

21/12/2016

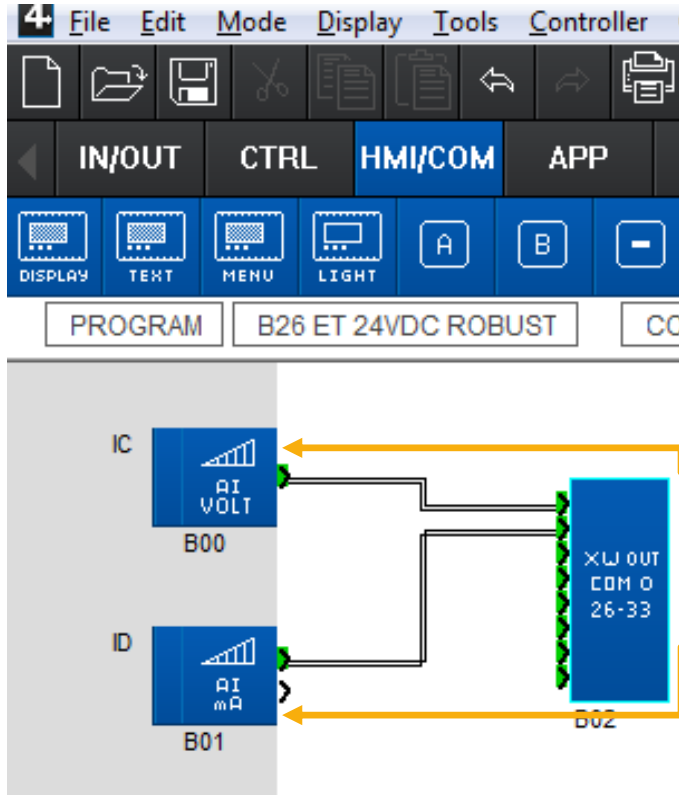
TREND DISPLAY TUTORIAL CROUZET TOUCH



- **VALUE SELECTION**
- **CREATE DATABASE OF DATA TO COLLECT**
- **OPTIMISE TREND DISPLAY**

VALUE SELECTION

- Select data to display in the graph :

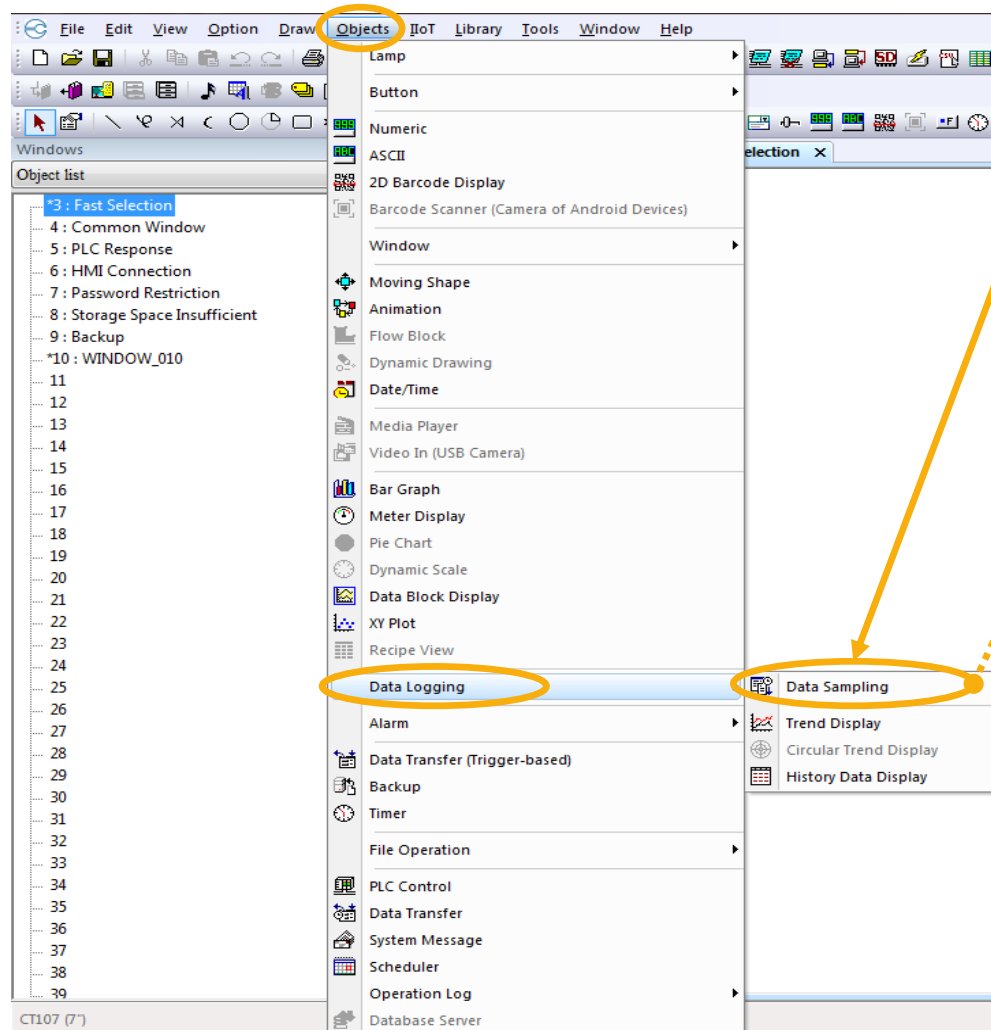


[View in em4 soft](#)

- In Crouzet Touch screen we have the possibility to create graphs with : Digital data (the graph will be of step type 0 or 1), or Analog data (e.g. the data from an analog input)
- It was necessary to know the data type and to take into account the values limits (minimum and maximum values)
- A **0-10V** Analog input Voltage is converted into a digital integer value by a **12-bit** analog/digital converter. The whole output value is between **0 and 4095**
- A **0-20mA** analog input current is converted into an integer value by an **11-bit** analog to digital converter. The integer value of the output is between **0 and 2000**

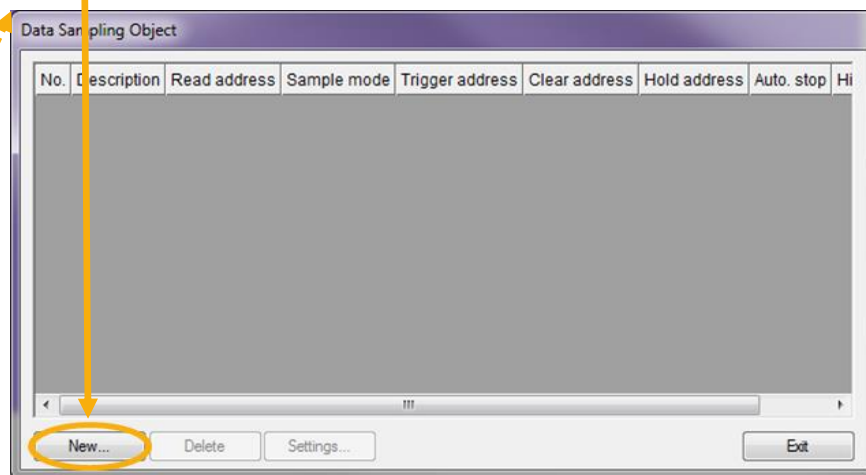
CREATE DATABASE OF DATA TO COLLECT

- Define Data Sampling address



- Start by creating a **Data Sampling Object** to assign the data address to the data to display. Select **Objects**, **Data logging** and **Data Sampling**

- In **Data Sampling Objects** click on **New** (If several graphs are required it will take the same number of **Data Sampling Object** as graphs)



- Define desired PLC and Read address:

Comment : TD

PLC : Crouzet em4 Modbus RS485 interface RTU

Sampling mode

☐ High priority (this may reduce refresh rate of screen components.)

☒ Time-based ☐ Trigger-based

Sampling time interval : 5 second(s)

Clear real-time data address

☐ Enable

Hold address

☐ Enable

Read address

PLC : Crouzet em4 Modbus RS485 interface RTU

Address : XWOUT 26

Settings...

Data Record

Max. data records (real-time mode) : 1000 ☐ Auto. stop

Data Format ... Data length : 2 word(s)

PLC : Crouzet em4 Modbus RS485 interface RTU

Device type : XWOUT

Address : 26 ☐ User-defined tag

Address format : DD [range : 26 ~ 49]

