

**Easy 6-channel touch push-button panel
module with interchangeable symbols**



GWA9471

Technical Manual

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1 Introduction

The Easy 6-channel touch push-button panel module with interchangeable symbols (flush-mounting) is a command device with 6 channels used - on their own or combined - to perform the functions of ON/OFF, dimmer control, roller shutter control, scene management, priority and timed commands on a KNX BUS.

2 Application

Each of the 6 channels of the push-button panel is configured with the ETS software to create one of the functions listed below.

- Button (cyclic switching)
- Dimmer command:
 - with single or double push-button
- Roller shutters/curtain command:
 - with single or double push-button
- Edges
- Timing
- Scene

2.1 Association limits

Maximum number of group addresses:	254
Maximum number of associations:	254

This means that up to 254 group addresses can be defined, and up to 254 associations can be made (communication objects and group addresses).

3 “Settings” menu

The **Settings** menu contains the parameters used to enable the different functions implemented by the device.

The structure of the menu is as follows:

---.1 KNX Easy pushbutton module 6 ch. replac. symbols > Settings

Settings	Programming mode	<input type="radio"/> Easy mode <input checked="" type="radio"/> ETS mode
Sound signalling		
Soft reduction	Channel 1	<input checked="" type="radio"/> disabled <input type="radio"/> enabled
Led 1	Channel 2	<input checked="" type="radio"/> disabled <input type="radio"/> enabled
Led 2	Channel 3	<input checked="" type="radio"/> disabled <input type="radio"/> enabled
Led 3	Channel 4	<input checked="" type="radio"/> disabled <input type="radio"/> enabled
Led 4	Channel 5	<input checked="" type="radio"/> disabled <input type="radio"/> enabled
Led 5	Channel 6	<input checked="" type="radio"/> disabled <input type="radio"/> enabled
Led 6		
	Proximity sensor sensitivity	<input checked="" type="radio"/> low <input type="radio"/> high
	Glass cleaning function	<input type="radio"/> disable <input checked="" type="radio"/> enable
	- Inhibition time [s]	30
	Backlight brightness with user in proximity	100%
	Backlight brightness in	30%

Fig. 3.1

3.1 Parameters

The database of the device for configuration with ETS software allows you to configure the main operating parameters, and also gives you the possibility to reconfigure the device with the factory parameters for E-mode operation. The parameter used to differentiate the two behaviours is “**Programming mode**”. The values that can be set are:

- **Easy mode** (default value)
- ETS mode

By selecting **Easy mode**, no additional device configuration parameters are displayed as this value is used to restore the device to its factory settings for correct operation in easy mode (E-Mode).

ETS mode allows the visualisation and configuration of the main device operating parameters (S-Mode).

➤ 3.1.1 Channel X

Each of the 6 input channels implemented by the module can be managed autonomously, carrying out a function independent of the others; parameters “**Channel 1**”, “**Channel 2**”, “**Channel 3**”, “**Channel 4**”, “**Channel 5**” and “**Channel 6**” are used to enable the configuration of the relative input channels, making the configuration menus visible. The values that can be set are:

- **disabled** (default value)
- enabled

Selecting **enabled** displays the **Channel 1**, **Channel 2**, **Channel 3**, **Channel 4**, **Channel 5** or **Channel 6** configuration menu (see par. 4 - “Channel x” menu).

Selecting **disabled**, the light signalling associated with the channel is not managed by any function. In this case, the specific communication object - **Led.x - Light signalling** (Data Point Type: 1.001 DPT_Switch) - is displayed and the signalling is subject to the value of that object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Night light”**” parameter of the **Led x** menu (see the “Led x” menu).

Every time the BUS voltage is restored you must send a status read request on the **Led.x - Light signalling** object in order to update the push-button panel about the status of the devices connected.

➤ 3.1.2 Proximity sensor sensitivity

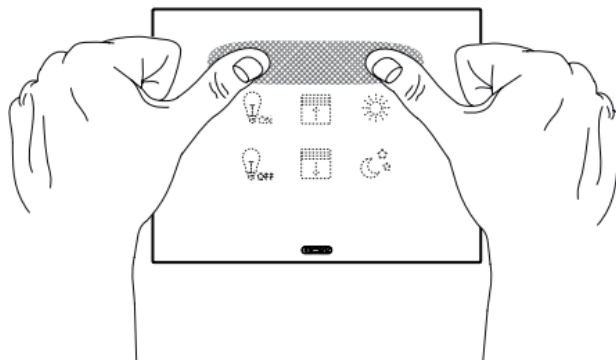
The device is fitted with a proximity sensor that is used to increase the level of brightness of the touch push-button backlighting when the user approaches the glass plate.

Using the “**Proximity sensor sensitivity**” parameter, you can set the level of sensitivity of the proximity sensor to increase/reduce the maximum distance at which the device is able to detect the approach of the user. The values that can be set are:

- **low** (default value)
- high

Setting the value **low**, the device can detect the user's presence at a maximum distance of 10 (TBD) cm. Setting the value **high**, the device can detect the user's presence at a maximum distance of 20 (TBD) cm. The sensitivity of the proximity sensor can always be modified using the following manual procedure:

Change mode input



1. touch the plate as shown in figure for at least 15 seconds, without touching the device channels
2. wait until you hear two long beeps, then remove your hand from the plate
3. wait until all six LEDs are flashing in a magenta colour
4. activation of LED 5 on the basis of the configuration that is active in that moment (all the other LEDs are OFF)

Ciclically change the sensitivity of the proximity sensor by touching channel CH5 repeatedly, as shown in the table:

LED 5	sensitivity of the proximity sensor
fixed blue	high
flashing blue	low

Change mode output

1. wait 10 seconds without touching any channels
2. wait until you hear a long beep
3. wait until all six LEDs are flashing quickly with a magenta colour
4. wait until the flashing stops and the current status or night-time localisation signals are reset

During this configuration phase, the messages from the BUS are ignored (they will be managed after you have quit the configuration phase).

➤ 3.1.3 Glass cleaning function

This parameter enables the inhibition of the capacitive sensors to allow the cleaning of the glass surface. The values that can be set are:

- disable
- **enable** (default value)

Selecting **enable** displays the “Inhibition time [s]” parameter and the **Glass cleaning** communication object.

