

# WxS7800-341011

WiFi Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal

## Product Highlights

- ❖ WiFi Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal
- ❖ 2-in-1 smart sensor(s) and RTU terminal product
- ❖ Optional DC 5V/DC 12V power supply
- ❖ Optional Battery power supply (ER34615H 19,000mAh/ER34615M 13,500mAh)
- ❖ It can be opened or moved illegally by non-contact monitoring, and the monitoring distance is 20mm-30mm
- ❖ Expandable with 2 of 14 types PSS gas sensors with aluminum sleeve enclosure
- ❖ Up to 8 working simultaneously including sensors and controllers; Customization needed if more than 8 working at the same time
- ❖ RTU controlling signal and interfaces OD/PWR triggered by sensor(s) data or OTA command for solenoid valve or other devices
- ❖ Optional (Public/Private) IoT cloud platform PolySuite iView

## Products includes following parts:

- ❖ WxS7800 WiFi Smart IoT and RTU 2-in-1 Terminal
- ❖ ENC-102001 WxS Series 4.0 Enclosure(  $\phi$  145x90x55mm, IP67)
- ❖ PSS-341011 Door/window magnetic switch Sensor (Indoor)

## Configuration Tool

- ❖ iEdge4.0 WxS IoT Terminal products can be configured with PolySuite software-visual based Configuration Tool or CLI interface command or OTA via IoT platform, such as PolySuite PaaS platform iView.
- ❖ Download link <http://ota.polysense.online/wincc/ConfigurationTool.rar>

## Product Image

- ❖ The shell is WxS Series 4.0 Enclosure(  $\phi$  145x90x55mm, IP67) , as shown in the figure below
- ❖ The sensor is externally connected. See the following document PSS-341011 for the sensor picture



# WxS7800

## WiFi Smart IoT and RTU 2-in-1 Terminal

### Related Products

Product #	Interf.	Descriptions
WxS7800	11MPI+RS485+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx00,PSB-BD01,&Enclosure)
WxS7801	RS485+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx01,PSB-BD01,&Enclosure)
WxS7802	0-20mA*1+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx02,PSB-BD01,&Enclosure)
WxS7803	0-20mA*4+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx03,PSB-BD01,&Enclosure)
WxS7804	0-3.3V*2+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx04,PSB-BD01,&Enclosure)
WxS7805	0-3.3V*4+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx05,PSB-BD01,&Enclosure)
WxS7806	0-10V*2+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx06,PSB-BD01,&Enclosure)
WxS7807	0-10V*4+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx07,PSB-BD01,&Enclosure)
WxS7808	PT100*1+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx08,PSB-BD01,&Enclosure)
WxS7809	PT100*5+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx09,PSB-BD01,&Enclosure)
WxS780A	Switch*1+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0A,PSB-BD01,&Enclosure)
WxS780B	Switch*5+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0B,PSB-BD01,&Enclosure)
WxS780C	Unibus*1+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0C,PSB-BD01,&Enclosure)
WxS780D	Unibus*18+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0D,PSB-BD01,&Enclosure)
WxS780E	IIC*1+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0E,PSB-BD01,&Enclosure)
WxS780F	SPI*1+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0F,PSB-BD01,&Enclosure)
WxS780G	Uart*2+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0G,PSB-BD01,&Enclosure)
WxS780H	Uart*3+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0H,PSB-BD01,&Enclosure)
WxS780J	Uart*1+RS485+OD*2+PWR*2	WiFi Smart IoT and RTU 2-in-1 Terminal (Inc.WxS78xx,PSM-xx0J,PSB-BD01,&Enclosure)
WxS7850	Ai/Ao/Di/Pi/Ro/IIC/SPI/Ci + RS232/485/Ro/RJ45	WiFi Smart RTU

