

# SH Democase template Manual

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# Index

1 GENERAL NOTES	3
2 TEMPLATE PERSONALIZATION	4
3 PAGES DESCRIPTION	5
3.1 Home page	5
3.2 Functions pages	
3.3 Rooms page	
3.4 Webserver page	8
3.5 Settings page	
4 WIDGET DESCRIPTION	9
4.1 Light ON-OFF	
4.1.1 How to set the widget proprieties	
4.2 Light ON-OFF with energy save timer	10
4.2.1 How to set the widget proprieties	
4.3 Light ON-OFF with dialog page	11
4.3.1 How to set the widget proprieties	
4.4 Dimmer	
4.4.1 How to set the widget proprieties	
4.5 System temperature	21
4.5.1 How to set the widget proprieties	
4.6 Zone temperature	22
4.6.1 How to set the widget proprieties	
4.7 Smoke alarm4.7 Smoke alarm4.7.1 How to set the widget proprieties	
4.8 Water alarm	
4.8.1 How to set the widget proprieties	30 31
4.9 Rollerblind with basic dialog page	
4.9.1 How to set the widget proprieties	
4.10 Rollerblind with advanced dialog page	
4.10.1 How to set the widget proprieties	40
4.11 Main intruder alarm	
4.11.1 How to set the widget proprieties	45
4.12 Zone intruder alarm	45
4.12.1 How to set the widget proprieties	47
4.13 Sequence	49
4.13.1 How to set the widget proprieties	49





#### 1 General notes

This template is useful to quickly configure the BTM-T7 display for SH system without perform the whole display programming. Read the following guide to adjust the template according to the plant needs. This template is designed to monitor one SH system which is connected to BTM-T7 using TCP/IP communication.

This template is designed to monitor and control the functions on SH system (lights, dimmers, roller blinds, smoke alarms...).

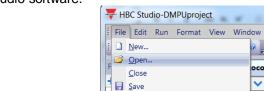
The IP address of the SH2WEB24 is 192.168.2.71 The IP address of the BTM-T7-24 is 192.168.2.72

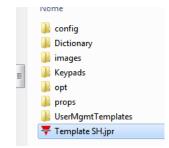
New Project...

Save Project As...

Save Project

Open the SH template project (Template SH.jpr file) from "File" → "Open..." menu using the HBC Studio software:





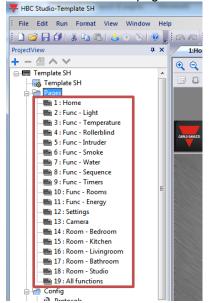
On the "ProjectView" box on the left of the window all the pages used in this project are listed:

cols

**∨** | &

CP:pr

:prot2



All the pages appear as shown below:





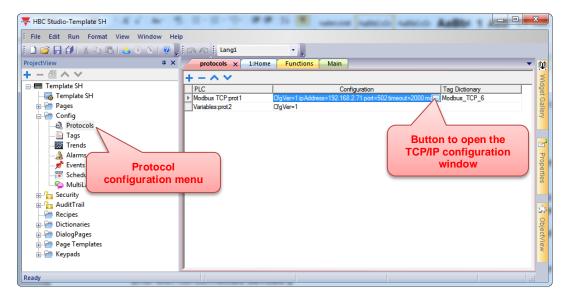


- 1- Date and time of the display
- 2- Some instantaneous variables (ex. Temperature, humidity, lux...)
- 3- Menu toolbar (it summarizes all pages)

# 2 Template personalization

In this chapter the personalization of the project according to SH IP address settings is described:

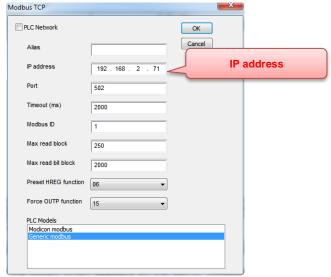
- Double click on the "Protocols" item in the "ProjectView" to open the "protocols" sheet:



- Click the button which appears on the cell in "Modbus TCP:prot1" row and "Configuration" column; the following window is shown:







 On the top of this window the IP address is shown; change this value according to SH system settings.

# 3 Pages description

In this chapter all the pages of this project are described.

# 3.1 Home page

Press the following button on the menu toolbar to open the home page:



This page summarizes all the pages used SH project; press the icon buttons to show the relevant page



1- Functions pages







- a) Light functions
- b) Temperature functions
- c) Roller blind functions
- d) Intruder alarms
- e) Timers
- f) Sequences
- g) Water alarms
- h) Smoke alarms
- 2- Rooms page
- 3- Web server page
- 4- Settings page
- 5- IP camera page

# 3.2 Functions pages

Press one of the following buttons to open the relevant function page:

















These pages show the status of used functions; they have the following background with houseplant:



In each page the widget functions, above the houseplant, are placed according to the SH system settings.

Ex. Light function page

Ex. Intruder alarm page









# 3.3 Rooms page

This page shows all rooms used on SH system; press the icon button to show the relevant room:



The rooms pages have a rotatory menu, which changes the current page, and a room figure where are placed all the room widget functions:



- 1- Rotatory menu
- 2- Room figure
- 3- Room widget function





# 3.4 Webserver page

Press the following button to open the webserver page:



This page has a web browser to show the webserver pages:



Press the following button to show the keypad and set user and password:

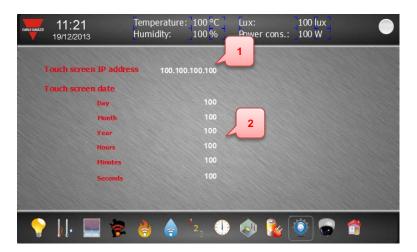


# 3.5 Settings page

Press the following button to open the setting page:



In this page are shown:







- 1- BTM IP address
- 2- BTM date and time

The data and time values could be set pressing the number fields of day, month, year,... (a numeric keypad is shown to set the value).

# 4 Widget description

This chapter describes how to set the widget functions according to the SH system register map. Copy and paste the existing widgets to add a new function.

# 4.1 Light ON-OFF

The light widget looks like the following figure:



It is a button with a lamp image which shows the light status:



Light ON

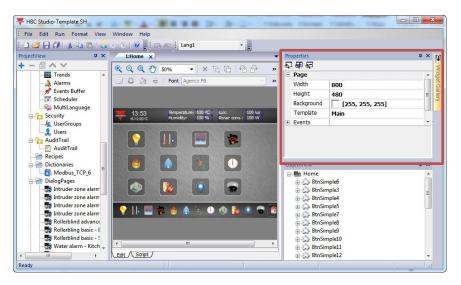


Light OFF

When the button is pressed, the light switches its status ( $ON \rightarrow OFF$ ;  $OFF \rightarrow ON$ ).