The “Inhibition time [s]” parameter allows you to define the sensor inhibition period. The values that can be set are:

- from 10 to 240 in steps of 1 (default value 30)

- manual activation:



Enabling

1. touch the plate as shown for at least 10 seconds, without touching the device channels.
2. wait until you hear a long beep, then remove your hand from the plate
3. wait until all 6 LEDs are flashing blue
4. the countdown of the inhibition time set via ETS begins; this is indicated by the activation of the blue LEDs in the following sequence:

LED 1 with LED 2 for 500ms

LED 3 with LED 4 for 500ms

LED 5 with LED 6 for 500ms

Disabling

1. wait until the end of the inhibition time set via ETS
2. wait until you hear a long beep
3. wait until all 6 LEDs are flashing quickly in a blue colour
4. wait until the flashing stops and the current status or night-time localisation signals are reset

During this configuration phase, the messages from the BUS are ignored (they will be managed after you have quit the configuration phase).

➤ 3.1.4 Backlight brightness

In standby, the brightness of the backlighting is reduced to avoid disturbance and limit the consumption of the device on the BUS line.

The backlighting is activated when the user approaches the surface of the glass, and deactivates automatically after 30 seconds with no user activity on the device (no pressing of the touch push-buttons).

The “**Backlight brightness with user in proximity**” parameter is used to define the level of brightness of the backlighting when the proximity sensor detects the presence of the user in front of the device. The values that can be set are:

- **100%** (default value)
- 90%
- 80%
- 70%
- 60%
- 50%

The “**Backlight brightness in standby**” parameter is used to define the level of brightness of the backlighting when the device is in standby (after 30 seconds with no user activity on it). The values that can be set are:

- 40%
- **30%** (default value)
- 20%
- 10%
- 0%
- no reduction 255

4 “Channel x” menu (independent channels)

If a channel is enabled, a dedicated menu - called **Channel x** (x = 1 .. 6, is the input index) - is displayed for each input. The menu structure changes according to the value set for the “**Matched function**” parameter.

For the sake of simplicity, the parameters enabled according to the value set for the above parameter are listed in the following paragraphs.

The basic structure of the menu is as follows (Fig. 4.1):

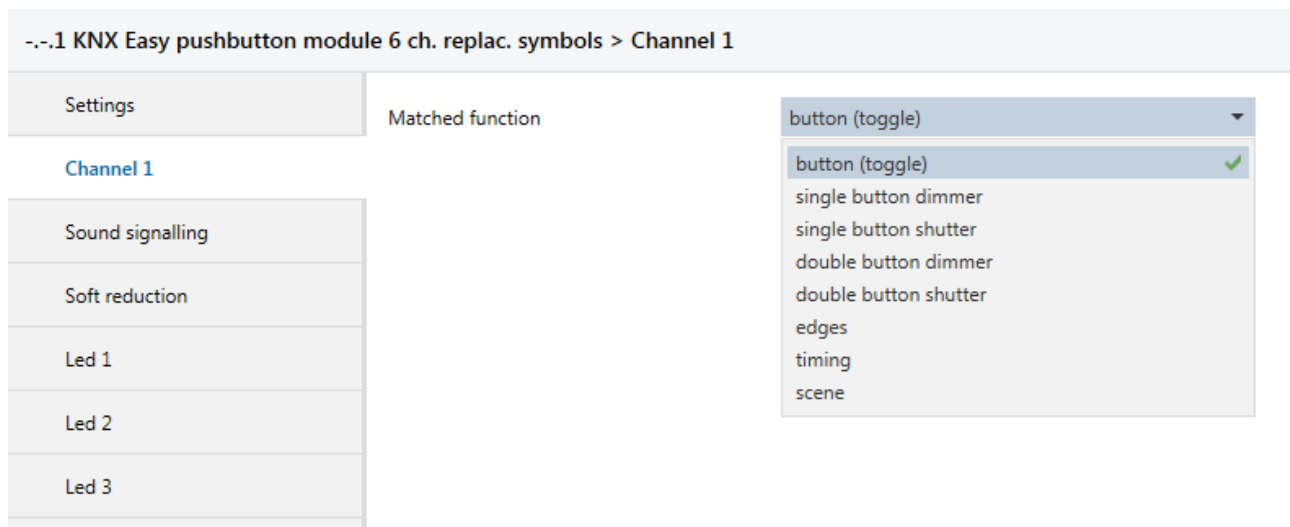


Fig 4.1

4.1 Parameters

➤ 4.1.1 Matched function

This determines the function associated with the general channel x. Depending on the value set with this parameter, the **Channel x** menu will appear differently. The values that can be set are:

- **Button (cyclic switching)**
See chapter 5 - “**Button (cyclic switching)**” function
- **Single button dimmer**
See chapter 6 - “**Single button dimmer**” function
- **Single button shutter**
See chapter 7 - “**Single button shutter**” function
- **Double button dimmer**
See chapter 8 - “**Double button dimmer**” function
- **Double button shutter**
See chapter 9 - “**Double button shutter**” function
- **Edges**
See chapter 10 - “**Edges**” function
- **Timing**
See chapter 11 - “**Timing**” function
- **Scene**
See chapter 12 - “**Scene**” function

5 “Button (cyclic switching)” function

This function is used to set the sending of an alternating ON/OFF switching command. When the sensitive area associated with channel x is touched, the device sends a telegram via the BUS with the logic value opposite to the value of the status adopted by the controlled actuator or the last sent value.

The value (ON or OFF) evaluated by the device to send the next status is the last received via the **Ch.x - Status feedback** (Data Point Type: 1.001 DPT_Switch) communication object. The device uses this value to determine, for example, the current status of the output channel of the actuator that is commanded (by itself or by other devices). In this way, the next command that the device sends will be the inverted signal of the current status of the output channel. In the same manner, to prevent the continuous sending of the same command due to the loss of status information received by the controlled actuator, the device also evaluates which was the last command it sent; in short, the command to send is the opposite of the value generated by the most recent event (either the BUS value received on the object **Ch.x - Status feedback** or the last value sent).