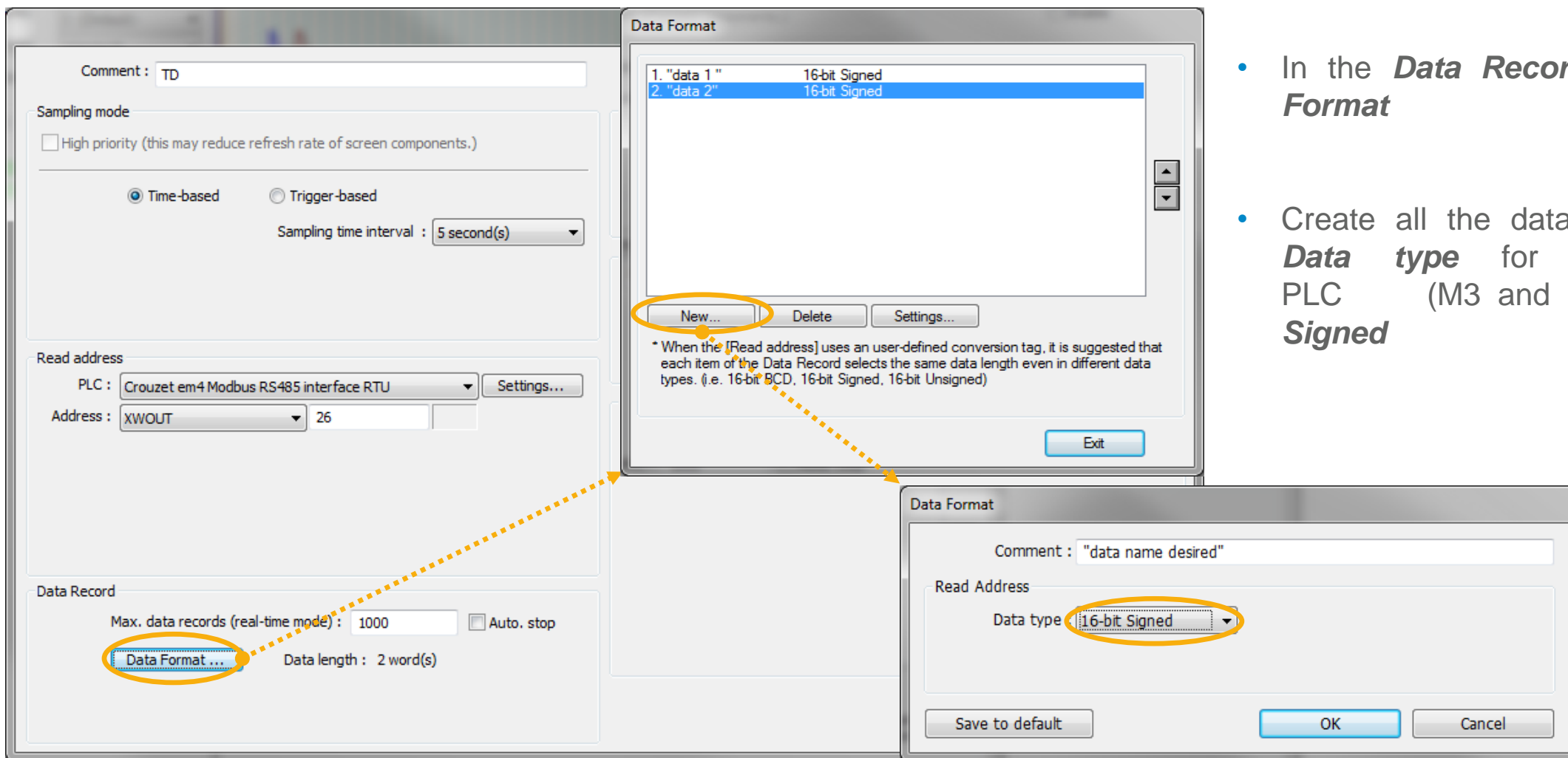
☐ Index register

* To make calculation (arithmetic operations +-/ or more) from raw data, use an user-defined tag with conversion definition.

Tag Library... OK Cancel

- Define the **PLC** for the data
- Choose the **Sampling mode** and the **sampling time interval** or the **trigger address** depending on the selected **Sampling mode**
- Select the **Read address** depending of the PLC configuration
- If we have several data to display, they must have **consecutive addresses** because we only define the **first address** and the software **automatically** takes the **following addresses**

- Choose the number data and their format :



Data Record

Comment : TD

Sampling mode

☐ High priority (this may reduce refresh rate of screen components.)

☒ Time-based ☐ Trigger-based

Sampling time interval : 5 second(s)

Read address

PLC : Crouzet em4 Modbus RS485 interface RTU

Address : XWOUT 26

Max. data records (real-time mode) : 1000 ☐ Auto. stop

Data Format ... Data length : 2 word(s)

Data Format

1. "data 1 "	16-bit Signed
2. "data 2"	16-bit Signed

New... Delete Settings...

