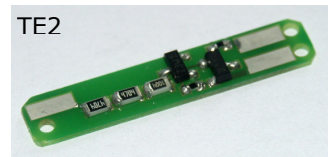
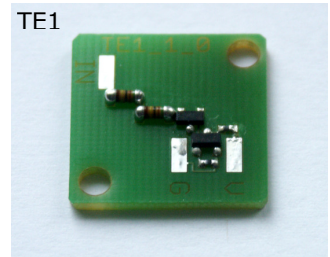


## Touch Extension Module for Lumi-Con DIMMERS

### Features

- Extension of sensor connection length for Lumi-Con Dimmer Modules up to 10m
- Direct two wire connection to respective Lumi-Con Dimmers Module
- Supply through Lumi-Con Dimmers – no separates supply necessary
- Touch extension module can be glued directly to touch pad (e.g. on back side) or mounted into lamp tube (TE2)



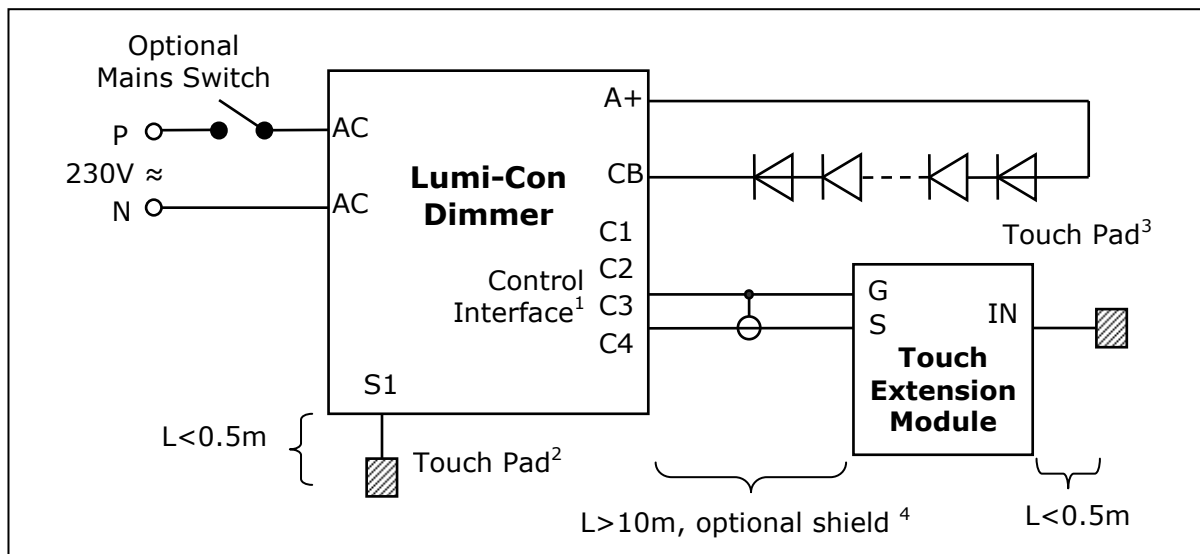
### Applications

- Extension of Touch-Sensor-Connection of Lumi-Con Dimmers up to 10m

**Caution!**

Set up should be done by skilled personnel only!  
 All circuit parts including LEDs are connected to mains supply (230V AC)!  
 Please read carefully the instructions on last page!

### 1 Overview



- 1) Please check pinning of respective Dimmer Modules.
- 2) Touch Pad for direct Dimmer access.
- 3) Touch Pad of Extension Module
- 4) Shielding necessary when G/S cable is positioned close to mains cable

## 2 Description

The Touch-Pad-Extension-Module allows extension of the wire length to a Lumi-Con Dimmer Module up to 10m. Nearly all Dimmer Modules are available for application of such extension.

The Touch-Pad-Extension-Module is very compact and can be, for example, glued to the back side of a metallic or conductive touch pad. The dimensions are 20 x 20 x 5mm. The module comes with three wires. Two of the wires are for connecting the Dimmer Module and the third is for attaching the touch pad.

The module can be operated in parallel to the normal touch pads connected, for example, to S1. The function of the extension module touch pad is the same as the normal touch operation of a Dimmer Module.