Every time the BUS voltage is restored you must send a status read request on the **Ch.x - Status feedback** object in order to update the push-button panel about the status of the devices connected.

The basic structure of the menu is as follows (Fig. 5.1):

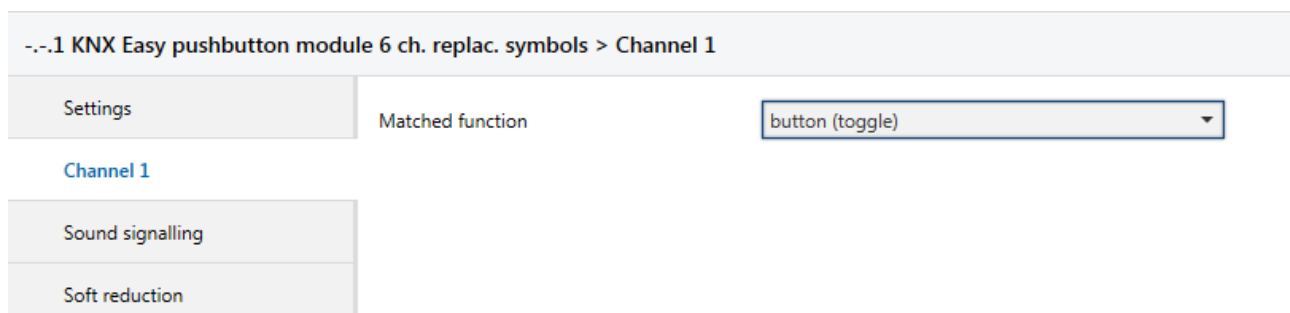


Fig. 5.1

5.1 Parameters

No new parameters are enabled with this function.

Setting this function, the light signal associated with the channel is subject to the value of the **Ch.x - Status feedback** object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Night light”**” parameter of the **Led x** menu (see the “Led x” menu).

6 “Single button dimmer” function

This is used to configure the channel to control a dimmer with a single channel, increasing and decreasing dimmer brightness always using the same channel.

It is possible to send on/off telegrams and brightness control telegrams.

As there is only one channel to manage the On/Off and brightness control functions, the operation is managed by differentiating between short touch and long touch:

- If the touch lasts longer than 0.5 sec, a long touch is recognised and, in this case, is translated into a brightness adjustment command. If the value of the last of the two events "last sent command" and "dimmer status feedback" is OFF or a brightness decrease command, the new command will be a 100% brightness increase command; vice versa, if the value of the last two events is ON or a brightness increase command, the new command will be a 100% brightness decrease command. In both cases, when the button is released, an adjustment stop telegram is sent to stop the dimmer brightness increase/decrease operation and to fix the value reached at the moment the stop adjustment command was received.
With the technology used, the maximum touch duration that the device can recognise is about 20 seconds.
- If the touch lasts less than 0.5 sec, a short touch is recognised and, in this case, is translated into an on/off command. The command to send on the BUS is the opposite of the value generated by the most recent event between the value received from the BUS on the **Ch.x - Dimmer status feedback** object and the last sent value. The brightness increase/decrease commands do not have any effect in determining the command to be sent.

The brightness adjustment commands are sent via the **Ch.x - Brightness adjustment** (Data Point Type: 3.007 DPT_Control_Dimming) communication object, while the on/off commands are sent via the **Ch.x - Switching** (Data Point Type: 1.001 DPT_Switch) object.

The basic structure of the menu is as follows:

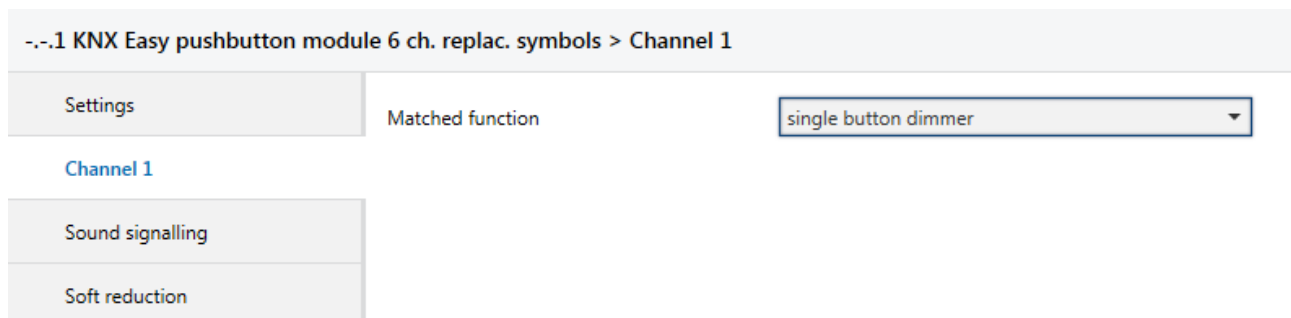


Fig. 6.1

6.1 Parameters

No new parameters are enabled with this function.

Setting this function, the light signal associated with the channel is subject to the value of the **Ch.x - Dimmer status feedback** object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Night light”**” parameter of the **Led x** menu (see the “Led x” menu).

7 “Single button shutter” function

This is used to configure the channel to control a shutter with a channel, regulating the upward and downward travel of the shutter and, depending on the device version, controlling louvre opening/closing.

As only one channel manages the louvres up/down and control functions, the operation is managed so that at each touch, a command is sent that is the opposite of the last movement signal received by the actuator that manages the shutter; there is a difference between short and long touch:

- if the touch lasts longer than 0.5 sec, a long touch is recognised and, in this case, is translated into an up/down movement command. If the last received movement signal was “up”, the new command will be a down command, and vice versa.
- If the touch lasts less than 0.5 sec, a short touch is recognised and, in this case, is translated into a slat adjustment command. If the last received movement signal was “up”, the new command will be a slat closure control command; if the last received movement signal was “down”, the new command will be a slat opening control command. If the shutter is moving, the louvre control command will only stop the shutter up/down movement.

The up/down movement commands are sent via the **Ch.x - Shutter movement** (Data Point Type: 1.008 DPT_UpDown) object. The commands to stop current movements or to adjust the slats are sent via the **Ch.x - Slat stop/adjustment** (Data Point Type: 1.007 DPT_Step) object. Signalling regarding the current movement of the controlled shutter/Venetian blind are received on the **Ch.x - Movement feedback** (Data Point Type: 1.008 DPT_UpDown) object.

The structure of the menu is as follows:

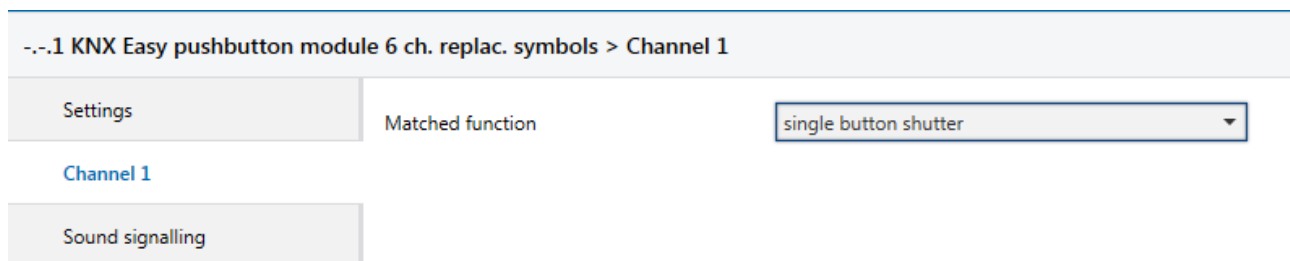


Fig. 7.1

7.1 Parameters

No new parameters are enabled with this function.

Setting this function, the light signalling associated with the channel is not managed directly by the function itself.

In this case, the specific communication object - **Led.x - Light signalling** (Data Point Type: 1.001 DPT_Switch) - is displayed and the signalling is subject to the value of that object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Night light”**” parameter of the **Led x** menu (see the “Led x” menu).

Every time the BUS voltage is restored you must send a status read request on the **Led.x - Light signalling** object in order to update the push-button panel about the status of the devices connected.

8 “Double button dimmer” function

This is used to configure the channel to control a dimmer with two push-buttons, managing in this case only one of the two control directions (brightness increase/decrease).

On or off telegrams and brightness increase or decrease telegrams can be sent, based on the configured control direction. Also in this case, there is a difference between short and long touch:

- If the touch lasts longer than 0.5 sec, a long touch is recognised and, in this case, is translated into a brightness adjustment command. If the set control direction is "increase", the control will only be increasing, otherwise if the set control direction is "decrease" the control will be decreasing. In both cases, when released, an adjustment stop telegram is sent to stop the brightness increase or decrease operation for the dimmer and to fix the brightness value reached at the moment the stop control command was received.
With the technology used, the maximum touch duration that the device can recognise is about 20 seconds.
- If the touch lasts less than 0.5 sec, a short touch is recognised and, in this case, is translated into an on/off command (depending on the set adjustment direction).
If the set control direction is "increase" the sent command will only be an ON command. If the set control direction is "decrease" the sent command will only be an OFF command.

The brightness adjustment commands are sent via the **Ch.x - Brightness adjustment** (Data Point Type: 3.007 DPT_Control_Dimming) communication object, while the on/off commands are sent via the **Ch.x - Switching** (Data Point Type: 1.001 DPT_Switch) object.

The structure of the menu is as follows:

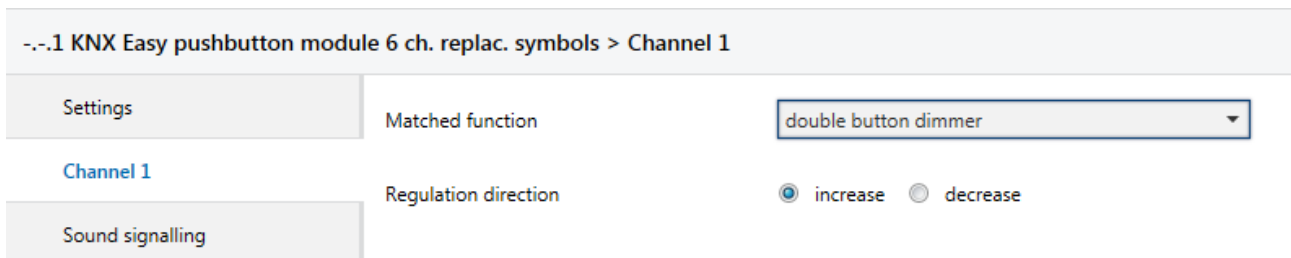


Fig. 8.1

8.1 Parameters

➤ 8.1.1 Regulation direction

The “**Regulation direction**” parameter configures the control direction of the brightness that the channel controls. The values that can be set are:

- **increase** (uneven channel default value)
- **decrease** (even channel default value)

Selecting **increase**, the sent commands will be 'increase brightness 100%' or ON, depending on the recognised activation; otherwise, selecting **decrease** the sent commands will be 'decrease brightness 100%' or OFF.

Setting this function, the light signal associated with the channel is subject to the value of the **Ch.x - Dimmer status feedback** object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Night light”**” parameter of the **Led x** menu (see the “Led x” menu).

Every time the BUS voltage is restored you must send a status read request on the **Ch.x - Dimmer status feedback** object in order to update the push-button panel about the status of the devices connected.

9 “Double button shutter” function

This is used to configure the channel to control a shutter/Venetian blind with two buttons, managing in this case only one of the two movement directions (down or up).

Up or down movement telegrams or louvres open or close control telegrams can be sent. Also in this case, there is a difference between short and long touch:

- If the touch lasts longer than 0.5 sec, a long touch is recognised and, in this case, is translated into a movement command. If the set movement direction is "up", the movement will only be up, vice versa if the set direction is "down" the movement will be down. When released, the device will not perform any action.
- If the touch lasts less than 0.5 sec, a short touch is recognised and, in this case, is translated into a slat adjustment command (opening or closing, depending on the set movement direction) or a movement stop, if the shutter is already moving.
If the set movement direction is "up" the sent command will only be a louvres opening control command (or stop movement). If the set adjustment direction is "down" the sent command will only be a louvres closing control command (or stop movement).

