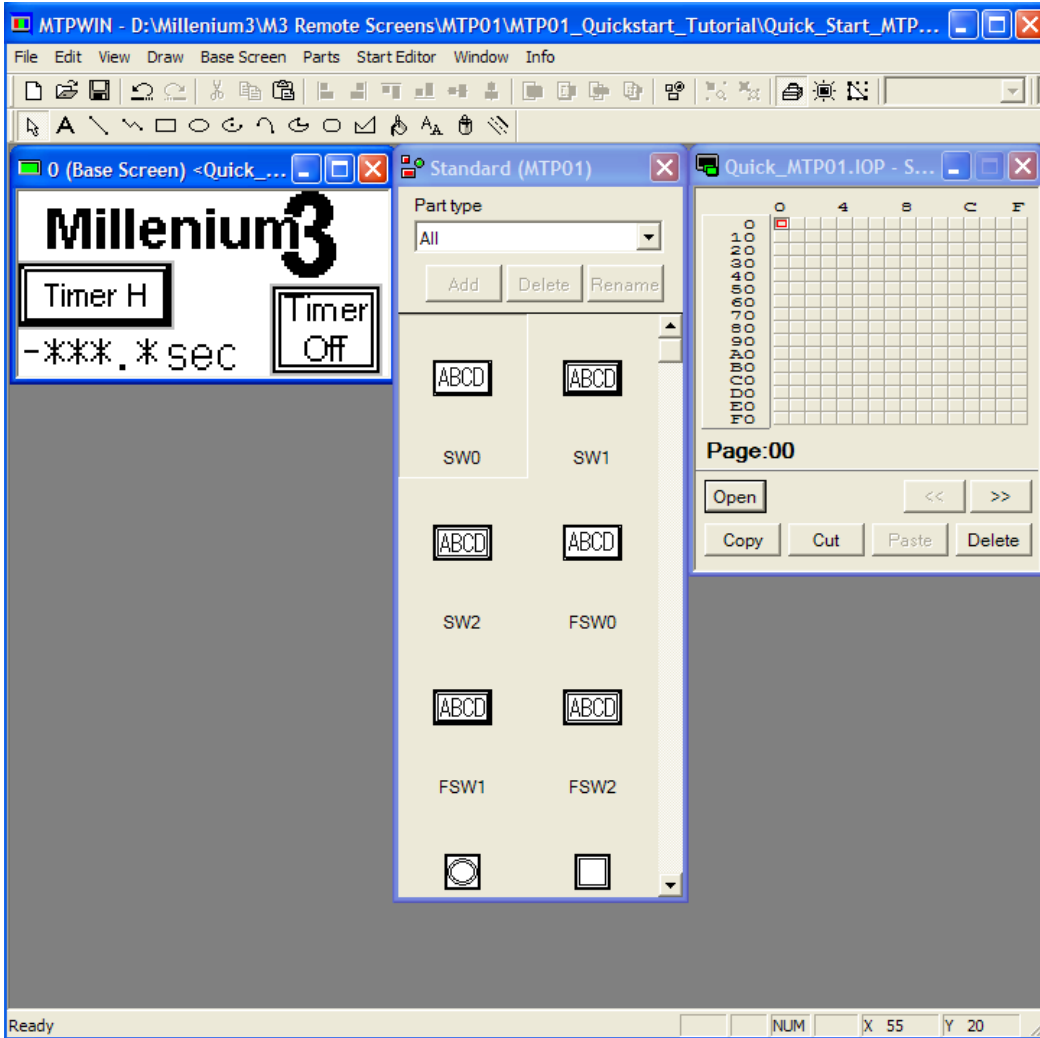- ➢ **Beep (On or Off)**

Recipies
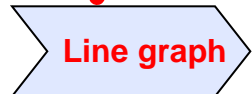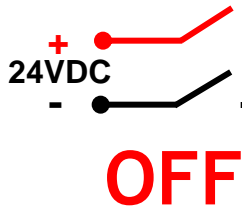
Line graph

Transfer parameters and program transfer

Tick here to start the video

Tick here to start the flash

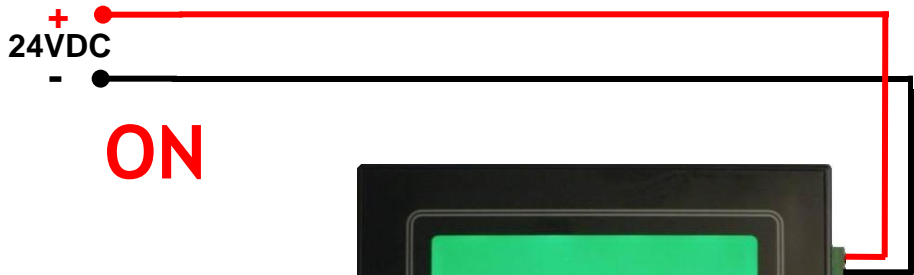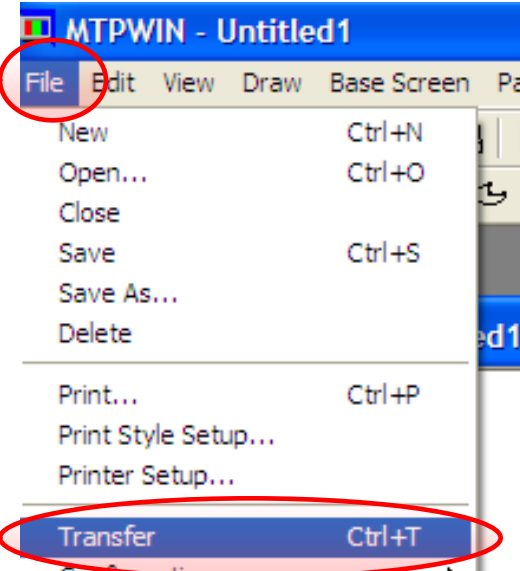# ⚠ Wiring for program transfer PC ⇒ MTP01

Disconnect the power whenever inserting or extracting the programming cable into/from MTP01 !

+
24VDC
-

OFF

Program transfer PC ⇒ MTP01

24VDC + -

ON

Connection configuration

MTP01

MTPWIN - Untitled1

File Edit View Draw Base Screen

New .... Ctrl+N
Open... ..... Ctrl+O
Close
Save .... Ctrl+S
Save As...
Delete

Print... ..... Ctrl+P
Print Style Setup...
Printer Setup...

Transfer .... Ctrl+T

File ⇒ Transfer

Transfer Data - Untitled1

Data to Transfer
☐ All Data

Direction

OK
Cancel
COM Settings
Password
IP Address

Communication Setting

Network Type : USB
Ethernet
RS232C
USB

Product Type

OK
Cancel

Communication Setting

Network type: RS232C
COM port: COM1
Baud rate: 115200 bps

OK
Cancel
Initialize

Data length
○ 7 bits ● 8 bits

Stop bit
● 1 bit ○ 2 bits

It will be set as the following value automatically:
Data Length: 8, Stop Bit: 1

Parity
○ Non ● Odd ○ Even ○ 0

Time-out: 5 sec

Parameter for automatic setting
☑ Baud rate
☑ Data Length
☑ Parity

COM configuration

Tick here

Select RS232C

Tick OK

If a USB to serial adapter is used, select the appropriate port according to the Device Manager before ticking OK !

Device Manager

Fichier Action Affichage ?

⊞ Périphériques Bluetooth
⊟ Ports (COM & LPT)
  Communications Port (COM1)
  ECP Printer Port (LPT1)
  Prolific USB-to-Serial Comm Port (COM8)
  USB -> COM Driver Service (COM5)

Where to find the COM ports

Feb 2010

34/83

Data transfer PC ⇒ MTP01

Updates Firmware.

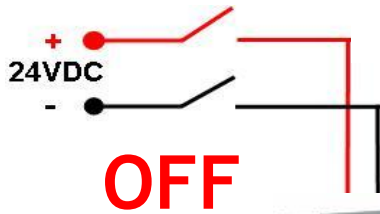**Important to mark on first data transfer.**

- **All data**
- **Transfer data after clear screen (optional)**
- **Select Recipe if necessary**
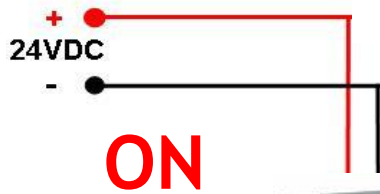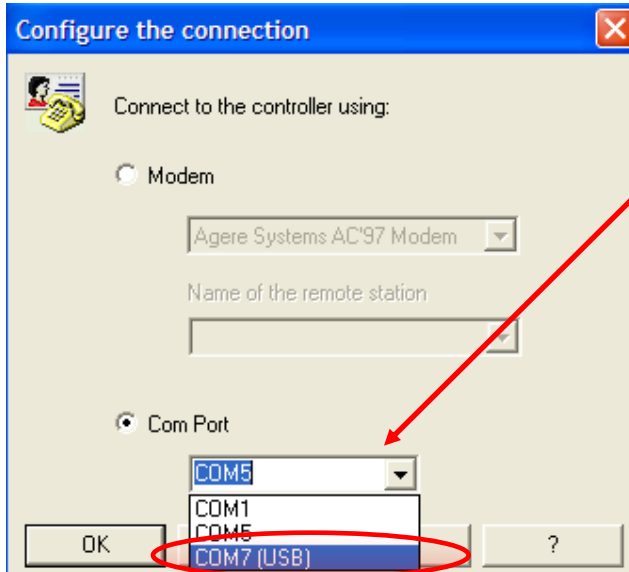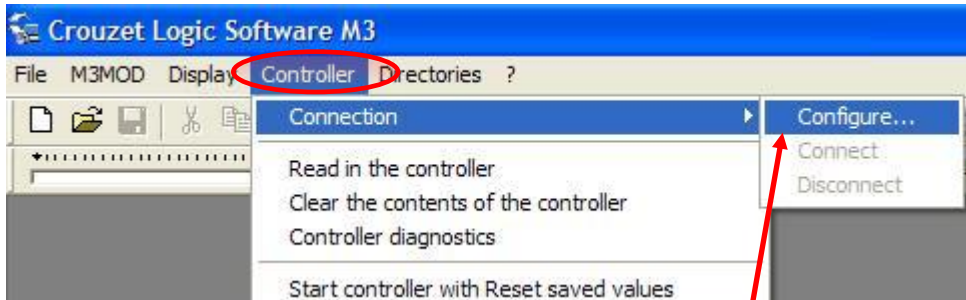- **Enter Recipe File N°(s) if necessary**

⚠ Wiring for program transfer PC ⇒ M3

Millenium3

Disconnect the power whenever inserting or extracting the M3 programming cable!

OFF

88 970 109
or
88 970 104
or
88 970 102

Program transfer PC ⇒ M3

Connection configuration

Millenium3

Crouzet Logic Software M3

File   M3MOD   Display   Controller   Directories   ?

Connection ▶   Configure...
                     Connect
Read in the controller   Disconnect
Clear the contents of the controller
Controller diagnostics

Start controller with Reset saved values

Configure the connection

Connect to the controller using:

○ Modem

  Agere Systems AC'97 Modem ▼

  Name of the remote station

  [▼]

⦿ Com Port

  [COM5 ▼]
  COM1
  COM5
  COM7 (USB)

  OK   ?

Tick here

Enter the COM-port according to the information in the Device Manager

Tick OK

Device Manager

Fichier   Action   Affichage   ?