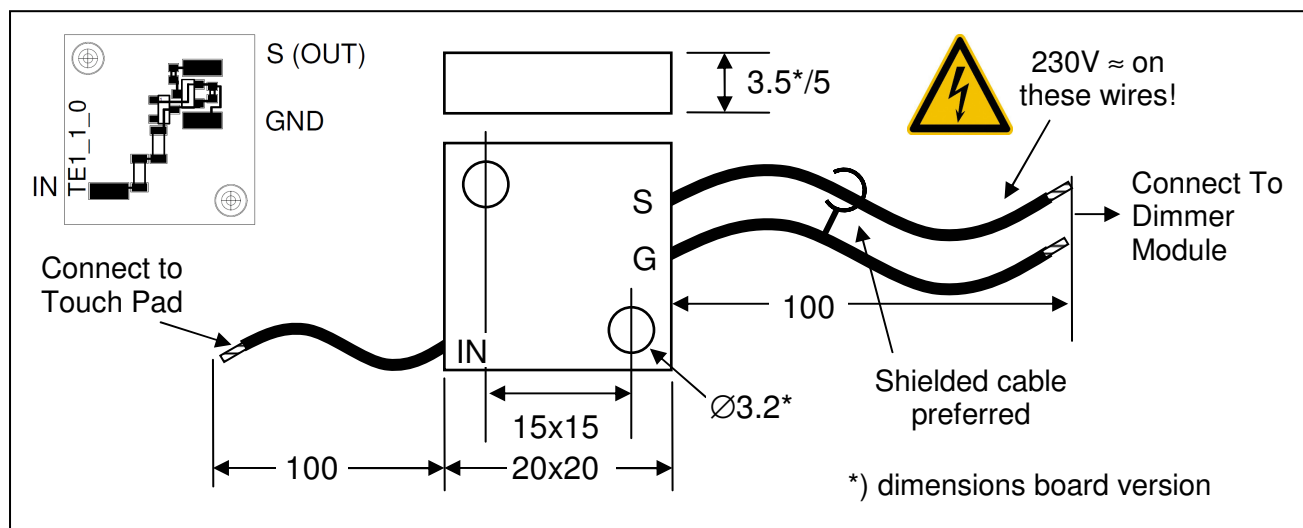
Crosstalk of mains voltage or GND (protective earth conductor) must be avoided, thus the two connecting (G, S) cable to the dimmer must not be within a power cable or placed close to a power cable. Shielding is possible when the shield of the connecting cable is connected to Dimmer GND (G), details see figure below.

**Please note that the connecting wires G, S to the touch extension module are at mains power level (230V!). Please isolate these wires respectively!**

### 2.1 Pin assignment

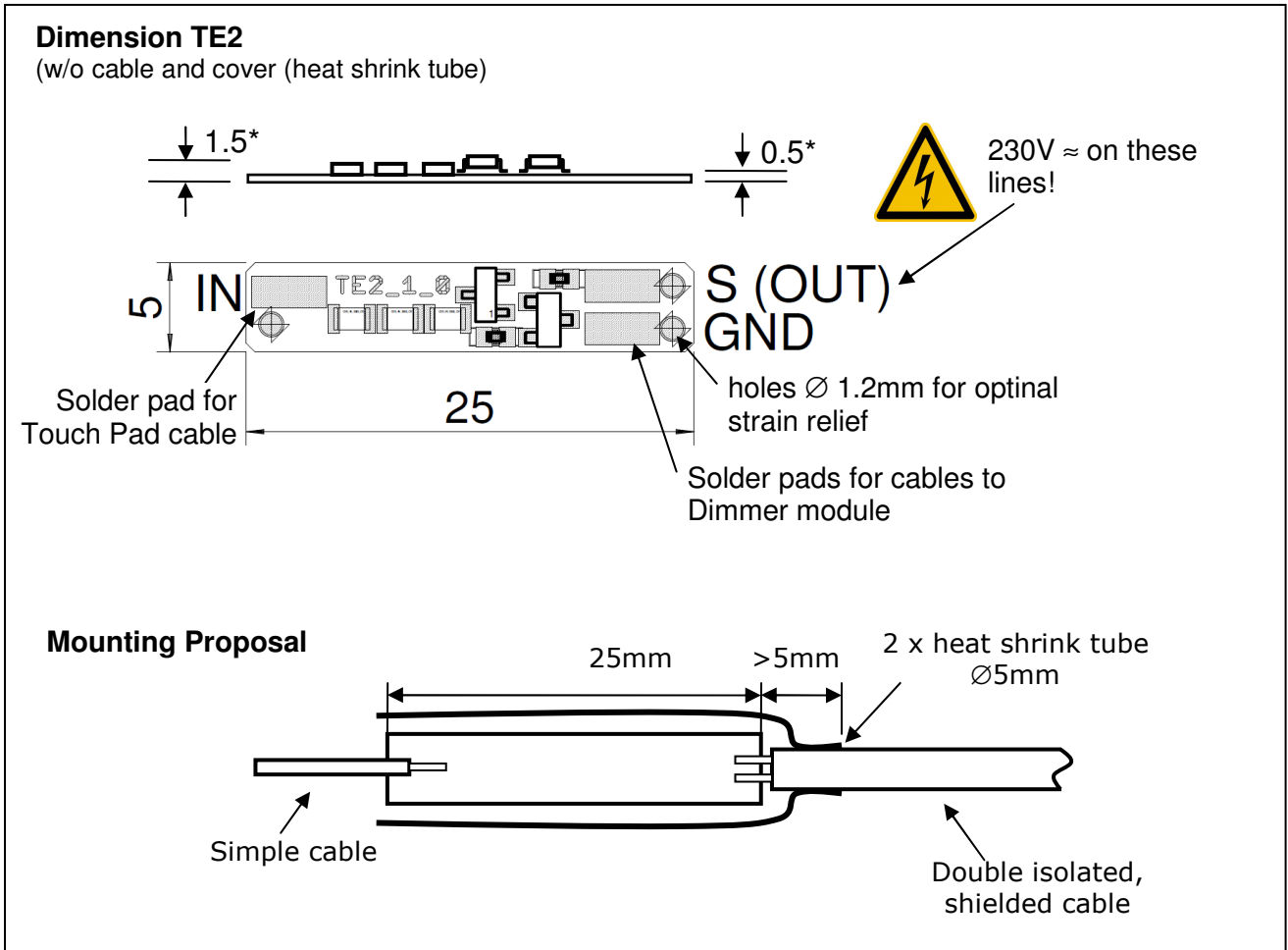
S	Signal (connect to TE-IN of Dimmer)	Max. 10m, cross-talk from power cable to be avoided
G	Connect to GND of the Dimmer Module	
IN	Touch Pad input (max. 0.5m, <100pF), connect to touch pad	