* When the [Read address] uses an user-defined conversion tag, it is suggested that each item of the Data Record selects the same data length even in different data types. (i.e. 16-bit BCD, 16-bit Signed, 16-bit Unsigned)

Exit

Data Format

Comment : "data name desired"

Read Address

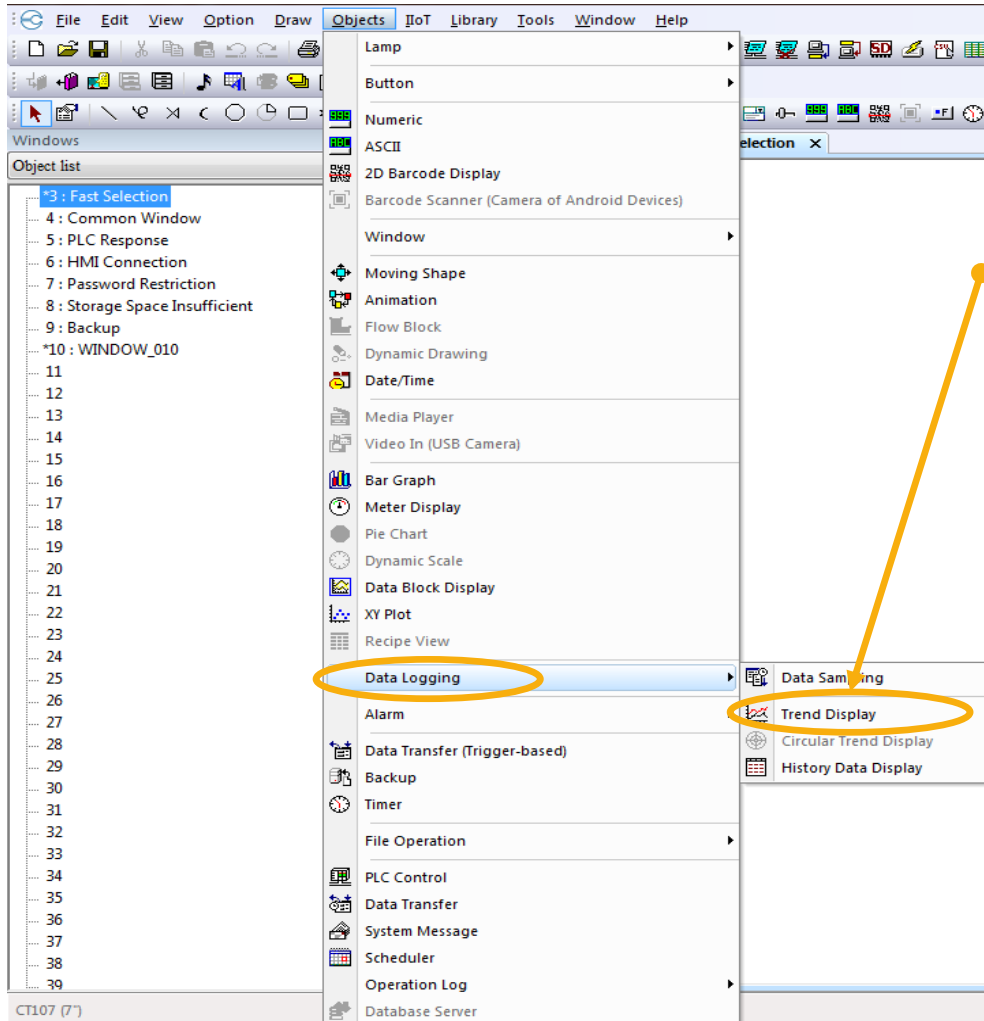
Data type : 16-bit Signed

Save to default OK Cancel

- In the **Data Record** select **Data Format**
- Create all the data needed. The **Data type** for the Crouzet PLC (M3 and em4) is **16-bit Signed**

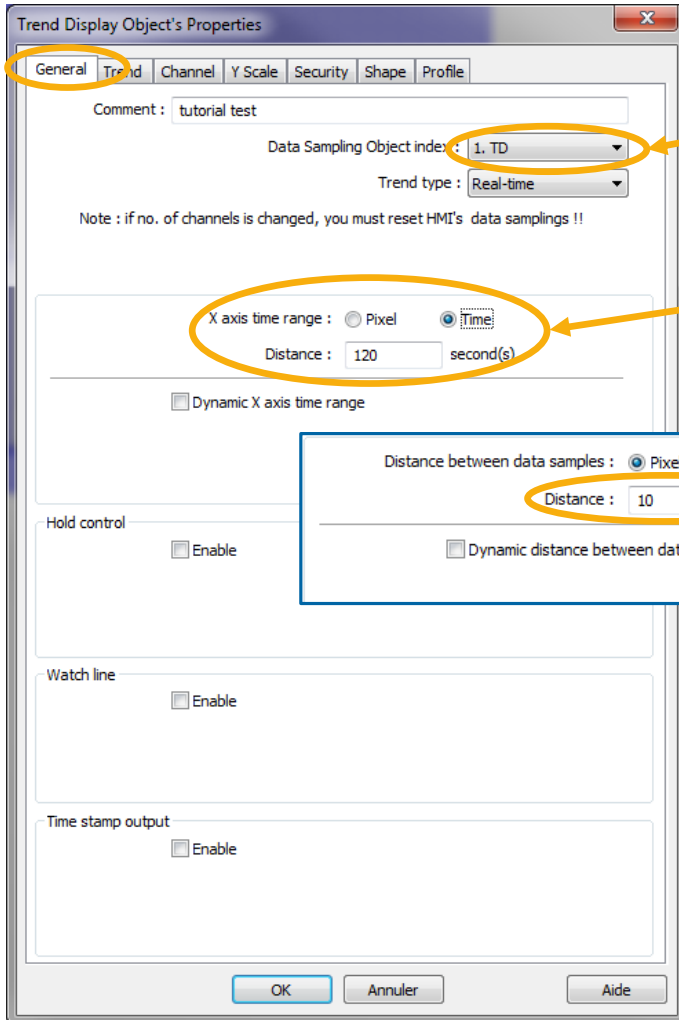
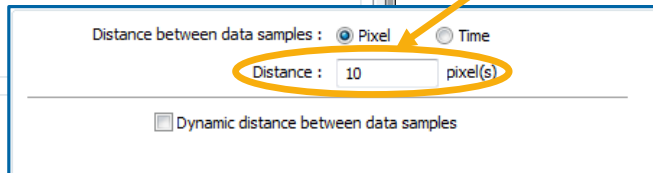
OPTIMISE TREND DISPLAY

- Now we starting the graphical display :

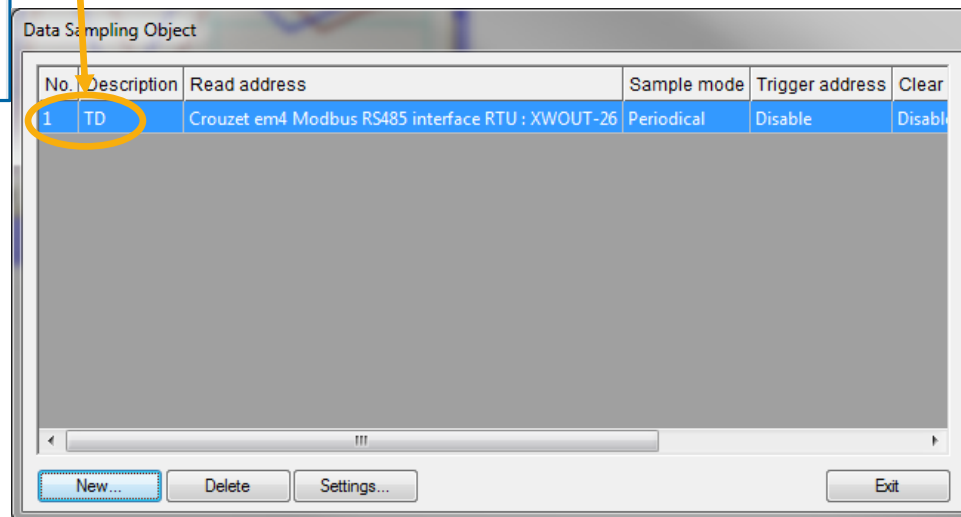


- Select **Objects**, **Data logging** and **Trend Display**

- General parameters :

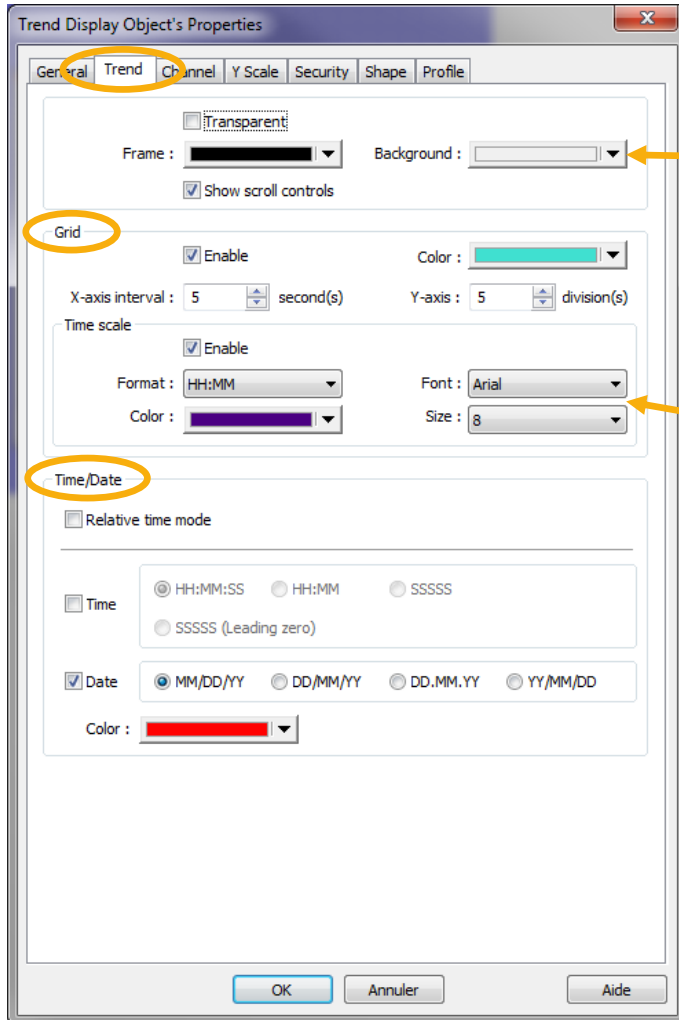



- The first parameter possible is trend display **Comment** and we have the **Data Sampling Object index** representing a number and a description in the **Data Sampling Object**
- The second parameter is unit of measure choice for X axis. We have two proposition **Time** or **Pixel**. The number written in **Distance** will be the units number show in the graph (*Here, It will display 120 seconds or 10 pixels*)



No.	Description	Read address	Sample mode	Trigger address	Clear
1	TD	Crouzet em4 Modbus RS485 interface RTU : XWOUT-26	Periodical	Disable	Disabl

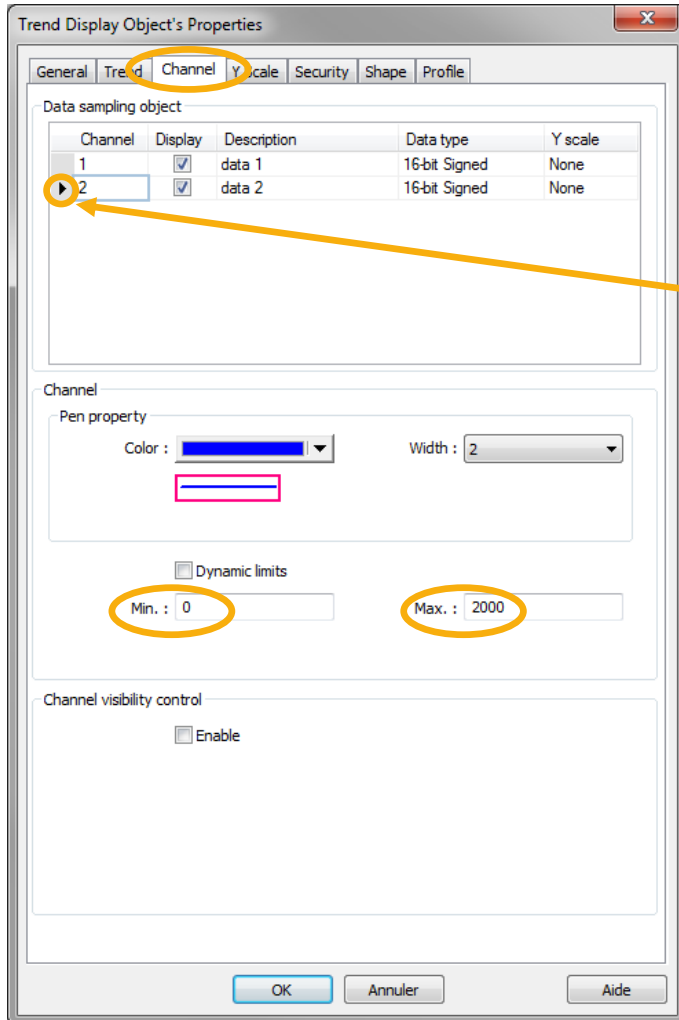
Define back ground parameters of the graph :



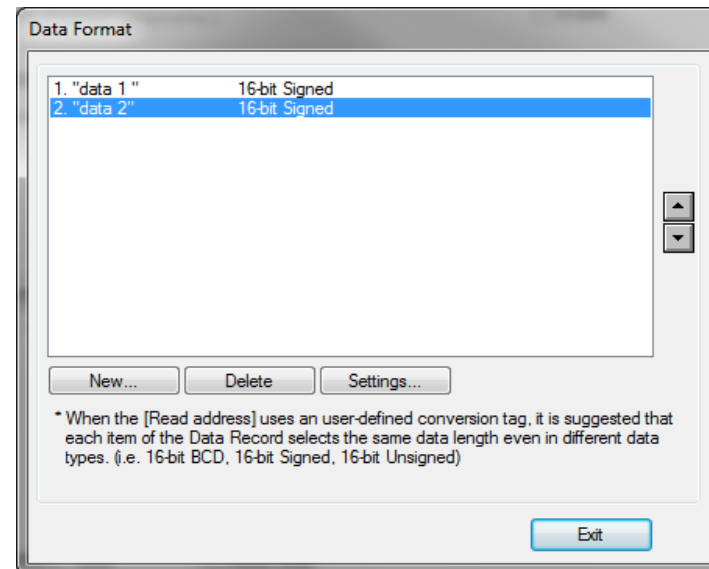
— We can change or choose few parameters on this **Trend** tab :

- The **Frame** color and **Background** color
- The **Grid** with its **interval** with other axis and her **Color**
- Show the **Time scale** with **Format** choice, **Color** choice, **Font** and **size** choice of the text. Only when we have chosen **Time** for unit measure to X axis
- Ability to display **Time/Date** with desired format and color (she will display on the top of the graph)

- Choose Data to display and the Data Format :

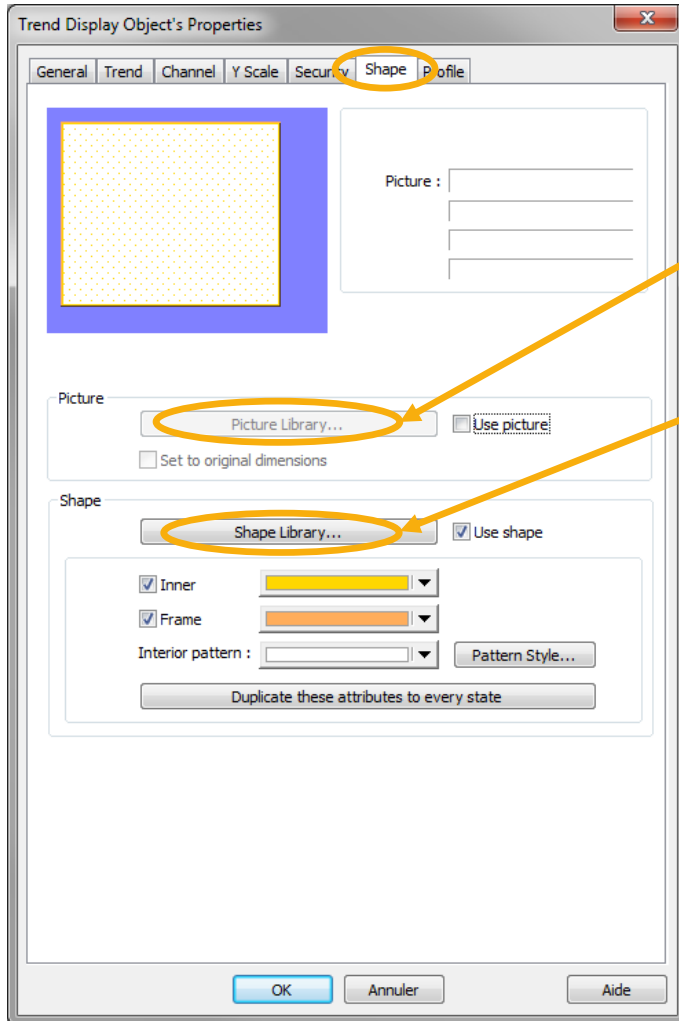


- Here we are in a graph with two values (data 1 and data 2), we can tick the desired data to display them.
- By clicking on each one we can modify different parameters (there is a small arrow that shows the selected data) :



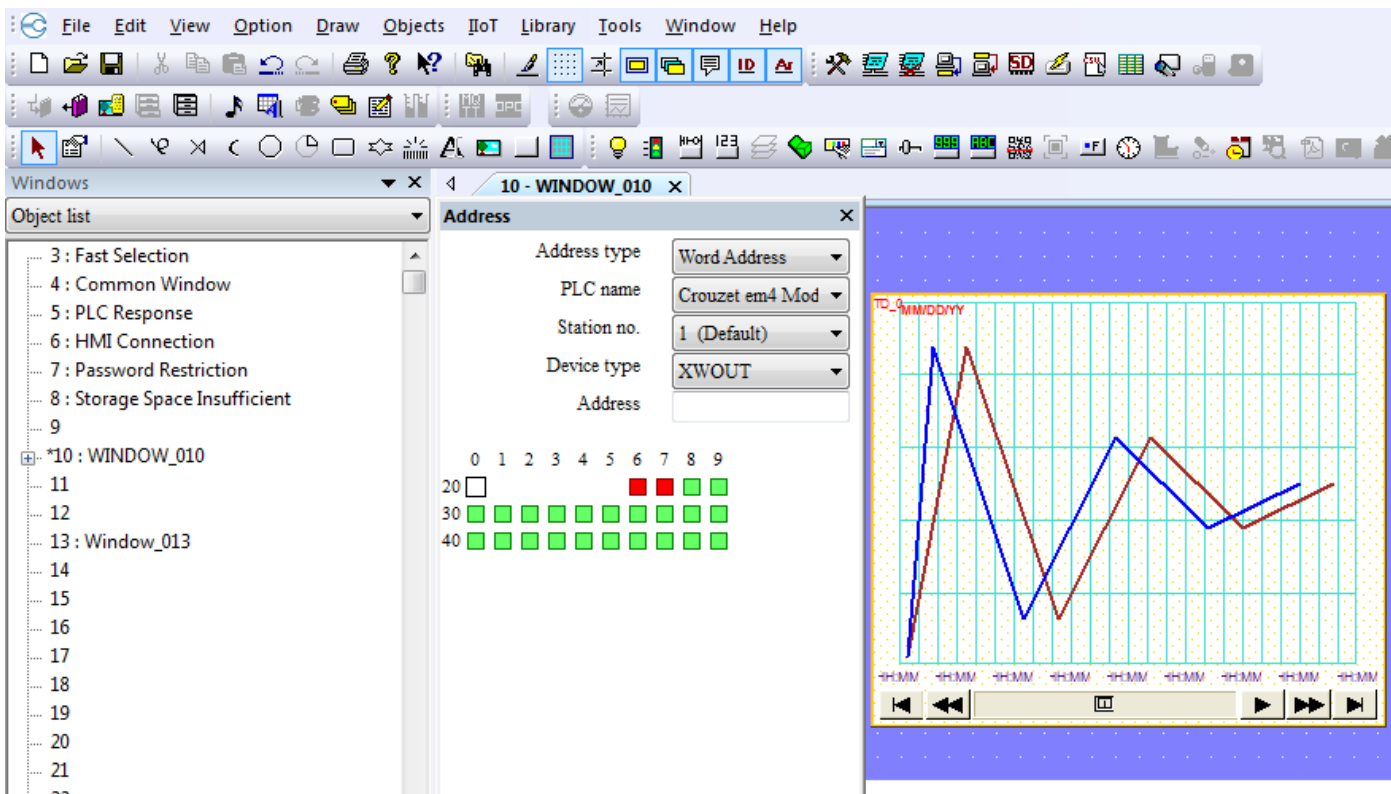
- **Pen property** (*Color* and *Width*)
- The both **Limits** (*Min* and *Max*)

- Shape and fill of the trend display :



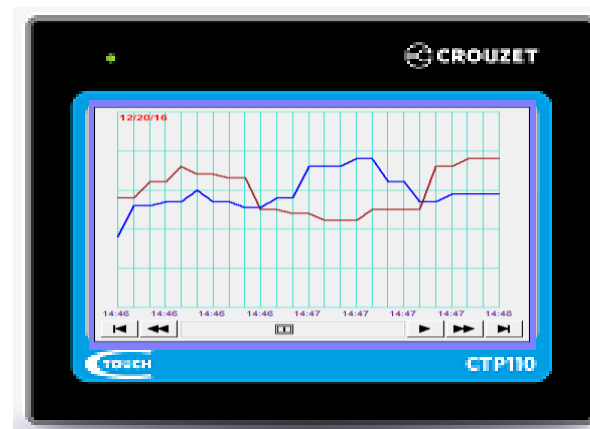
- We can choose an imported picture from our to insert into the graph background
- Or import a shape
- Alternatively we can modify **Inner** colour, **Frame** colour, **Pattern Style** and **Pattern** colour

- Example and overview :



View of the program window

View in Crouzet Touch display



THANK YOU FOR YOUR ATTENTION

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