### Product Highlights

- ❖ Interfaces supported:
  - MPI:(AIN(0-20mA)\*2, PT100\*1, VIN(0-10V/0-3.3V)\*2, Switch\*1 ,Unibus\*1, IIC \*1, SPI\*1, Uart(3.3V TTL)\*2), RS485\*1
  - RTU interfaces
    - OD\*2 output for external devices controlling
    - PWR\*2 output for external devices/sensors power supply or customization usage
- ❖ 2-in-1 DC(5V/12V)+Battery(3.6V Li-SOCl2 ER34615H/M) Power Supply, DC in priority
- ❖ Up to 8 working simultaneously including sensors and controllers; Customization needed if more than 8 working at the same time
- ❖ Built-in sensor options including:
  - PSS-403011 IIC Temperature and Humidity Sensor (Indoor)
  - PSS-403012 RS485 Temperature and Humidity Sensor (Indoor)
  - PSS-403013 IIC Temperature and Humidity Sensor (IP67,Outdoor)
  - PSS-403014 RS485 Temperature and Humidity Sensor (IP67,Outdoor)

- PSS-403015 IIC Temperature and Humidity Sensors (Indoor)
- PSS-403016 RS485 Temperature and Humidity Sensors (Indoor)
- PSS-403017 IIC Temperature and Humidity Sensors (IP67,Outdoor)
- PSS-403018 RS485 Temperature and Humidity Sensors (IP67,Outdoor)
- PSS-403019 IIC Temperature and Humidity Sensors (Indoor)
- PSS-40301A RS485 Temperature and Humidity Sensors (Indoor)
- PSS-40301B IIC Temperature and Humidity Sensors (IP67,Outdoor)
- PSS-40301C RS485 Temperature and Humidity Sensors (IP67,Outdoor)
- PSS-403021 IIC Temperature + Humidity + Barometric Pressure Sensors(Indoor)
- PSS-403022 RS485 Temperature + Humidity + Barometric Pressure Sensors(Indoor)
- PSS-403023 IIC Temperature + Humidity + Barometric Pressure Sensors (IP67,Outdoor)
- PSS-403024 RS485 Temperature + Humidity + Barometric Pressure Sensors (IP67,Outdoor)
- PSS-33B011 RS485 illumination Sensor(Indoor)
- PSS-423011 Uart AQI(PM2.5/10, SO2,NO2, O3, CO,Temp,Humidity) PPM Level Sensors
- PSS-423031 Uart IAQ(PM2.5/10, CO2, HCHO, Temp,Humidity) Sensors
- PSS-423041 Uart IAQ(PM2.5/10, CO2, TVOC, Temp,Humidity) Sensors
- PSS-423051 Uart IAQ(PM2.5/10, CO2, HCHO, TVOC,Temp,Humidity)Sensors
- PSS-318711 Uart GPS/Beidou Positioning Sensor
- PSS-318712 RS485 GPS/Beidou Positioning Sensor
- PSS-319311 0-3.3V Tilt / Inclination Sensor (SHM- Structure Health Monitoring)
- PSS-333051 0-3.3V PIR Sensor (3-4 Meters)
- PSS-333052 0-3.3V PIR Sensor (up to 20 Meters)
- PSS-334061 0-3.3V UV Sensor (Range:0-15 grade, outdoor)
- PSS-355051 Switch Uni-Call Button & Controller
- PSS-362011 Uart Sound/Noise Sensor (30~130dB range, Indoor)
- All Gas Sensors with Product No. PSS-21xxxx

❖ Support 1-8 enclosure externally connected sensors

- All enclosure external PSS sensors w/o separate power supply

❖ RTU OD&PWR(PWM) output control interfaces

- OD output control interface for controlling external devices such as electric relay,AC contactor, beeper, draught fan, lamps and lantern etc.
- PWR\*2 output, one default for external devices/sensors power supply voltage output, one with 3.3V voltage; or customization usage,such as for PWM port
- PWR port signal can be used as PWM output to control stepper moter or lamp
- Sensor(s) data or OTA Command triggered OD/PWR controlling signal&interfaces

❖ Power supply options:

- PSB-BT01 WxS Terminal Battery Power (3.6VDC Output) (3.6V Li-SOCI2 ER34615H/M)
- PSB-BT02 WxS Terminal Battery Power Board (3/5/9/12VDC Output) (3.6V Li-SOCI2 ER34615H/M)
- PSB-DC01 WxS Terminal DC Power Board (Inc. PSP-DC012V)
- PSB-BD01 WxS Terminal Battery (3.6V Li-SOCI2 ER34615H/M) & DC Power Board(Inc. PSP-DC012V)
- Battery capacity ER34615H: 19000mAh/ER34615M: 13500mAh