### 2.2 TE1 Dimension and Order Number



The order number is: TE1-B/G (B: Board, G: with Cover).

### 2.3 TE2 Dimension and Order Number



The module TE2 is extremely small (25x5x1.5mm w/o cable and cover) and therefore suitable to be built into a tube of a lamp. Thus you can design longer lines from touch pad to the dimmer module. We propose to use a shielded double isolated cable as all lines to the TE-module contain 230V AC.

The module is delivered w/o cables and cover. The cables are to be soldered on to the solder pads. An optional (provisional) strain relief can be made using the 1.2mm holes at the board.

For building into a metallic tube we propose to use simple heat shrink tube for isolating the board (Ø5mm) - if necessary two tubes for double isolation.

Please don't bend the boards as sensitive components may be damaged on the board.

The order number is TE2-B (only board version available).



### 3 Installation and Precautions


The module is normally connected the dimmer module directly attached to mains voltage (230V $\approx$ ). Before you connect to mains voltage (initially) please make sure that all necessary connections are correct. Assure that you have **protection against contact** for all wires including the circuit, mains voltage wires, wires and LEDs thus no occasional contact can happen (exception: sensor inputs S1, S2). The module must not be operated in wet ambient or outside except it is protected accordingly.

The whole circuit including the attached components (e. g. the LEDs) and wires may show up to 350V peak voltage referred to ground. **Please do not touch the circuit and the connected components including the LEDs** if the circuit is powered up. In case of failure please switch of or separate from mains voltage immediately. Do not try to repair the module even it seems simple; this includes also broken fuses.

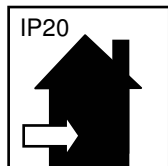
If you use switches please do only connect to protective earth conductor or to the grounded conductor (as shown in the figure on 1<sup>st</sup> page).

To measure the circuit (for example the LED current) you need isolated or battery operated instruments or eventually an isolating transformer for the module mains voltage. Caution: During power up an isolating transformer may generate high voltage peaks which can destroy the circuit. Hence, first switch on the isolating transformer, then connect the circuit to it.

After disconnecting the module from mains voltage the onboard capacitors are charged to high voltages. Hence please wait a minute until capacitors are discharged before you touch the circuit and the connected components (LEDs).



The modules fulfil the *EC Low Voltage Directive 2006/95/EC*, the *EC EMC Directive 2004/108/EC* as well as the RoHS compliancy (*EC Directive 2002/95/EC*). In addition they are compliant to *EuP Directive 2005/32/EG: Eco-Design of Energy Using Products*.



#### Attention please!

The information herein is given to describe certain components and shall not be considered as warranted characteristics. Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

Lumi-Con components may only be used in life-support devices or systems with the expressed written approval of Lumi-Con.

ERROR: stackunderflow  
OFFENDING COMMAND: ~

STACK: