Wall Switch

Featuring LoRaWAN®

WS50x



WS50x is a smart LoRaWAN® wall switch for the local and remote control of lights and electrical appliances. It adopts two standard sizes for most of international wall switch types, which can replace the traditional wall switches directly. Compliant with Milesight LoRaWAN® gateway and Milesight IoT Cloud solution, WS50x can be monitored and controlled via webpage or mobile App remotely and triggered by other Milesight sensors.

WS50x can be widely used for indoor applications in homes, offices, hotels, museums, etc.

◆ Features

- Support local or remote control via high reliability relay
- Collect current, voltage, power, electrical consumption and support overload protection
- Built-in switch indicator, easy to use in dark environment
- Ultra-wide-distance wireless transmission up to line of sight of 15 km
- Equipped with NFC for one touch configuration and support card emulation mode
- Function well with standard LoRaWAN® gateways and network servers
- Compliant with Milesight IoT Cloud and Milesight Development Platform
- Support Milesight D2D protocol to enable ultra-low latency control without gateway
- Support multicast feature to control switches in bulk

◆ Specifications

Electrical	
Circuit Type	3-Wire (Neutral Required)
Switch Indicator	Ice Blue
Input Voltage	100~250 VAC, 50~60 Hz
Maximum Current	Inductive: 5 A per Gang, Total 10 A Resistive: 10 A per Gang, Total 10 A
Rated Load	Max 1000 W per Gang, Total 0~2000 W
Terminal	SPST
Switches (Optional)	86 Type: 1-Gang/2-Gang 120 Type: 1-Gang
Measurement	Voltage (VAC), Current (mA), Power Factor (%), Active Power (W), Power Consumption (kWh)
Measurement Accuracy	Typical ±3%, Maximum ±5 % (±1% Customizable)
Wireless Transmission	
Technology	LoRaWAN®, Milesight D2D
Antenna	Internal Antenna
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16 dBm (868 MHz)/22 dBm (915 MHz)/19 dBm (470 MHz)
Sensitivity	-137dBm
Mode	OTAA/ABP Class C
Software	
Configuration	Mobile App via NFC or Downlink
Switch Control	Local Press or Remote Control
Advanced Features	Delay Switch, Switch Lock, Overcurrent Protection, Multicast, Milesight D2D Agent, Milesight D2D Controller
Physical Characteristics	
Ingress Protection	IP20
Material & Color	Polycarbonate (UL94 V0), White (Customizable)
Weight	86 Type: 94g (1-Gang), 103g (2-Gang) 120 Type: 100.4g
Dimensions	86 Type: 86 × 86 × 40 mm (3.39 × 3.39 × 1.57 in) 120 Type: 118 × 72 × 46.9 mm (4.65 × 2.83 × 1.85 in)
Operating Temperature	-20°C ~ 60°C (-4°F ~ 140°F)

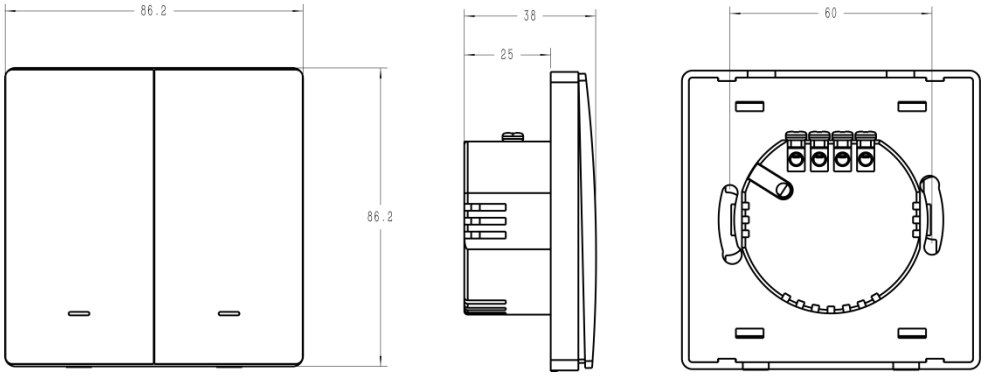
Relative Humidity	0% ~ 95% (non-condensing)
Installation	Wall Mounting
Approvals	
Regulatory	CE, FCC
Environmental	RoHS

◆ Ordering Information

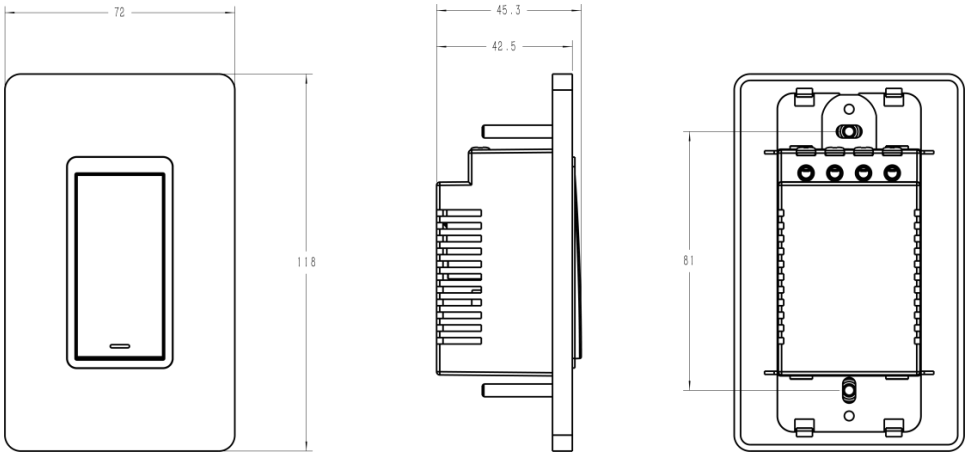
Model	PN	Description
WS501	3W-W12-US	1-Gang, suitable for 118/120 square pattress box
WS501	3W-W11-EU	1-Gang, suitable for 86mm square pattress box
WS502		2-Gang, suitable for 86mm square pattress box

◆ Dimensions

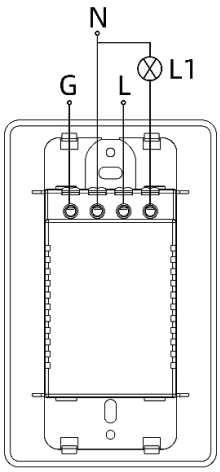
86 Type:



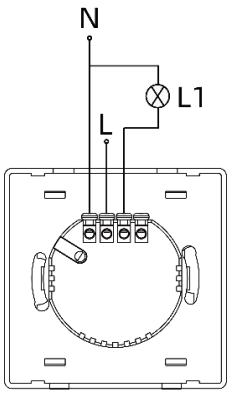
120 Type:



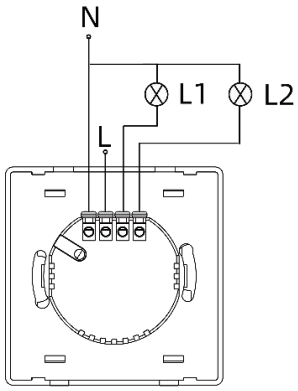
◆ Wiring Diagram



WS501
(3W-W12-US)



WS501
(3W-W11-EU)



WS502
(3W-W11-EU)