#### 4.1.1 How to set the widget proprieties

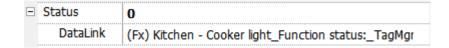
Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



This widget has the following proprieties:







Set them according to the following instruction:

Propriety	Setting	
	Attach this propriety to the light function status	
Status	Status 0	+
		tach To

#### 4.2 Light ON-OFF with energy save timer

The light widget with energy save timer looks like the following figure:



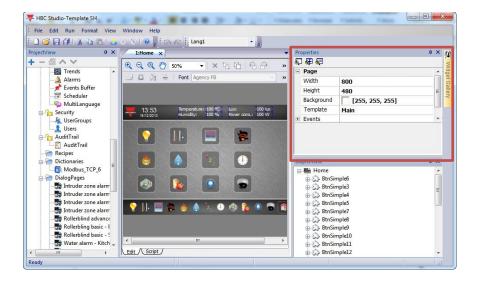
It is a button with a lamp image, which shows the light status, and a numeric field, which shows the energy save time value in seconds:



When the button is pressed, the light switches its status (ON→OFF; OFF→ON).

#### 4.2.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



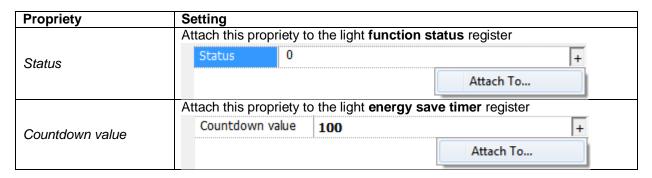




This widget has the following proprieties:

Status	0
DataLink	(Fx) Bathroom - Mirror light_Function status:_TagMgr
Countdown value	100
DataLink	(Fx) Bathroom - Mirror light_Energy save timer:_TagMgr

Set them according to the following instruction:



# 4.3 Light ON-OFF with dialog page

The light widget with dialog page is made up of two parts:

1) A light button with a lamp image which looks like the following figure:



It shows the light status:





Light OF

When the button is pressed the dialog page is shown (see next point).

2) A dialog page which looks like the following figure:



It is saved on "DialogPage" folder into the "ProjectView" sheet:









#### This dialog page allows to:

on	Switch ON/OFF the light
100 Lux	Read the lux value of the lux meter (when a lux meter is used on the light function)
Energy save timer 1000	Read and set the energy save time value
Set-point 1000	Read and set the lux set-point value
×	Close the dialog page

#### 4.3.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:

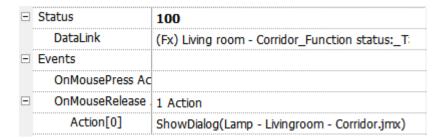


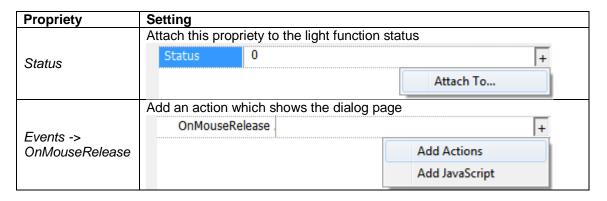




The two parts of the widget have the following proprieties:

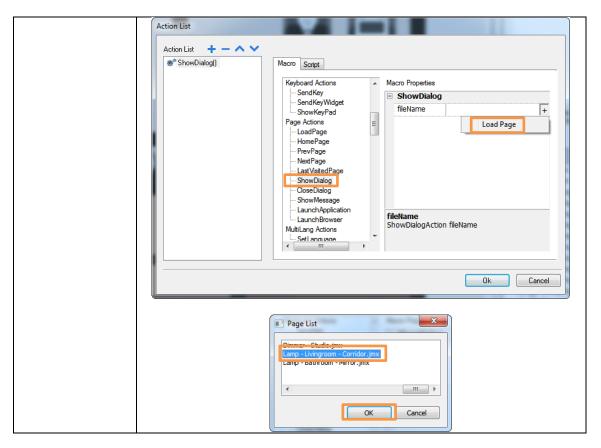
## 1) Light button



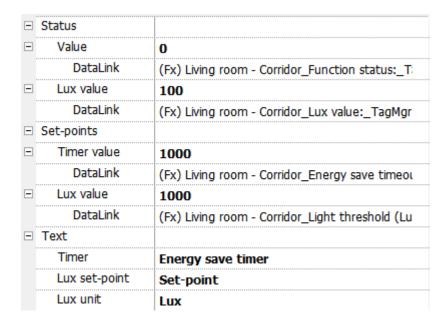








#### 2) Dialog page



Propriety	Setting
Status -> Value	Attach this propriety to the light function status





	Status 0		+
			Attach To
	Attach this propriety to used on the light functi		x meter (when a lux meter is
Status -> Lux value	Lux value	100	+
raido	□ Set-points		Attach To
	□ Timer value	1000	
	Attach this propriety to	energy save timer re	gister
Set-points ->	Timer value	1000	
Timer value	□ Lux value	1000	Attach To
	Attach this propriety to <b>light threshold</b> register		
Set-points -> Lux	Lux value	1000	+
value	□ Text		Attach To
	Set the energy save timer label		
Text -> Timer	Energy save timer 1000		
_	Set the lux set-point lal	bel	
Text -> Lux set- point	LUX	Set-point	1000
	Set the lux unit label		
Text -> Lux unit		100 Lux	

# 4.4 Dimmer

The dimmer widget is made up of two parts:

1) A light button with a lamp image which looks like the following figure:



It shows the light status:





ON Lio

When the button is pressed the dialog page is shown (see next point).