The up/down movement commands are sent via the **Ch.x - Shutter movement** (Data Point Type: 1.008 DPT_UpDown) communication object. The commands to stop current movements or to adjust the slats are sent via the **Ch.x - Slat stop/adjustment** (Data Point Type: 1.007 DPT_Step) object.

The structure of the menu is as follows:

The screenshot shows the configuration menu for a KNX Easy pushbutton module. The title bar reads: "-.-.1 KNX Easy pushbutton module 6 ch. replac. symbols > Channel 1". On the left is a sidebar with "Settings" selected, and below it are "Channel 1", "Sound signalling", and "Soft reduction". The main area has "Matched function" set to "double button shutter" in a dropdown menu. Below that, "Movement direction" is set with radio buttons: "up" (selected) and "down".

Fig. 9.1

9.1 Parameters

➤ 9.1.1 Movement direction

The “**Movement direction**” parameter is used to configure the direction of movement of the shutter controlled by the channel. The values that can be set are:

- **up** (uneven channel default value)
- **down** (even channel default value)

selecting **up**, the sent commands will be up movement or louvres opening control (stop movement), depending on the recognised activation; vice versa, selecting **down**, the sent commands will be down movement or louvres closing control (stop movement).

Setting this function, the light signalling associated with the channel is not managed directly by the function itself.

In this case, the specific communication object - **Led.x - Light signalling** (Data Point Type: 1.001 DPT_Switch) - is displayed and the signalling is subject to the value of that object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Night light”**” parameter of the **Led x** menu (see the “Led x” menu).

Every time the BUS voltage is restored you must send a status read request on the **Led.x - Light signalling** object in order to update the push-button panel about the status of the devices connected.

10 “Edges” function

This function is used to set the type of ON/OFF command to send after a status change has been detected; it is possible to differentiate the type of command depending on the event that is detected (touching and releasing).

The ON/OFF commands are sent via the **Ch.x - Switching** (Data Point Type: 1.001 DPT_Switch) communication object.

The structure of the menu is as follows:

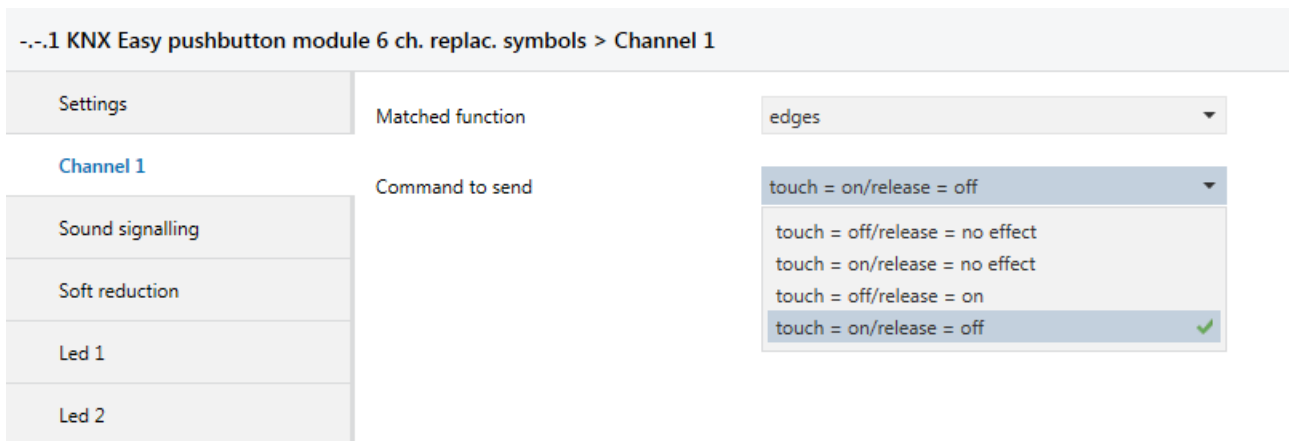


Fig. 10.1

10.1 Parameters

➤ 10.1.1 Command to send

The “**Command to send**” parameter is used to set the value to be sent via the **Ch.x - Switching** object, following the detection of the “contact closure” and “contact opening” events.

The values that can be set are:

- touch = off / release = no effect
- touch = on / release = no effect
- touch = off / release = on
- **touch = on / release = off (default value)**

Setting this function, the light signalling associated with the channel is not managed directly by the function itself.

In this case, the specific communication object - **Led.x - Light signalling** (Data Point Type: 1.001 DPT_Switch) - is displayed and the signalling is subject to the value of that object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).

- when the value “0” is received on the communication object, the backlighting assumes the colour set in the **“Backlighting for “Night light”** parameter of the **Led x** menu (see the “Led x” menu).

Every time the BUS voltage is restored you must send a status read request on the **Led.x - Light signalling** object in order to update the push-button panel about the status of the devices connected.

11 “Timing” function

This function is used to configure an input in order to send a timed ON command to an actuator output channel. The device sends only the timer start command associated with the "touch" event; no action occurs upon release. The timing is set on the actuator, which will deactivate itself independently.

This mode is typically used for the stairs light function.

The ON/OFF commands are sent via the **Ch.x - Timed switching** (Data Point Type: 1.010 DPT_Start) communication object.

The structure of the menu is as follows:

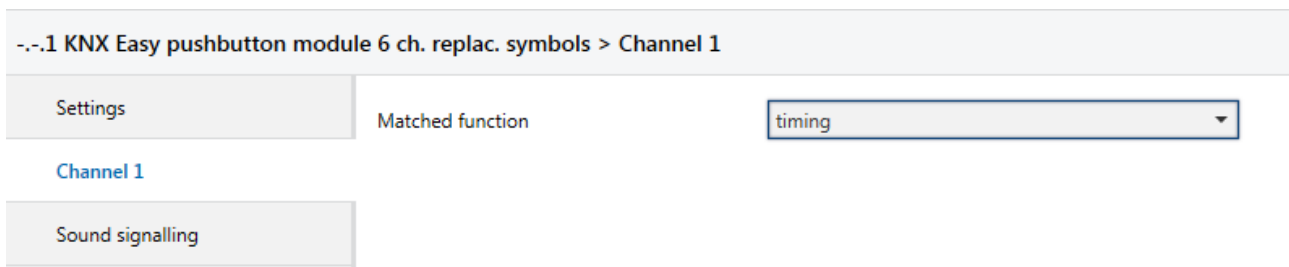


Fig. 11.1

11.1 Parameters

No new parameters are enabled with this function.

