Door Window Sensor 8

(ZWA055)

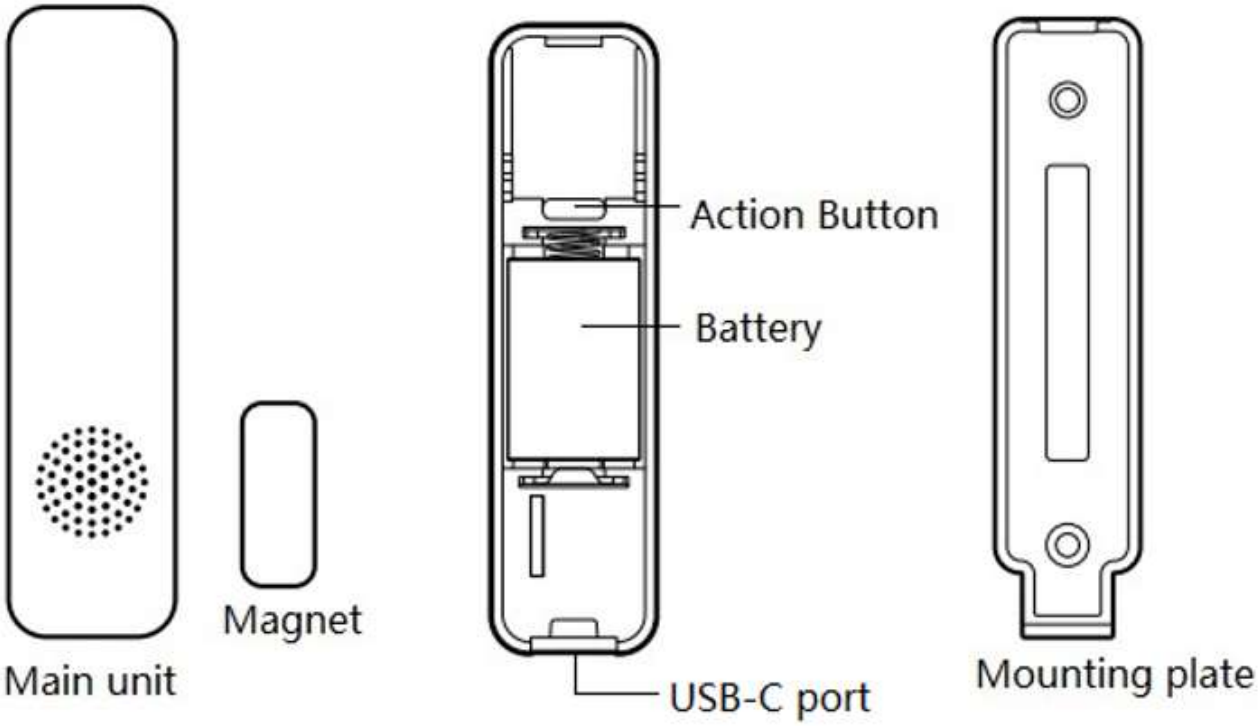
REVISION RECORD		
Version	Date	Brief description of changes
0.1	2024.12.26	First revision.
0.2	2025.07.03	update
0.3	2025.11.12	update
0.4	2025.12.15	Update. Add description for Param 13.

Table of Content

1 OVERVIEW

Aeotec Door Window Sensor 8 is a sensor designed to detect whether a window/ or door is open, closed, or tilted. This sensor is easy to install. Thanks to its slim design, the Door Window Sensor 8 can be discreetly installed on any window. Simply mount the sensor on the window frame and place a slim magnet on the frame near the sensor. Additionally, the sensor integrates temperature and humidity sensors, allowing it to reliably monitor the status of the window/ door while also detecting indoor environmental conditions. Twice clicking the action button includes (adds) or excludes (removes) the device. A single press wakes up the device.

This product supports Security 2 Command Class. While a Security S2 enabled Controller is needed in order to fully use the security feature. This product can be operated in any Z-Wave® network with other Z-Wave/ Z-Wave Plus® certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network. This product also supports SmartStart.



Terminology	Description
Action button	Used for networking ,resetting and protecte the device.
Led (Green, Red)	Used for indicating the current state of the product.
Battery	Power supply
USB	Power supply
tamper switch	Trigger tampering report
Magnet	Change the sensor state via making the Magnet away or near from Main Sensor.

