

LITROL™

### 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-BTS is a touch switch only for on/off lighting control applications. Group and Scene functions provide versatile way for the lighting applications.

### Technical data

Power requirements	PSM-BTS 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), Off delay timer running(ORANGE)
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	TMPN3120FE3M 5MHz 20KB(18K ROM, 2K 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	80:00:72:20:00:06:04:30
External Interface File	PSMBTS_xx.XIF
Plug-In Software	PSMBTS_xx.EXE

## Objects

### Object #0

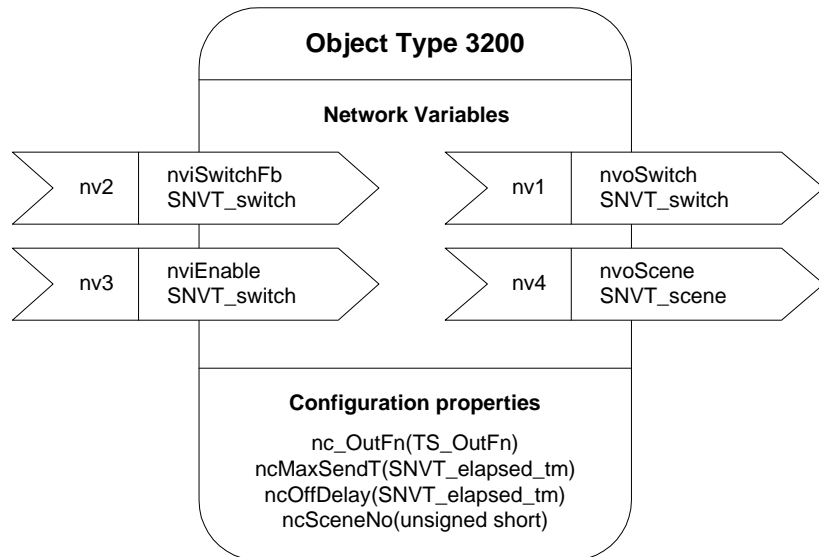
Node object                      Status request support: RQ\_NORMAL for each Object  
Configuration variables for Location String

### Object #1 to #3

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

## Object #1 to #3

Switch (SW1, SW2, SW3)



## Network Variables

<b>nvoSwitch</b>	Switch output. Includes state On/Off
<b>nvoScene</b>	Scene output. RECALL with associated scene number
<b>nviSwitchFb</b>	Switch feedback input. If the value is 50(mixed state), the value of nvoSwitch is changed to 50.0, but the state is not changed. If the value is 40(Priority), nvoSwitch is not changed.
<b>nviEnable</b>	Object function On/Off. When nviEnable is Off state, the nvoSwitch maintains it's current value regardless of the switch input

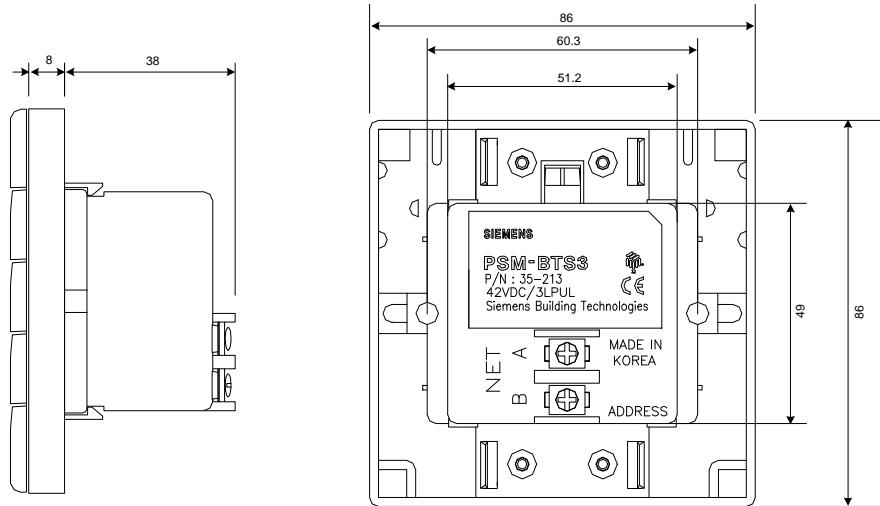
## Configuration Properties

<b>ncOutFn</b>	Selects an output function <b>DEFAULT</b> - Toggle function. Single click for the On/Off function of the nvoSwitch. Off Delay Timer is available <b>MOMENTARY</b> - nvoSwitch maintained On state while the button is pressed. Off delay Timer is available <b>SCENE</b> - Propagate the scene number, which associated the functional block. Heart beat timer cannot be available
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<b>ncMaxSendT</b>	Time between subsequent updates. Range 0min 0sec ~ 59min 59sec. Default = 0 sec
<b>ncOffDelay</b>	Off delay time before output changes, when digital input contact goes open. Default = 0sec
<b>ncSceneNo</b>	Used to set the number of the scene for the functional block

