User manual

Double-Switch

Please keep this page with the full device specific key (DSK) in a safe place!
It is needed throughout the entire product lifetime

TechniSat

1 Safety warnings

INSTALLATION

1. To prevent electrical shock and/or equipment damage, disconnect electrical power at the main fuse or circuit breaker before installation and maintenance.
2. Be aware that even if the circuit breaker is off, some voltage may remain in the wires — before proceeding with the installation, be sure no voltage is present in the wiring.
3. Take extra precautions to avoid accidentally turning on the device during installation.
4. Connect the device according to the wiring diagram.

Danger of electrocution!

Installation of this device requires a great degree of skill and may be performed only by a licensed and qualified electrician. Please keep in mind that even when the device is turned off, voltage may still be present in the device's terminals.

2 IMPORTANT DISCLAIMER

Wireless communication is not always 100% reliable. This device should not be used in situations in which life and/or valuables are solely dependent on its functioning. If the device is not recognized by your gateway (hub) or shows up incorrectly, you may need to change the device type manually and make sure your gateway (hub) supports Z-Wave Plus devices.

WARNING

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal free of charge.

Z-Wave

This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

Z-Wave Plus

This device is a security enabled Z-Wave Plus product that is able to use encrypted Z-Wave Plus messages to communicate to other security enabled Z-Wave Plus products.
This device must be used in conjunction with a Security Enabled Z-Wave Controller in order to fully utilize all implemented functions.

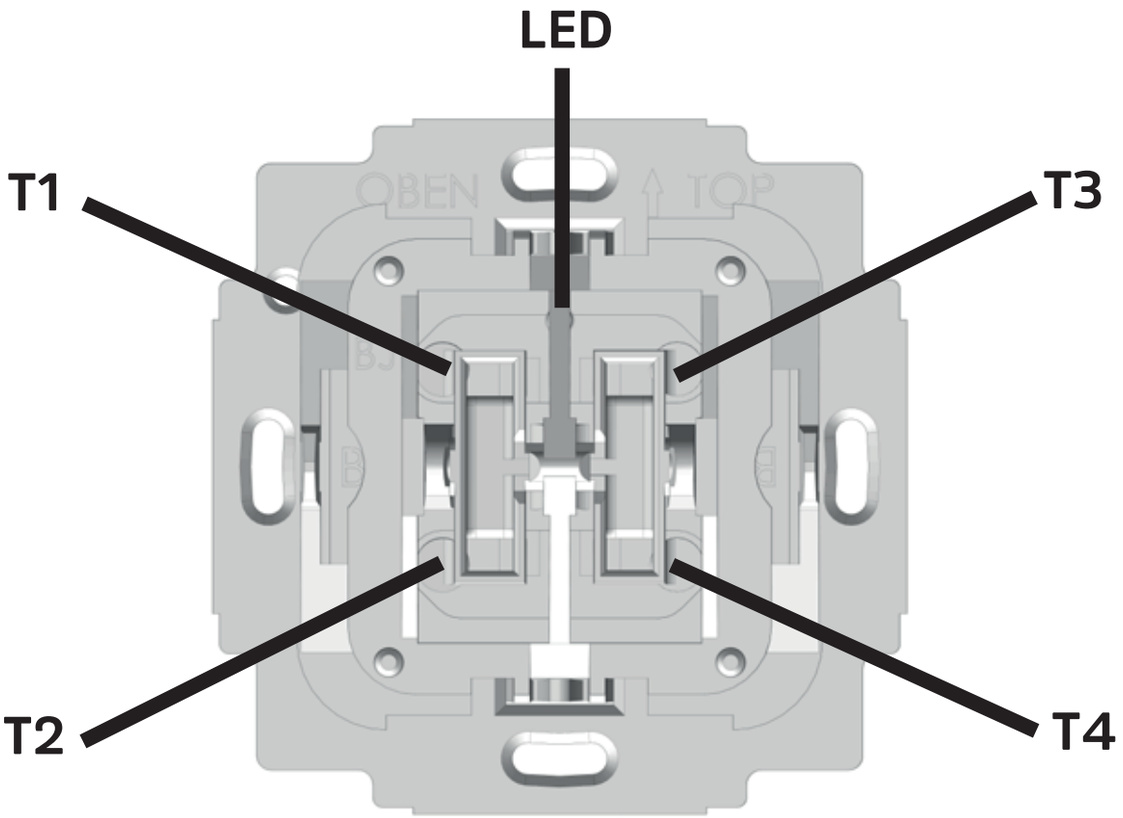
3 Key features

The TechniSat Double-Switch controls the on/off function for two electrical devices. It measures power consumption of the connected devices.