⊞ Monitors
⊞ Network adapters
⊞ PCMCIA adapters
⊞ PCMCIA and Flash memory devices
⊞ Périphériques Bluetooth
⊟ Ports (COM & LPT)
    Communications Port (COM1)
    ECP Printer Port (LPT1)
    USB -> COM Driver Service (COM7)
⊞ Processors
⊞ Secure Digital host controllers
⊞ Smart card readers
⊞ Sound, video and game controllers

Where to find the COM ports
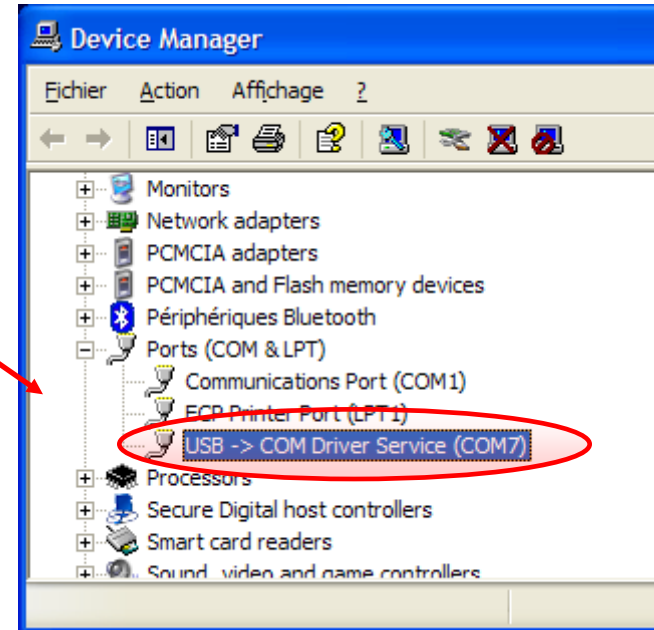
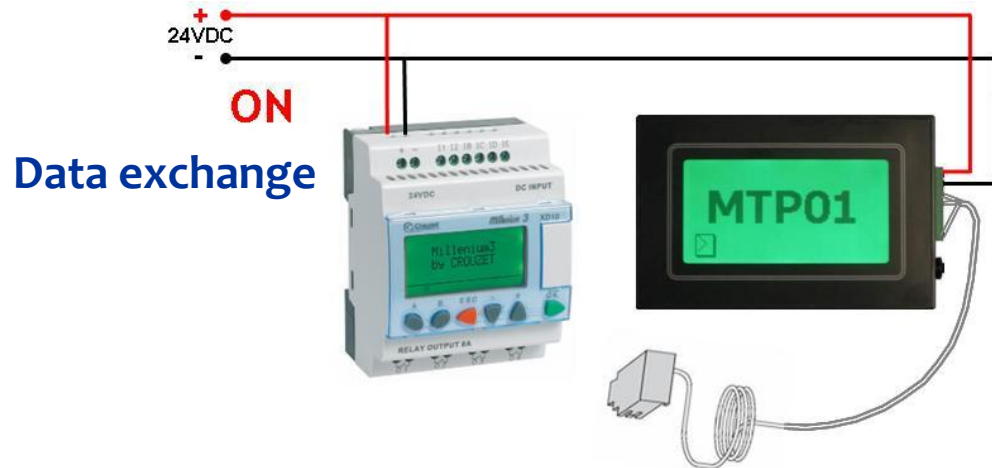# Transferring the program PC ⇒ M3
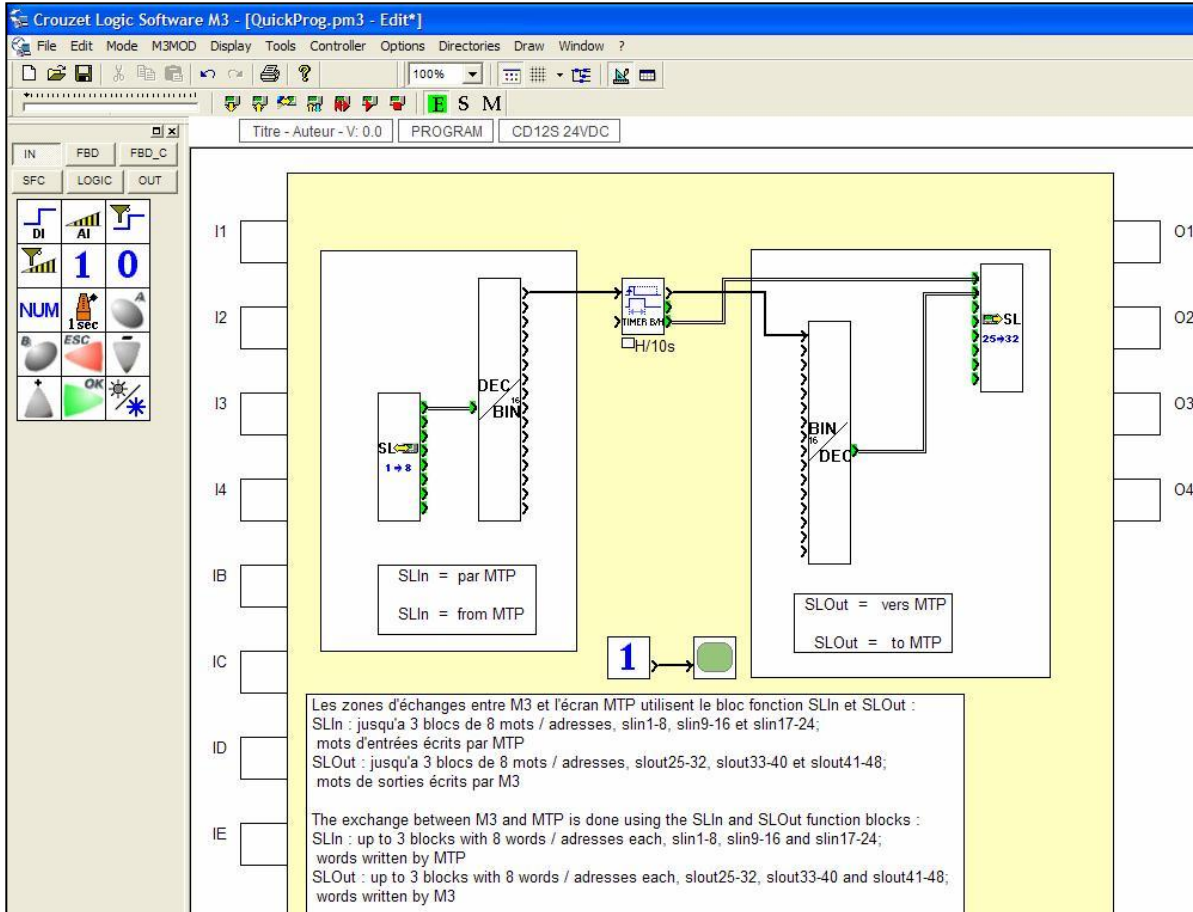
Tick here to start the video

Tick here to start the flash

⚠ Wiring for use / data exchange   Reminder

Disconnect the power whenever inserting or extracting the Millenium3 - MTP01 data exchange cable !

OFF

Connecting

MTP01

ON

Data exchange

MTP01

- **Commissioning an M3 – MTP01 program example**

Description of the program:

Read/write word and bit between M3 and MTP01.

- Read a word by MTP01
- Read a bit by MTP01
- Write a bit to M3

Links :

QuickProg.pm3

QuickMTP01.IOP

- **Read / write bit**

Double click on the parts to open the parameter windows

Drag and drop:

- Switch

- Lamp

- **Read / write word**

0 (Base Screen) <Untitle...

```
-****
-****
```

```
7 8 9
4 5 6
1 2 3
0 ESC ↵
```

Data Parts No.0

List | Basic Setup | Input | Reverse/Blink | Color and Form | Option

OK

Cancel

Data to Display

Number of Digits (1 - 5)   4   ...

Data Format   DEC(1 W)

Size

Font

⦿ 1*1   ○ Half

Vertical   1 2 4 8

Horizontal   1 2 4 8

Zero Suppression

○ Off
⦿ On

Display Decimal Places

⦿ Off
○ On

Reference Device

WSLOUT25

Standard (MTP01)

Part type

All

Add   Delete   Rename

ABC0 | -:::::

Msg2 | Data

• Read / write word

Data Parts No.0

List | Basic Setup | Input | Reverse/Blink | Color and Form | Option

○ Off
● On

Startup Condition
☑ Press
☐ Conditions

Supported Keyboard
○ Keyboard Screen
● Keyboard Parts   Part No. (0 - 7)   [0] [...]

Input Range
☐ Check Range

Output Trigger
☐ Bit ON on Outp

Here one enters the part number of the keyboard that has been placed on the screen.

(Or, if there are several, the keyboard that is to be linked to the data entry.)

0 (Base Screen) <Untitle...

Add | Delete | Rename

ABC0   Msg2
[.....] Data

Bar Graph
Clock

Line Graph
DEC1

CST
CUSTOM SENSORS & TECHNOLOGIES

- **Recipe management**

    - **Control area**
    - **Read/write word**
    - **Read/write bit**

A recipe is a group of parameters that belong together.

Description of a recipe: A machine produces parts with different dimensions in different amounts. The parameters and amounts for each part, called recipies, are sent to Millenium3 by the MTP01 when a new production batch is started.

An example: - Thickness

- Width

- Length

- Number of pieces

All parameters should be sent simultaneously to Millenium3. By using MTP01 one can imagine to have several recipies (parameter groups). One can create an Excel table which can be imported by the MTPWIN software, allowing to transfer these recipies (parameter groups) to the MTP01 screen and from there to Millenium3.

File N°0; Recipe N°0

File N°0 Recipe N°2

- Thickness	WSLIN1(DEC1W)		100	50	25
- Width	WSLIN2(DEC1W)		200	100	50
- Length	WSLIN3(DEC1W)		300	150	75
- Amount	WSLIN4(DEC1W)		400	200	100
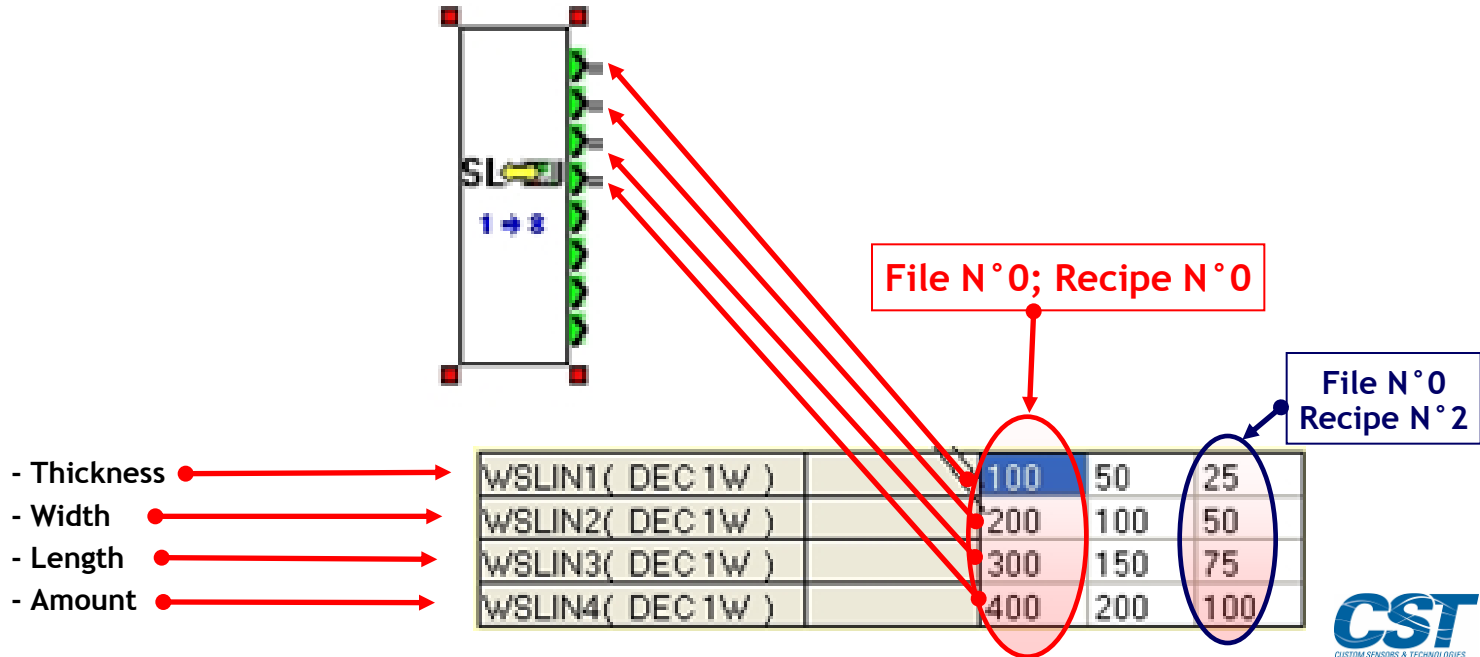
The M3 pilot area, adjustable:

MTP Configuration

Basic Setup | Communication Parameters | Auto-Paging | Start-up Screen | Setup 1 | **Recipe** | Line Graph   OK

Recipe
- ☐ Off   ⊙ On
- Control Device   WGR10

Recipe control register (example)

Recipe control register (example)	
Example on	WGR10
File N	WGR11
Recipe N	WGR12
Error code	WGR13
Write to M3	GR100
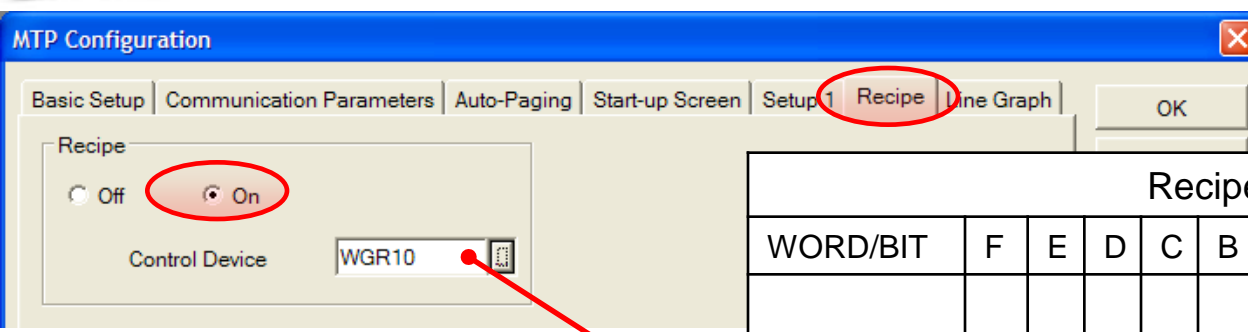
Recipe management

WORD/BIT	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0
n														Delete recipes on MTP05		Write from MTP05 to M3
n+1	File n															
n+2	Recipe n															
n+3	Error code N : 0: No errors 1: The file number was not indicated 2: The recipe number was not indicated 3: Insuffisant memory															

- ## Creating recipies 1

Menu: Start editor ⇒ Recipe
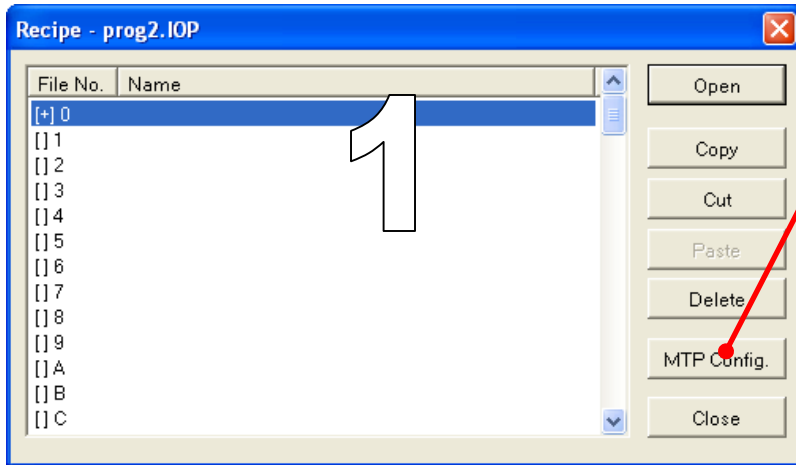
• Creating recipies 2

Menu: Start editor ⇒ Recipe

Recipe - prog2.IOP

File No.	Name
[+] 0	
[] 1	
[] 2	
[] 3	
[] 4	
[] 5	
[] 6	
[] 7	
[] 8	
[] 9	
[] A	
[] B	
[] C	

Open · Copy · Cut · Paste · Delete · MTP Config. · Close

Double click

2

File No.0

Title ___ Eng · OK · Cancel · Form

Device(Data Format)	Comment	No.0	No.1	No.2
WSLIN1(DEC1W)		100	50	25
WSLIN2(DEC1W)		200	100	50
WSLIN3(DEC1W)		300	150	75
WSLIN4(DEC1W)		400	200	100

Enter values manually

Insert Data Set · Add Data Set · Delete Data Set · Insert Recipe · Delete Recipe · Import · Export

Form

Data/Recipe Setting | Entry Device Setting

Recipes (Columns) 3 (1 - 100)

Data Sets (Rows) Entry Device Number (1 - 100) 4

OK · Cancel

3

4

5

Form

Data/Recipe Setting | Entry Device Setting

Number Continuously: Off ○ On ●

Comment ___ Eng

Data Format DEC(1 W)

Device WSLIN1

OK · Cancel

- ## Recipe management

  - ## Commissioning an M3 program example

Program description:

Recipe management

Preselect values for counters sent by MTP01.

Links :

Rec_MTP.pm3

Recipe_MTP01.IOP

File N°0; Recipe N°0

File N°0 Recipe N°2

WSLIN1(DEC 1W)	100	50	25
WSLIN2(DEC 1W)	200	100	50
WSLIN3(DEC 1W)	300	150	75
WSLIN4(DEC 1W)	400	200	100
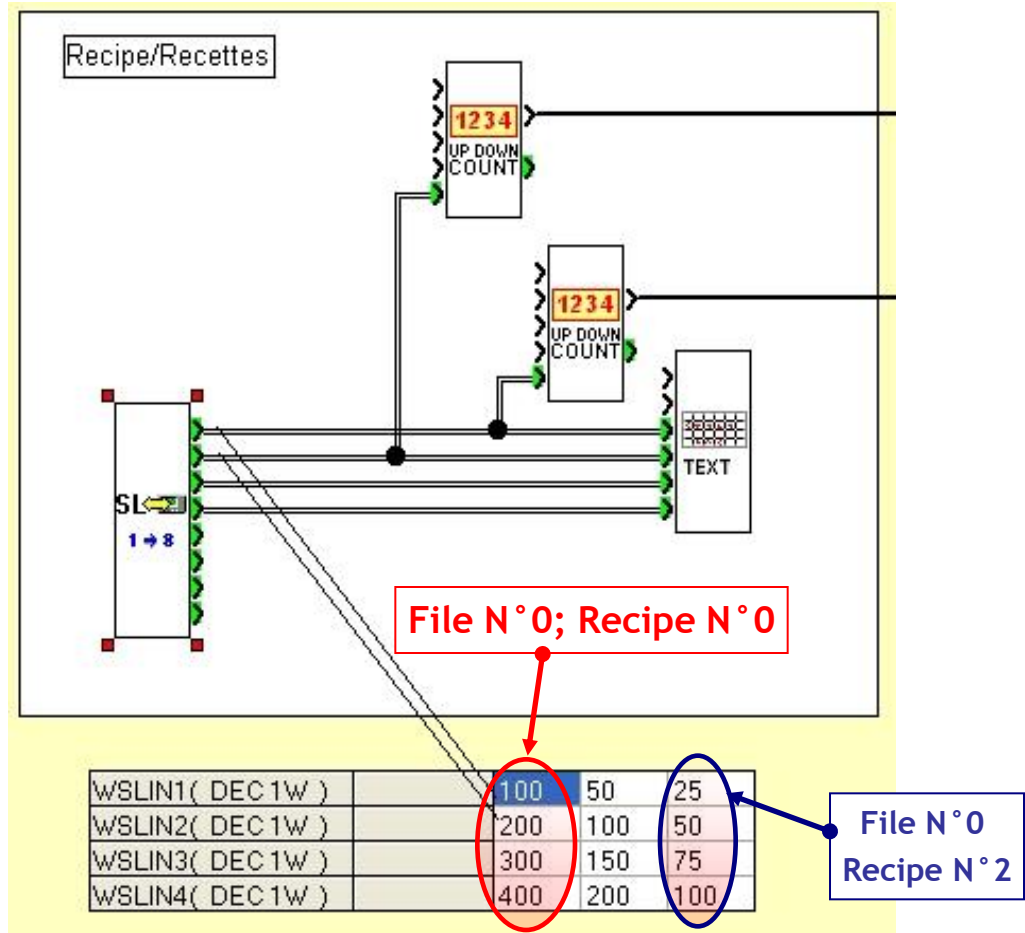
• Recipe management

• Commissioning an M3 program example

Recipe control register (example)	
Example on	WGR10
File N	WGR11
Recipe N	WGR12
Error code	WGR13
Write to M3	GR100
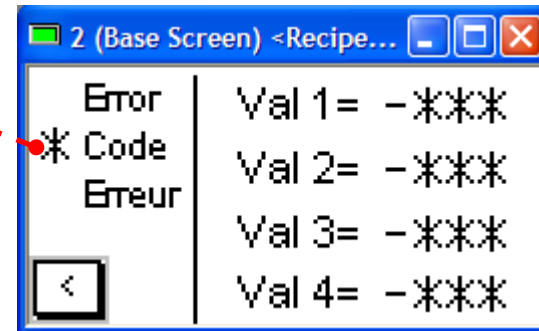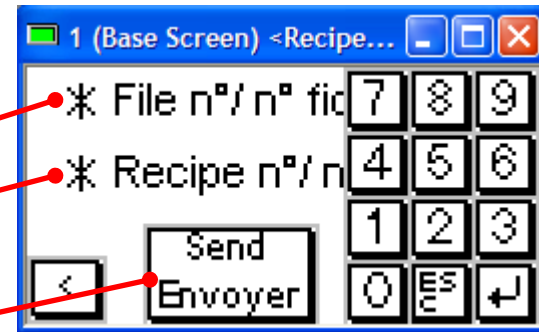
• Pilot MTP01 by M3

- – Example
- – Configuration « Basic Communication Area »
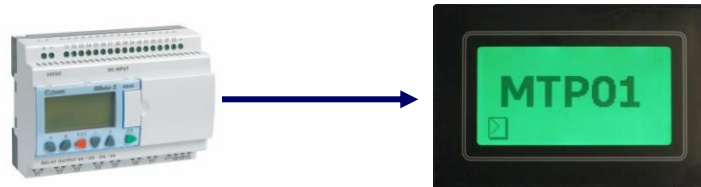
- **Piloting MTP01 by M3**

- Program description:

- **Manage pages by M3.**

- **Buzzer activation with M3 keys.**

- **Manage MTP01 backlight colors with M3 keys.**

- **Activate flashing backlight with M3 keys.**

Links :

Screen_Control.pm3

MTP01_ScreenControl.IOP
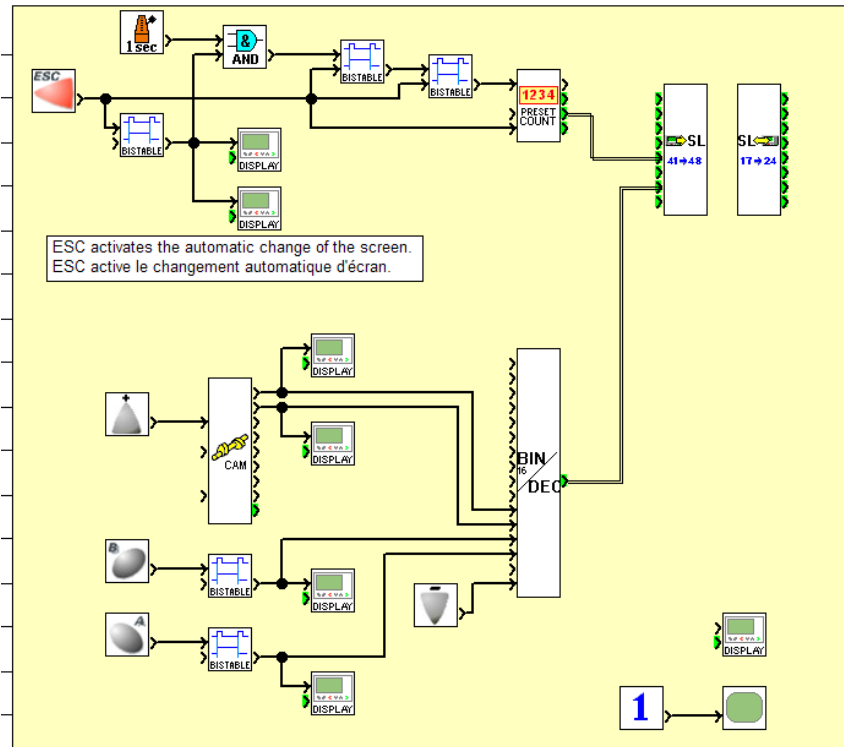
- ## REMINDERS

Changing a page

To control the MTP05 with the keys, in- or outputs of M3 one has to use SLOut function blocks.