- ❖ iEdge 4.0 terminal enclosure options
  - ENC-102001 WxS Series Standard Enclosure(145x90x55mm)IP67
  - ENC-102002 WxS Series Poromeric Enclosure(145x90x59mm)
  - ENC-102003 WxS Series High Poromeric Enclosure(145x90x70mm)
  
- ❖ Terminal and sensor parameters configurable with Configuration Tool running on PC
  - WiFi Bands Supported and SW Configurable
  - WiFi Uplink Transmission Cycle Configurable
  - Sensor Parameters Configurable
  - Sensor Data Report Cycle Configurable
  
- ❖ FOTA (Over The Air) firmware upgrade, including to upgrade loader and application images
- ❖ OTA (Over The Air) terminal running parameters supported including output signal
- ❖ Low power consumption, years of battery operational life with 3.6V Li-SOCI2 ER45615H/M Battery with various scenarios
- ❖ Integrated internal antenna, or optional external SMA/IPEX antenna
- ❖ WiFi Compliance

## Specifications

Parameters	Value
<b>Smart Terminal</b>	
Interfaces	MPI Interfaces-Any Mixture of Following: MPI:(AIN(0-20mA) *2, PT100 *1, VIN(0-10V/0-3.3V) *2, Switch *1 ,Unibus*1, IIC *1, SPI*1, Uart(3.3V TTL)*2), RS485*1 Output Control: OD*2&PWR*2
Data Report	Cross-threshold report, plus periodic report (the threshold and the periodic report cycle are both user-configurable)
Intensive data sampling and averaging	Support intensive data sampling and averaging to improve data accuracy
<b>Wireless</b>	
Wireless standards	802.11 b/g/n
output power	+20 dBm in 802.11b mode
frequency range	2.4GHz-2.5GHz (2400M-2483.5M)
Data connection	UART/HSPI/I2C/I2S/Ir Remote Control
Wireless network mode	station/softAP/SoftAP+station
Network Protocol	IPv4, TCP/UDP/HTTP/FTP
Power	Power consumption in standby mode is less than 1.0 mW (DTIM3)
Antenna	Integrated internal antenna or external 1/2 wavelength whip antenna (SMA)
<b>Mechanical</b>	
Dimension	3 Enclosure options with different size WxS Series 4.0 Enclosure(φ145x90x55mm, IP67) WxS Series 4.0 Poromeric Enclosure(φ145x90x59mm) WxS Series 4.0 High Poromeric Enclosure(φ145x90x70mm)
IP rating	IP65&IP67

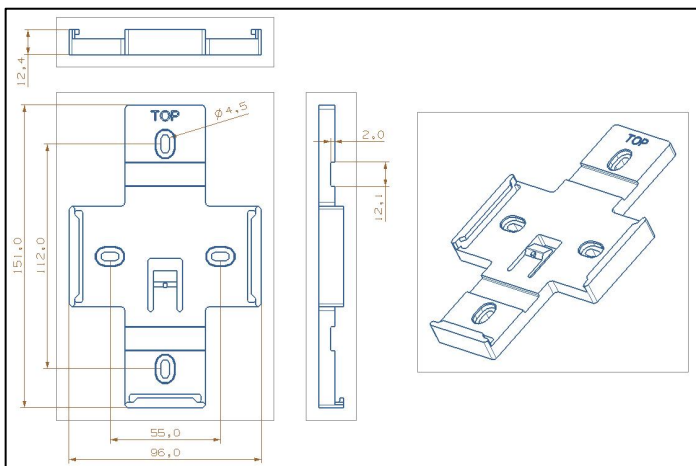
Operating Temperature	-40C to +85C
Total Weight	150 g
<b>Electrical</b>	
Supply Voltage	3.6VDC
Power Type	Replaceable 1 ER34615H/M 3.6V Li-SOCI2 Battery (H/M); DC 4.5V – 12V optional

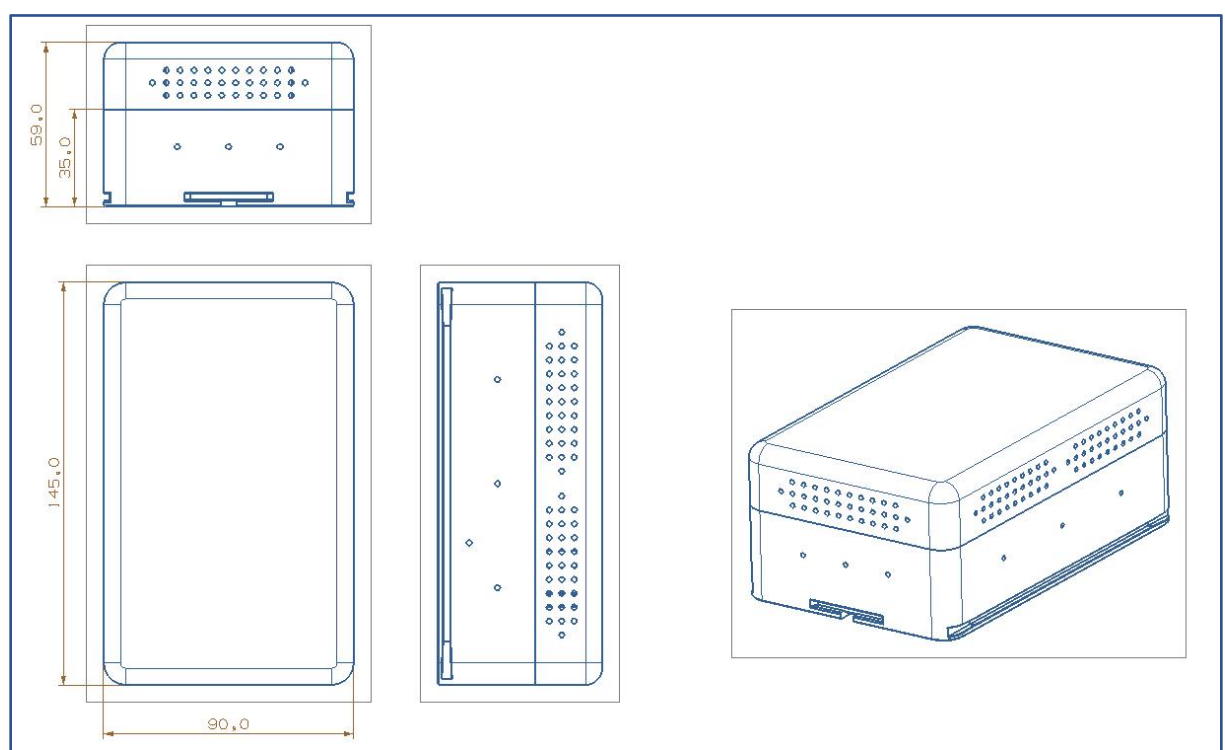
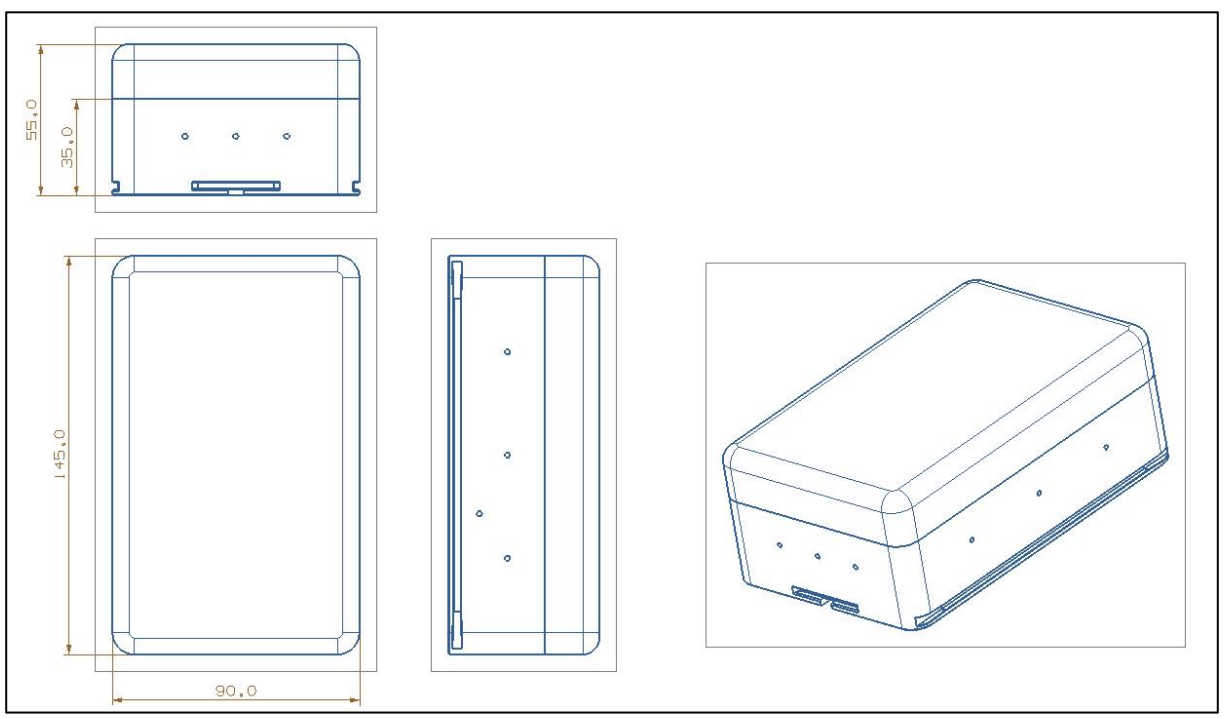
## Configuration Tool

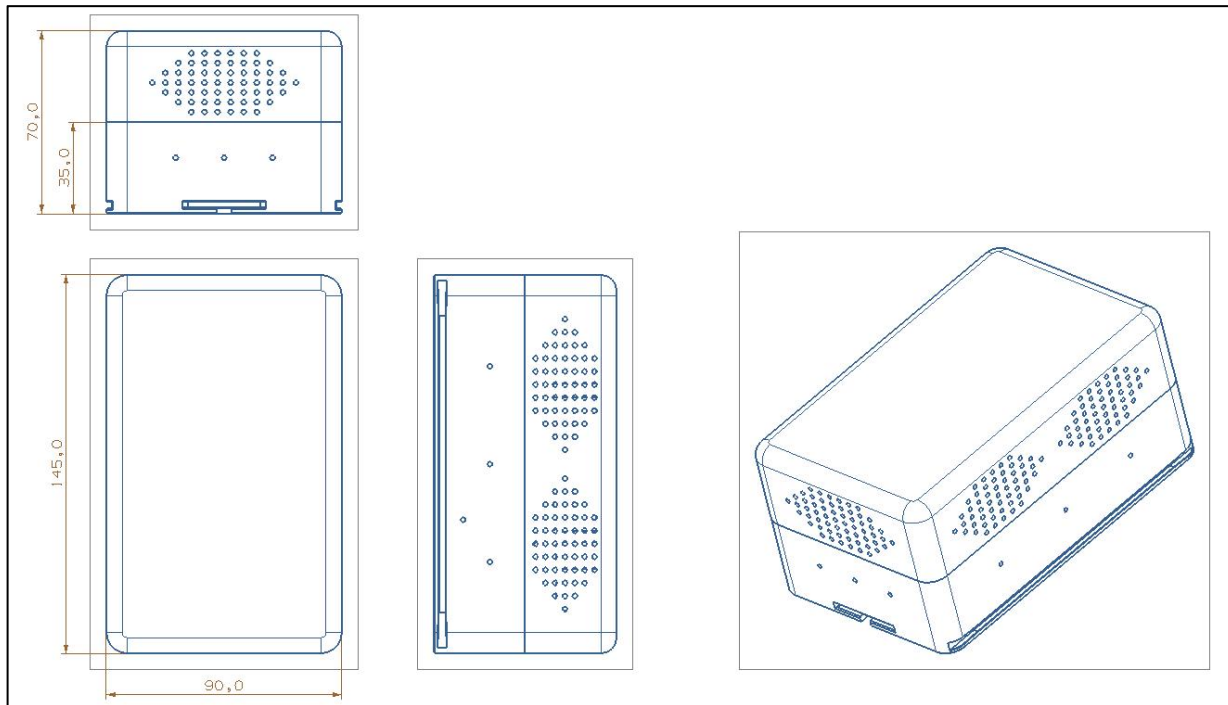
- ❖ iEdge4.0 WxS IoT Terminal products can be configured with PolySuite software-visual based Configuration Tool or CLI interface command or OTA via IoT platform, such as PolySuite PaaS platform iView.
- ❖ Download link <http://ota.polysense.online/wincc/ConfigurationTool.rar>

## Installation Guide

- ❖ Below diagram shows the general installation guide for WxS7800, it can be installed on any flat and solid surface:

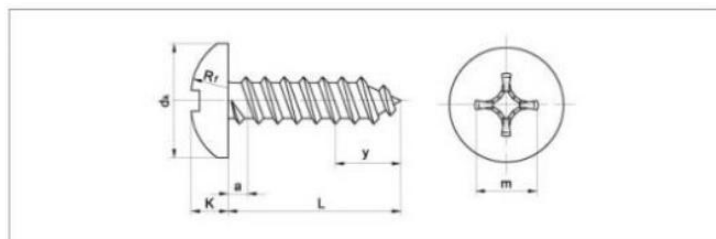






❖ Below is the recommendation of the self-tapping screw and its sizes:

螺纹规格		ST2.2	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3
dk	min	3.7	5.3	6.64	7.64	9.14	10.57	11.57
K	min	1.4	2.15	2.35	2.8	3.4	3.7	4.3
m		1.9	3	3.9	4.4	4.9	6.4	6.9
L		4.5mm-100mm						





## Product Images

❖ WxS Series 4.0 Enclosure(φ145x90x55mm, IP67)



❖ WxS Series 4.0 Poromeric Enclosure(φ145x90x59mm)



❖ WxS Series 4.0 High Poromeric Enclosure(φ145x90x70mm)



# PSS-341011

## Door/window magnetic switch Sensor

### Product introduction

PSS-341011 Doors, windows, cabinets and magnetic switches are widely used in the field of intelligent home. Door magnetism is used to detect whether doors, windows, drawers, etc. are illegally opened or moved. Non-contact magnetic field monitoring, safer and more hidden.

### Detection principle

Using the principle of a non-contact magnetic field. The magnetic switch is mainly composed of a switch and magnet. The switch part is connected with the reed switch through a lead and is formed and encapsulated. The magnet portion responds to the magnetic field strength and is encapsulated in a plastic or alloy housing. When the two are separated or close to a certain distance, the switch opens and closes, to sense the change of object position.

### Product features

- ❖ Non-contact thermal stress
- ❖ Sensing distance 20mm ~ 30mm
- ❖ Normally open and normally closed conversion
- ❖ Easy installation, concealment and flexibility
- ❖ Sensitive induction and strong anti-interference



### Product parameters

Parameters	
Sensing distance	20mm - 30mm
Switch form	Normally closed, normally open, switching
Maximum load	10W, 100V, 0.5A
Warranty	
Warranty period	1year
Mechanics	
Working temperature	- 30°C~60°C
Relative humidity	≤95%
Shell material	Zinc alloy, silver gray
Size	49 * 19 * 10mm (customizable)
Power	
Working current	0.25mA
Operating voltage	100V
Power	3W

### Application

A door magnet is common safety protection and alarm device in daily life. Door magnetism is mainly used to test whether windows, doors, cabinets, drawers, etc. are illegally moved or opened. Door magnets are used in the security industry, electric power, telecommunications, banks, companies, warehouses, schools, residential areas, houses, factories, and many other places that need door and window protection.

## Ordering Guide

- ❖ PSS-341011 sensor is a sensor only, it needs to use with WxS terminals to combine to different product series; On the basis of the combination, multiple PSS sensors can be loaded through the Multiple Purpose Interface (MPI) of the intelligent IoT terminal.
- ❖ According to the specific scenario of use case, the enclosure and antenna of intelligent IoT terminal will be replaced to ensure the product quality and performance.
- ❖ PSS sensors can be integrated with the WxS terminal via the MPI interface to form different product series.
- ❖ Example of products are as follows:
  - WxS7800-341011 WiFi Series Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal
  - WxS8800-341011 LoRaWAN Series Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal
  - WxS9800-341011 NB-IoT (China) Series Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal
  - WxS9900-341011 NB-IoT (Global) Series Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal
  - WxSC800-341011 LTE Cat1 Series Door/window magnetic switch Sensor
  - WxSC900-341011 LTE Cat1 w/GPS Series Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal
  - WxSD800-341011 LTE Cat4 Series Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal
  - CxS1800-341011 Ethernet (RJ45) Series Door/window magnetic switch Smart Sensor & RTU 2-in-1 Terminal