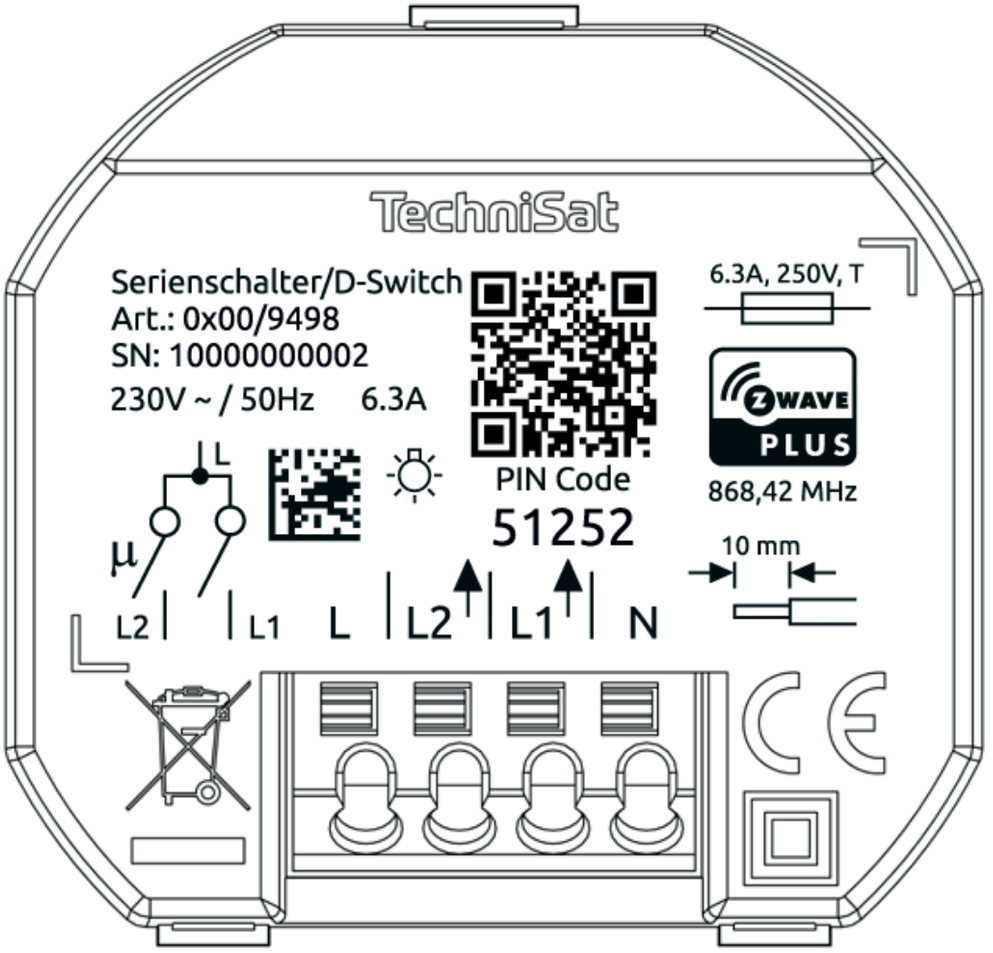
- In-wall mounted binary switch control
- Z-Wave Plus
- Security S2
- SmartStart
- compatible with German market wall switch product lines
- Overload protection