2 SPECIFICATIONS

2.1 Structural

Parameter	Value
Product Identifier	ZWA055
Dimensions	70x18x19mm
Color	White
Usage	For indoor use.
Operating Temperature	32~104°F (0~40°C)
Relative Humidity	8%~80%

2.2 Hardware

Parameter	Value
Z-Wave Module	EFR32ZG23
Z-Wave TX Power	Max: 14dBm
Z-Wave Classic Antenna Distance	40m (Indoor) /150m (Outdoor)
Buttons	Action Button x1
Indicator Light Color	Green, Red
Connectors	Magnet x1
Built-in Sensors	hall switch
Temperature Sensor	-10 to 60°C (+- 1°C)
Relative Humidity Sensor	0 to 90% RH +- 3%
Dew Point Temperature	-10 to 60°C (+- 1°C) Td = T – (95-RH) / 5 (Td=Dew Point, T=Temerature, RH=Relative Humidity)
Mold Detection	When |T – Td| <= 1 + param13 trigger Mold danger alram. By default, when humidity greater than or equal to 90%, it will trigger mold danger.
Power Type	USB or 1*CR14250

USB Power Supply:

Parameter	Value
Work Current	12mA
Standby Current	6mA

Battery Supply:

Parameter	Value
Work Current	12mA
Standby Current	10uA

2.3 Software

Parameter	Value
Wireless Technology	Z-Wave
Certification Type	Z-Wave Plus v2 Certification
Z-Wave SDK Version	7.23.2
Z-Wave Library Type	Enhanced 232 Slave
Z-Wave Role Type	Always On Slave(USB Power Supply), Reporting Sleeping Slave(Battery Supply).

Generic Product Type	GENERIC_TYPE_SENSOR_NOTIFICATION [0x07]
Specific Product Type	SPECIFIC_TYPE_NOTIFICATION_SENSOR [0x01]
Security Class	Non-Security, S2 Unauthenticated, and S2 Authenticated
SmartStart Compatible	Support. After powering on, SmartStart is auto activated.
Over The Air (OTA)	Support. Firmware can be updated via RF.
Multi Channel Product	No
Association	Support. Refer to Section 4.7 Association Group Info.
Factory Reset	Support. Refer to Section 3.7 How to factory reset.
Power-down Memory	Support. All command settings will stay unchanged even power down.
Sensor State Report	Support. Send out notification via Group 1 when Magnet is away or near.
Control other product	Support. Control other Z-Wave product directly via Group 2 when Magnet is away or near. Control other Z-Wave product directly via Association Group when heat alarm and weather alarm is triggered.

3 QUICK START

3.1 Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law. The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material. Use this equipment only for its intended purpose. Follow the disposal instructions. Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

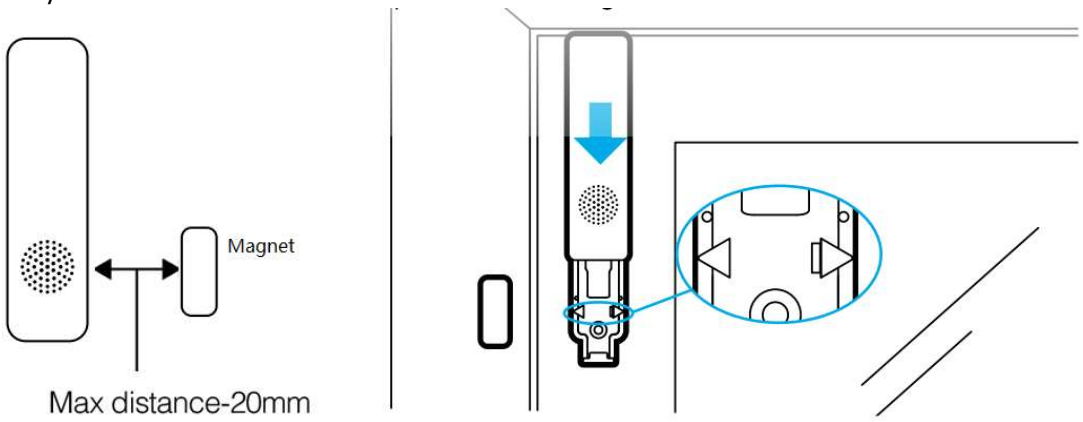
3.2 How to install the product

This is a **secure Alarm Sensor**. To run this device please insert fresh 1 * CR14250 batteries. Please make sure the internal battery is fully charged. The DSK for the S2 inclusion can be found inside the sensors packaging.

If your Z-Wave gateway supports SmartStart: scan the QR code on Door / Window Sensor 8 using the gateway's app. Your sensor will join your Z-Wave network automatically.