Parameters in the M3 program:

Buzzer activation, changing the backlight color or flashing is done on word SLOut47, bits 11,12,13,14 and 16.

To realise switching a screen page use word SLOut45.
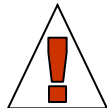
⚠️ The block SLIn17-24 must be present in the M3 program.

> Reminder page 19

• Page management using M3.

Buzzer activation using the M3 keys.

Managing the backlight color of MTP01 using the M3 keys.
Activate the flashing backlight using the M3 keys.

To be able to do this :

1. **Go to: File ⇒ Configuration ⇒ MTP Configuration**

2. **Configure the 'Basic Communication Area' as shown**
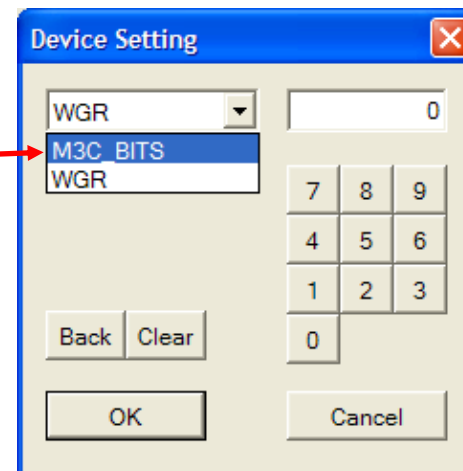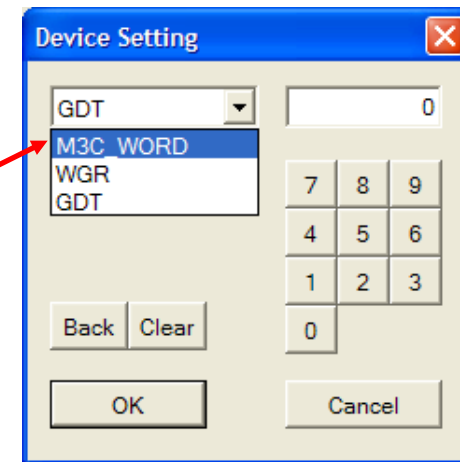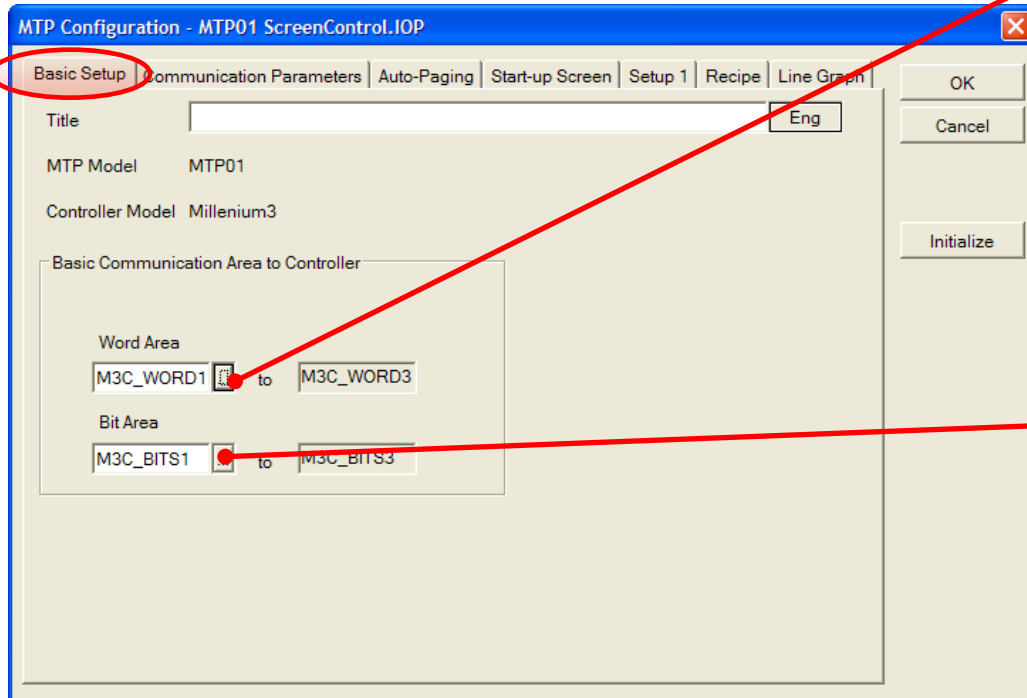
- **Read/write M3 parameters**

    – **Read status**

    – **Read/write M3 clock**

- ## Status M3, Clock M3

- ## Program description:

- **Read M3 status by MTP01.**

- **Read/write M3 clock**

Links :

S_C_Base.pm3

Status_Clock.IOP

• Read M3 status

Reading the status is used to see if M3 is running, has stopped or shows an error.
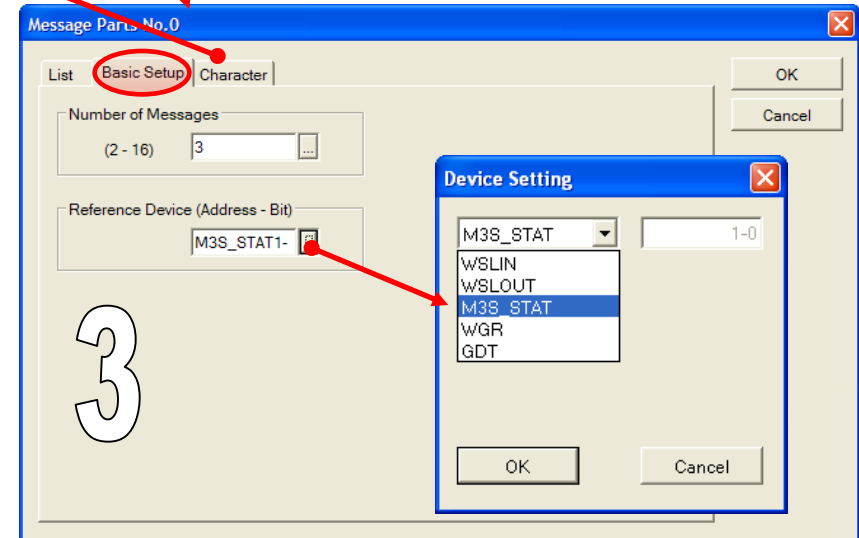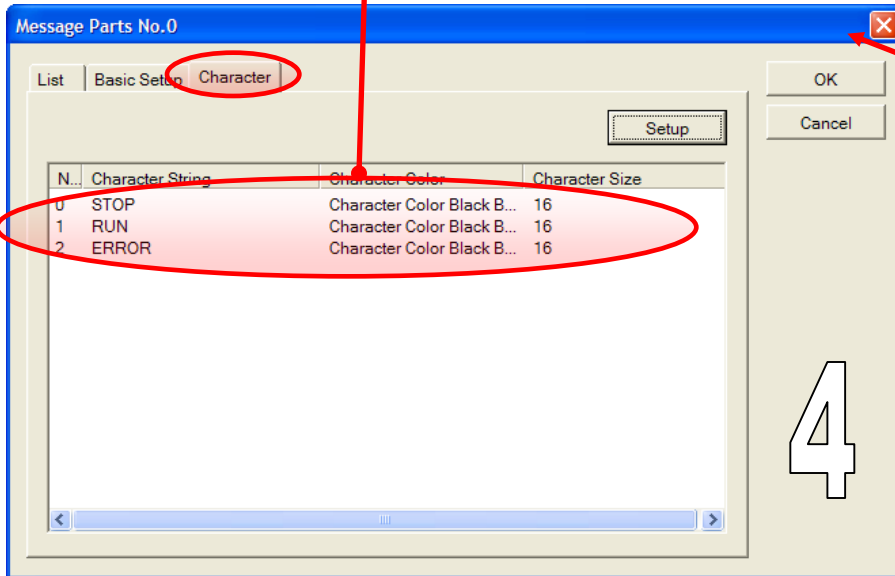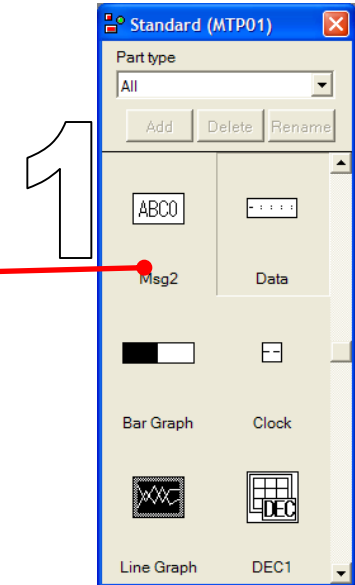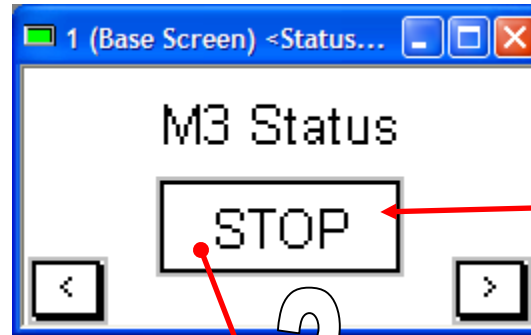
• Read M3 clock