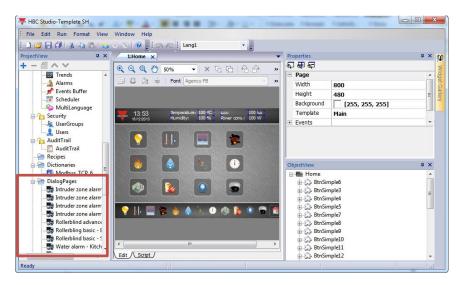
2) A dialog page which looks like the following figure:







It is saved on "DialogPage" folder into the "ProjectView" sheet:





# This dialog page allows to:

100	Change the dimming using the slider
100 Lux	Read the lux value of the lux meter (when a lux meter is used on the light function)
OFF	Switch OFF the light
S2 S3 S4 S5	Set the dimming according to the S2, S3, S4 or S5 scenario
100 100 100 100	Read and set the dimming values of S2, S3, S4 and S5 scenarios
Energy save timer 1000	Read and set the energy save time value

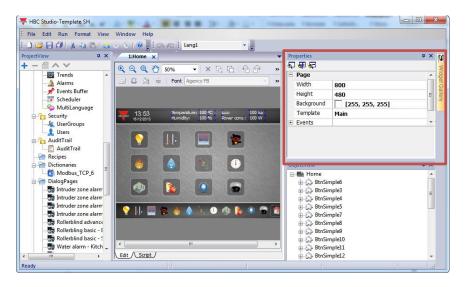




Set-point 1000	Read and set the lux set-point value
×	Close the dialog page

#### 4.4.1 How to set the widget proprieties

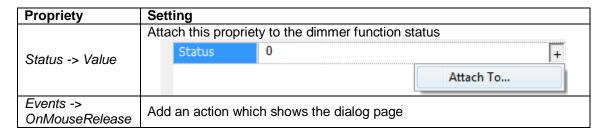
Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



The two parts of the widget have the following proprieties:

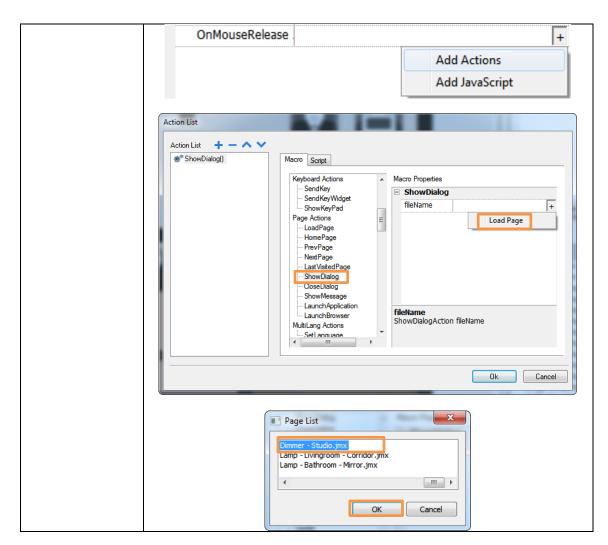
#### 1) Light button









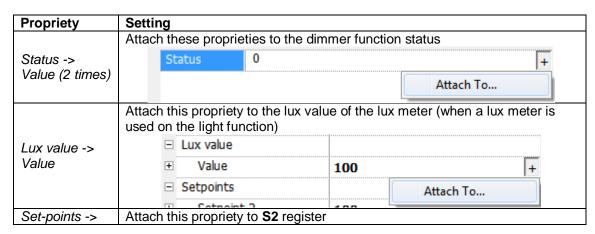


2) Dialog page





	Dimmer value	
+	Value	0
+	Value	0
	Lux value	
+	Value	100
⊒	Setpoints	
+	Setpoint 2	100
+	Setpoint 3	100
+	Setpoint 4	100
+	Setpoint 5	100
	Energy save timer	
+	Value	100
Ξ.	Lux setpoint	
+	Value	1000
	Text	
	Switch OFF button	OFF
	Setpoint 2	S2
	Setpoint 3	<b>S3</b>
	Setpoint 4	<b>S4</b>
	Setpoint 5	<b>S</b> 5
	Energy save timer	Energy save timer
	Lux setpoint	Set-point
Ξ.	Events	
	OnMousePress Action	
+	S2 OnMousePress Action	
+	S3 OnMousePress Action	
+	S4 OnMousePress Action	
+	S5 OnMousePress Action	
+	OFF OnMousePress Acti	2 Actions



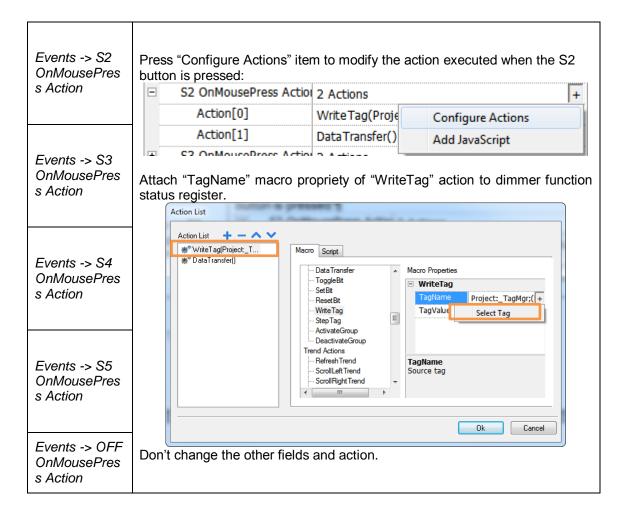




Set-point 2	□ Setpoints				
	Setpoint 2	100		+	
		100	Attach 1	Го	
Set-points ->	F Setnoint 4	100			
Set-point 3	Attach this propriety to S3	3 register			
Set-points ->	Attach this propriety to <b>S4</b>	l register			
Set-point 4	- Autom uno propriety to C				
Set-points -> Set-point 5	Attach this propriety to S5	register			
,	Attach this propriety to en	ergy save timer re	gister		
Energy save	□ Energy save timer				
timer -> Value	Value	100			+
				Attach To	
	Attach this propriety to <b>lig</b>	i <b>ht threshold</b> regist	er		
	☐ Lux setpoint	The time of the region	<u> </u>		
Lux set-point - > Value	Value	1000			+
> value	± Text			Attach To	
	- Events			Attach To	
	Set the OFF button label				
Text -> Switch OFF button		OFF			
	Set the S2 button label				
Text -> Set-	Oct the O2 button label				
point 2		S2			
Text -> Set-	Set the S3 button label				
point 3		S3			
	Set the S4 button label				
Text -> Set- point 2		<b>54</b>			
point 2					
	Set the S5 button label				
Text -> Set-					
point 2		S5			
	Set the energy save timer	r label			
Text -> Timer	AL	Energy save timer	1000		
		Linergy save unlien	1000		
Text -> Lux	Set the lux set-point label				
set-point		Set-point	1000		
	-20%				







# 4.5 System temperature

The system temperature widget looks like the following figure:



It is a button with a thermometer image which shows the heating system status:



Heating system ON



Heating system OFF

When the button is pressed, the heating system switches its status ( $ON \rightarrow OFF$ ;  $OFF \rightarrow ON$ ).

