

PosiTouch DALI Lighting Controller User Manual



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Safety Notes

- Interior use only
- DALI is not SELV and installation must therefore follow appropriate standards
- Installation should only be performed by a qualified professional

Introduction

The PosiTouch is capacitive touch sensitive DALI controller on a standard Clipsal Saturn wall plate. It provides simple touch to dim control of DALI light fittings and can be configured to use address units by broadcast, group or short address.

Specifications

Physical

		Units
Saturn Plate & Mounting Block Dimensions	75 x 115.5 x 10	mm
Protrusion into wall	28.5	mm
Weight	28	g

Inputs

		Units
Voltage (as per IEC62386)	9.5 – 22.5	V
Current (drawn from DALI Bus)	10	mA
Communications	DALI (IEC62386)	

Installation

Prior to installation of the PosiTouch, it should be configured using the PosiTouch Configuration Tool. This configures the DALI commands associated with each button.

Installation merely requires the connection of the 2 DALI wires. The PosiTouch draws power from the DALI bus, so there is nothing further to connect. Refer to Appendix B. DALI Networking Basics for further information regarding DALI wiring.

Operation

The PosiTouch is operated simply by touching the buttons marked on the wall plate. When a button is active its corresponding LED will turn on, and the associated action will trigger accordingly.



Figure 1 Rear view of the PosiTouch

Action	Description
Short Press	A short press action occurs when a button is pressed and released in under 0.3s.
Long Press	A long press action occurs when a button is pressed for longer than 0.3s. When some DALI commands are assigned to a long press they are repeated until the button is released.
Release	A release action occurs when the button is released following a long press.

Table 1 Button Actions

Default Configuration

The PosiTouch comes configured by default for basic on/off and dimming control, with the configuration of fade rate and fade time disabled.

Button	Address	Default Action		
		Short Press	Long Press	Release
1	Broadcast	Go to 100%	Go to 100%	Stop Dim
2	Broadcast	Go to 75%	Go to 75%	Disabled
3	Broadcast	Go to 50%	Go to 50%	Disabled
4	Broadcast	Go to 0%	Go to 0%	Stop Dim
5	Broadcast	Go to 25%	Go to 25%	Disabled
6	Broadcast	Go to 10%	Go to 10%	Disabled

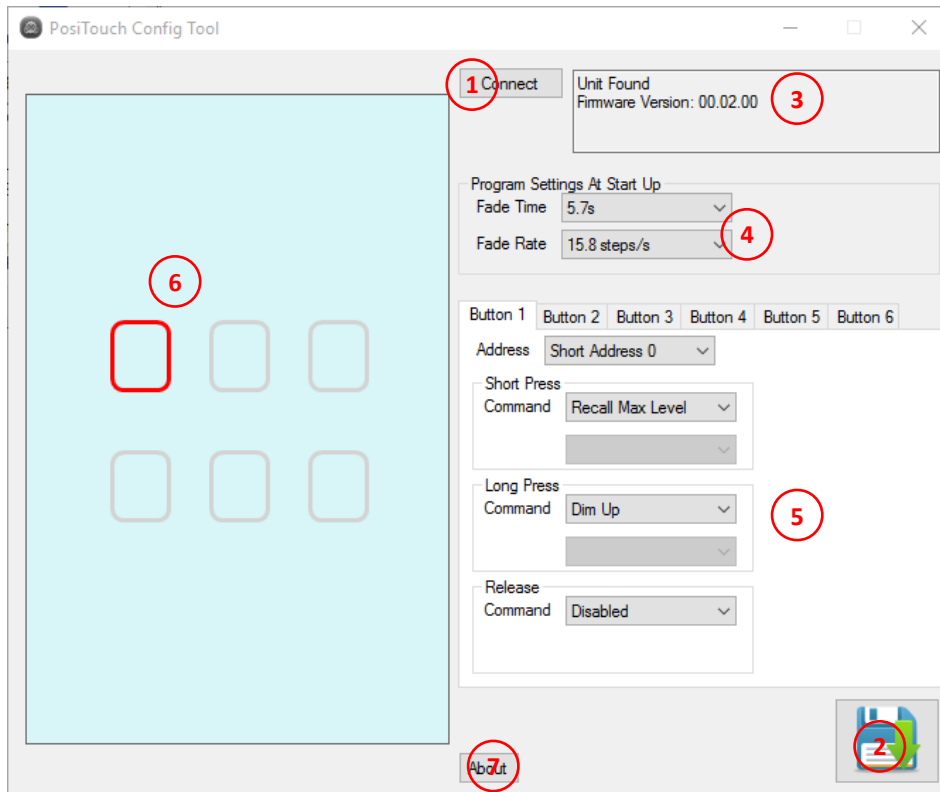
Table 2 Default button actions.