Setting this function, the light signal associated with the channel is subject to the value of the **Ch.x - Status feedback** object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the **“Backlighting for “Status signalling ON”** parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the **“Backlighting for “Night light”** parameter of the **Led x** menu (see the “Led x” menu).

Every time the BUS voltage is restored you must send a status read request on the **Ch.x - Status feedback** object in order to update the push-button panel about the status of the devices connected.

12 “Scene” function

This is used to configure the channel to send scene memorising and execution commands. Only one scene can be managed for each channel.

There is a difference between short and long touch:

- If the touch lasts longer than 3 sec, a long touch is recognised and, in this case, is translated into a scene learning command.
- If the touch lasts less than 3 sec, a short touch is recognised and, in this case, is translated into a scene execution command.

The scene execution/storage commands are sent via the **Ch.x - Scene** (Data Point Type: 18.001 DPT_SceneControl) communication object.

The structure of the menu is as follows:

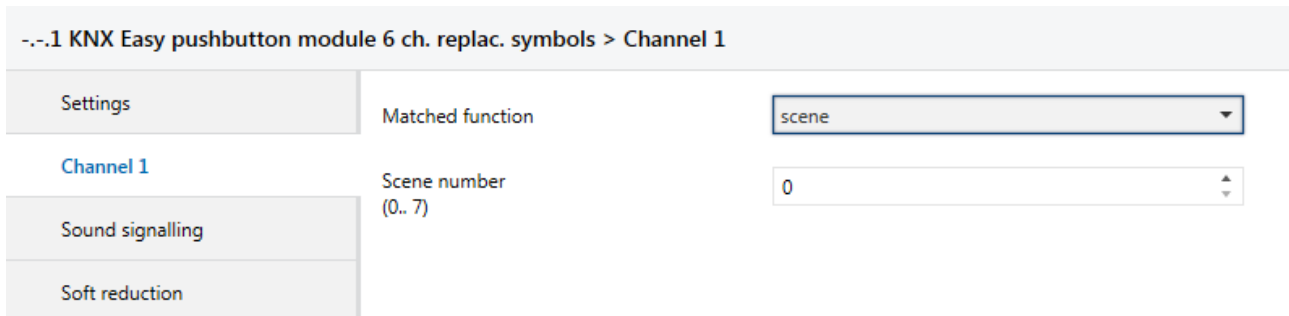


Fig. 12.1

12.1 Parameters

➤ 12.1.1 Scene number (0..7)

The “**Scene number (0.. 7)**” parameter is used to set the value of the scene to be recalled/stored, and as a result the relative values that are sent via the **Ch.x - Scene** object. The possible values are:

- from **0 (default value)** to 7, with steps of 1

Setting this function, the light signalling associated with the channel is not managed directly by the function itself.

In this case, the specific communication object - **Led.x - Light signalling** (Data Point Type: 1.001 DPT_Switch) - is displayed and the signalling is subject to the value of that object. The behaviour is as follows:

- when the value “1” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Status signalling ON”**” parameter of the **Led x** menu (see the “Led x” menu).
- when the value “0” is received on the communication object, the backlighting assumes the colour set in the “**Backlighting for “Night light”**” parameter of the **Led x** menu (see the “Led x” menu).

Every time the BUS voltage is restored you must send a status read request on the **Led.x - Light signalling** object in order to update the push-button panel about the status of the devices connected.

13 “Sound signalling” menu

The device is equipped with an electronic buzzer that can be configured to emit sound signals following touch events. The configuration of this function is valid for all six channels; it is not possible to differentiate the sound effect associated with each individual channel.

The basic structure of the menu is as follows:

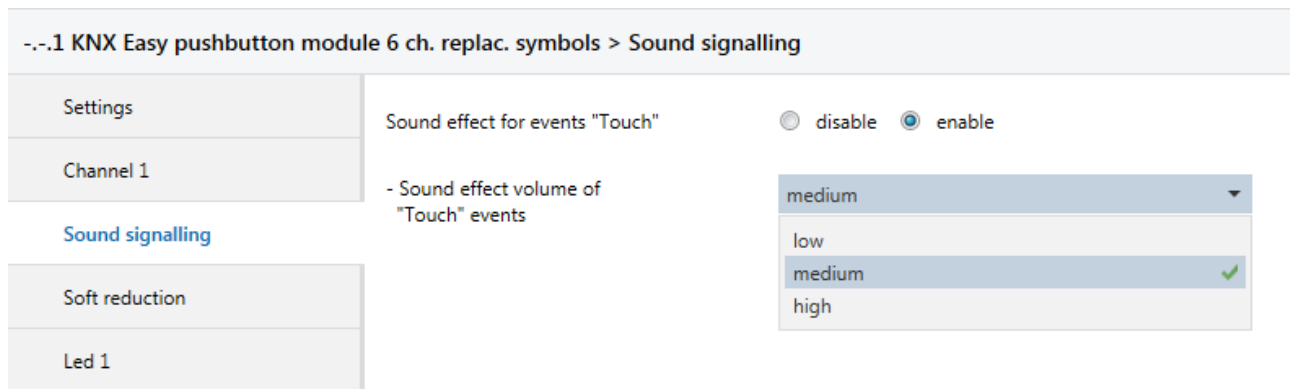


Fig. 13.1

13.1 Parameters

➤ 13.1.1 Sound effect for events “Touch”

The “**Sound effect for events “Touch”**” parameter is used to enable the reproduction of certain sound effects indicating the detection of certain touch events by the capacitive sensor. The values that can be set are:

- disable
- **enable** (default value)

Selecting the value **enable** displays the “**Sound effect volume of “Touch” events**” parameter. Each touch event is associated with a particular sound effect:

- Touch → **click**
- Maintained touch → **click 300ms**
- Long touch → **short beep**

➤ 13.1.2 Sound effect volume of “Touch” events

The “**Sound effect volume of “Touch” events**” parameter defines the power level of the sounds associated with the Touch events. The values that can be set are:

- low
- **medium** (default value)
- high

The acoustic signal possibly associated with the input or output via manual configuration functions is always active, regardless of the setting of sound effects for Touch events.