4 Overview

Front

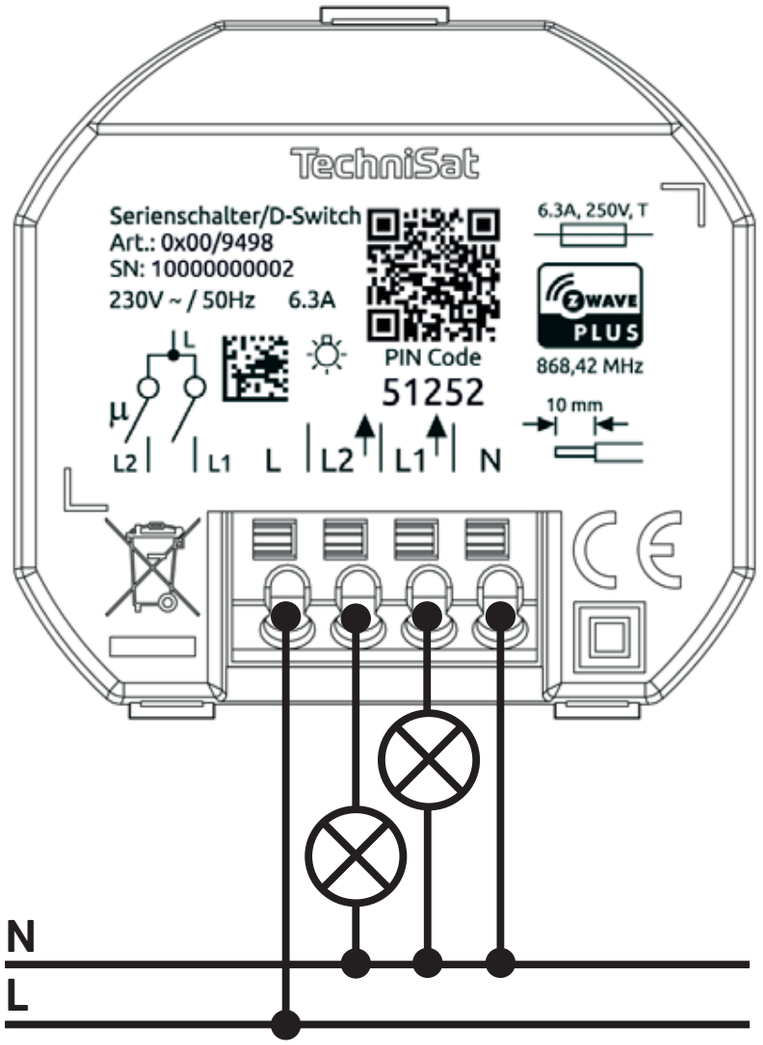


Back



L	Live lead
L1	Switched output to electrical device 1 (T1 - T2)
L2	Switched output to electrical device 2 (T3 - T4)
N	Neutral lead

5 Wiring diagram



6 SmartStart inclusion

SmartStart enabled products can be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

1. The Z-Wave QR-Code is located on the back of the product.
2. Please follow your SmartStart enabled Z-Wave gateway‘s manual, on how to use SmartStart inclusion.
3. Install the TechniSat Double-Switch.
4. After checking the correct installation, re-enable electrical power at the main fuse or circuit breaker
5. The TechniSat Double-Switch will be added to your Z-Wave network within 10 minutes after re-enabling electrical power.

7 Manually adding the device to the Z-Wave network

1. Install the TechniSat Double-Switch.
2. After checking the correct installation, re-enable electrical power at the main fuse or circuit breaker.
3. Start the Z-Wave device add mode on your Z-Wave gateway, according to the gateway‘s manual.
4. Press T1 3x within 1 second.
5. The red status LED is on while the device is added to the Z-Wave network.
6. The green LED is on for 5 seconds after successfully adding the device.

8 Removing the device from the Z-Wave network

1. Start the Z-Wave device remove mode on your Z-Wave gateway, according to the gateway‘s manual.
2. Press and hold T1 for more than 10 seconds.
3. The red status LED is on while the device is removed from the Z-Wave network.
4. The green LED is on for 5 seconds after successfully removing the device.

9 Factory Default Reset

Use this procedure only when the network primary controller is missing or otherwise inoperable.

1. Press and hold T2 for more than 20 seconds.
2. The LED will alternately flash red and green for 5 seconds after a successful reset.

10 Configuration

Parameter	Description	Size (Bytes)	Value	Default
1	Enable/Disable Central scene notifications for 2x-5x press	1	0 - disable 1 - enable	1
2	Interval of current wattage meter report in 10 seconds	2	0 - disable unsolicited reports 3 ... 8640 (30 seconds - 1 day)	3 (30s)
3	Interval of active energy meter report in minutes	2	0 - disable unsolicited reports 10 ... 30240 (10 minutes - 3 weeks)	60 (1hour)

4	Operation mode of buttons T1-T4	1	0 - top buttons turn outputs on bottom buttons turn outputs off 1 - buttons toggle the outputs on/ off	0

11 Supported Association Groups

Root Device:

ID	Name	Max group members	CC-Commands
1	Lifeline	1	- Device Reset Locally Notification - Central Scene notification - Meter Report - Switch Binary Report - Notification Report
2	Switch State 1	10	- Basic Set
3	Switch State 2	10	- Basic Set

Endpoint 1:

ID	Name	Max group members	CC-Commands
1	Lifeline	0	- Meter Report - Switch Binary Report - Notification Report

2	Switch State 1	10	- Basic Set

Endpoint 2:

ID	Name	Max group members	CC-Commands
1	Lifeline	0	- Meter Report - Switch Binary Report - Notification Report
2	Switch State 2	10	- Basic Set

12 Basic Command Class

The endpoints of this device control members of its association group 2 (association group 2 & 3 on the root device) with Basic Command Class Set commands. The set commands mirror the endpoint‘s state.

If an endpoint is switch **on**, a Basic Set with value **0xFF** will be send to members in association **group 2** of this endpoint.
If an endpoint is switch **off**, a Basic Set with value **0x00** will be send to members in association **group 2** of this endpoint.

13 Notification Command Class

Notification Type	Notification Event	Description
Power Management (0x08)	Idle (0x00)	No event detected / event cleared
	Overload detected (0x08)	The maximum resistive load on L1 has been exceeded

14 Supported Command Classes documentation

Root device:

Command Class	Version	Required Security Class
Association	2	highest granted
Association Group Information	1	highest granted
Basic	2	highest granted
Binary Switch	1	highest granted
Central Scene	3	highest granted
Configuration	1	highest granted

Device Reset Locally	1	highest granted
Firmware Update Meta Data	4	highest granted
Manufacturer Specific	2	highest granted
Meter	4	highest granted
Notification	8	highest granted
Powerlevel	1	highest granted
Security 0	1	none
Security 2	1	none
Supervision	1	none
Transport Service	2	none
Version	3	highest granted
Z-Wave Plus Info	2	none

Endpoint 1 & 2:

Association	2	highest granted
Association Group Information	1	highest granted

Basic	2	highest granted
Binary Switch	1	highest granted
Meter	4	highest granted
Multi Channel Association	3	highest granted
Notification	8	highest granted
Security 0	1	none
Security 2	1	none
Supervision	1	none
Z-Wave Plus Info	2	none

15 Multi Channel endpoint information

Root device:
Device Type: Power Switch Binary
Controlled Command Classes: Basic

Endpoint 1:
Device Type: Power Switch Binary
Controlled Command Classes: Basic
This endpoint controls output L1.

Endpoint 2:
Device Type: Power Switch Binary
Controlled Command Classes: Basic
This endpoint controls output L2.

16 Central Scene

The Double-Switch can send central scene activation notifications to a Z-Wave gateway.

Pressing the respective button multiple times, will send the corresponding scene number:

Button	T1	T2	T3	T4
Scene number	1	2	3	4

The following Z-Wave key attributes are available for all scenes:

Button pressed	Z-Wave key attribute
two times	Key Pressed 2 times
three times	Key Pressed 3 times
four times	Key Pressed 4 times
five times	Key Pressed 5 times

17 Firmware update

This device supports firmware update via Z-Wave. For enhanced security, the device requires a manual confirmation, before an update of the device‘s firmware can be initated.

To perform a firmware update follow these steps:

1. Follow your Z-Wave gateway‘s manual, on how to update the firmware of a Z-Wave device.
2. From your gateway issue a Z-Wave request to get the current firmware version of the device to be updated.
3. When the request has been received, your device‘s LED will glow red for 10 seconds.
4. While the LED glows red, press T1, T2, T3 or T4 to allow a firmware update - the LED will now glow green for 10 seconds.
5. While the LED glows green, start the device‘s firmware update from your gateway.

18 Technical Data

Product Key Features	In-wall mounted binary switch control Z-Wave Plus Security S2 SmartStart compatible with German market wall switch product lines Overload protection
supply voltage	230 VAC +/- 10%
line frequency	50Hz +/- 10%
rated load current of output (resistive load)	5 A for each load 6.3 A for both loads together
output circuit power - resistive load - reactive loads	1449 W 1449 VA
electricity consumption (without load)	< 0,4 W
operation altitude	< 2000 m NN
IEC protection class	Schutzklasse II

accuracy of power measurement	>= 100W: +/- 3%
Status LED	Red status LED is on during inclusion process Green LED is on for 5 s after succesful inclusion
Ambient Conditions Operational	Temperature: +5°C to +35°C Humidity: 10 % to 75% RH IP Code: IP20
Ambient Conditions Warehousing & Transport:	Temperature: -20°C to +60°C Humidity: 5 % to 90% RH non condensing

Subject to technical changes and errors.
Subject to change for amendments and printing errors.

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