Multi-Master

The PosiTouch can operate in what is referred to as Multi-Master, meaning there can be more than 1 controller on the DALI network (so long as they also operate in Multi-Master).

Appendix A. Using the PosiTouch Configuration Tool

The Interface



1	Connect button	Detects and reads settings from a connected PosiTouch.
2	Save Button	Saves the settings to the connected PosiTouch
3	Status Window	Displays messages during operation
4	Fades	Used to configure the PosiTouch to program the DALI Fade Rate & Time on start-up. If there are multiple PosiTouch units on the DALI network, these should only be set on 1. In order for these settings to take effect, energise the DALI network with or after applying power to the fittings being controlled.
5	Button Actions	Here the action to perform for the 3 button states (short press, long press & release) can be configured.
6	Selected Button	Shows the button that is currently being configured. You can also click on the button to select it.
7	About button	

Configuring the PosiTouch

1. Connect the PosiTouch to the computer using a micro-USB cable. No other connections are required; the PosiTouch will be powered via the USB.
2. Open the PosiTouch Configuration Tool. It should detect the connected PosiTouch. If it fails to, check the USB cables is connected at both ends and press the connect button.
3. Change the action for each of the buttons to the desired setup
4. Press the save button.

DALI Addressing

The configuration tool allows you to set an address that the commands are set to for each button. By default is set to Broadcast, which means all units on the network will respond.

To use any of the other addresses you will need to commission the units to have the addresses & groups programmed.

Dimming Options

Within the DALI standard there are 3 possible methods to dim a light fitting.

Stop Dim

Any dimming command can be halted through the use of this command. By using it in combination with the Go to Level command (which uses the DALI Fade Time), a reliable fade can be achieved.

Button Action	To Dim Up	To Dim Down
Long Press	Go to Level	Go to Level
Level	100%	0%
Release	Stop Dim	Stop Dim

Dim up/Down

These commands will dim the level for a period of 200ms at the rate specified in DALI Fade Rate. They cannot dim to off, nor can they dim from off. When these commands are assigned to a long press, the PosiTouch will repeat them every 200ms while the button is pressed.

Button Action	To Dim Up	To Dim Down
Long Press	Dim Up	Dim Down

Step Up/Down

These commands will cause the output to change by a single step. When these commands are assigned to a long Press, the PosiTouch will repeat them every 40ms. This dimming rate is not adjustable.

Button Action	To Dim Up	To Dim Down
Long Press	Step Up	Step Down

Appendix B. DALI Networking Basics

DALI is very flexible in its network configuration, to the point that DALI control lines and mains voltage supply lines can be wired together.

The DALI control line input to a ballast is polarity insensitive, meaning there is no + or -.

A DALI network can consist of up to 64 ballasts.

Wiring of the DALI network can be almost any fashion, be it a daisy chain, star or branch, as per the below figure

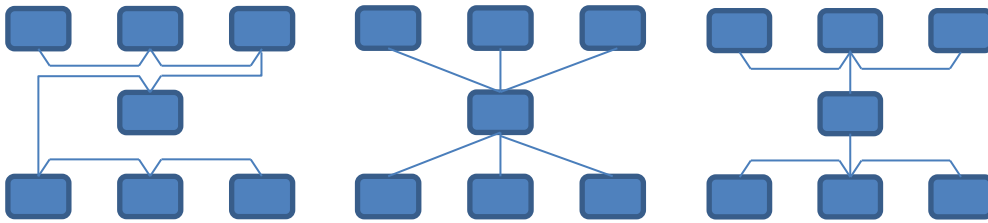


Figure 2 DALI Network Topologies

Cable sizes should follow the guide given in the table below.

Lead Length	Minimum Lead Diameter
Up to 100m	0.5mm ²
100 – 150m	0.75mm ²
150 – 300m	1.5mm ²

Appendix C. Wiring Diagram