The table below shows which sound effects are reproduced, according to the function associated with the channel.

Touch events		
Touch	Operation	Long touch

Matched function	No function			
	Button (cyclic switching)	YES		
	Single button dimmer	YES	YES	
	Single button shutter	YES		YES
	Double button dimmer	YES	YES	
	Double button shutter	YES		YES
	Edges	YES		
	Timing	YES		
	Scene	YES		YES
	Sound effect	click	click 300 ms	short beep

14 “Soft reduction” menu

Given its function, the device could be installed in places where it is necessary to temporarily inhibit the sound signalling and minimise the intensity of the backlighting, so as not to cause any disturbance.

The “Soft reduction” function uses a specific communication object to temporarily modify the sound/light signalling settings to minimise the disturbance for the user during the night-time.

This function is activated/deactivated from a remote device connected to the KNX system (e.g. an hourly timer, a supervisor/control panel, a light sensitive sensor, etc.).

The basic structure of the menu is as follows:

---.1 KNX Easy pushbutton module 6 ch. replac. symbols > Soft reduction

Settings	Soft reduction function	<input type="radio"/> disable <input checked="" type="radio"/> enable
Channel 1	Touch effects volume if soft reduction is active	<input checked="" type="radio"/> not active <input type="radio"/> low
Sound signalling		
Soft reduction		
Led 1	Backlight brightness with user in proximity and soft reduction is active	50% ▼
Led 2	Standby backlight brightness if soft reduction is active	0% ▼
Led 3		

Fig. 14.1

14.1 Parameters

➤ 14.1.1 Soft reduction function

The “**Soft reduction function**” parameter is used to enable the function and display the configuration parameters. The values that can be set are:

- **disable** (default value)
- enable

Selecting **enable** displays the function configuration parameters and the **Soft reduction** (Data Point Type: 1.001 DPT_Switch) status object.

In this case, every time the BUS voltage is restored you must send a status read request on this object in order to update the device about the function activation status. When the BUS voltage is restored, the function status is the one that was active prior to the failure. If necessary, it will then be updated according to the status read request.

➤ 14.1.2 Touch effects volume if soft reduction is active

The “**Touch effects volume if soft reduction is active**” parameter, visible if the “**Sound effect for events** “**Touch**”” parameter of the **Sound signalling** menu assumes the value **enable**, defines the power level of the sounds associated with the touch effect (Touch, Operation, Long touch, etc.) when the Soft reduction function is active. The values that can be set are:

- **not active** (default value)
- low

This setting does not concern the possible reproduction of a sound effect activated via the BUS. When the function is deactivated, the volume depends on the setting of the “**Sound effect volume**” parameter of the **Sound signalling** menu.

➤ 14.1.3 Backlight brightness with user in proximity and soft reduction active

The “**Backlight brightness with user in proximity and soft reduction active**” parameter defines the level of brightness of the backlighting when the proximity sensor detects the presence of the user in front of the device and the soft reduction function is active. The values that can be set are:

- 100%
- 90%

- 80%
- 70%
- 60%
- **50%** (default value)

➤ **14.1.4 Standby backlight brightness if soft reduction is active**

The “**Standby backlight brightness if soft reduction is active**” parameter defines the level of brightness of the backlighting when the device is in standby and the soft reduction function is active. The values that can be set are:

- 40%
- 30%
- 20%
- 10%
- **0%** (default value)
- no reduction

When the function is disabled, the backlight brightness levels will depend on the setting of the relative parameters in the **Main** menu.

15 “LED X” menu

This is used to define and personalise the operation of the signalling LEDs associated with the channel. The signalling LED can assume different colours for the night light function or to indicate the load activation status. The "light signalling upon touch/operation/long touch/release" function may be enabled or disabled with various preconfigured lighting effects.

The basic structure of the menu is as follows:

---.1 KNX Easy pushbutton module 6 ch. replac. symbols > Led 1

Settings	Backlight for "Night signalling"	amber
Channel 1		
Sound signalling	Backlight for "ON status feedback"	customize
Soft reduction		
Led 1	- RED component value (0 .. 255)	0
Led 2	- GREEN component value (0 .. 255)	0
Led 3	- BLUE component value (0 .. 255)	0
Led 4		
Led 5	Light effect for "Touch" events	<input type="radio"/> disable <input checked="" type="radio"/> enable
Led 6		

Fig. 15.1

15.1 Parameters

➤ 15.1.1 Backlight for "Night signalling"

The "**Backlight for night signalling**" parameter is used to define the colour of the night light associated with channel x. The values that can be set are:

- deactivated
- white
- yellow
- magenta
- red
- turquoise
- green
- blue
- **amber** (default value)
- customise 9

By selecting **customise**, the following parameters are made visible: "**Value of RED component (0 .. 255)**", "**Value of GREEN component (0 .. 255)**" and "**Value of BLUE component (0 .. 255)**"; The combination of the three colour components determines the colour associated with night lighting. The values that can be set are:

- from **0 (default value)** to 255, with steps of 1

The brightness of the LED associated with the channel depends on the setting of the parameters of the **Settings** menu.

➤ 15.1.2 Backlight for "ON status feedback"

The "**Backlight for "ON status feedback"**" parameter defines the colour of the backlighting associated with the "ON status" signal of channel x. The values that can be set are:

- deactivated
- white
- yellow

- magenta
- red
- turquoise
- green
- **blue** (default value)
- amber
- customise

By selecting **customise**, the following parameters are made visible: “**Value of RED component (0 .. 255)**”, “**Value of GREEN component (0 .. 255)**” and “**Value of BLUE component (0 .. 255)**”; The combination of the three colour components determines the colour associated with the "ON status" signal. The values that can be set are:

- from **0 (default value)** to 255, with steps of 1

NOTE: the personalised colour resulting from the combination of the three fundamental RGB components is interpreted by the device as a colour with 100% brightness. This means that if the backlighting brightness value defined in the **Settings** menu is different from 100%, the final effect may not be as expected.

To help the installer make the best selection of the RGB components of the colour to be associated with the light signalling, the **RGB colour TEST** (Data Point Type: 232.600 DPT_Colour_RGB) and the **RGB colour brightness TEST** (Data Point Type: 5.001 DPT_Scaling) communication objects can be used to select respectively the colour and the brightness percentage of the signalling, so that the selected colour can be verified with the brightness levels set for the backlighting both in proximity and in standby. The colour test mode is activated when a telegram is received on the **RGB colour TEST** object. If a telegram is received on the **RGB colour brightness TEST** object and the test function is not active, there is no action.

When the TEST function is active, all 6 LEDs light up with the colour received via the BUS. The TEST function is automatically deactivated after 30 seconds of no telegrams received on the test objects. Any light effects received when the TEST function is active are managed after the TEST function has been deactivated.

Every time the colour is modified via the **RGB colour TEST** object, the brightness of the light signalling returns to the 100% value (even if it has been previously modified).

Once the required values have been identified, they must be indicated in the ETS parameters so that the personalised colour can be used during normal device operation.

The activation of the backlighting associated with the night light or ON status signalling depends on the function associated with the channel or the value of the object reserved for signalling (as explained in each paragraph of the “Channel x” menu chapter).

➤ 15.1.3 Light effects for “Touch” events

The “**Light effects for “Touch” events**” parameter is used to enable the reproduction of certain light effects indicating the detection of certain touch events by the capacitive sensor. The values that can be set are:

- disable
- **enable** (default value)

Selecting the value **enable**, the reproduction of a certain light effect is associated with each Touch event:

- Touch → **blink**
- Maintained touch → **quick blinking**
- Long touch → **3 blinks**

The effects associated with Touch events do not alter the current colour of the light signalling; if the light signalling is disabled, the effect associated with the Touch event is not reproduced.

The table below shows which sound effects are reproduced, according to the function associated with the channel.

Touch events		
Touch	Operation	Long touch

Matched function	No function	YES		
	Button (cyclic switching)	YES		
	Single button dimmer	YES	YES	
	Single button shutter	YES		YES
	Double button dimmer	YES	YES	
	Double button shutter	YES		YES
	Edges	YES		
	Timing	YES		
	Scene	YES		YES
	Light effect	blink	quick blinking	3 blinks

After downloading the application, the light signalling of the channel will be the one defined for night lighting. When the BUS voltage is restored, the light signalling that was active prior to the failure is reactivated. If necessary, it will then be updated according to the status read requests.

16 Communication objects

The following tables summarise all the communication objects with their specific ID numbers, names and functions displayed in ETS, plus a brief description of the function and the type of Datapoint used.

Communication objects with output functions

#						Object name	Object function	Description	Datapoint type
Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6				

1	6	11	16	21	26	Ch.x - Switch	On/Off	Send switch On/Off commands	[1.1] DPT_Switch
1	6	11	16	21	26	Ch.x - Timed switch	Activate timing	Send timing (stair light) activation commands	[1.10] DPT_Start
1	6	11	16	21	26	Ch.x - Shutter stop/Louvres control	Stop/Step	Send stop movement/slat regulation commands	[1.7] DPT_Step
2	7	12	17	22	27	Ch.x - Shutter movement	Up/Down	Moves up/down the shutter	[1.8] DPT_UpDown
3	8	13	18	23	28	Ch.x - Brightness dimming	Increase/Decrease	Dimmer brightness increasing/decreasing commands	[3.7] DPT_Control_Dimming
4	9	14	19	24	29	Ch.x - Scene	Execute/Store	Send learn/execute scene commands	[18.1] DPT_SceneControl

Communication objects with input functions

#						Object name	Object function	Description	Datapoint type
Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6				
0	5	10	15	20	25	Ch.x - Status feedback	On/Off status	Receive status feedback from switching actuator	[1.1] DPT_Switch
0	5	10	15	20	25	Ch.x - Dimmer status feedback	On/Off status	Receive status feedback from dimmer actuator	[1.1] DPT_Switch
0	5	10	15	20	25	Ch.x - Movement feedback	Increase/Decrease	Receive movement direction feedback from shutter actuator	[1.8] DPT_UpDown
30	31	32	33	34	35	Led x - Light signalling	1=ON status / 0=Night signalling	Receives backlight activation command associated with ON status/night signalling	[1.1] DPT_Switch
36						Soft reduction	Switching On/Off	Receives function activation/deactivation commands	[1.1] DPT_Switch
37						TEST RGB colour	Set personalised colour	Receives the RGB colour components to be tested	[232.600] DPT_Colour_RGB
38						TEST RGB colour brightness	Set colour brightness	Receives the personalised colour brightness to be tested	[5.1] DPT_Scaling

17 Signalling of plate absence/presence and BUS voltage recovery

Even if the device is powered, it will not launch the application if the glass plate or test plate is not fitted. If the device is powered when there is no plate, all six LEDs will flash red with a frequency of 3Hz. Once the plate has been fitted, the device recognises this fact and begins calibrating the capacitive sensors; this is indicated by the simultaneous green flashing of all six LEDs at a frequency of 3Hz. When the calibration has been completed, the application is launched; Initialisation is indicated by the activation of all six LEDs in the sequence red → green → blue.

If the plate is removed during normal operation, the device will stop the application and all six LEDs will flash red at a frequency of 3Hz. Once the plate has been fitted, the device recognises this fact and begins calibrating the capacitive sensors; this is indicated by the simultaneous green flashing of all six LEDs at a frequency of 3Hz. When the calibration has been completed, the application is relaunched; Initialisation is indicated by the activation of all six LEDs in the sequence red → green → blue. Any BUS signals received while there is no plate are processed when the application is relaunched.

The start-up of the device (with the plate fitted) following a BUS failure is indicated by the sequential activation of all six LEDs - red → green → blue.

Punto di contatto indicato in adempimento ai fini delle direttive e regolamenti UE applicabili:

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