#### 4.5.1 How to set the widget proprieties

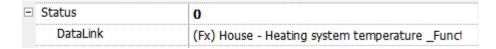
Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:







This widget has the following propriety:



Set it according to the following instruction:

Propriety	Setting	
	Attach this propriety to the heating system function status	
Status 0		+
		Attach To

# 4.6 Zone temperature

The zone temperature widget is made up of two parts:

1) A zone temperature button which looks like the following figure:



It is a button with a thermometer image, which shows the zone temperature status, and a numeric field, which shows the temperature value:



Zone temperature ON



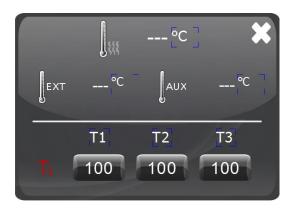
Zone temperature OFF

When the button is pressed the dialog page is shown (see next point).

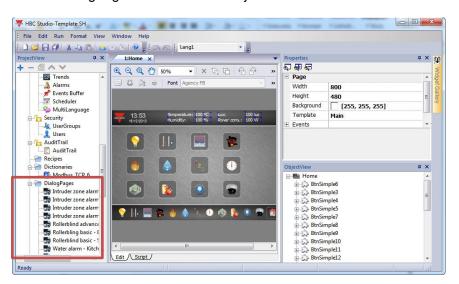


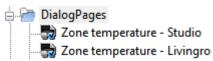


2) A dialog page which looks like the following figure:



It is saved on "DialogPage" folder into the "ProjectView" sheet:





#### This dialog page allows to:

	Show the zone temperature status:
	<ul> <li>Zone temperature ON</li> <li>Zone temperature OFF</li> </ul>
50 7	·
°C	Read the regulating temperature value
EXT°C	Read the <u>external temperature</u> value (when an external temperature is used)
Jaux°C	Read the <u>auxiliary temperature</u> value (when an auxiliary temperature is used)

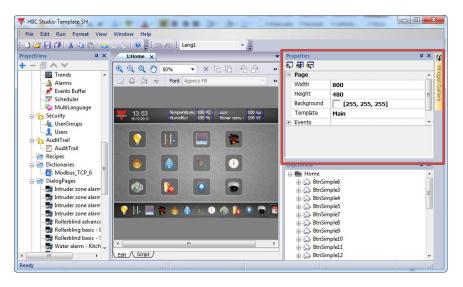




Ti	Show the active set-point (T1, T2 or T3)
T1 T2 T3 100 100	Read and set the zone temperature set-points.
×	Close the dialog page

#### 4.6.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



The two parts of the widget have the following proprieties:

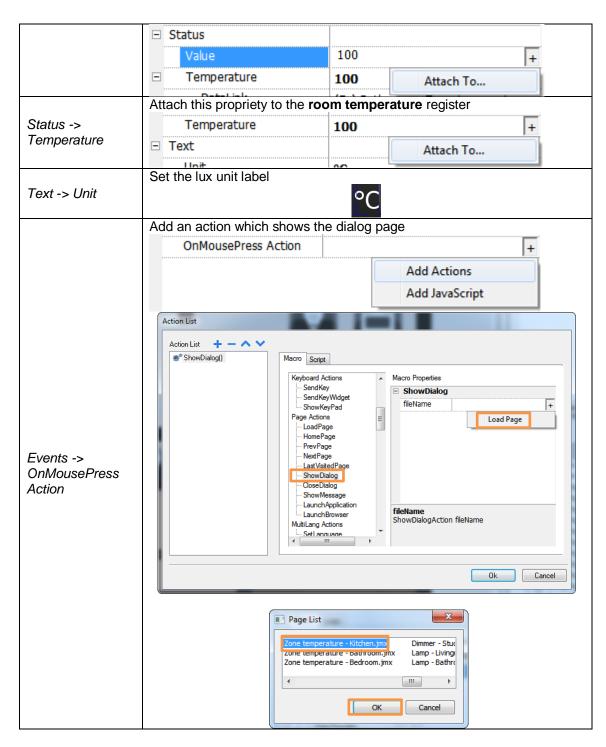
#### 1) Zone temperature button

	Status	
	Value	100
	DataLink	(Fx) Bathroom - Zone temperature
	Temperature	100
	DataLink	(Fx) Bathroom - Zone temperature
	Text	
	Unit	°C
+	Images	
	Events	
+	OnMousePress Action	1 Action

Propriety	Setting
Status -> Value	Attach this propriety to the heating system function status



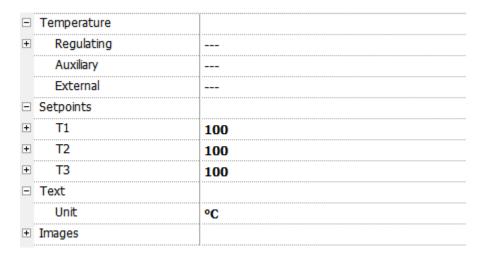




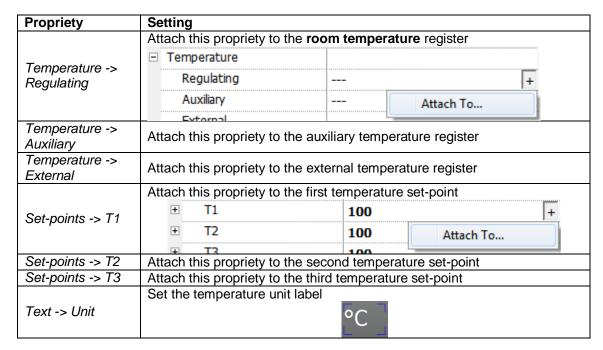
2) Dialog page







Set them according to the following instruction:



#### 4.7 Smoke alarm

The smoke alarm widget is made up of two parts:

1) A smoke alarm button which looks like the following figure:



It is a button with a fire image, which shows the smoke alarm status, and a numeric field, which shows the reset timer value:







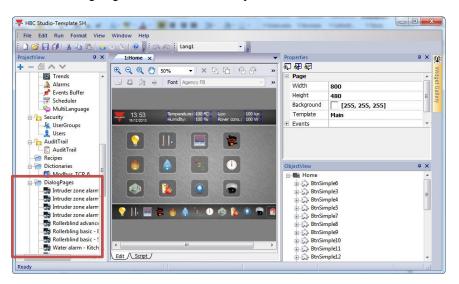


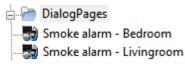
When the button is pressed the dialog page is shown (see next point).

2) A dialog page which looks like the following figure:

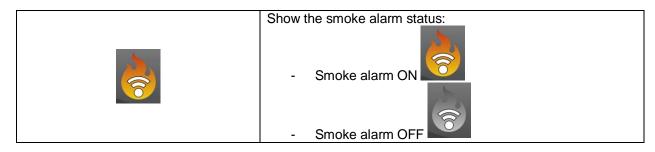


It is saved on "DialogPage" folder into the "ProjectView" sheet:



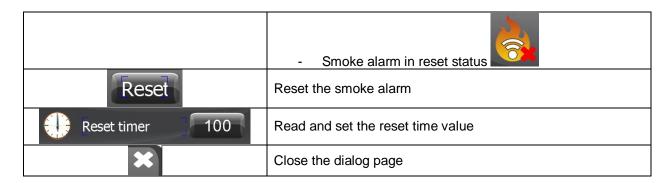


This dialog page allows to:



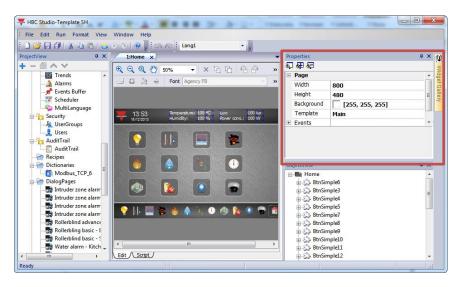






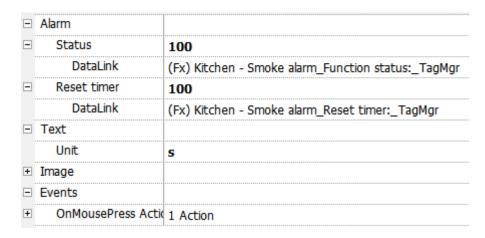
#### 4.7.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



The two parts of the widget have the following proprieties:

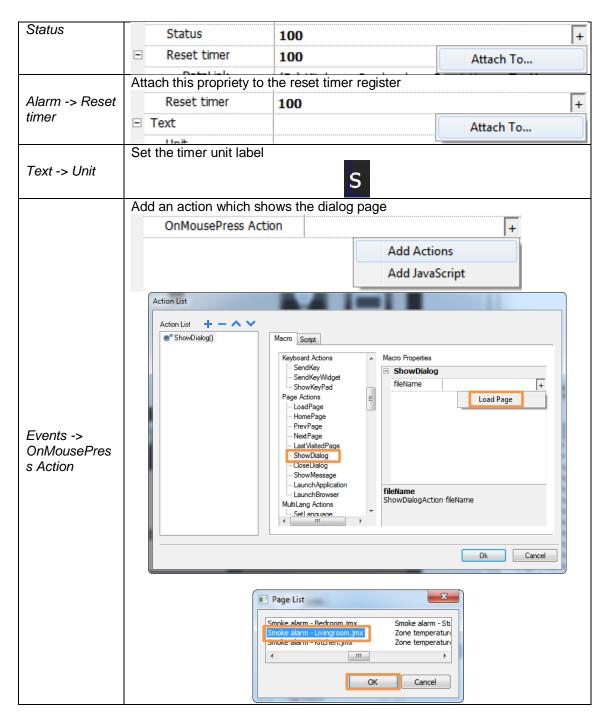
#### 1) Smoke alarm button



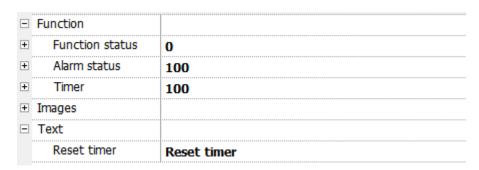
Propriety	Setting
Alarm ->	Attach this propriety to the smoke alarm status







#### 2) Dialog page







Set them according to the following instruction:

Propriety	Setting			
	Attach this propriety to the smoke alarm function status register			
Function ->		0	+	
Function status	Alarm status	100	Attach To	
Function -> Alarm status	Attach this propriety to the <b>alarm status</b> register			
Function -> Timer	Attach this propriety to the <b>reset timer</b> register			
Text -> Unit  Set the reset timer label  Reset timer		100		

#### 4.8 Water alarm

The water alarm widget is made up of two parts:

1) A water alarm button which looks like the following figure:



It is a button with a water image, which shows the water alarm status, and a numeric field, which shows the reset timer value:





ter alarm ON Water alarm OF

When the button is pressed the dialog page is shown (see next point).

2) A dialog page which looks like the following figure:

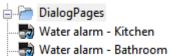


It is saved on "DialogPage" folder into the "ProjectView" sheet:

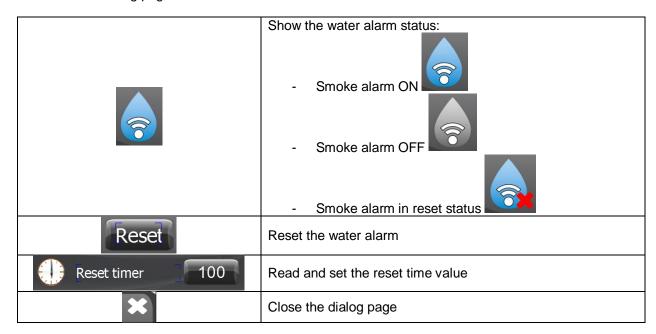








#### This dialog page allows to:



#### 4.8.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:

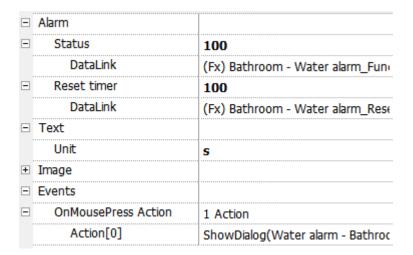






The two parts of the widget have the following proprieties:

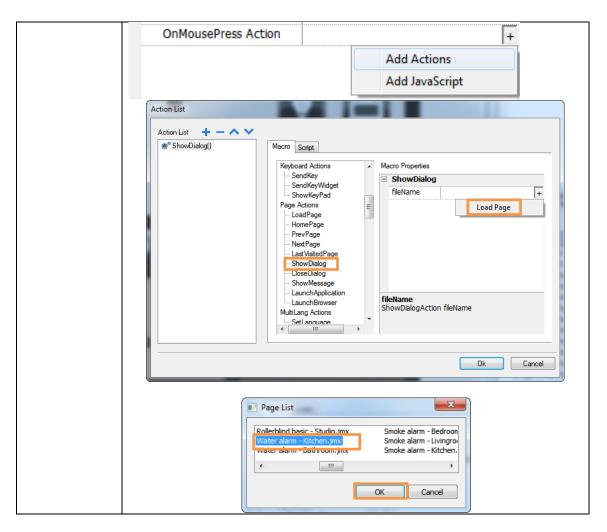
#### 1) Water alarm button



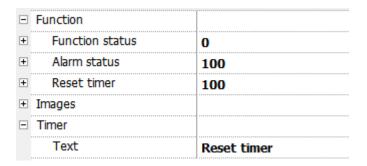
Propriety	Setting				
	Atta	ch this propriety	to the water alarm s	tatus	
Alarm ->		Status	100		+
Status	=	Reset timer	100	Attach To	
	Attach this propriety to the reset timer register				
Alarm -> Reset		Reset timer	100		+
timer	Ξ 7	Гехt		Attach To	
Text -> Unit	Set the timer unit label				
Events -> OnMousePres s Action	Pres Add an action which shows the dialog page				







# 2) Dialog page



Propriety	Setting			
	Attach this propriety to the water alarm function status register			
Function -> Function status		0 +		
	Alarm status	100	Attach To	
Function -> Alarm status	Attach this propriety to the <b>alarm status</b> register			
Function -> Reset timer Attach this propriety to the reset timer register		ister		







# 4.9 Roller blind with basic dialog page

The roller blind widget is made up of two parts:

1) A roller blind button which looks like the following figure:

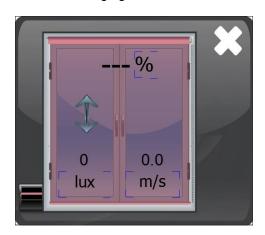


It is a button with a roller blind image, which shows the roller blind position:



When the button is pressed the dialog page is shown (see next point).

2) A dialog page which looks like the following figure:

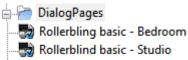


It is saved on "DialogPage" folder into the "ProjectView" sheet:

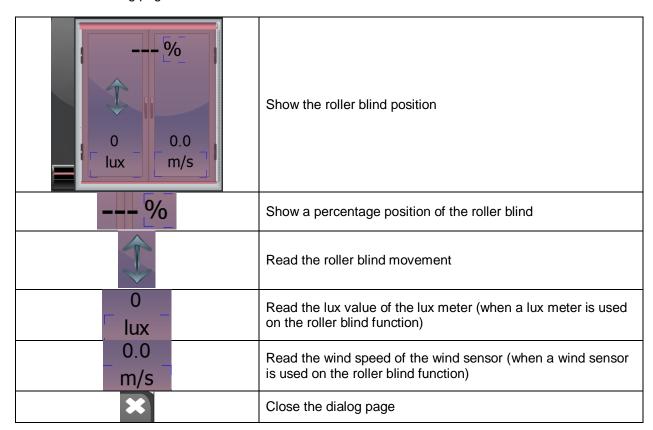








#### This dialog page allows to:



#### 4.9.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



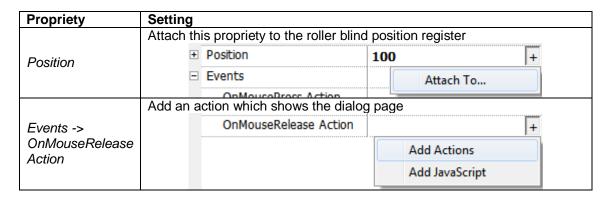




The two parts of the widget have the following proprieties:

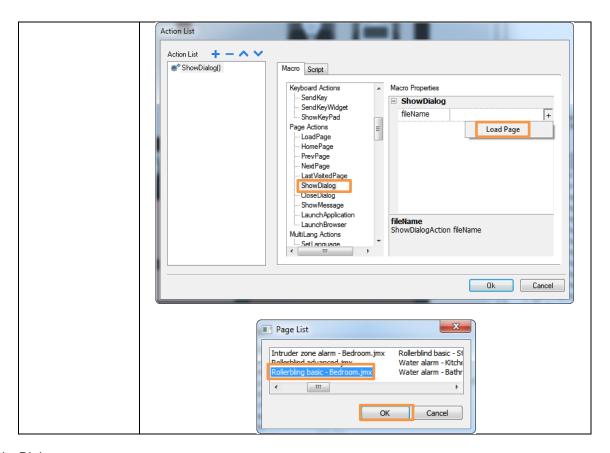
#### 1) Roller blind button

Position	100
DataLink	(Fx) Studio - Rollerblinds _M
Events	
OnMousePress Action	
OnMouseRelease Action	1 Action
Action[0]	ShowDialog(Rollerblind basic

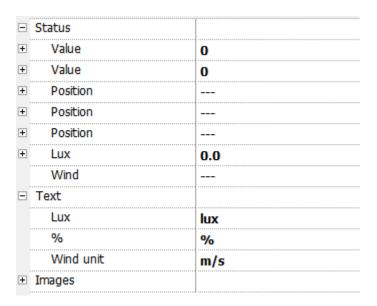








## 2) Dialog page



Propriety	Setting
Status -> Value (2 times)	Attach this propriety to the roller blind function status





	Status     ■ Status	
		0 +
	± Value	O Attach To
	Attach this propriety to the roller bline	d position register
Status -> Position	+ Position	
(3 times)	+ Position	Attach To
	Attach this propriety to the lux value	register (when a lux meter is used on
Status -> Lux	the roller blind function)	regioter (inner a rax meter le deed en
Status -> Wind	Attach this propriety to the wind specused on the roller blind function)	ed register (when a wind sensor is
Text -> Lux	Set the lux unit label	
		IX.
T( 0/	Set the % label	
Text -> %	0,	<b>6</b>
Text -> Wind unit	Set the wind unit label	
16xt -> vviild unit	m	n/s

# 4.10 Roller blind with advanced dialog page

The roller blind widget is made up of two parts:

1) A roller blind button which looks like the following figure:



It is a button with a roller blind image, which shows the roller blind position:



Closed roller blind



Roller blind at 50%



Opened roller blind

When the button is pressed the dialog page is shown (see next point).

