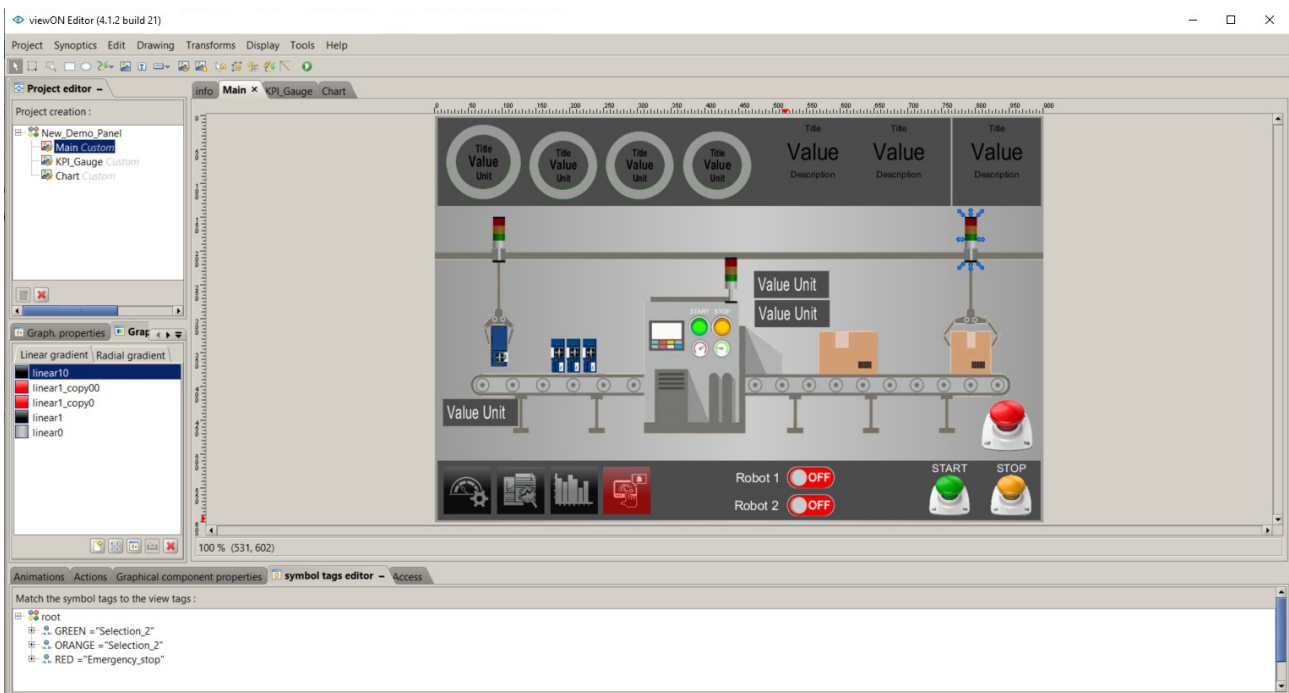


viewON - Symbols

Application User guide



AUG-008-02 4.1 en-US

Important User Information

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1. Hardware and software requirements

1.1. Hardware requirements

In order to follow this guide you need:

- 1 Ewon device with viewON capabilities (for example: Ewon Flexy)
- 1 PC with an Internet access and an up-to-date web browser

1.2. Software requirements

Ewon configuration software:

The Ewon device is configured through its embedded web server. So all you need is a standard web browser software like Firefox or Chrome.

Additionally we suggest to download the eBuddy utility on our support website:

<https://resources.Ewon.biz/download/ebuddy>

The eBuddy utility lists all the Ewon devices available on your network and changes the default IP address of an Ewon device to match your LAN IP address range. With eBuddy you can also easily backup/restore your configuration or upgrade the firmware of your Ewon device.

viewON software:

To create a viewON project, the viewON Editor is needed on your PC.

To visualize the exported viewON application on the Ewon device you simply need an up- to-date web browser (Mozilla FireFox, Google Chrome,...).

This makes the viewON project visualization compatible with any kind of platform (computer, tablet, smartphone) and any kind of OS (Windows, Linux, MacOS, iOS, Android).

The viewON editor software can be downloaded on the Ewon web site:

<https://resources.Ewon.biz/download/viewON>

1.3. Ewon firmware version

To be able to follow this guide, your Ewon device needs a firmware version 14.4s0 or higher.

A simple way to upgrade the Ewon firmware is to use eBuddy, the Ewon software companion. We recommend upgrading your Ewon to the latest available firmware version before starting a new viewON project.

2. What are Symbols

A symbol is a predefined object that you can use as you please.

Instead of using several objects inside your view and animating these objects separately, you can use symbols. A symbol regroups different objects, animations and actions inside one single entity.

Let's take a valve object as an example.

To design your valve you'll probably use:

- 2 triangle objects to design the valve
- a color animation to reflect the current state of the valve (open=green, close = red)
- a send action to change the state of the valve

Inside your different views, you'll probably want to re-use this valve several times. You want to keep the same aspect and behavior of the valve. The only thing you want to change is the linked tag for the animation.

That's where the symbol becomes useful. Transforming this object into a symbol will simplify the re-use of the valve object.

To duplicate the valve, you'll then only need to insert the symbol and to attribute a tag to the valve state. No need to re-adapt animations and actions and also no risk to change the look and global behavior of the valve itself.

Inside this document we will first show you how to insert a symbol inside your view. viewON already has a few predefined symbols.

Then we will show you how to create your own symbol.

3. Using existing Symbols

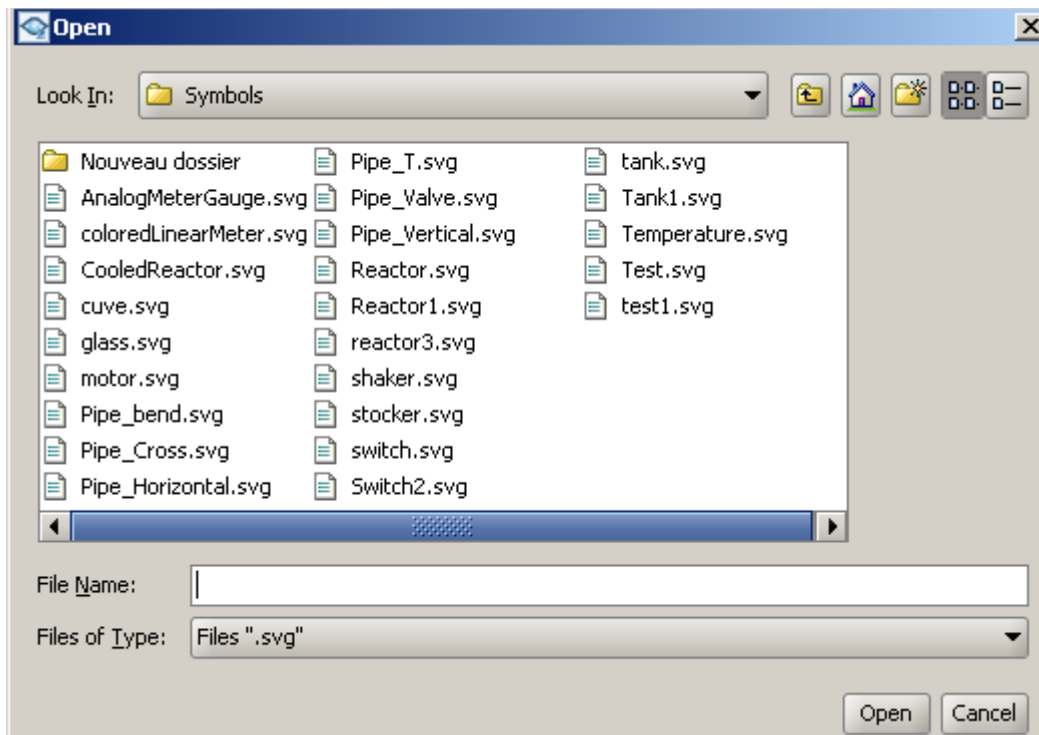
3.1. Inserting a symbol inside a view

In the toolbar click on **Insert a symbol** .



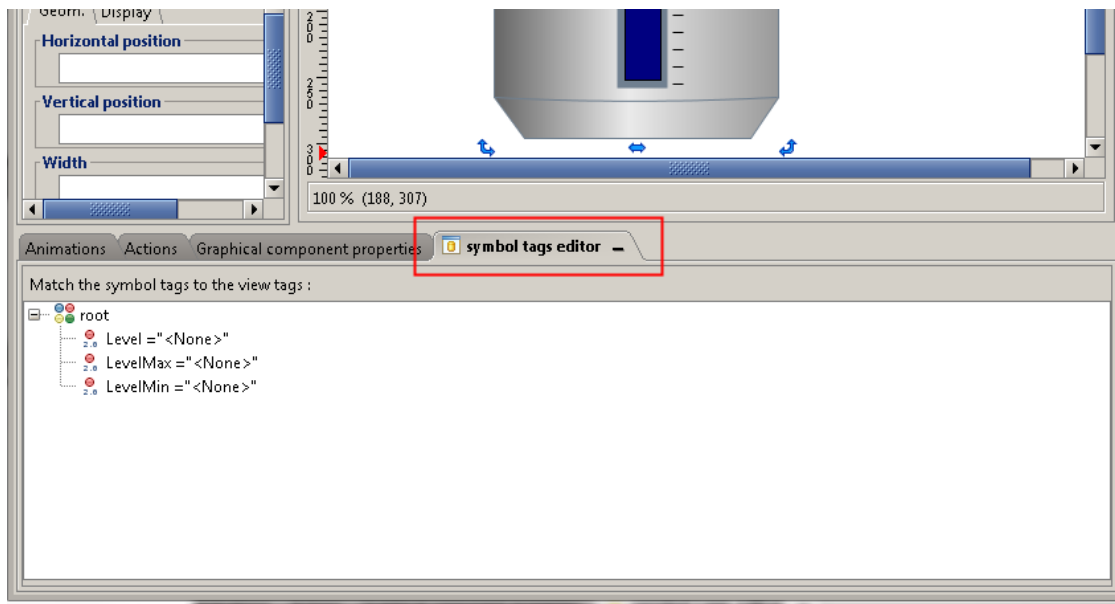
Then inside the view click on the place where you want to insert the symbol.

