

LITROL™

PSM-BTD

## Programmable Switch Module

For integrated operation of lighting ;  
with LONMARK Association-Certified device



- 3-channel programmable switch module
- Indicating LED for status of the switch
- Flush mounting in a British standard electrical wall box(BS4662)
- LONMARK Association-Certified device
- Power supply via the two-wire bus (LONWORKS Network, LPT-10)

### Application

The PSM-BTD is a touch dimmer switch only for dimming control applications. Group and Scene functions provide versatile way for the lighting applications.

### Technical data

Power requirements	PSM-BTD receives its power via the LONWORKS Network In accordance with specification LPT-10	3 LPUL(Unit Load)
Functions	Selectable switch input channel LED status indicator	On(REDF), Off(GREEN), Up(ORANGE), Down(Off)
Interfaces	Interface type Transceiver Baud rate	LON (LONMARK) LPT-10 78 kBit/s
Cable connection	Terminals LONWORKS Network (Polarity insensitive)	Screw terminals 2-wire twisted pair 0.2 ~ 1.0 mm <sup>2</sup>
Hardware	Processor type Processor clock Memory	TMPN3120FE5M 5MHz 23KB(19K ROM, 4K RAM)
Industry standards	<b>CE</b> conformity to EMC directive Emission Immunity LONMARK conformance	89/336/EEC EN 55011 EN 50082-2 Guidelines Version 3.2

**LonWorks®  
Interoperability**

LONMARK ® Version 3.2 interoperability

Standard program ID	80:00:72:20:00:06:04:40
External Interface File	PSMBTD_xx.XIF
Plug-In Software	PSMBTD_xx.EXE

**Objects**

**Object #0**

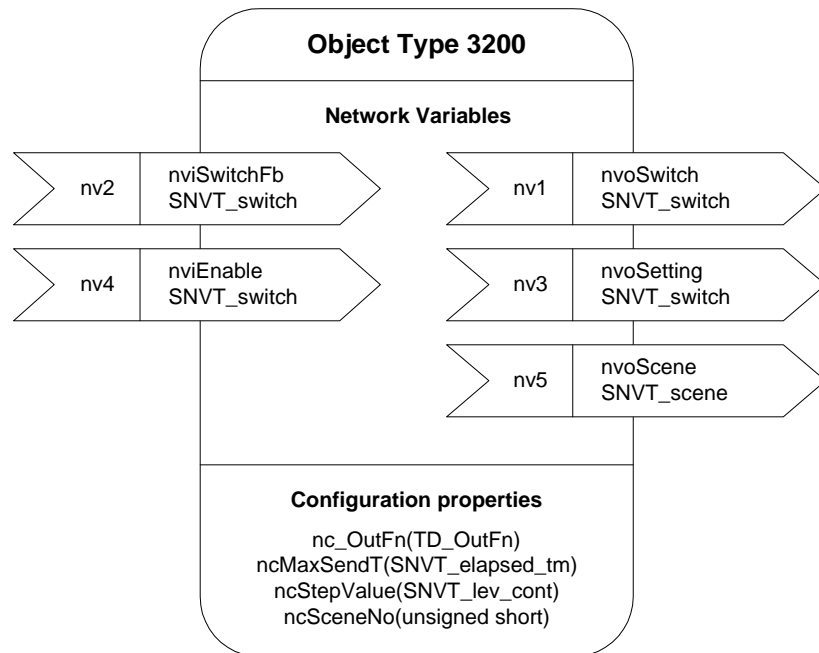
Node object                      Status request support: RQ\_NORMAL for each Object  
Configuration variables for Location String

**Object #1 to #4**

Switch object                      Functional profile 3200 version 1.0  
SNVT\_switch and SNVT\_scene for output and feedback input  
Configuration properties for output value and output function

**Object #1 to #3**

Switch (SW1, SW2, SW3)