Go to: File ⇒ Configuration
⇒ MTP Configuration
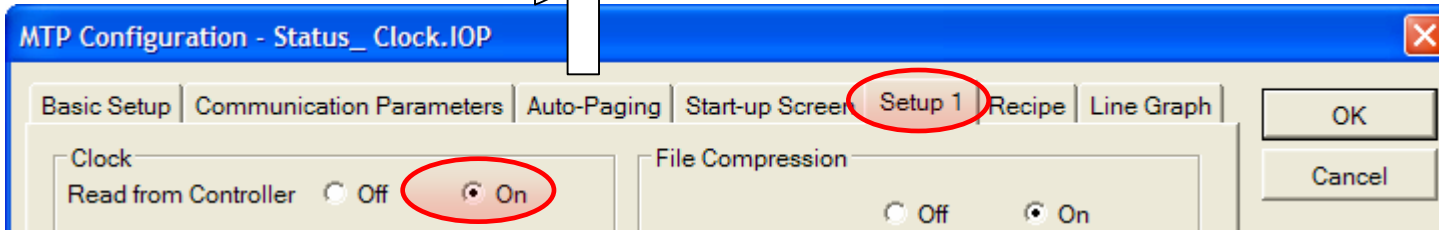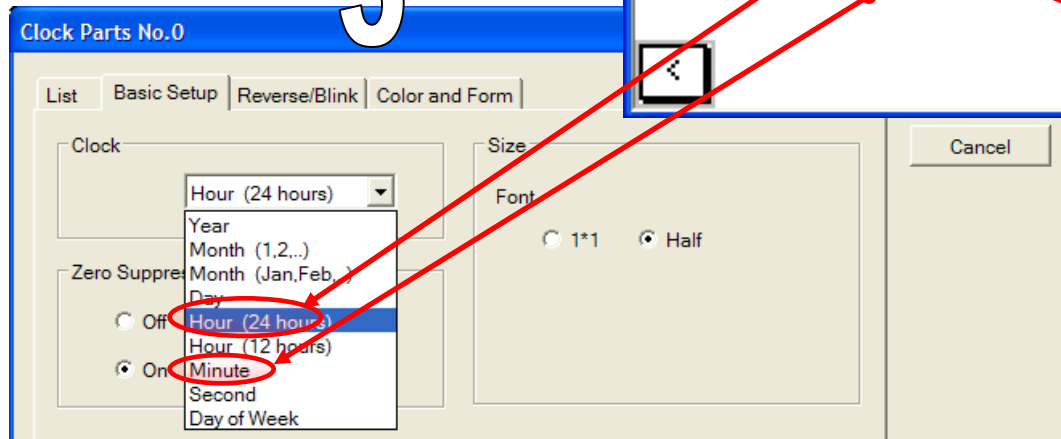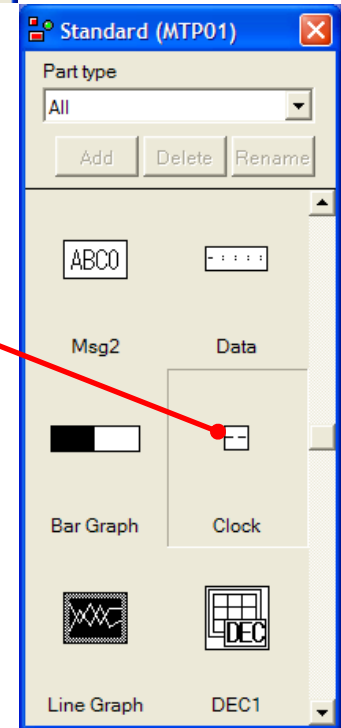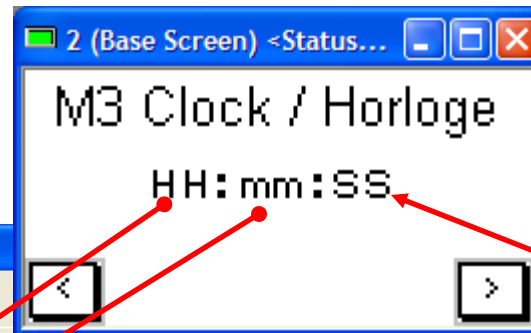
• Write/Read M3 clock

The example shows how to write to the Millenium3 clock

Feb 2010
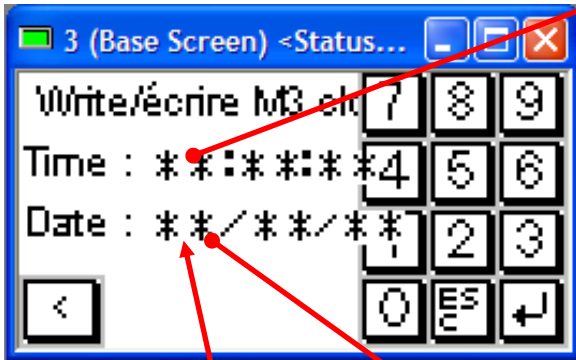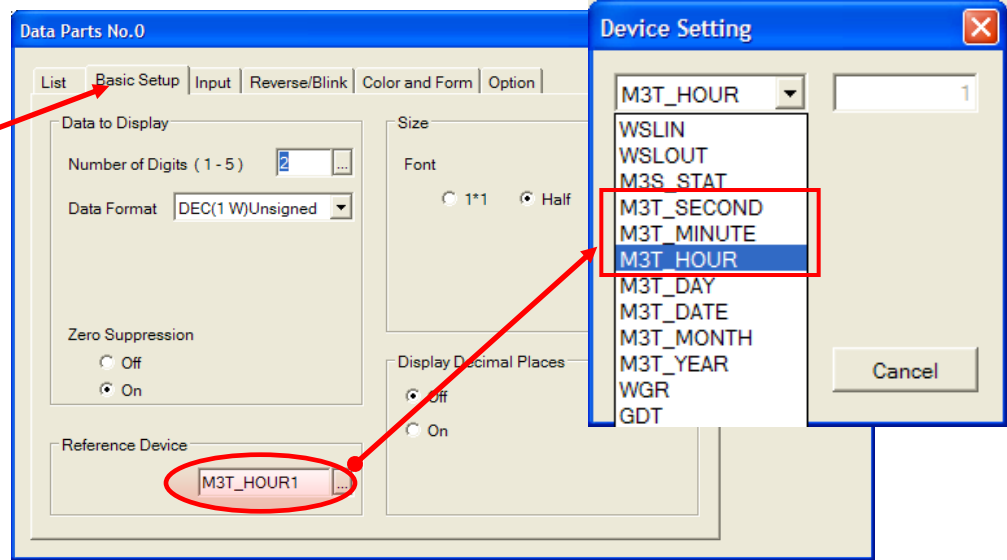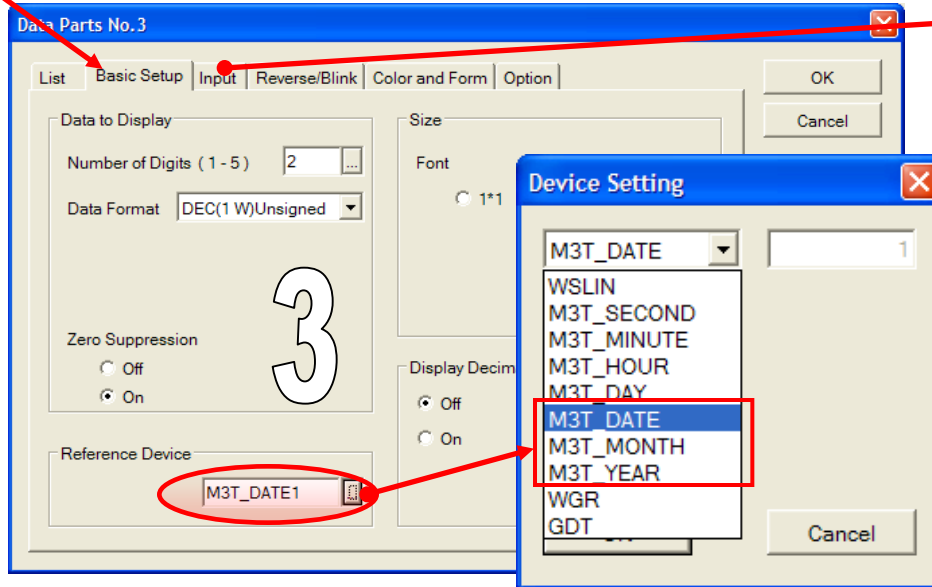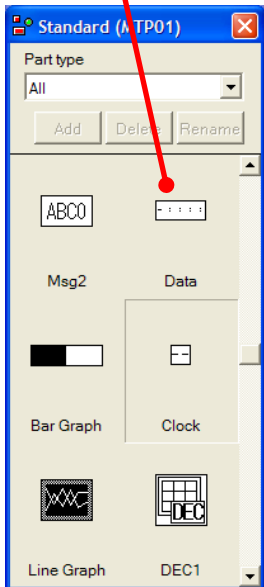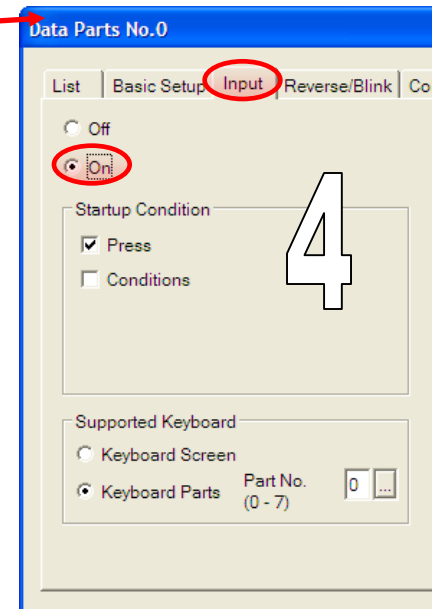
- **Line Graph**

  - Program example
  - Configuration
  - Bargraph

- **Line Graph**

- <u>Program description:</u>

- Create a line graph using values from M3.
- Switch the line graph input to show potentiometer values.

Links :

Line_Graph.pm3

Line_Graph.IOP

• Line Graph 1

Go to: File ⇒ Configuration ⇒ MTP Configuration ⇒ Line Graph

Page 80
Read out
Sample Data

• Line Graph 2

- ## Bargraph

- ## Program description:

- Create a bargraph using values from M3.
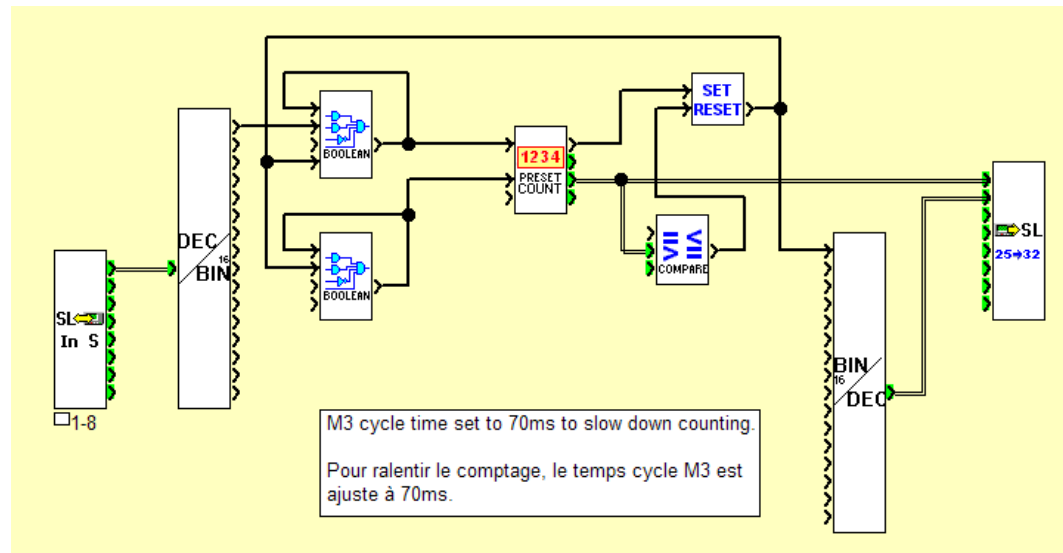
Links :

Bargraph.pm3

Bargraph.IOP

• **Bargraph**

- **Other functions** ⭐

  - Example programs
    - **Messages**
    - **Bitmaps**
    - **Scrolling messages**
  - Comparator

- ## **Messages**

- ## Program description:

- Display different messages using one SLOut address.
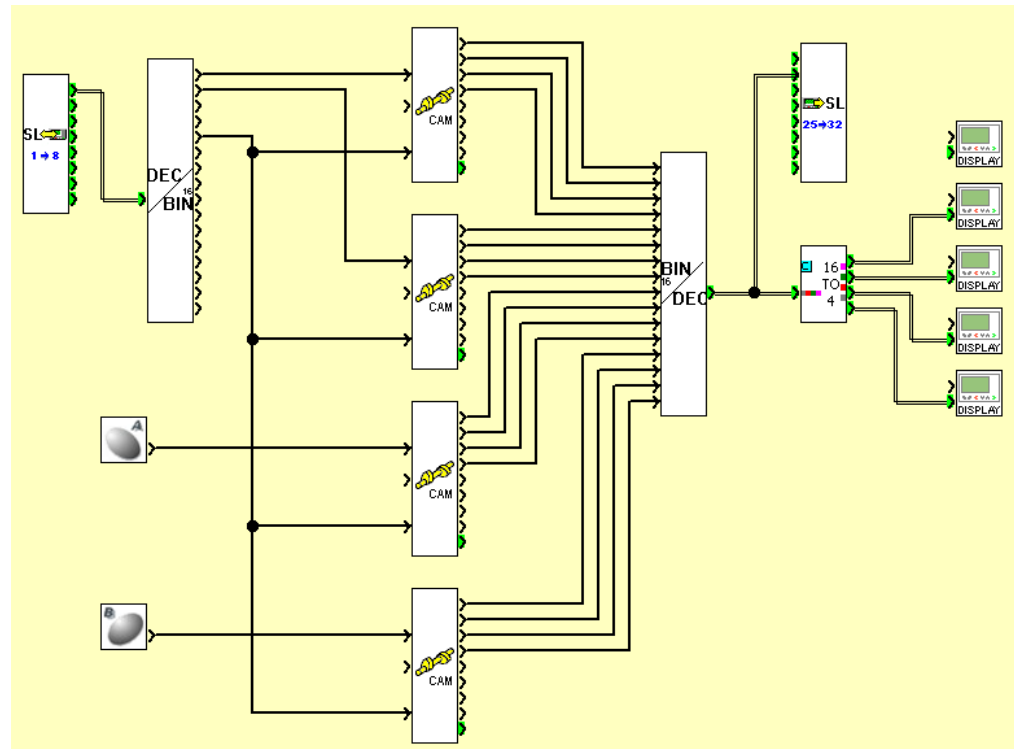
Links :

Message_Base.pm3

MTP01_Messages.IOP

• Messages 1

How the Message parts work:

- The Message part automatically splits up a 16bit word address into four 4bit sub addresses.
- Each of these 'sub addresses' allows to show up to 16 different text messages.
- So using one SLOut address it is possible to display up to 64 different process informations.
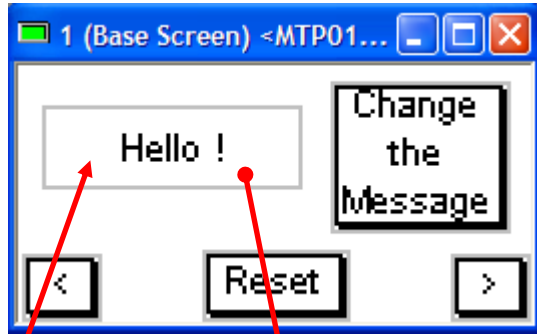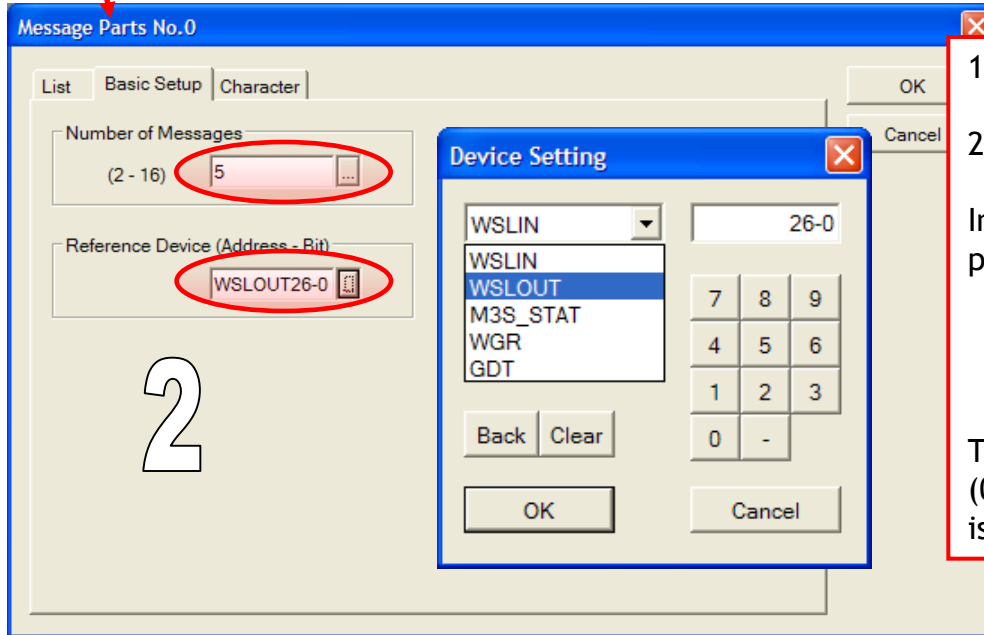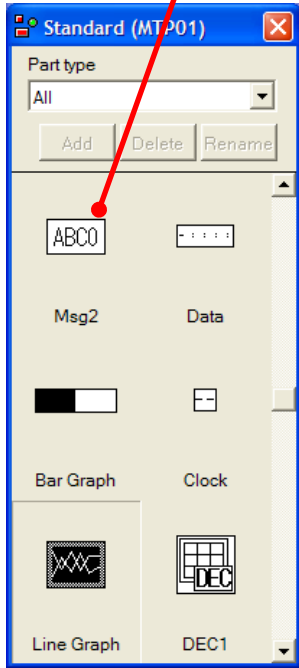
1. Define the number of messages to be displayed.
2. Define the 'sub address ' which is to be used.

In the example on SLOut26 the possible settings are:

26-0
26-1
26-2
26-3.

The number of the message (0,1, 2,…) defines which value is needed to activate it.

Crouzet

| Software Installation and Wiring | MTP01 Functiona-lities | Addressing | Internal Address Zone | MTPWIN Introduction | Commi-sioning M3+MTP01 | Data Backup | Links to M3 + MTP01 Programs | Glossary |

• **Messages 2**

3 (Base Screen) <MTP01...

| Mess2-0 | Mess3-0 |

| < | Reset |

Message Parts No.0

List | Basic Setup | **Character**

③

Setup

OK

Cancel

N...	Character String	Character Color	Character Size
0	Hello !	Character Color Black B...	12
1	Welcome	Character Color Black B...	12
2	to MTP01	Character Color Black B...	12
3	and its	Character Color Black B...	12
4	Messages	Character Color Black B...	12

Message Parts No.0-0

Character

④

OK

Cancel

Character String
Eng — Hello !

Image
A B C

Enter character string, font type and size.

Font
Windows(R)
Arial

Style
☐ Bold   ☐ Underlined
☐ Outlined   ☐ Shadow
☐ Italic

Align ○ Left ⦿ Center ○ Right

Size
Number of Dots — 12

Color
Character — ■
Background — None

Words (values) are used in the communication between M3 and MTP.

So in order to activate a specific message, M3 has to send the value linked to this message.
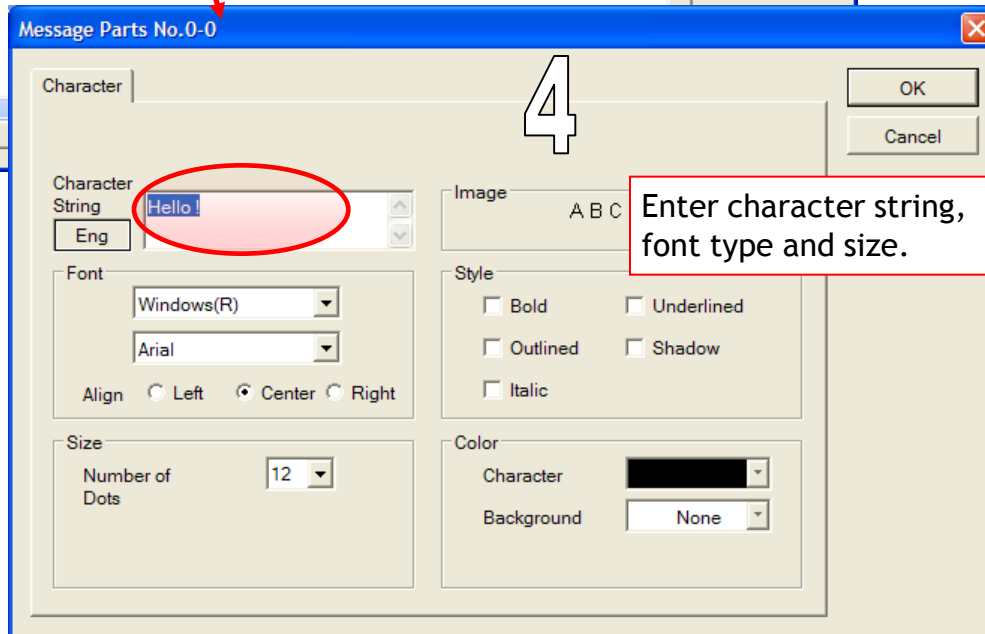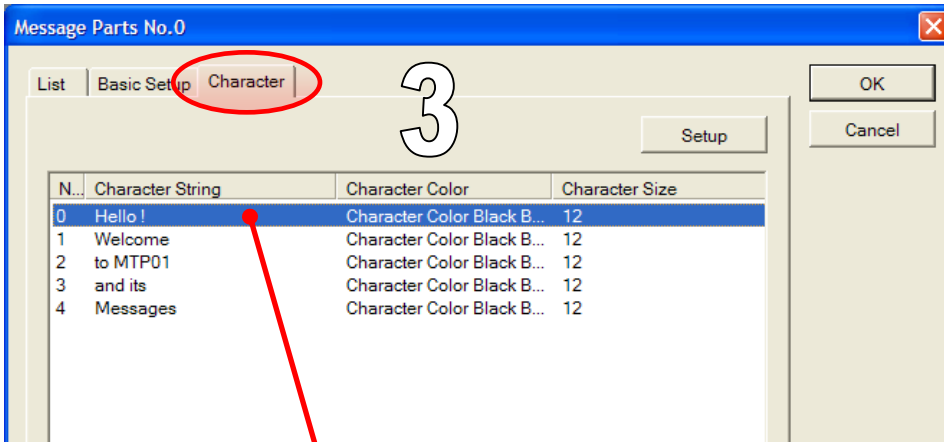
There are several possibilities to realise this.

• Create a program similar to the example below.

• Use the example below to define the value necessary for a specific message. Write this value to an SLOut when the message needs to be displayed.

• Use the example as a base to create a table for the FBD_C (Application Specific Function Block) 'Y=f(x)'.
Input = page number to be displayed, output = apropriate value.

Link :

Message_Cam.pm3

- **Bitmap and scrolling messages**

- Program description:

- Insert a bitmap image
- Show scrolling messages

The scrolling messages are shown on all screens and are therefore not configurable per screen.

Link :

MTP01_Bitmap.IOP

• Bitmap 1

max. size 128 x 64 dots
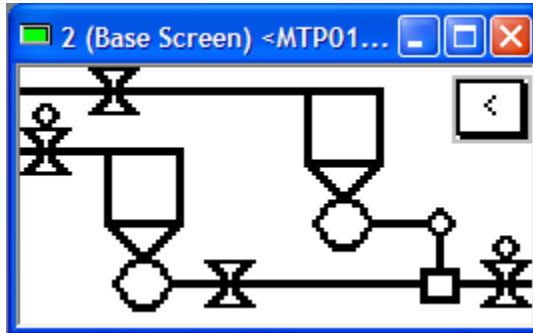
How to create a Bitmap:

1. Draw the schematics of ones application using powerpoint, etc., (or directly in the MTPWIN software) or copy any picture / diagram into PowerPoint, redimension it, tick right, 'save as image', .bmp.

2. To verify the size, copy to Paint, tick 'Image', 'Attributes', or move the mouse over the saved image to activate the pop-up.

3. Copy and paste it into an empty MTP01 screen, or enter it into the MTPWIN Bitmap Library.
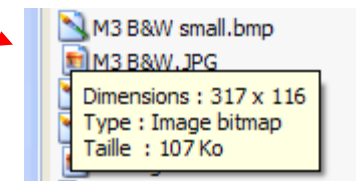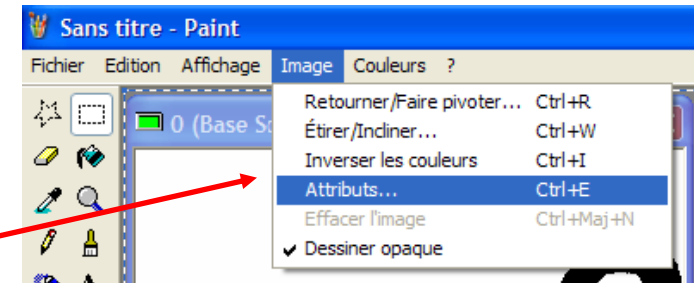
Black and white diagrams and pictures produce the best results.

• Bitmap 2

max. size 128 x 64 dots

Go to: Start Editor ⇒ Bitmap

Creating a bitmap

Create your own library of images, and you can use them in any program you make.

• Bitmap 3

max. size 128 x 64 dots

Inserting a bitmap
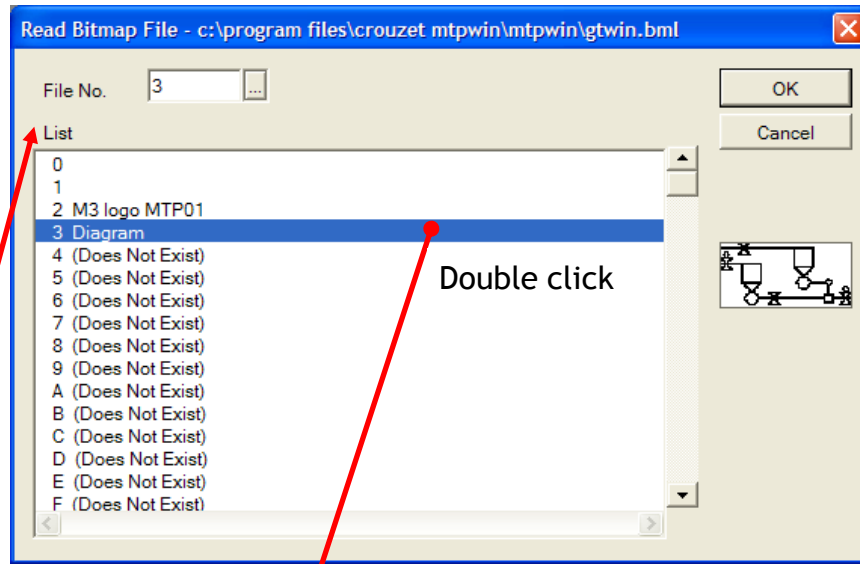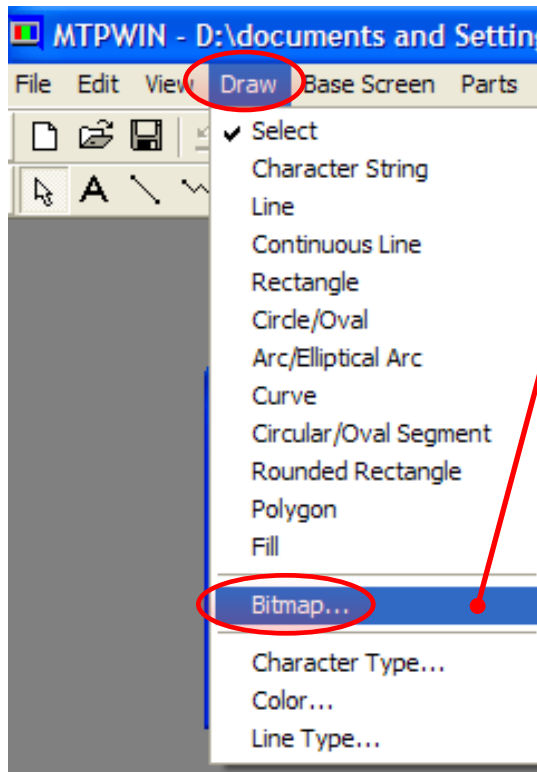
Double click

Click
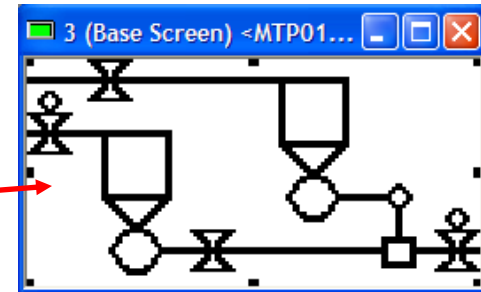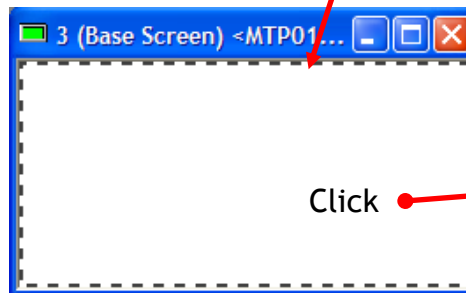
Bitmap video

Bitmap flash

• Scrolling messages 1

Go to: Start Editor ⇒ Flow Display

Enter text here

If activated by key of the MTP display

If activated by M3

• Scrolling messages 2
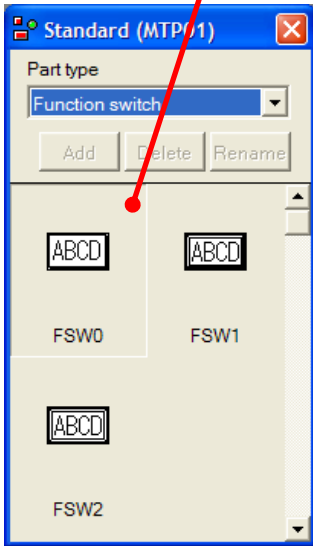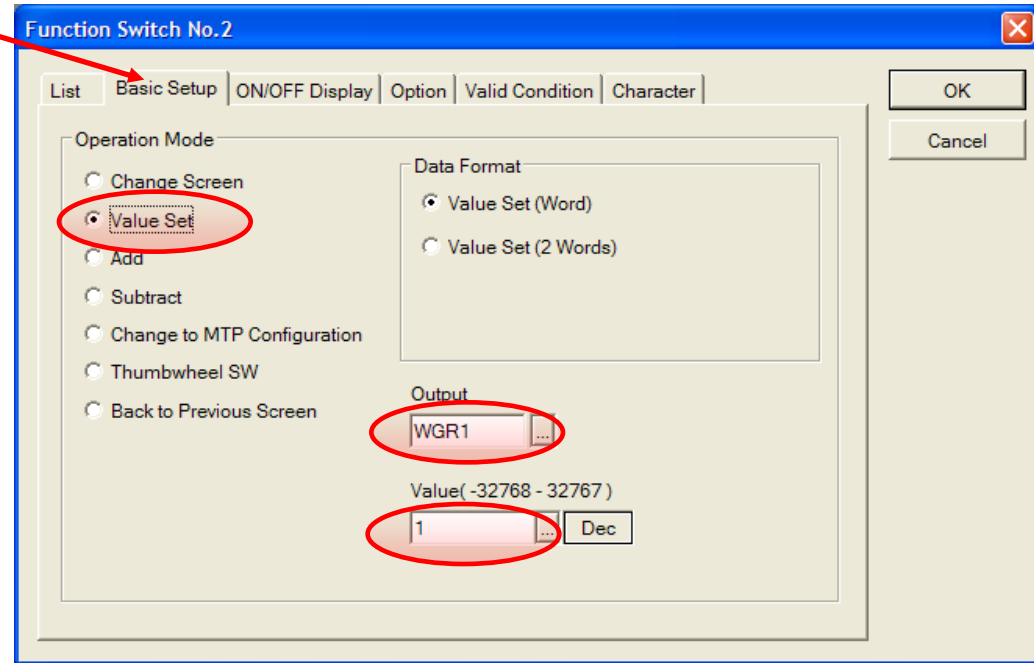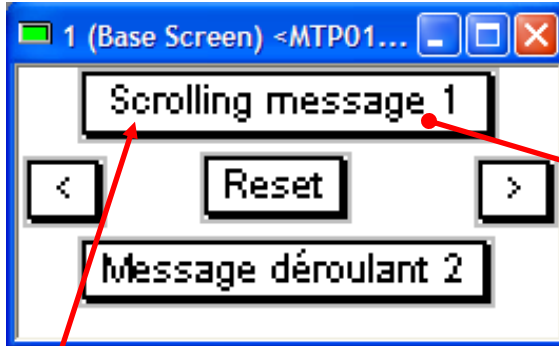
• Comparator 1

Go to: Start Editor ⇒ Write Device

Write Device - MTP01_Write_Device.IOP

Name [   ] Eng | OK | Cancel

N..	Scre...	Condition1	Conditi...	Operation	Co
0	All S...	WSLOUT25(1W/Unsigned)...	Always ...	Momentary (BSLIN11	
1	All S...	WSLOUT25(1W/Unsigned)...	Always ...	Value Set (1W) (GDT0=2(...	
2	All S...	WSLOUT25(1W/Unsigned)...	Always ...	Value Set (1W) (WGR0=1...	
3	All S...	WSLOUT25(1W/Unsigned)...	Always ...	Value Set (1W) (WGR0=1...	
4	All S...	WSLOUT25(1W/Unsigned)...	Always ...	Value Set (1W) (WGR0=1...	
5	All S...	WSLOUT25(1W/Unsigned)...	Always ...	Value Set (1W) (WGR1=1(...	
6	All S...	1(DEC) < WSLOUT25(1W/...	Always ...	Value Set (1W) (GDT0=1(...	
7	All S...	WSLOUT25(1W/Unsigned)...	Always ...	Value Set (1W) (WGR1=0(...	

Settings | Insert | Delete | Cut | Copy | Paste

Write Device

List | Condition | Operation   OK | Cancel

Operate
if condition1 is valid

1

Specified Screen
(•) All Screens
( ) Specified Screen

Condition 1
( ) Always Operational
(•) Operational under Valid Condition   WSLOUT25(1W/Unsigned) = [Conditions]

Condition 2
(•) Always Operational
( ) Operational under Valid Condition

The « Write Device » will compare a value and, according to the result, carry out an operation on a word or bit.
One can apply the comparator to a specific screen or to all screens of a program.

Reference Device = Value 1   ▼

Reference Device <> Value 1
Reference Device < Value 1
Reference Device > Value 1
Reference Device <= Value 1
Reference Device >= Value 1
Value 1 < Reference Device < Value 2
Value 1 < Reference Device <= Value 2
Value 1 <= Reference Device <= Value 2
Value 1 <= Reference Device < Value 2

Conditions

Relation Device | Word (Unsigned) ▼ | OK
Relation Code | Reference Device = Value 1 ▼ | Cancel

Reference Device
[WSLOUT25] [...]

Value1
(•) Fixed (0 - 65535)   [0] [...] [Dec]
( ) Device Value

2

Links :

WriteDevice.pm3

MTP01_Write_Device.IOP

• Comparator 2

Write Device

List | Condition | Operation

Operate
if condition1 is valid

After defining the condition(s):

OK
Cancel

Specified Screen
- ● All Screens
- ○ Specified Screen

Condition 1
- ○ Always Operational
- ● Operational under Valid Condition   WSLOUT25(1W/Unsigned) =   Conditions

Condition 2
- ● Always Operational
- ○ Operational under Valid Condition

Write Device

List | Condition | Operation

OK
Cancel

Operation Mode
- ○ Bit Set
- ○ Bit Reset
- ● Momentary
- ○ Alternate
- ○ Change Screen
- ○ Others

Output   BSLIN11

③

- ● Others   Value Set (1W)

Output   WGR0

Value   15360   Dec

(-32768 - 32767)

Write Device video

Write Device flash

• Comparator 3

The advantage of using 'Write Device':

The program 'Comparator_M3.pm3' together with 'Comparator_M3.IOP' has the same functionality, as 'WriteDevice.pm3' in connection with 'MTP01_Write_Device.IOP'.

In case of 'WriteDevice' the M3 program is smaller, because the functions of switching Messages, pages, and colour, and the complete value comparision has been transfered to the Write Device of the MTP.