A window will open showing all the existing symbols. Select the symbol you want to use.



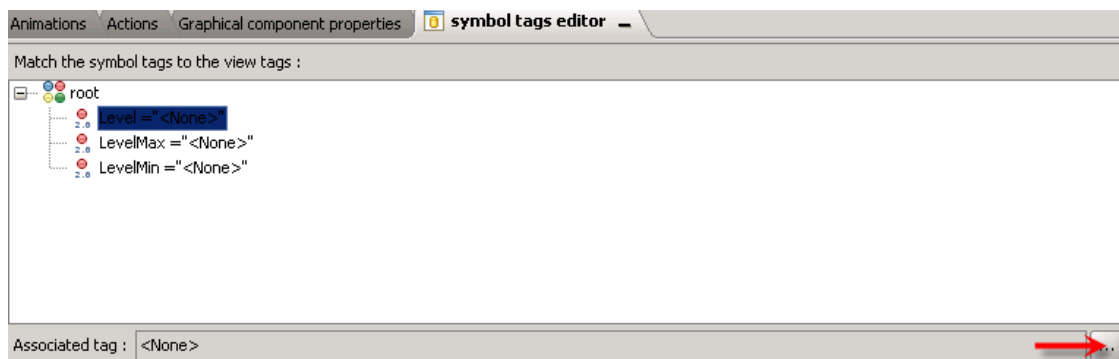
Let's take the **Reactor** symbol.

To animate a symbol, don't use the Animations or Actions tabs as used for the graphical objects. Use the **Symbol Tags editor** instead.

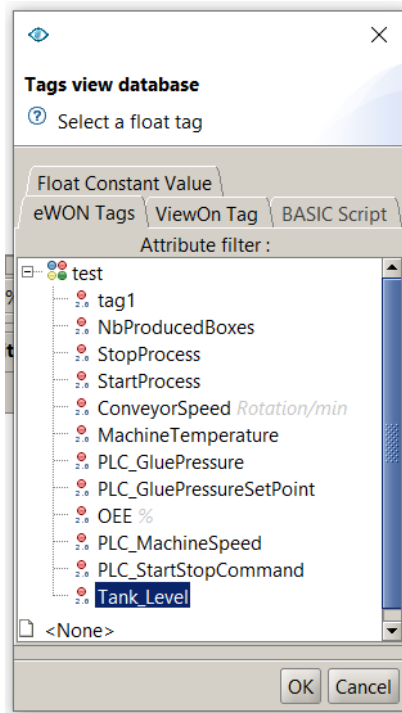


Inside the view select the symbol and go to the **Symbol tags editor** section on the bottom of the screen. Here you'll be able to link the tags to the symbol.

For example, for the reactor symbol you'll need to add a tag for the **Level**, the **LevelMax** and **LevelMin**.



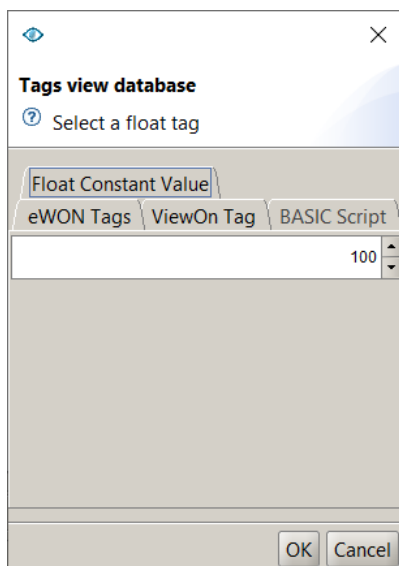
Select the symbol tag you want to link to a Tag and click on the browse "..." button.



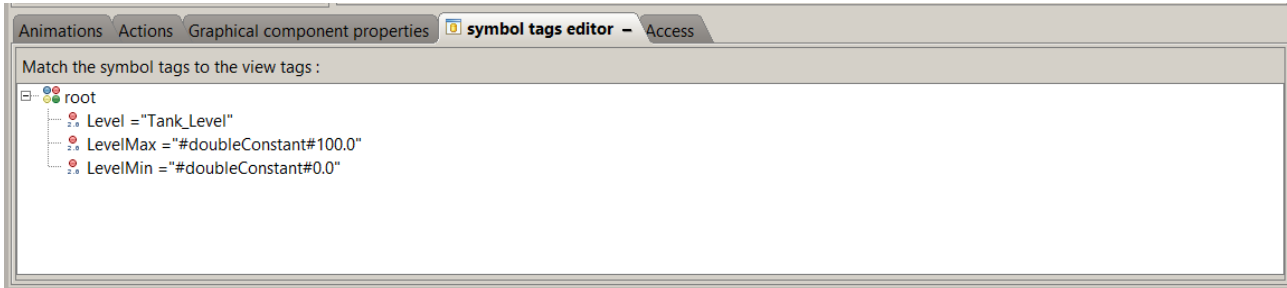
Inside the 'Ewon Tags' or 'ViewOn Tag' tab select the tag you want to use for this animation and click on OK.

Instead of linking a tag, you can also use a BASIC Script or a Constant Value.

For example, for the LevelMax and LevelMin symbol tags, better to use a constant value than linking to a tag.



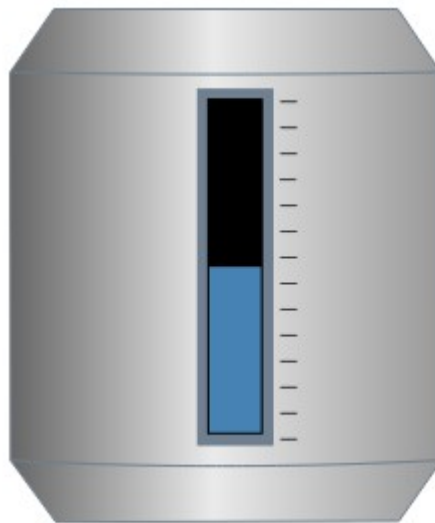
After associating the symbol tags, you will see the associated tag, script or constant value inside the symbol tags editor:



To test the animation, click on **Test animations and actions button** as usual.



The reactor will be filled according to the tag value. You do not need to add an animation as the symbol has an already configured one linked to a tag.



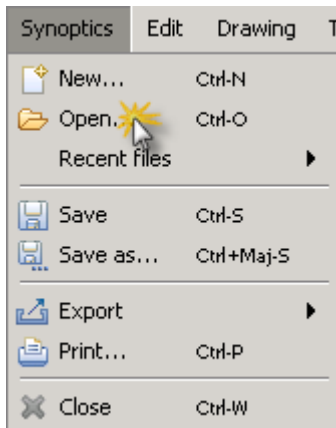
3.2. Modifying an existing symbol

It may be sometimes required to adapt the existing symbol before using it inside your view(s).

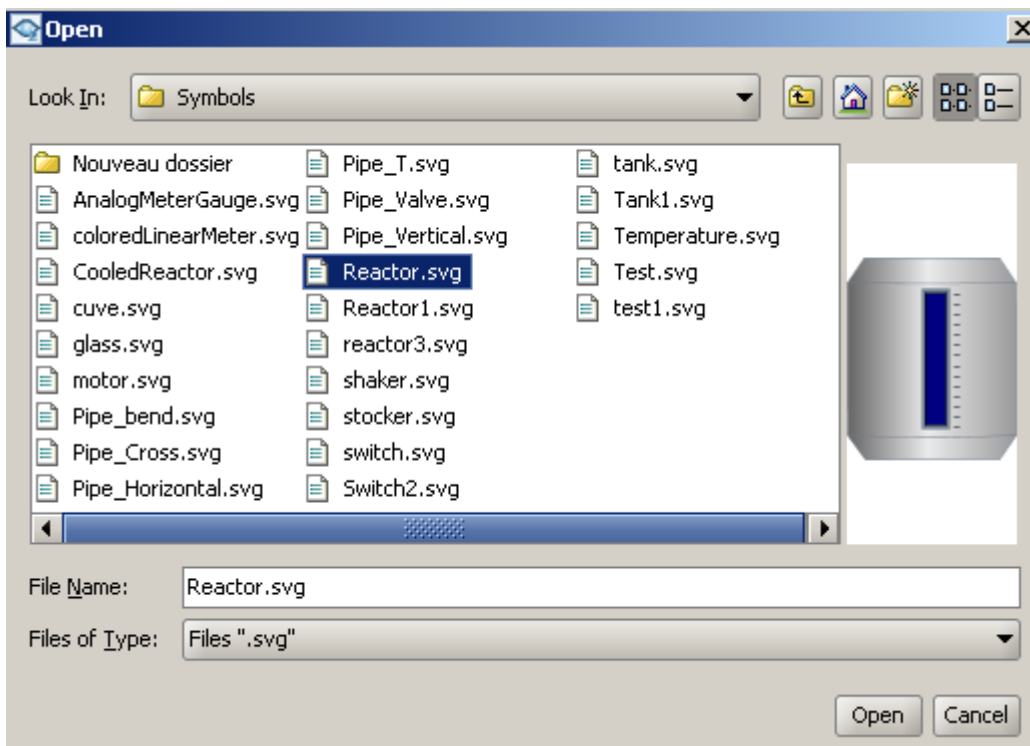
Let's assume you want to personalize the symbol called "Reactor".

For the Reactor symbol the fill color is dark blue. We will show you how to change the fill color of this symbol.

Click on **Synoptics** (on the menu bar) and then on **Open**.



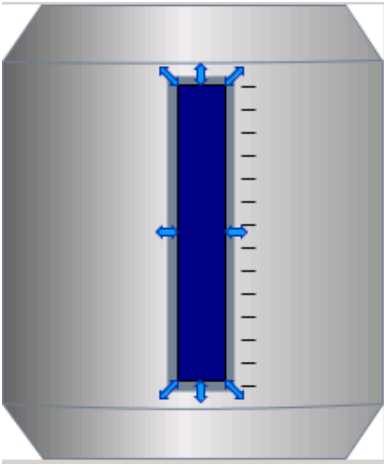
A window that lists all the symbols pops up (open the directory **C:\Users\<CurrentUser>\Documents\viewON Projects\Symbols**).



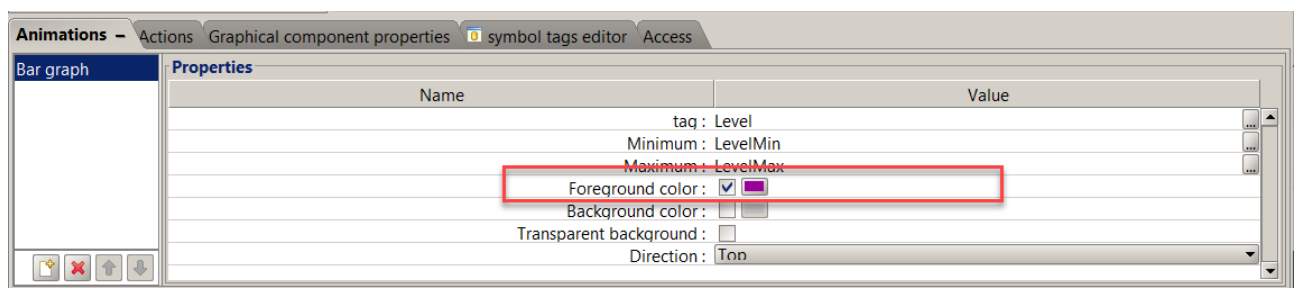
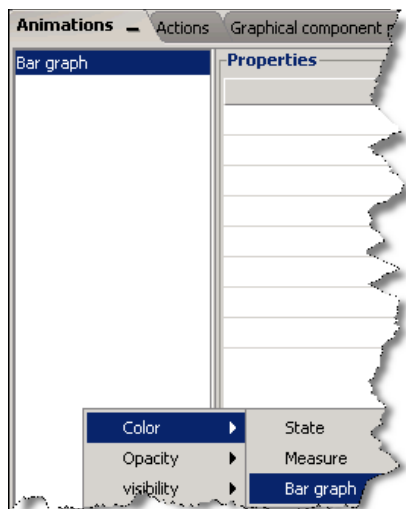
Choose the **Symbol** you want to modify (the Reactor, in our example).

Once a **Symbol** has been opened in **Synoptics**, it behaves like a simple object, so you will be able to customize it according to your needs.

Click with the mouse on the the vertical bar of the reactor. You can now change the properties or the animation of this object.

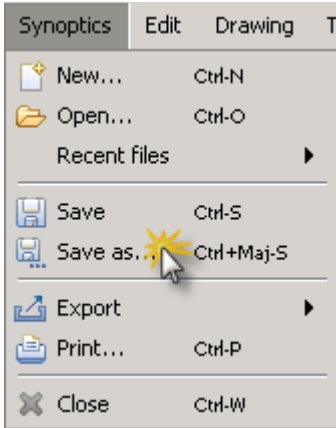


Click on the fill and go to the **Animations** section (in the second part of the screen). There, you will see the **Bar graph** properties that you will be able to modify.

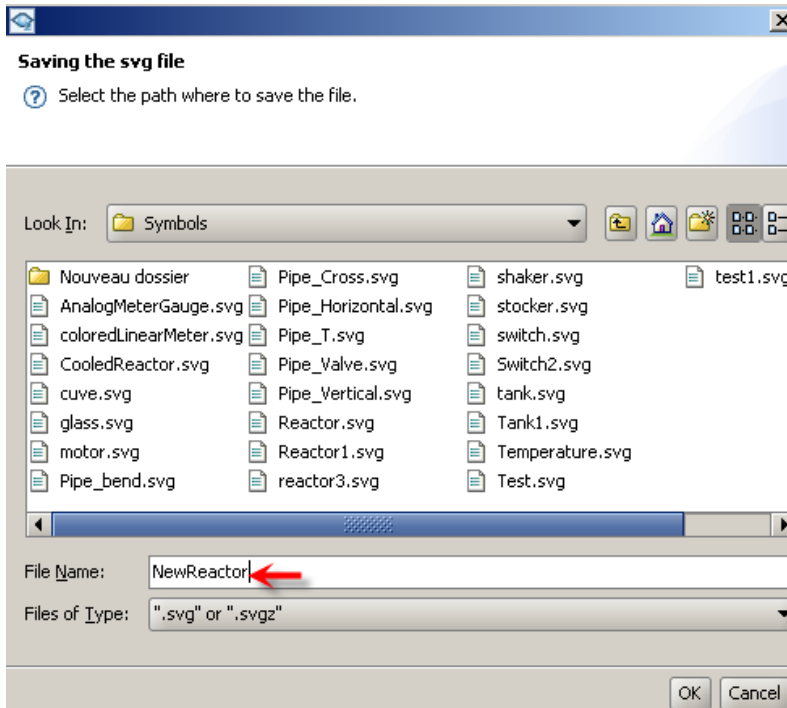


In the **Properties** section, select another color for the Foreground color.

To validate the modification of the symbol, click on **Synoptics** and save your object as a new symbol.



Do not forget to rename your new symbol before saving it.



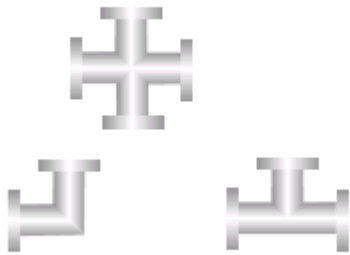
Your new symbol is now created. You can use it as many times as you want in your projects.

Note: Make sure to save your Symbols inside the directory
C:\Users\\Documents\viewON Projects\Symbols.

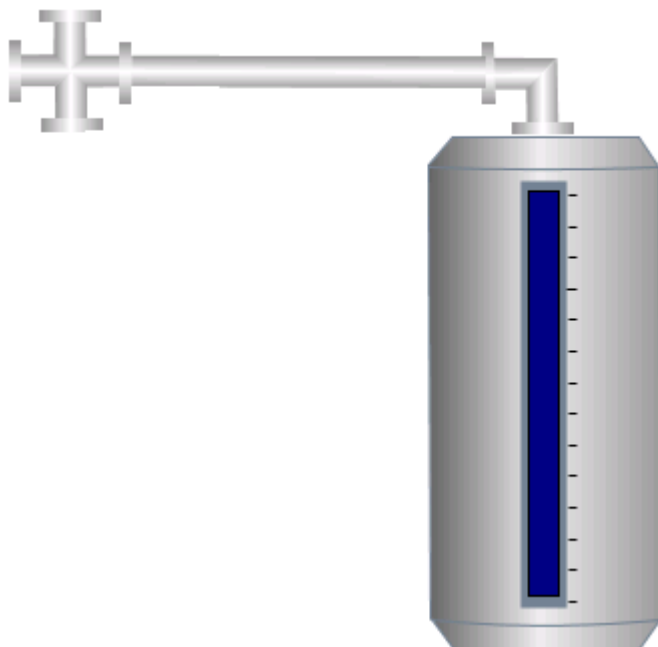
3.3. Symbols without animation

It is not required that a symbol needs to be animated.

Inside the preexisting **Symbols** list in viewON you'll find some **Symbols** that are not animated. .



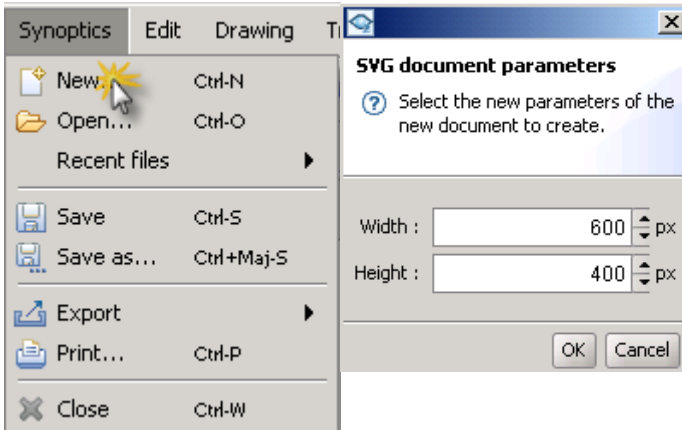
Those **Symbols** do not have any predefined animation. But they will help you to design easily a more complex object, as for example:



4. Create your own symbol

You can create your own symbol in order to reuse the object in different projects without recreating the same object over and over again.

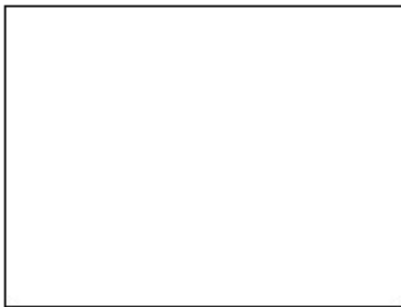
To create a new symbol, inside the **Synoptics menu**, select **New** and set the size of the **Synoptic**.



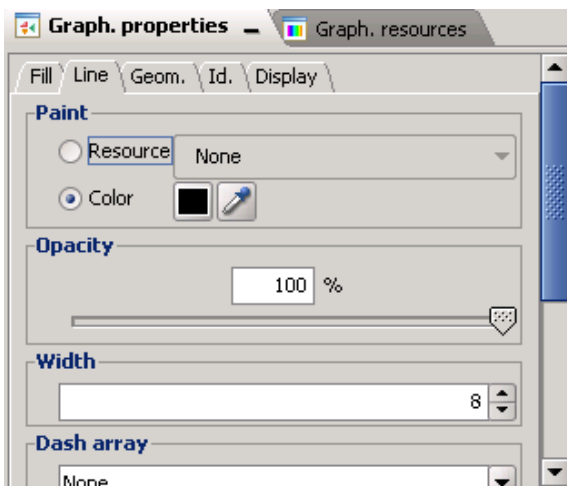
You can now draw the object you want to create as a symbol.