**Network Variables**

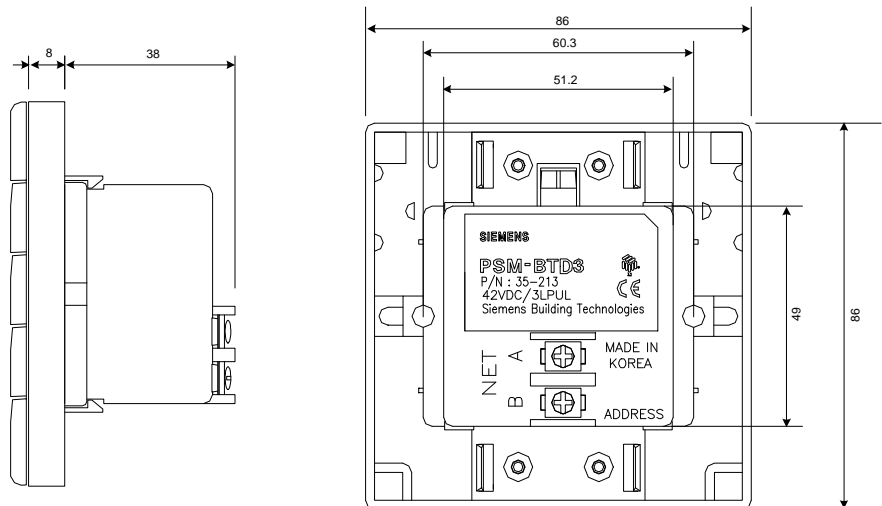
<b>nvoSwitch</b>	Switch output. Value 0-100% in 0.5% increments and state On/Off
<b>nvoSetting</b>	Setting output. Valid ranges are ON, OFF, UP and DOWN. The range for UP and DOWN is 0 to 50%
<b>nvoScene</b>	Scene output. RECALL with associated scene number
<b>nviSwitchFb</b>	Switch feedback input
<b>nviEnable</b>	Object function On/Off. When nviEnable is Off state, the nvoSwitch maintains it's current value regardless of the switch input

## Configuration Properties

<b>ncOutFn</b>	<p>Selects an output function</p> <p><b>DEFAULT</b> - Control for Dimming Actuator. Short touch for the On/Off function and long touch for the Up/Down function.</p> <p><b>STEP</b> - Control for Dimming Actuator. Step is circulated through the following sequences. (0% -&gt; 25% -&gt; 50% -&gt; 100% -&gt; 0%...)</p> <p><b>MANOVR</b> - Control for Dimming Controller. Short touch for the On/Off function, long touch for the Up/Down function and double touch for the Manual Override On/ Manual Override Off function</p> <p><b>SETTING</b> - Control for Dimming Controller. Short touch for the SET_ON/ SET_OFF function and long touch for the SET_UP/SET_DOWN function</p> <p><b>SCENE</b> - Propagate the scene number, which associated the functional block. Heart beat timer is not available</p>
<b>ncMaxSendT</b>	<p>Time between subsequent updates. Range 0min 0sec ~ 59min 59sec. Default = 0 sec</p>
<b>ncStepValue</b>	<p>Step value for up/down ramps. Default = 1%</p>
<b>ncSceneNo</b>	<p>Used to set the number of the scene for the functional block</p>

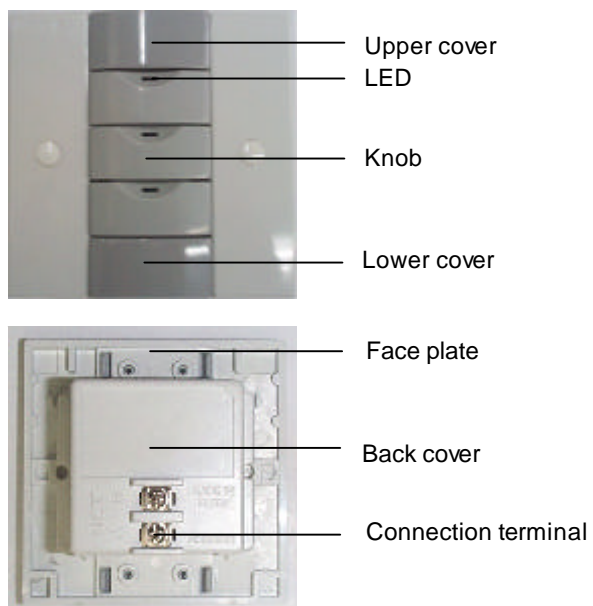
## Dimensions

All dimensions in mm



## Mechanical design

The PSM-BTD comprises a back cover, a face plate and touch switches. The device also has a service Pin/LED, status indicating LEDs and connection terminals for NET A/B. The service LED and service pin are behind the touch knob.



### Service LED

This LED shows the overall status of the LonWorks device. When the device application is not configured, this LED flashes green and off. When the device application is configured, the LED goes off.