Comparator_M3.IOP

Comparator_M3.pm3
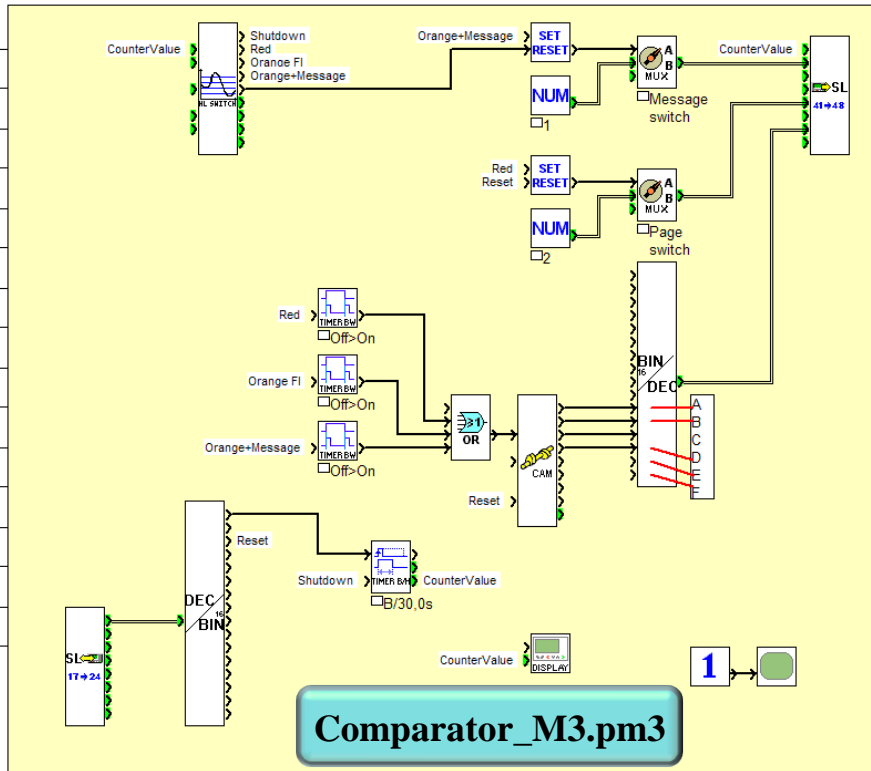
MTP01_Write_Device.IOP

WriteDevice.pm3
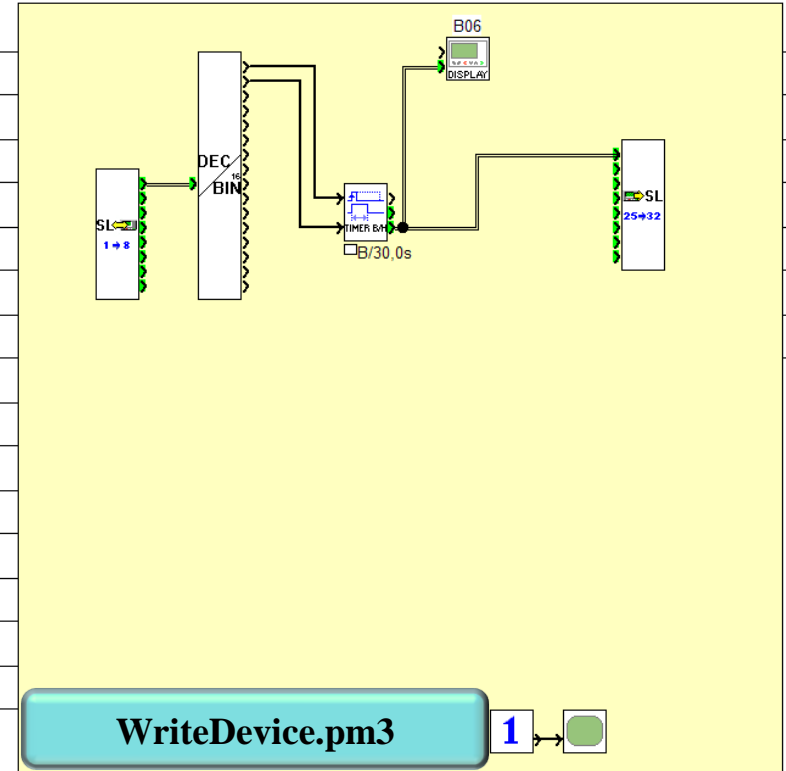
• Accessing Sampled Data 1

Go to: Start ⇒ Programs ⇒ Crouzet MTPWIN ⇒ Tools ⇒ MTP Memory Editor

Select Graph, then

Crouzet

| Software Installation and Wiring | MTP01 Functiona-lities | Addressing | Internal Address Zone | MTPWIN Introduction | Commi-sioning M3+MTP01 | Data Backup | Links to M3 + MTP01 Programs | Glossary |

• Accessing Sampled Data 2

Line Graph Information Editor

Line Graph Sampling Graph No.

Graph No. [0 ▼]

③

Close
MTP -> PC
Save
COM Settings

Sampling Record Number 160

See Line Graph configuration

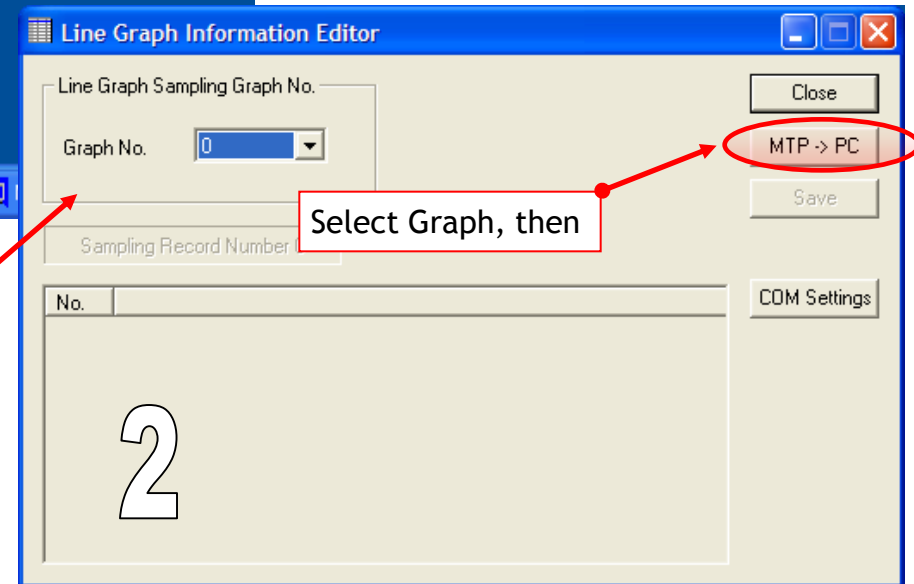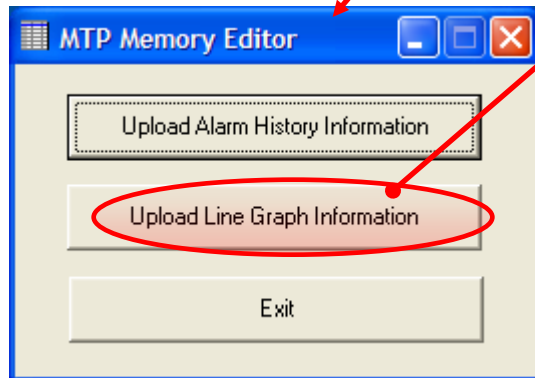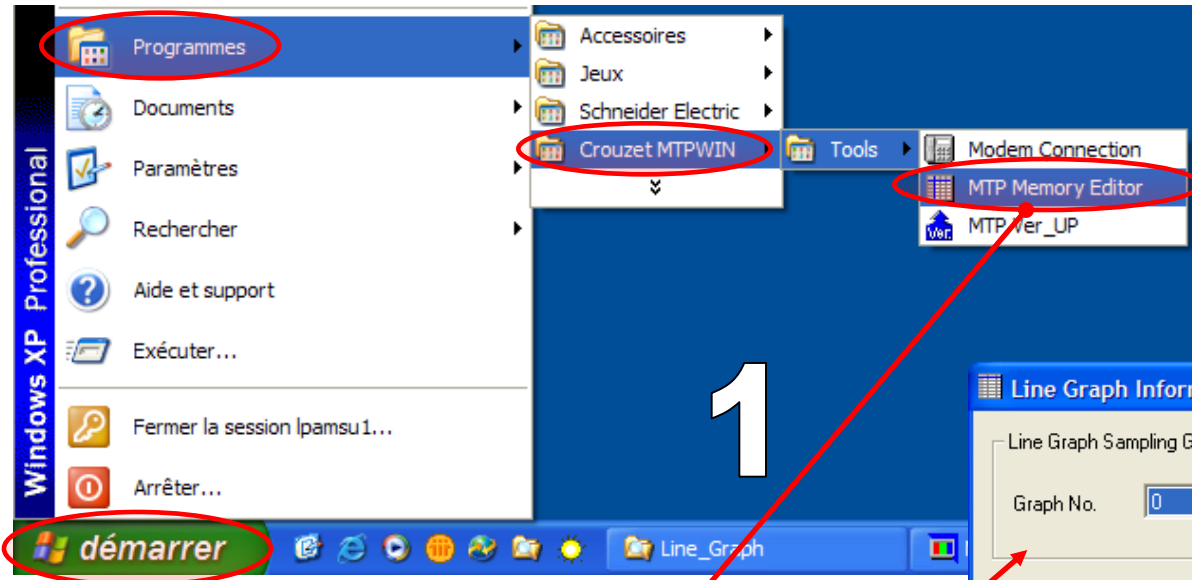| No.	Channel 0
118	51
119	51
120	0
121	1
122	33
123	0
124	16
125	50
126	19
127	2

In this example, the last 160 samples that have been taken, up to the moment the transfer order has been given, can be read out and saved.

Save by CSV format

Enregistrer dans : [📁 LineGraph Data ▼]

📄 LineGraph0_1.CSV

④

Nom du fichier : [LineGraph0_2.CSV]   Enregistrer

Type : [CSV File(*.CSV) ▼]   Annuler

Microsoft Excel - Line

Fichier   Edition   Affic

Arial   10

	A	B
112	51	
113	51	
114	51	
115	51	
116	51	
117	51	
118	51	
119	51	
120	51	
121	51	
122	51	
123	0	
124	1	
125	33	
126	0	
127	16	
128	50	
129	19	
130	2	
131	30	
132	61	
133	64	
134	44	
135	42	
136	42	
137	29	
138	36	
139	50	
140	72	
141	66	
142	57	
143	51	
144	58	
145	70	
146	77	
147	77	
148	78	
149	62	
150	57	
151	60	
152	54	
153	40	
154	11	
155	3	
156	30	
157	32	
158	42	
159	39	
160	33	
161	33	

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• Links to M3/MTPWIN programs:

M3 Programs:

- Read/write bit/word
- Recipe
- Pilot MTP01 by M3
- M3 status / clock
- Line graph
- Bargraph
- Messages
- Message explanation
- Conditions
- Comparator M3

MTPWIN Programs:

- Internal screen control
- Read/write bit/word
- Recipe
- MTP01 piloted by M3
- Status / clock
- Line graph
- Bargraph
- Messages
- Comparator M3
- Conditions
- Bitmap & Scroll messages

• Glossary

- Bit ⇒ logic status (1 or 0)
- Word ⇒ a 16 bit value
- WGR ⇒ internal MTP register (Word)
- GDT ⇒ internal MTP register (Word)
- GR ⇒ internal MTP register (Bit)
- WSLOUT ⇒ word/address on block SLOut M3
- WSLIN ⇒ word/address on block SLIn M3
- BSLOUT ⇒ bit of a word on block SLOut M3
- BSLIN ⇒ bit of a word on block SLIn M3
- M3 ⇒ Millenium3
- MTPxx ⇒ Millenium Touch Panel (screen of the M3)
- .pm3 ⇒ program written with the M3 software
- .IOP ⇒ program written with the MTPWIN software