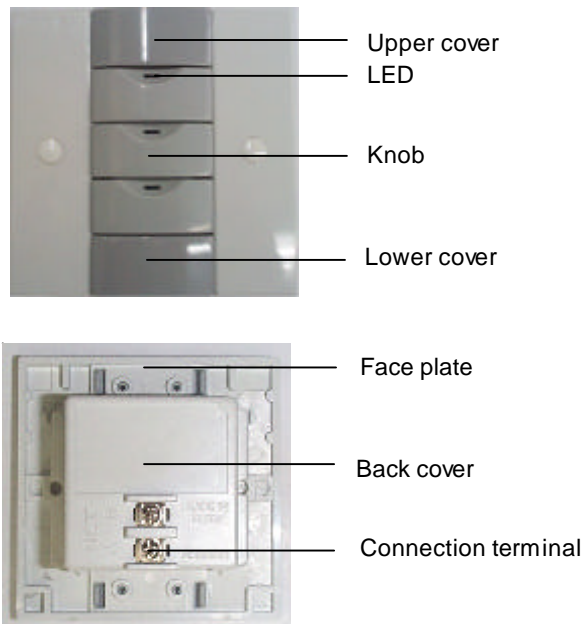
## Dimensions

All dimensions in mm



## Mechanical design

The PSM-BTS 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

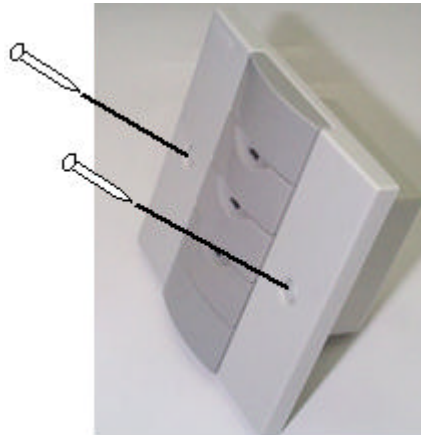
The service pin is used to identify the device at commissioning. When the service pin is pressed, program ID and LonWorks Unique ID (Neuron ID) contained in the device are transmitted to the commissioning or service tools.

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## Mounting notes

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

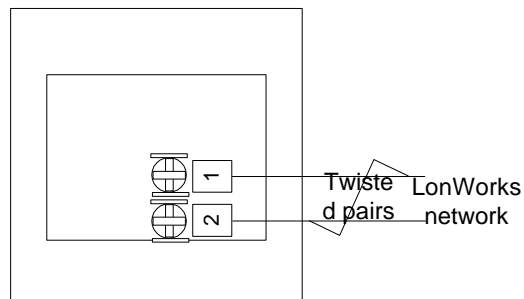
Two drill holes are provided for screw-mounting.



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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-BTS 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 status 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	MOMENTARY	SCENE
ON	RED	RED	X
OFF	GREEN	GREEN	X
Off delay	ORANGE	ORANGE	X
RECALL	X	X	*note

\*note : LED goes RED during 1 second

## Ordering information

Model	Description	P/N	Remark
PSM-BTS1	Programmable Switch Module, British Standard, 1 Touch Knob for Switching, for LonMark	35-211	
PSM-BTS2	Programmable Switch Module, British Standard, 2 Touch Knob for Switching, for LonMark	35-212	
PSM-BTS3	Programmable Switch Module, British Standard, 3 Touch Knob for Switching, for LonMark	35-213	
PSM-BTS1L	Programmable Switch Module, British Standard, 1 Labeling Touch Knob for Switching, for LonMark	35-311	
PSM-BTS2L	Programmable Switch Module, British Standard, 2 Labeling Touch Knob for Switching, for LonMark	35-312	
PSM-BTS3L	Programmable Switch Module, British Standard, 3 Labeling Touch Knob for Switching, for LonMark	35-313	

### Accessories

Touch knob	Touch knob for Switching	3342301-013	
Labeling knob	Labeling knob for Switching	Reserved	
Knob window	Labeling knob window	Reserved	
Lower Cvr1	Lower cover for PSM-BTS1	3352111-071	
Lower Cvr2	Lower cover for PSM-BTS2	3352121-070	
Lower Cvr3	Lower cover for PSM-BTS3	3352131-069	
Face plate 1/3	Face plate for PSM-BTS1,3	3352131-066	
Face plate 2	Face plate for PSM-BTS2	3352131-067	

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

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