### Service pin

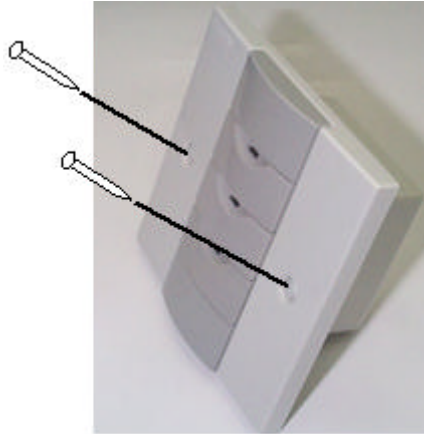
The service pin is used to identify the device at commissioning. When the service pin is pressed, program ID and LonWorks Unique ID (Neuron ID) contained in the device are transmitted to the commissioning or service tools.

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## Mounting notes

The device can be mounted in any orientation and fixed as follows:

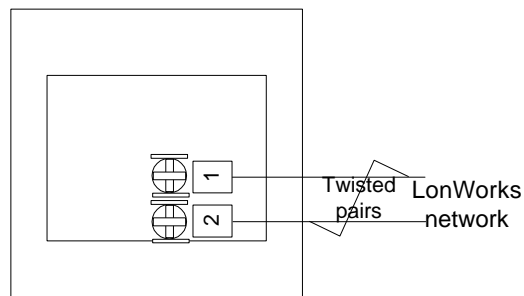
Two drill holes are provided for screw-mounting.



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## Connection terminals

You have to only connect a LonWorks network cable to connection terminal.



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## Installation instruction

1. Mount the PSM-BTD in the required location by firmly fixing to the wall with a minimum of two screws. (See mounting notes)
2. Connect the cable as per connection terminals. (See connection terminals)
3. Once the connections are completed, you must commission the device using LonWorks commissioning tool. (like as Echelon's LonMaker for Windows or SBT's Robust Manager )
4. Once the device is successfully added in the LonWorks network, you have to check the following.  
"All indicating LEDs are indicated by 5 flashes by **Wink** command."
5. If you want to set unconfigured state of the device, press the "Service pin" during 10 seconds.

note : The size of paper for labeling knob is 35\*9 mm.

## Reference

Indicating LED for status

Status	DEFAULT	STEP	MANOVR	SETTING	SCENE
<b>ON</b>	RED	RED	RED	RED	X
<b>OFF</b>	GREEN	GREEN	GREEN	GREEN	X
<b>UP</b>	ORANGE	X	ORANGE	ORANGE	X
<b>DOWN</b>	BLACK	X	BLACK	BLACK	X
<b>MANOvr Off</b>	X	X	ORANGE	X	X
<b>RECALL</b>	X	X	X	X	<b>*note</b>

**\*note** : LED goes RED during 1 second

## Ordering information

Model	Description	P/N	Remark
PSM-BTD1	Programmable Switch Module, British Standard, 1 Touch Knob for Dimming, for LonMark	35-231	
PSM-BTD2	Programmable Switch Module, British Standard, 2 Touch Knob for Dimming, for LonMark	35-232	
PSM-BTD3	Programmable Switch Module, British Standard, 3 Touch Knob for Dimming, for LonMark	35-233	
PSM-BTD1L	Programmable Switch Module, British Standard, 1 Labeling Touch Knob for Dimming, for LonMark	35-331	
PSM-BTD2L	Programmable Switch Module, British Standard, 2 Labeling Touch Knob for Dimming, for LonMark	35-332	
PSM-BTD3L	Programmable Switch Module, British Standard, 3 Labeling Touch Knob for Dimming, for LonMark	35-333	

### Accessories

Touch knob	Touch knob for Dimming	3342301-013	
Labeling knob	Labeling knob for Dimming	Reserved	
Knob window	Labeling knob window	Reserved	
Lower Cvr1	Lower cover for PSM-BTD1	3352111-071	
Lower Cvr2	Lower cover for PSM-BTD2	3352121-070	
Lower Cvr3	Lower cover for PSM-BTD3	3352131-069	
Face plate 1/3	Face plate for PSM-BTD1,3	3352131-066	
Face plate 2	Face plate for PSM-BTD2	3352131-067	

**\*note** : Upper cover and Lower cover are identical.

**\*note** : The minimum ordering quantity is 50pcs for Accessories.