

Datasheet GRENTON SMART PANEL SPS-001-T-0x

FOUR CAPACITIVE BUTTONS TOUCH PANEL WITH THE OLED DISPLAY AND HAND GESTURE CONTROL.

Replacing traditional wall switches, Grenton Smart Panel allows to control not only the light, but also any device in a smart home. The Panel provides information from sensors, system parameters or its functional data. The versatile and intuitive control interface makes it easy and quick to control an individual device or the whole home. There are 16 virtual buttons at our disposal, spread over 4 pages. The pages can also control the thermostats defined in the system. The Distributed-Logic mode enables operation in the case of no communication with the CLU. More advanced users appreciate the "freedraw" mode that allows to generate any interface.



1. Parameters - PANEL_BUTTON

Properties:	
Value	Returns button input state as 0 or 1
Mode	Returns the selected mode of button action (0 - monostable, 1 - bistable, 2 - locked)
HoldDelay	Time in milliseconds after which, when pressing and holding a button, the OnHold event occurs
HoldInterval	Cyclical interval in milliseconds after which, when pressing and holding a button, the OnHold event occurs
Label	The text that describes the button
IconA	The file name of the icon assigned to the button in monostable and bistable mode in the OFF position. The name preceded by "~" displays the graphic in negative. IconA has priority on the Label property
IconB	The file name of the icon assigned to the button in bistable mode in the ON position. The name preceded by "~" displays the graphic in negative
Methods:	
SetMode	Sets mode of button action (0 - monostable, 1 - bistable, 2 - locked)
SetHoldDelay	Sets HoldDelay value
SetHoldInterval	Sets HoldInterval value
SetLabel	Sets Label value
SetIconA	Sets IconA value
SetIconB	Sets IconB value
ShowOK	Forces the green diode on the button to flash for 2 seconds (frequency 500 ms). The red diode on the button is off
ShowError	Forces the red diode on the button to flash for 2 seconds (frequency 500 ms). The green diode on the button is off
LedSwitchOn	Activates the green diode on the button
RedLedSwitchOn	Activates the red diode on the button
LedSwitchOff	Deactivates all the diodes on the button
Events:	
OnValueChanged	Event occurs when a change in the input state takes place (regardless of the value)
OnSwitchOn	Event occurs when the high state is set at input
OnSwitchOff	Event occurs when the low state is set at input
OnShortPress	Event occurs after pressing the button for 500 ms - 2000 ms
OnLongPress	Event occurs after pressing the button for longer than 2000 ms
OnHold	Event occurs for the first time after HoldDelay time passes and then cyclically every HoldInterval value
OnClick	Event occurs after pressing the button for less than 500 ms

2. Parameters - PANEL

Properties:	
GestureIconUp	The BMP file name of the icon for gesture Up (without extension)
GestureIconDown	The BMP file name of the icon for gesture Down (without extension)
GestureIconLeft	The BMP file name of the icon for gesture Left (without extension)
GestureIconRight	The BMP file name of the icon for gesture Right (without extension)
ProximitySens	Sensitivity of the proximity sensor (less value-more sensitivity)
ProximityTimeout	The time after which the display will be blanked
ProximityValue	Proximity sensor value (dimensionless value)
BuzzerValue	Sound indication control (0 - Off, 1 - On)
GestureMode	Selection of gestures orientation (0 - Off, 1 - Vertical, 2 - Horizontal, 3 - Vert+Horiz)
GestureSens	Selection of gestures sensitivity (1 - Low, 2 - Mid, 3 - High)
PageNr	Number of the current page displayed
PageDisplayMode	Notification before changing the page (0 - ShowImmediately, 1 - ShowIconOrName, 2 - ShowGesture)
ButtonsLEDMode	Buttons location using very low LED light (0 - LocationLedOFF, 1 - LocationLedON, 2 - LocationLedONforActive)
PageControlMode	The source that switches the pages (0 - Command, 1 - Gesture/Command)
GestureDisplayMode	Displays information about the currently performed gesture (0 - Off, 1 - On)
Methods:	
SwitchOnDisplay	Wakes the display from sleep mode
ShowButtons	Changes display mode into 'buttons'. Clears the display and shows the icons (or text) for every button
ClearScreen	Clears the display in 'freedraw' mode
PrintText	Displays the text in 'freedraw' mode using parameters: (x, y, txt, font size)
PrintFloat	Displays the float number in 'freedraw' mode using parameters: (x, y, number, precision, font size)
DrawLine	Draws the line in 'freedraw' mode using the parameters: (x, y, xe, ye, color)
DrawBox	Draws the filled with color rectangle in 'freedraw' mode using the parameters: (x, y, w, h, color)
DrawPoint	Draws the point in 'freedraw' mode using the parameters: (x, y, color)
DrawIcon	Draws the icon (bmp) in 'freedraw' mode using the parameters: (x, y, Filename)
DisplayContent	Displays the memory graphic buffer content. Changes display mode to "freedraw"
SetGestureIconUp	Sets the icon for gesture Up
SetGestureIconDown	Sets the icon for gesture Down
SetGestureIconLeft	Sets the icon for gesture Left
SetGestureIconRight	Sets the icon for gesture Right
SetProximitySens	Sets the ProximitySens value
SetProximityTimeout	Sets the ProximityTimeout value (in seconds)
SetBuzzerValue	Sets the BuzzerValue (0 - Off, 1 - On)
SetGestureMode	Selection of gestures orientation (0 - Off, 1 - Vertical, 2 - Horizontal, 3 - Vert+Horiz)
SetGestureSens	Selection of gestures' sensitivity (1 - Low, 2 - Mid, 3 - High)
SetBeep	Generates sound according to frequency [Hz], duration [ms] and volume (freq, dur, vol, res)
SetPageNr	Sets the number of the page to be displayed
SetPageDisplayMode	Sets the mode of display notification before changing the page (0 - ShowImmediately, 1 - ShowIconOrName, 2 - ShowGesture)
SetButtonsLEDMode	Sets the buttons' location mode using very low LED light (0 - LocationLedOFF, 1 - LocationLedON, 2 - LocationLedONforActive)
SetPageControlMode	Sets the source that switches the pages (0 - Command, 1 - Gesture/Command)
SetGestureDisplayMode	Sets the mode of display information about the currently performed gesture (0 - Off, 1 - On)
SetNextPage	Forces the next page to be displayed
SetPrevPage	Forces the previous page to be displayed
Draw	Triggers the OnDraw event when OLED is active
Events:	
OnGestureUp	Event occurs after gesture Up
OnGestureDown	Event occurs after gesture Down
OnGestureLeft	Event occurs after gesture Left
OnGestureRight	Event occurs after gesture Right
OnProximityDetect	Event occurs after detection an object in front of the Smart Panel
OnPageChange	Event occurs after page change
OnDisplayOn	Event occurs after display on
OnDisplayOff	Event occurs after display off

3. Parameters - PANEL_PAGE

Properties:	
PageType	The type of page displayed on the Smart Panel (0 - Inactive, 1 - Buttons, 2 - Thermostats, 3 - FreeDraw)
PageName	Page Name/Icon Name of page displayed on the Smart Panel
Object_X_Id	Sets the ID of the thermostat object or virtual button number depending on page type e.g.: For Thermostats page type: - on the local CLU: THE1325 - on the remote CLU: CLU22000001->THE4321 For Buttons/FreeDraw page type, enter the number of the virtual button (1-16). X - object no. [1..4]
Object_X_Name	Name of the thermostat displayed on the Smart Panel page (no name - thermostat inactive). In the case of Buttons or FreeDraw page type, the Object_X_Name property should be empty. X - object no. [1..4]
Object_X_CustomIcon	Name of the custom icon name of the thermostat managed by the Smart Panel pages. An empty property changes the custom icon to the default 'chmode.bmp' or displays the label 'mode' when missing the default icon's BMP file. For page type set to Buttons or FreeDraw, the property remains empty. Setting an icon wider than 64 pixels and/or higher than 32 pixels may overwrite a part or all of the thermostat's UI
DistributedLogicGroup_X	Distributed Logic group - broadcast group for distributed logic. The property active only for Buttons page type. X - object no. [1..4]
Methods:	
SetPageType	Sets the type of page displayed on the Smart Panel
SetPageName	Sets the page name/icon name of page displayed on the Smart Panel
SetObject_X_Id	Sets the ID of the thermostat object or the button number due to page type. X - object no. [1..4]
SetObject_X_Name	Sets the Name of the thermostat displayed on the Smart Panel page (no name - thermostat inactive). In the case of Buttons or FreeDraw page type, the Object_X_Name parameter should be empty. X - object no. [1..4]
SetObject_X_CustomIcon	Sets the custom icon name of the thermostat managed by the Smart Panel pages. X - object no. [1..4]
Events:	
OnPageOpen	Event occurs after new page is shown
OnPageClose	Event occurs after actual page is closed
OnDraw	Event occurs after FreeDraw page wants to be redrawn
OnThermXModeButtonClick	Event occurs after top-left 'mode' button click in the thermostat no. X

4. Parameters - PANLESENSTEMP (temperature sensor)

Properties:	
Threshold	Hysteresis (accuracy 0.1°C) specifying the sensitivity when the following events are generated: OnValueChanged, OnValueLower, OnValueRise
Sensitivity	Period (in ms), for which the sampled values are averaged
Value	Temperature sensor value from 0.0 to 45.0°C
Calibration	Temperature calibration factor within -10°C to +10°C
MinValue	Minimum value of the Value property after exceeding which the OnOutOfRange event is generated
MaxValue	Maximum value of the Value property after exceeding which the OnOutOfRange event is generated
Events:	
OnValueChanged	Event resulting from changing input state
OnValueRise	Event resulting from exceeding the upper threshold of hysteresis
OnValueLower	Event resulting from exceeding the lower threshold of hysteresis
OnOutOfRange	Event resulting from exceeding the range (MinValue - MaxValue)

5. Parameters - PANLESENSLIGHT (light sensor)

Properties:	
Threshold	Hysteresis (accuracy 0.1%) specifying the sensitivity when the following events are generated: OnValueChanged, OnValueLower, OnValueRise
Sensitivity	Period (in ms), for which the sampled values are averaged
Value	Light sensor value from 0 to 100%
MinValue	Minimum value of the Value property after exceeding which the OnOutOfRange event is generated
MaxValue	Maximum value of the Value property after exceeding which the OnOutOfRange event is generated
Events:	
OnValueChanged	Event resulting from changing input state
OnValueRise	Event resulting from exceeding the upper threshold of hysteresis
OnValueLower	Event resulting from exceeding the lower threshold of hysteresis
OnOutOfRange	Event resulting from exceeding the range (MinValue - MaxValue)

6. Gestures



7. Preinstalled pictograms (different size)



8. Preinstalled pictograms (128x64)