For example, let's create a Level display field.

Click on **Create rectangles and squares**.



Customize the object as you like. Open the **Graph. properties** section and change the different properties (the fill, the line, the geometry, etc.)



For further information on how to use an Animation or an Action, please refer to the [AUG-006-01 \(Viewon-objects,animations and actions\)](#).

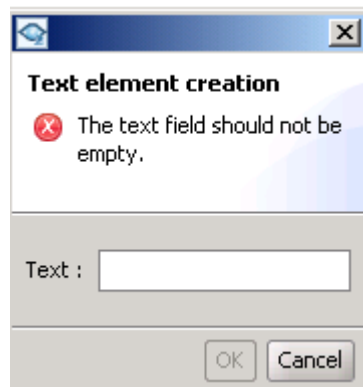
An example:



Let's now add text on our object. To do so, click on **T** in the viewON toolbar and then on your object.



The following pop-up window will open.



Enter your text in the blank field.

Let's assume we created the following object.

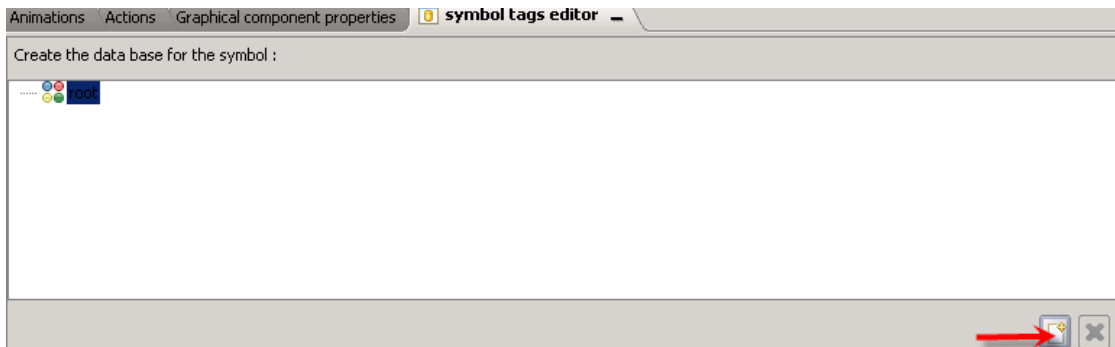


Now we want to link an animation to the “###.# L” text, to be replaced by a tag value when the symbol will be used.

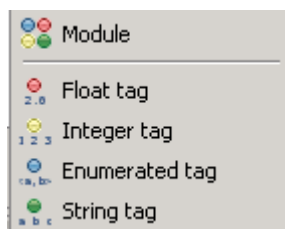
For this, we will first need to create a Symbol tag inside our Symbol. We will then link this Symbol tag to the animation.

Later, when the symbol will be used inside the viewON project, we can then link an Ewon tag to the corresponding Symbol Tag.

To create a Symbol tag, go to the **Symbol tags editor** tab (at the second part of the screen), and click on the **Insert** button.

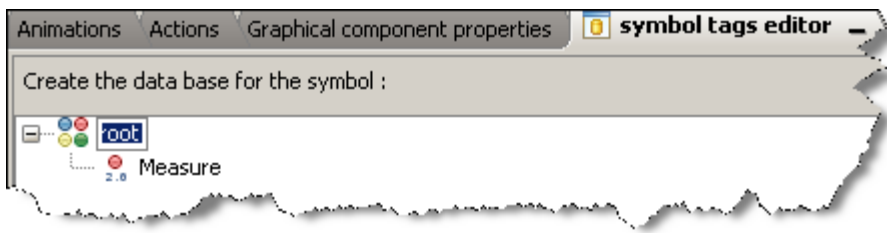


The following window will appear, asking for the type of tag to create.

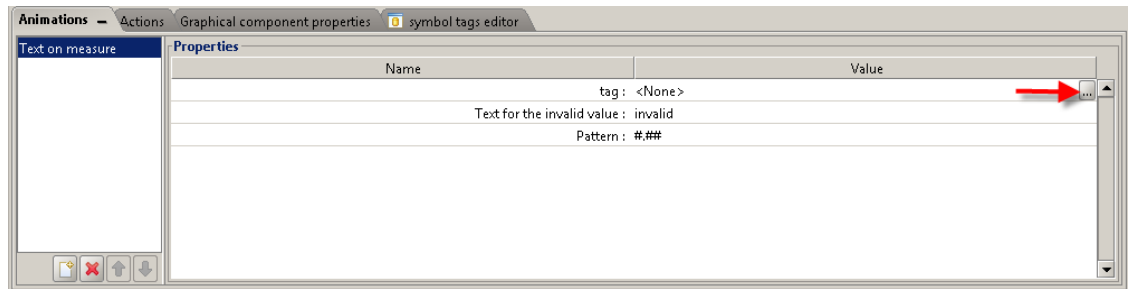


Here you'll now need to select the type of tag corresponding to the tag you want to link to the animation later.

Let us select a **Float Tag** and call it “Measure” (to name it, double-click on the float tag, type the name and then press the *enter* key).

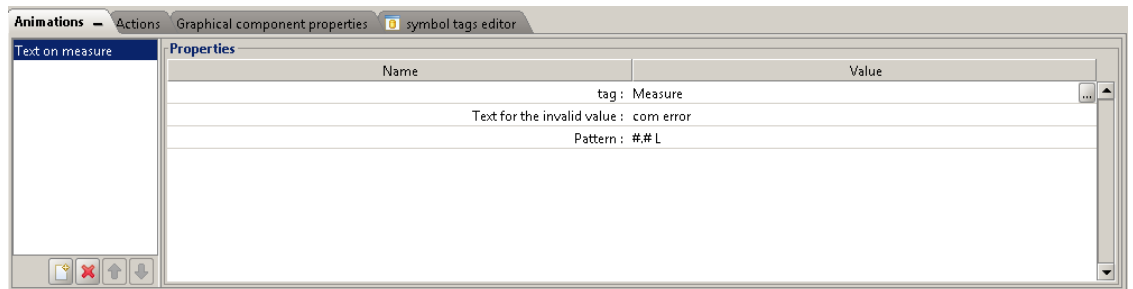


Now we can add the animation to the text field “###.# L”. We will use the **Text/Measure** animation.

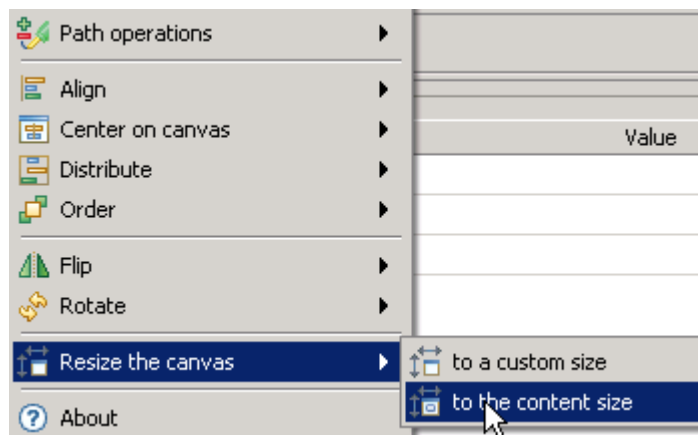


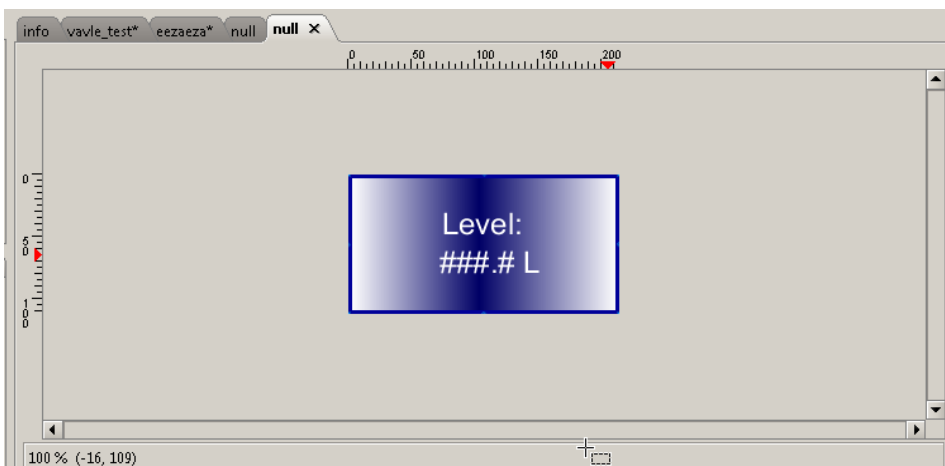
To link the animation to the symbol tag that we just created, click on the tag selection button.

Choose a text for the invalid value and define the display pattern (the number of decimals that you need).



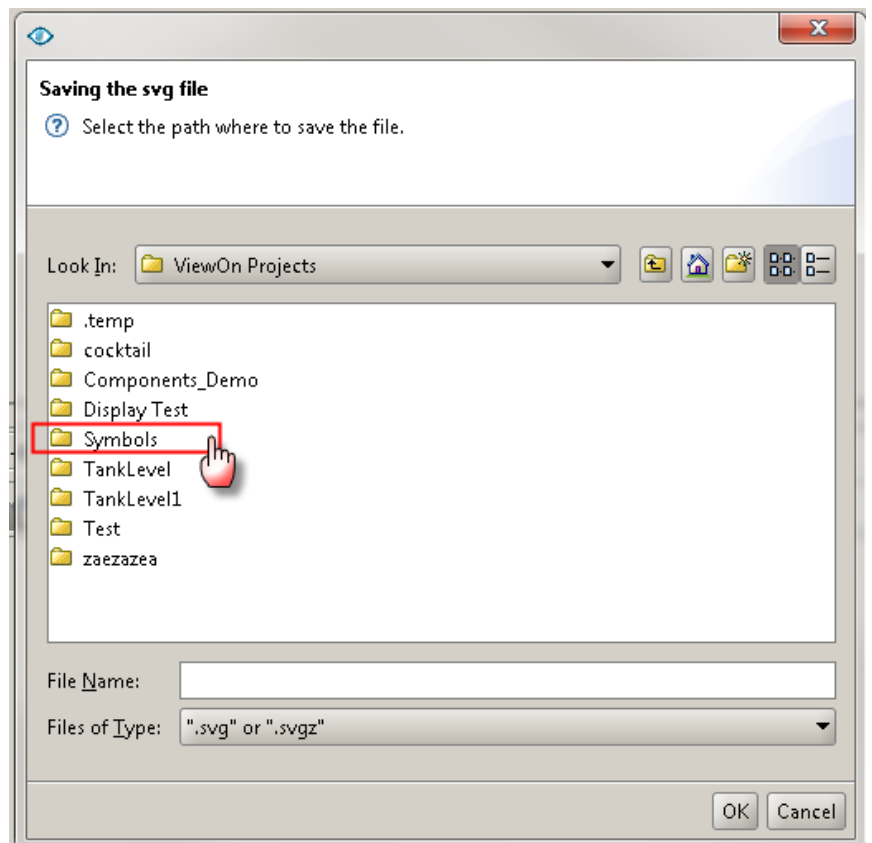
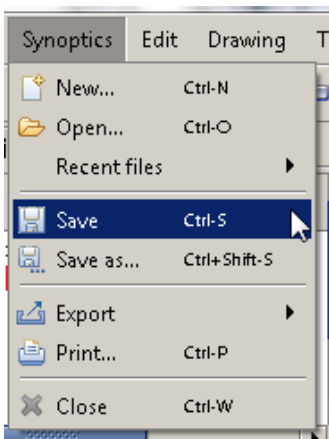
Next, we will need to re-size the canvas to the content size. Select the square, right click, and inside the “Resize the canvas” menu select the “to the content size” option.



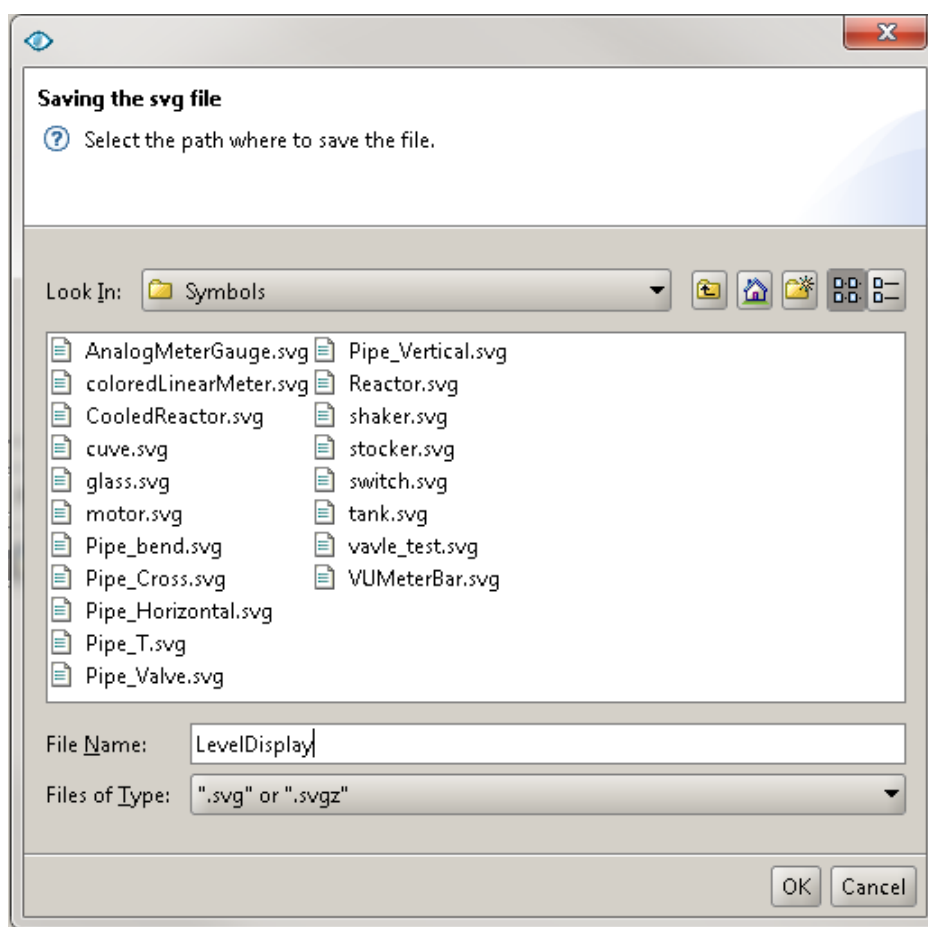


To finish the symbol, we will need to save it.

Inside the **Synoptics** menu, click on the **Save** option



and click on the **Symbols** directory.



Give a name to your symbol (for example: LevelDisplay) and click on the OK button to save the synoptic.

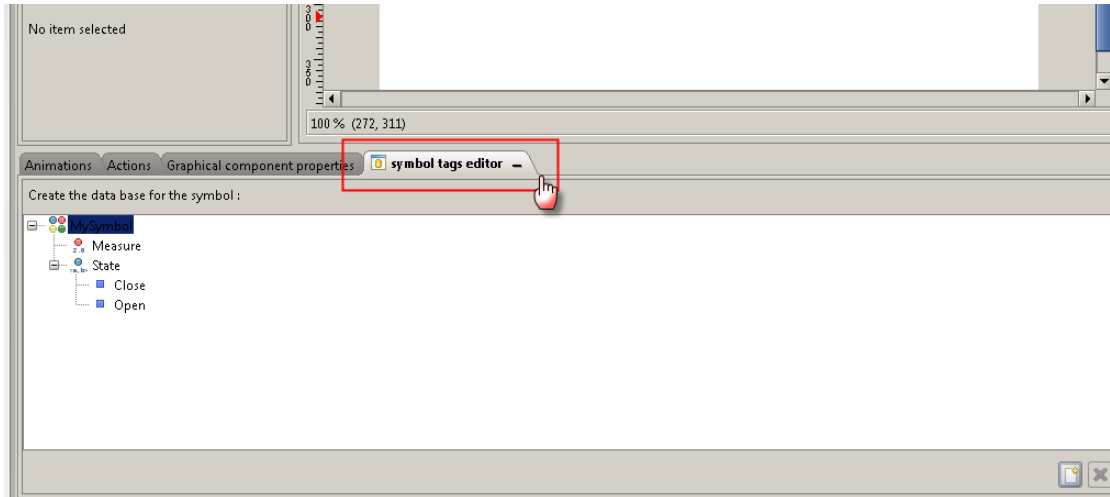
Your new symbol is now created. You can now use it inside your viewON projects simply by inserting the symbol called "LevelDisplay".

NOTE

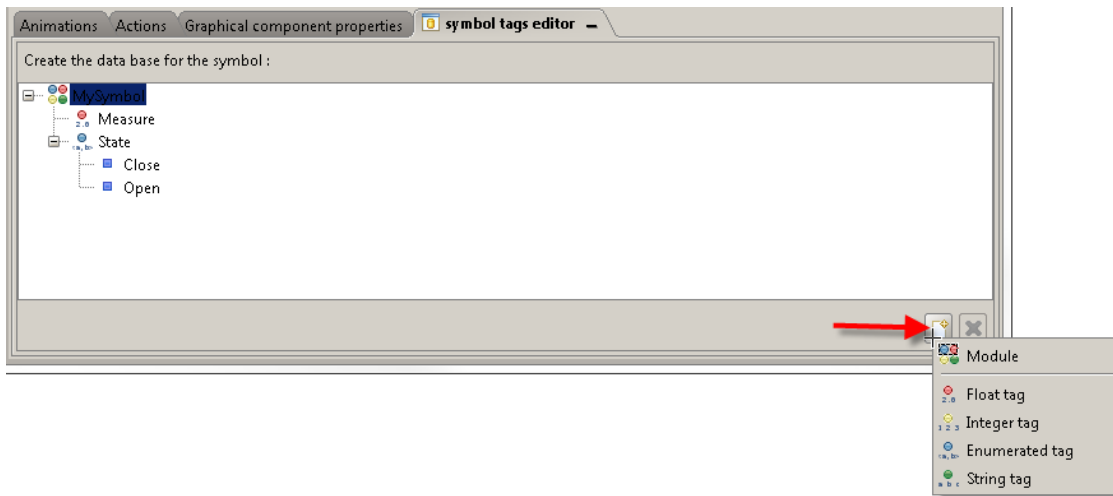
It is very important to save your Synoptic inside the directory
**C:\Users\
Otherwise your object will not be considered as a **Symbol.****

4.1. Symbol Tag Editor

As explained in the previous pages, to link an animation or action to your symbol, you need to create your symbol database inside the **symbol tag editor** section.



To add a symbol tag, click on the Insert button on the right lower corner.