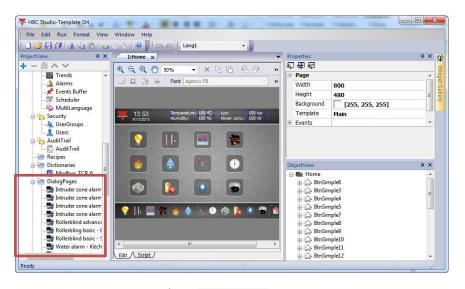
2) A dialog page which looks like the following figure:

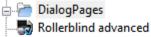




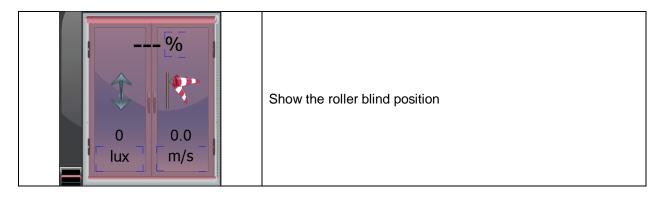


It is saved on "DialogPage" folder into the "ProjectView" sheet:





#### This dialog page allows to:







%	Show a percentage position of the roller blind
	Read the roller blind movement
o lux	Read the lux value of the lux meter (when a lux meter is used on the roller blind function)
_ 0.0 _ m/s	Read the wind speed of the wind sensor (when a wind sensor is used on the roller blind function)
	Show the wind level:  - Weak wind  - Strong wind
100 100	Read and set the two set-points for weak wind and strong wind
Lux % 100 100 100 100 100 100 100 100	Read and set the five lux/percentage position set-points
×	Close the dialog page

# 4.10.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



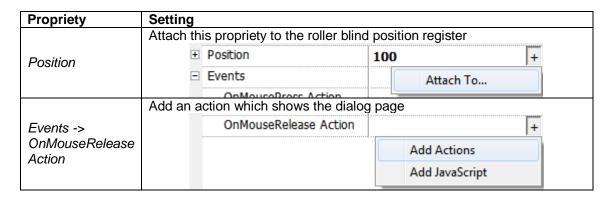




The two parts of the widget have the following proprieties:

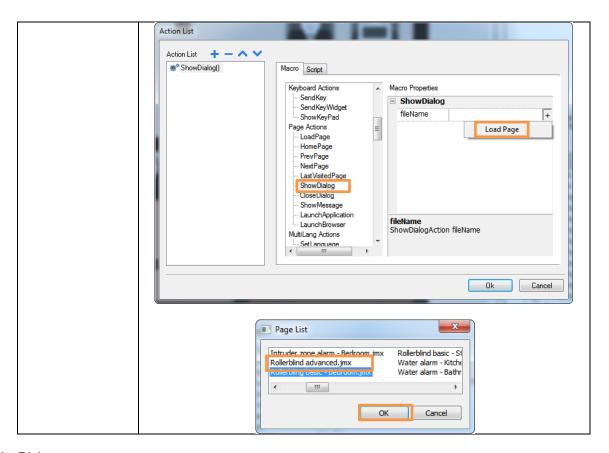
## 1) Roller blind button

Position	100
DataLink	(Fx) Studio - Rollerblinds _M
Events	
OnMousePress Action	
OnMouseRelease Action	1 Action
Action[0]	ShowDialog(Rollerblind basic









2) Dialog page





Ξ	Status	
+	Value	0
	Value	0
	Position	
	Position	
	Position	
+	Lux	0.0
+	Wind	
+	Wind type	0
	Text	
	Lux	Lux
	%	%
	Lux	lux
	%	%
	Wind unit	m/s
	Setpoints	
+	Lux #1	100
+	% #1	100
+	Lux #2	100
+	% #2	100
+	Lux #3	100
+	% #3	100
+	Lux #4	100
+	% #4	100
+	Lux #5	100
+	% #5	100
+	Wind strong	100
+	Wind weak	100
+	Images	

Propriety	Setting		
	Attach this propriety to the roller blind function status		
Ctatus Value	☐ Status		
Status -> Value (2 times)	Value	0 +	
,	Position	Attach To	
	Attach this propriety to the roller blind position register		
Status -> Position	Position	Jima position register	
(3 times)			
(3 times)	± Position	Attach To	
	Position		
Status -> Lux	Attach this propriety to the lux va	lue register (when a lux meter is used on	
Siaius -> Lux	the roller blind function)	-	
Status -> Wind	Attach this propriety to the wind speed register (when a wind sensor is		





	used on the roller blind function)	
Status -> Wind	Attach this propriety to the wind type register (when a wind sensor is	
type	used on the roller blind function)	
Text -> Lux	Set the lux unit label	
(2 times)	lux	
(2 (111100)		
Text -> %	Set the % label	
(2 times)	%	
T ( 14/2 / 2)	Set the wind unit label	
Text -> Wind unit	m/s	
Set-points -> Lux		
#1	Attach these proprieties the first lux and percentage position set-points	
Set-points -> %	Tracer tribes proprieties the first lax and persontage position set points	
#1		
Set-points -> Lux		
#2	Attach these proprieties the second lux and percentage position set-	
Set-points -> % #2	points	
Set-points -> Lux		
#3	Attach these proprieties the third lux and percentage position set-points	
Set-points -> %	Attach these proprieties the third lax and percentage position ser-points	
#3		
Set-points -> Lux		
#4	Attach these proprieties the fourth lux and percentage position set-points	
Set-points -> %	7 Mastra 11000 propriotion the fourtries and percentage position out points	
#4		
Set-points -> Lux		
#5	Attach these proprieties the fifth lux and percentage position set-points	
Set-points -> % #5		
Set-points ->	Attach this propriety the strong wind set-point register	
Wind strong		
Set-points ->	Attach this propriety the weak wind set-point register	
Wind weak		

# 4.11 Main intruder alarm

The main intruder alarm widget looks like the following figure:



It is an image which shows the main intruder alarm status:



Armed main intruder alarm



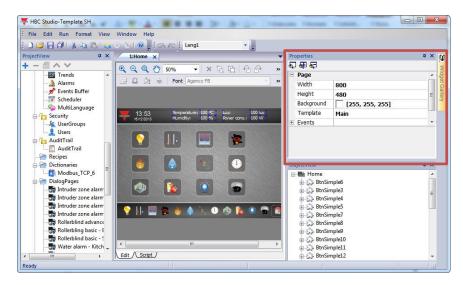
In alarm in at least one zone alarm



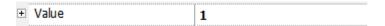


## 4.11.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



This widget has the following propriety:



Set it according to the following instruction:

Propriety	Setting	
	Attach this propriety to the main intruder alarm status	
Value		1
	Images	ima Attach To
	<b>→</b> Animate	

#### 4.12 Zone intruder alarm

The zone intruder alarm widget is made up of two parts:

1) A zone intruder alarm button which looks like the following figure:



It is a button with a zone alarm image, which shows the zone intruder alarm status, and a numeric field, which shows the disarming timer value:



Zone intruder alarm ON



Zone intruder alarm OFF



Zone intruder alarm in disarming



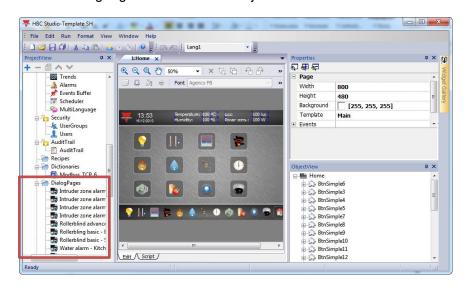


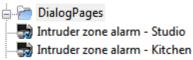
When the button is pressed the dialog page is shown (see next point).

2) A dialog page which looks like the following figure:

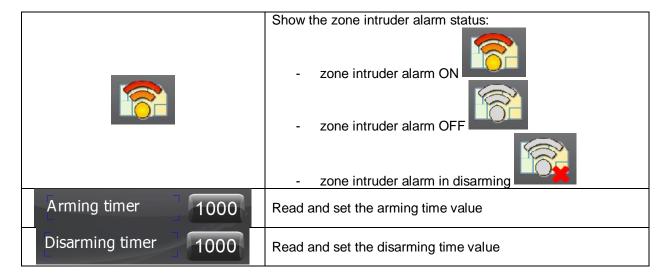


It is saved on "DialogPage" folder into the "ProjectView" sheet:





### This dialog page allows to:





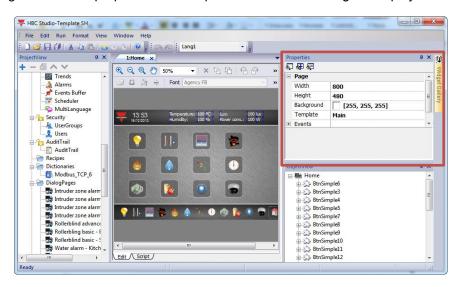


×

Close the dialog page

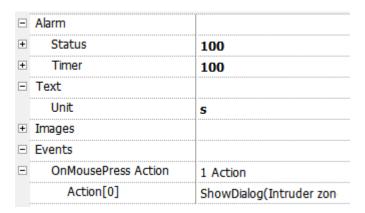
## 4.12.1 How to set the widget proprieties

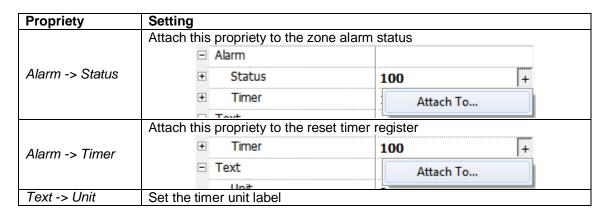
Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



The two parts of the widget have the following proprieties:

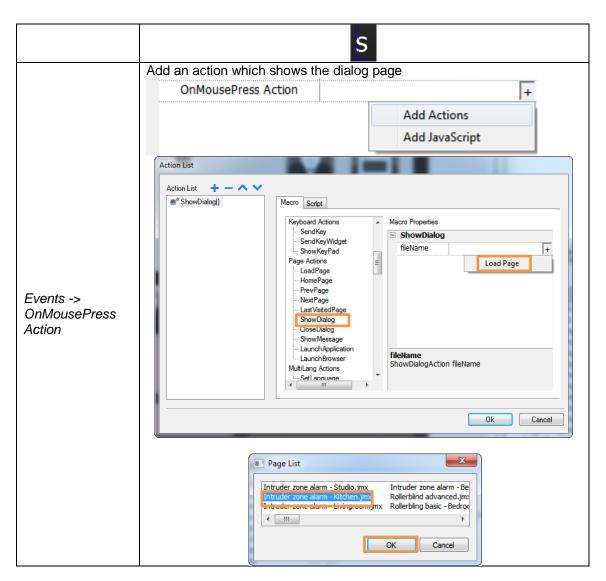
1) Zone intruder alarm button



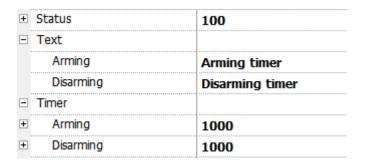








## 2) Dialog page



Propriety	Setting	
	Attach this propriety to the z	one intruder alarm function status register
Status		100 +
	□ Text	Attach To
	Armina	





	Set the arming timer label	
Text -> Arming	Arming timer 1000	
	Set the disarming timer label	
Text -> Disarming	Disarming timer 1000	
Timer -> Arming	Attach this propriety to the arming timer register	
Timer -> Disarming	Attach this propriety to the disarming timer register	

## 4.13 Sequence

The sequence widget looks like the following figure:



It is a button with an image which shows the sequence status:







Sequence OFF

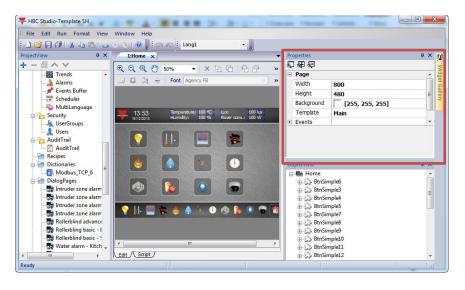
Sequence ON

Sequence in pause

When the button is pressed, the sequence is switched ON.

## 4.13.1 How to set the widget proprieties

Select the widget and set its proprieties on "Proprieties" sheet according to the project needs:



This widget has the following proprieties:





Status	100
DataLink	(Fx) House - Wellcome_F

Propriety	Setting	
	Attach this propriety to the sequence function status	
Status		100 +
	± Images	Attach To
	□ Events	