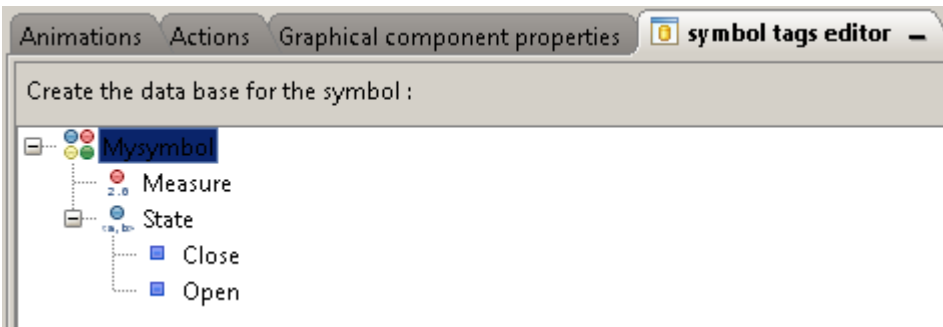
Define now the type of tag you want to insert.

The different possibilities are:

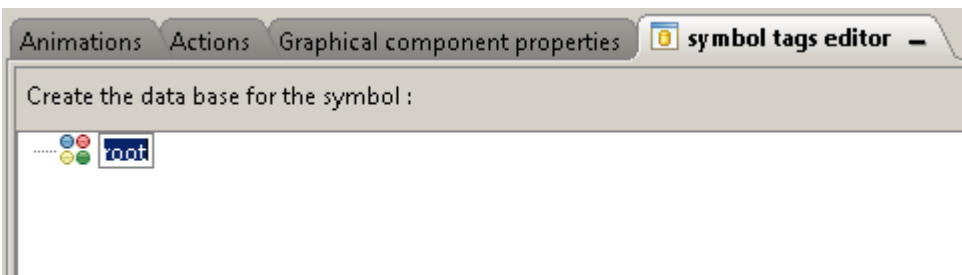
Symbol Tag type	Used for
Float Tag	Integer and floating point tags
Integer Tag	Do not use. Not implemented inside the current viewON version
Enumerated Tag	Boolean tags, or Alarm states of Ewon tags
String Tag	String tags or string from a viewON script.
Module	This will add a new module inside your Symbol tag database. If your symbol is composed of several different objects and animations, the module will help to identify clearly each tag. See chapter bSymbol Database module page 26

a) Symbol database example

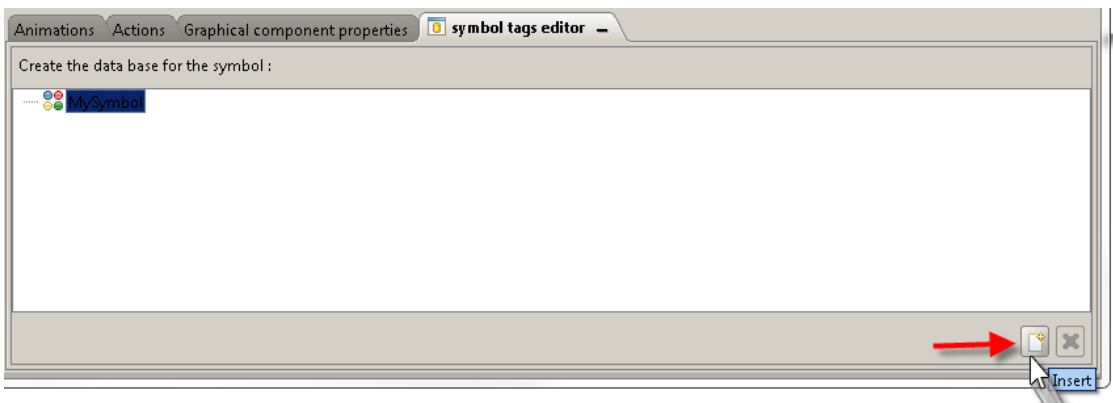
Let's for example create the following Symbol tag database structure:



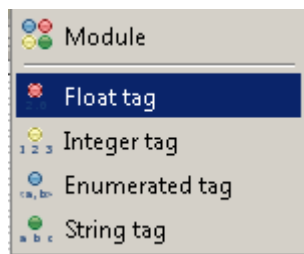
Inside the Symbol tags editor first double click the "root" text, to give a name to your Symbol database. (MySymbol for example)



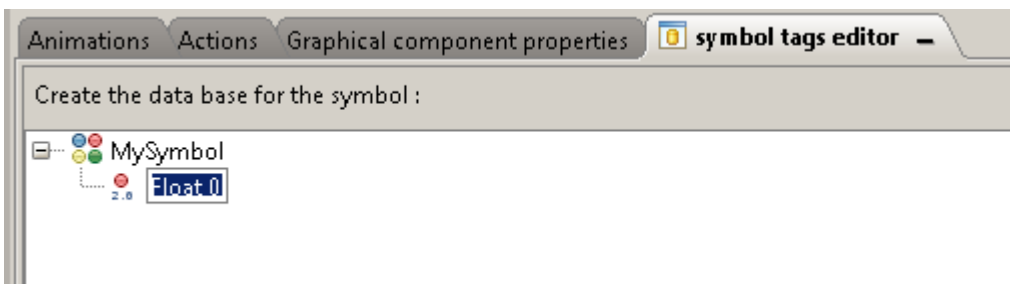
Then click on the **Insert** button.



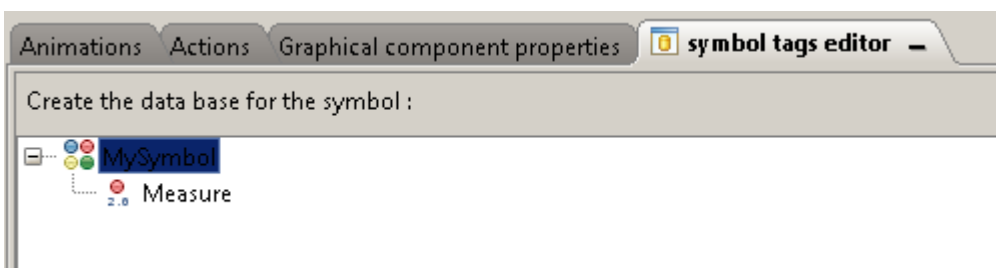
And select the Float tag type.



The float tag called "Float 0" will be added to your database.

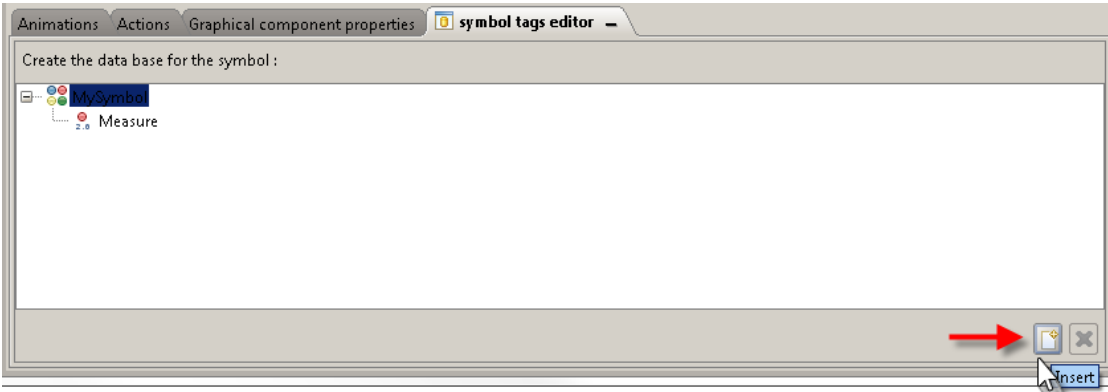


Double click the "Float 0" to change its name, as for example into "Measure"

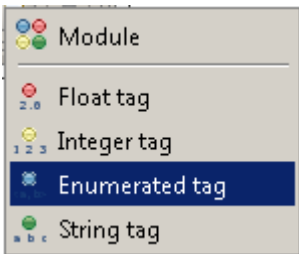


Now let's add a tag into the database to link later an Ewon boolean tag to the animation.

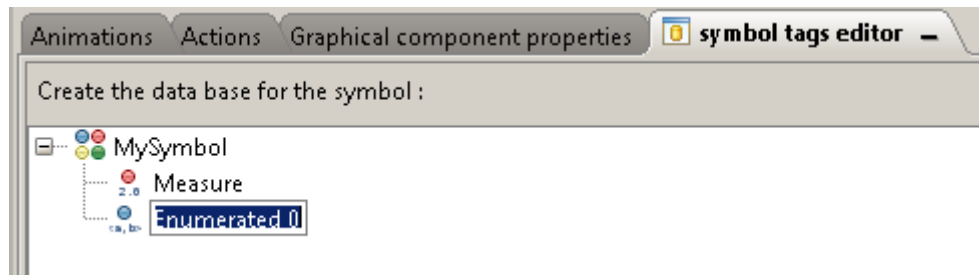
Click again on the **Insert** button



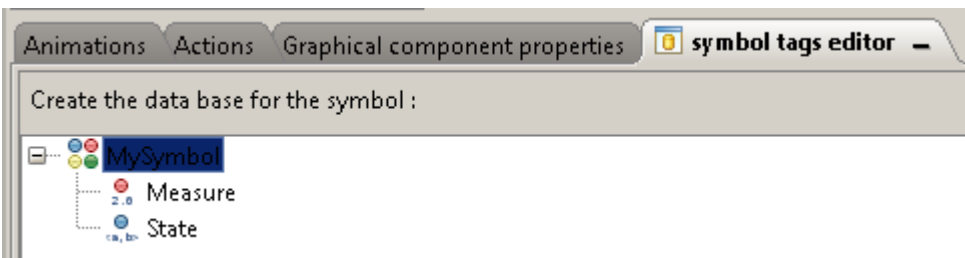
and select the **Enumerated tag** type.



The tag called "Enumerated 0" will be added to your database.



Double click the tag to change its name, for example, "State"



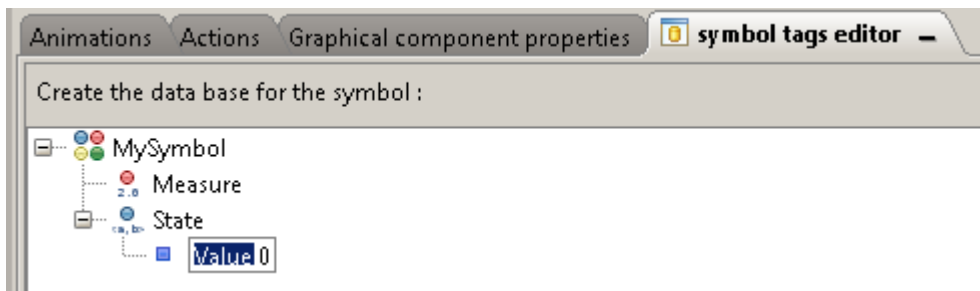
Now we need to add enumerated values for this tag. As it is for a boolean tag we will need to add 2 states, one for value 0 and one for value 1.

Select the “State” tag and click on the Insert button.

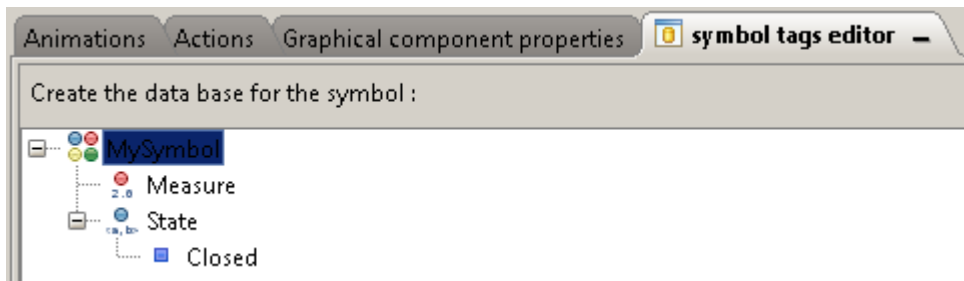


Click on the **Enumerated value** option.

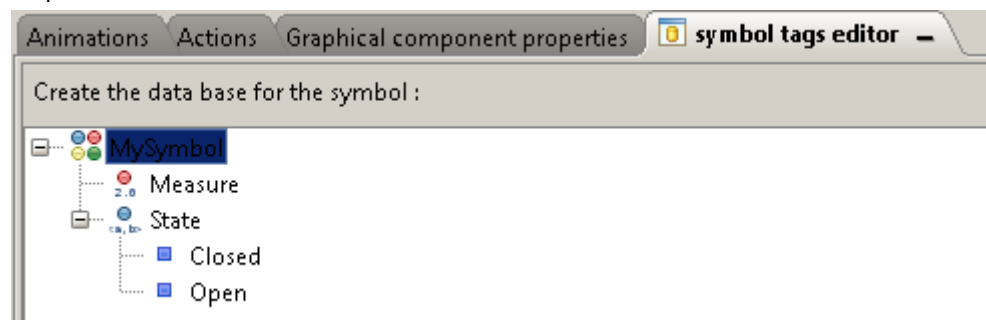
Under your State tag, you'll now see that “Value 0” has been added.



Double click the text “Value 0” to change its name, as for example : “Closed”

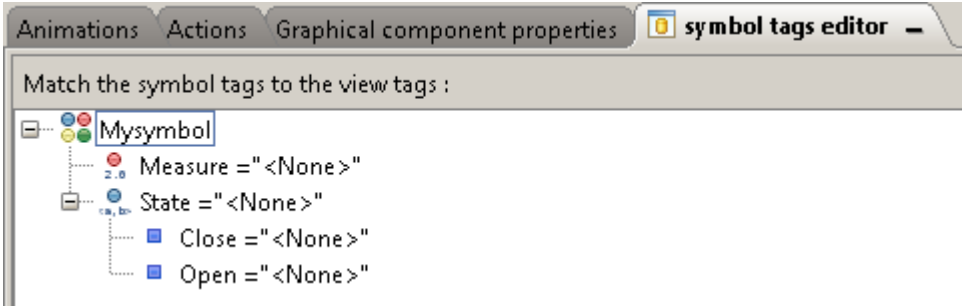


Repeat to add an “Open” state:

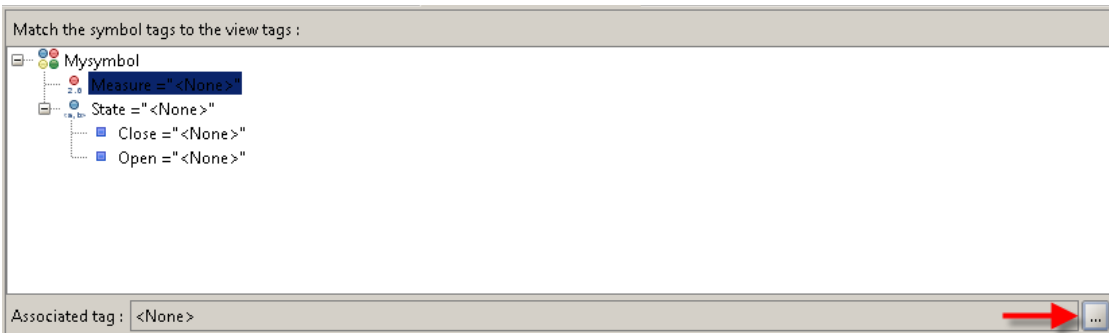


You'll now be able to use these Symbol tags for the animation inside your symbol animations and actions.

When this symbol is used inside a view, you'll need to link tags to the symbol tags. For this, select the symbol and open the symbol tag editor tab.

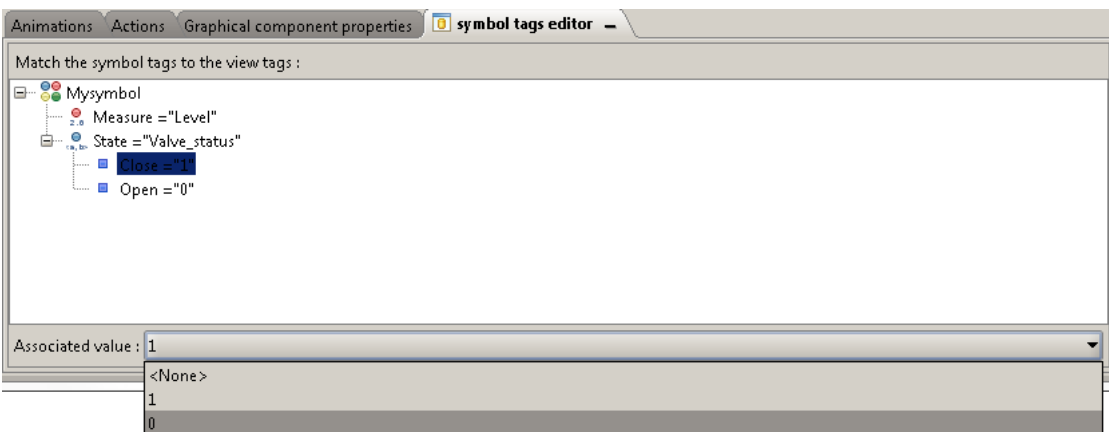


Select the Symbol tag and click on the browse button to link the Ewon tag.



For the Enumerated tag, you'll need to specify also the value for the states "Close" and "Open".

First link a tag to the symbol tag called "State",



Then for each state, select the value you want to associate (0 or 1).

b) Symbol Database module

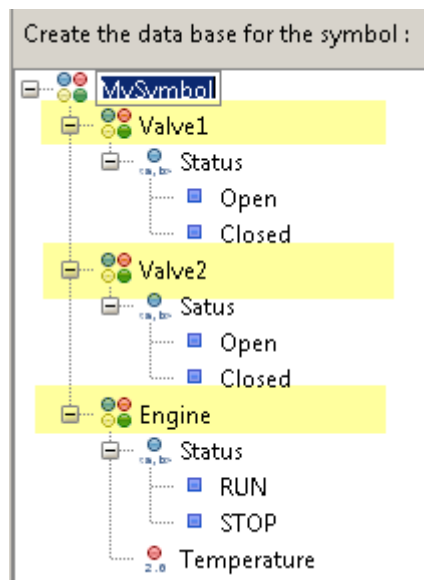
As explained above, the symbol tag editor supports following tag types:

- Float Tags
- Enumerated Tags
- String Tags
- Module

The **Module** tag type can be used to add a structure inside your symbol database. It does not represent directly a tag.

If your symbol is composed of several animated objects, then the module will help to identify clearly to which object the tag belongs.

For example, let's assume we have a symbol regrouping 2 valves and 1 engine. All the 3 objects will have linked an Enumerated Tag called "Status"



Highlighted items represents the Module symbol tags. They help to identify clearly to which object the tag will be linked.

5. Import existing SVG graphics

Instead of designing your own object, you can also import an existing SVG image and animate it according to tags.

To be able to animate the SVG image, make sure that the image is a real SVG image and not a simple bitmap included in a SVG file (using the element "xlink:href="data:image/png;...").

To be able to import the SVG image inside viewON, make sure that the file starts with an SVG element that includes the width and height attributes, as for example

```
<svg xmlns="http://www.w3.org/2000/svg"
xmlns:xlink="http://www.w3.org/1999/xlink" viewBox="0 0 200
200" width="200px" height="200px">
...
</svg>
```

Here is the SVG code of the example we will use :

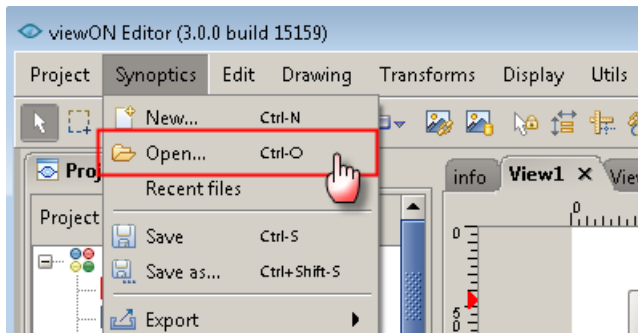
```
<svg xmlns="http://www.w3.org/2000/svg"
xmlns:xlink="http://www.w3.org/1999/xlink" viewBox="0 0 200 200" width="200px"
height="200px" preserveAspectRatio="none">
  <defs>
    <radialGradient id="circlegradient" cx="50%" cy="50%" r="50%" fx="50%"
fy="50%">
      <stop offset="80%" stop-color="black" stop-opacity="1"/>
      <stop offset="100%" stop-color="#808080" stop-opacity="1"/>
    </radialGradient>
    <radialGradient id="centergradient" cx="50%" cy="50%" r="50%" fx="50%"
fy="50%">
      <stop offset="10%" stop-color="black" stop-opacity="1"/>
      <stop offset="100%" stop-color="#808080" stop-opacity="1"/>
    </radialGradient>
  </defs>
  <circle id="circleout" cx="100" cy="100" r="100"
fill="url(#circlegradient)"/>
  <g stroke="white" stroke-width="2">
    <line x1="100" y1="13" x2="100" y2="25" stroke-width="4"
transform="rotate(27 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(40.5 100
100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(54 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(67.5 100
100)"/>
    <line x1="100" y1="13" x2="100" y2="25" stroke-width="4"
transform="rotate(81 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(94.5 100
100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(108 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(121.5 100
100)"/>
    <line x1="100" y1="13" x2="100" y2="25" stroke-width="4"
transform="rotate(135 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="25" stroke-width="4"
transform="rotate(225 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(238.5 100
100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(252 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(265.5 100
100)"/>
    <line x1="100" y1="13" x2="100" y2="25" stroke-width="4"
transform="rotate(279 100 100)"/>
    <line x1="100" y1="13" x2="100" y2="20" transform="rotate(292.5 100
100)"/>
```

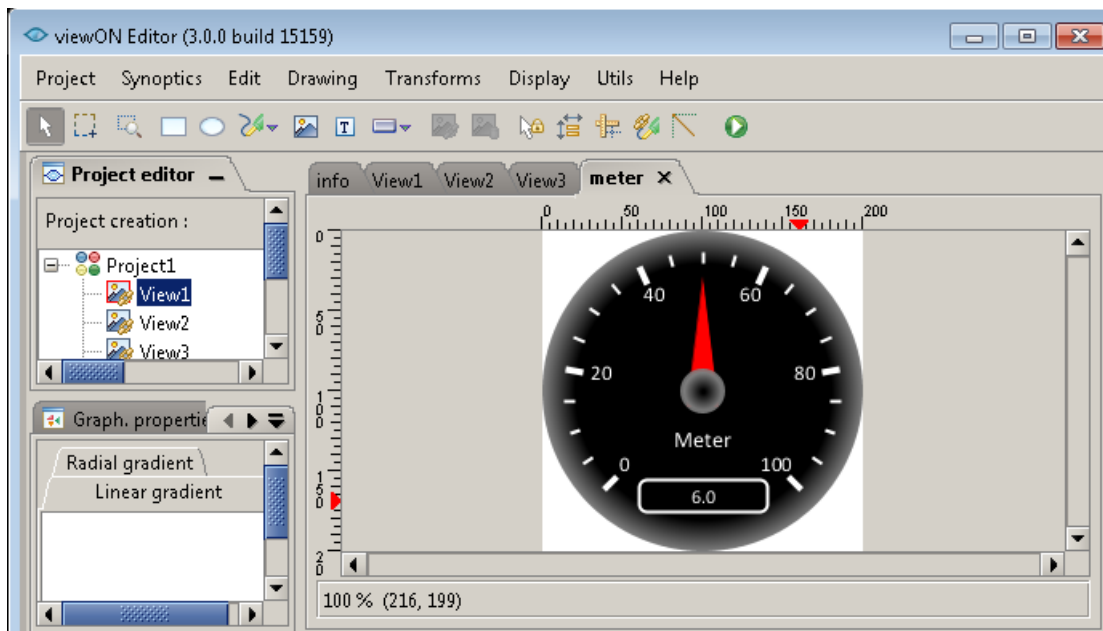
```

<line x1="100" y1="13" x2="100" y2="20" transform="rotate(306 100 100)"/>
<line x1="100" y1="13" x2="100" y2="20" transform="rotate(319.5 100
100)"/>
<line x1="100" y1="13" x2="100" y2="25" stroke-width="4"
transform="rotate(333 100 100)"/>
<line x1="100" y1="13" x2="100" y2="20" transform="rotate(346.5 100
100)"/>
<line x1="100" y1="13" x2="100" y2="20" transform="rotate(0 100 100)"/>
<line x1="100" y1="13" x2="100" y2="20" transform="rotate(13.5 100
100)"/>
</g>
<g font-family="Calibri" font-size="13px" fill="white"><text x="48"
y="150">0</text>
<text x="30" y="93"> 20</text><text x="63" y="44"> 40</text><text x="123"
y="44"> 60</text>
<text x="157" y="93"> 80</text><text x="136" y="150">100</text>
<text id="comment" x="100" y="135" font-size="14px" text-
anchor="middle">Meter</text>
</g>
<path id="needle" d="M 90 110 L 100 28 L 110 110 z " fill="red"
style="stroke: black; stroke-width: 0.1;"/>
<circle cx="100" cy="100" r="14" fill="gray" fill-opacity="0.9"/>
<circle cx="100" cy="100" r="12" fill="url(centergradient)"/>
<rect x="60" y="155" rx="5" ry="5" width="80" height="20" fill="black"
style="stroke:white;stroke-width:2;"/>
<text x="100" y="170" style="font-family: Calibri;" text-anchor="middle"
fill="white">6.0</text>
</svg>

```

To import an existing SVG symbol in viewON, click "Synoptic → Open" and select your SVG file :

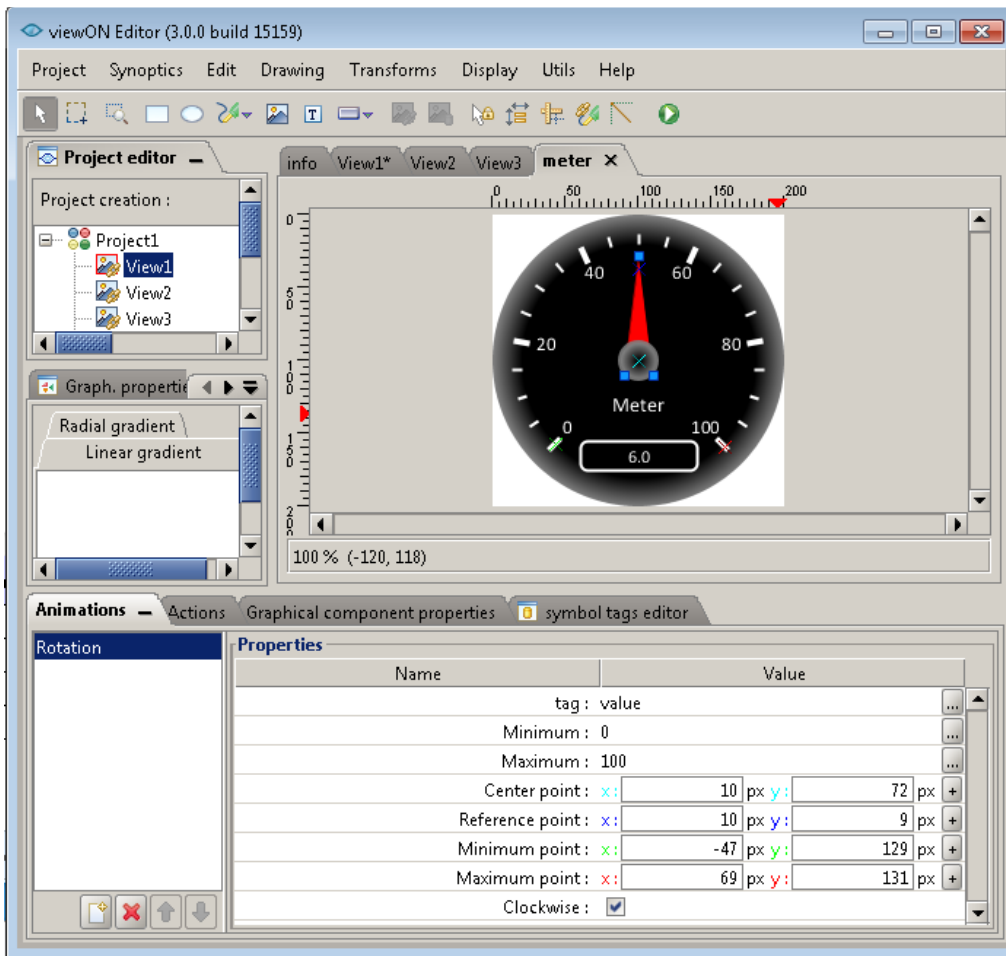




You can now edit and modify every component of the image and add animations/actions (see previous chapter).

Here, for our example, we will add

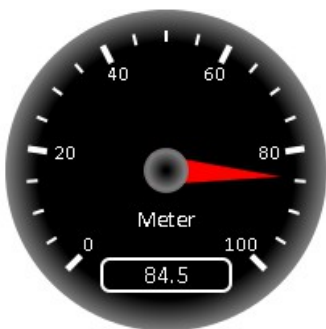
- a **Rotation** animation in order to make the needle rotate according to the value of the tag.
- a **Text On Measure** animation to update the Text according to the tag value.



To make this object become a symbol, proceed as described inside the chapter “Create your own symbol”.

End by resizing the canvas and save the Synoptic inside the directory **C:\Users\\Documents\viewON Projects\Symbols**.

Here is the result in the browser :



6. Document History and Trademark Information

6.1. Document History

Version	Date	Description
1.0	2014-04-09	First release
4.0	2020-06-30	Global update for viewON version 4.0
4.1	2021-12-21	Global update for viewON version 4.5

6.2. Trademark Information

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