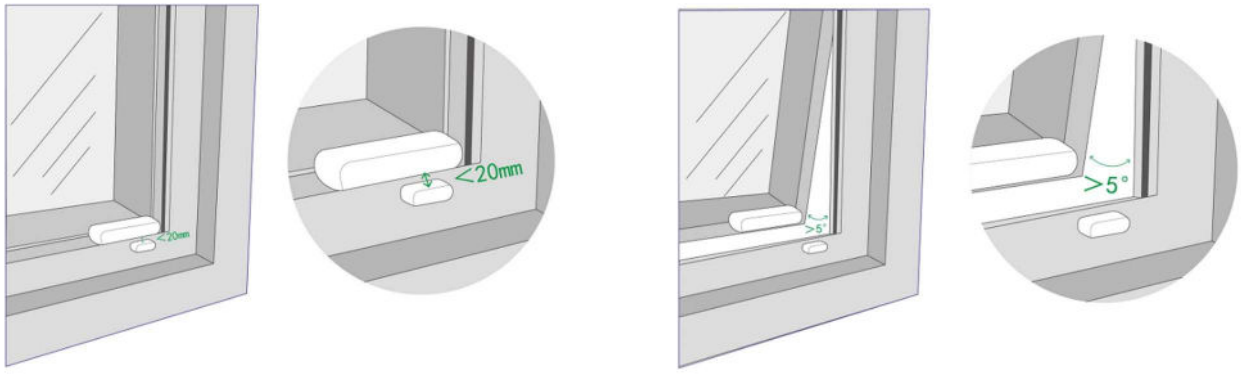
The sensor can be mounted either on the moving part or on the fixed part of a door or a window. Mounting can be accomplished either using the tape by peeling off the protection foil or using two screws with the holes inside the battery compartment. If the tilt detection on a window (only normal windows, no roof windows) shall be used the sensor device must be placed on the moving part of the window and the magnet on the window frame.

- The magnet covered by plastic part, mountable beside the sensor. Make sure the two indicating lines on sensor enclosure and magnet are opposite to each other. The image on the right-hand side shows the position of magnet and sensor body.



- To use the tilting function, the opening angle of the window must be at least 5°.

For German-style windows where the window sits on top of the window frame mounting on the side of the window is highly recommended. If no tilting detection is used, the sensor can be placed on any position of the door or the window. In case tilting detection is desired the sensor should be placed on the upper side of the window.



3.3 How to add the product

The following will step you through adding the product to your Z-Wave network.

1. Open the housing.

2. Remove the battery protection.

3. Press the action button twice quickly.

If your Z-Wave gateway supports SmartStart: scan the QR code on Door / Window Sensor 8 using the gateway's app. Your sensor will join your Z-Wave network automatically.

3.4 How to remove the product

1. Open the housing.

2. Press the action button twice quickly.

3.5 About SmartStart

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. You can find the QR code on the back of the product, like this:

PIN: 05065

The DSK information will be like this: **05065**-41336-16018-47313-50335-02212-29424-38760

3.6 About Product

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

3.7 How to factory reset

Reset procedure allows to restore the product back to its factory settings, which means all information about the Z-Wave controller and user configuration will be deleted.

1. Make sure the product is powered.

2. Press and hold the button for at least 12s, and then Factory Reset is performed. The product will issue a Device Reset Locally Command via its Lifeline to notify the Lifeline destination that the product has been reset to its factory default state. And it will perform the reset operation regardless of whether or not the delivery of the Device Reset Locally Notification is successful.

Note:

If you press and hold the button, 5 to 12 seconds, the Green LED will fast flash,and then Green LED light 2 senconds until the factory settings are restored.

Resetting the product is not the recommended way of removing the product from the Z-Wave network. Use reset procedure only if the primary controller is missing or inoperable. Certain product removal can be achieved by the procedure of removing described in “How to remove the product”.

3.8 Safety Warning for Batteries

The product contains batteries. Please remove the batteries when the device is not used. Do not mix batteries of different charging level or different brands.

3.9 Product Usage

Once installed the sensor will report "open" and "close" status changes to a central Z-Wave controller using notification commands. Additionally, the sensor can directly control other devices using association group. The device is protected by a tamper switch.

Tilt detection

The tilt detection allows reporting the way a window is opened. This is accomplished using the command class "binary sensor - tilt-type". The tilt function has 3 modes (mode 1 by default):

Mode 0: turn off the tilt function

Mode 1: Enable tilt function. It needs to be used with magnets. In case the magnet is far away and the tilt angle of the product is greater than 5 degrees, the tilt event is triggered. In case the magnet is near, the tilt event is released.

Mode 2: Enable tilt function. It can be used alone, but need to identify the current installation location. When this mode is configured or powered on (mode 2), it will enter the identification mode and the green light will flash. The product needs to stand still for 3-8 seconds. If the recognition fails, the red light will be on, and the tilt function is not available. It needs to be recognized again. If the recognition is successful, the green light will be on.In case the tilt angle of the product is greater than 5 degrees, the tilt event is triggered. In case the tilt angle of the product is less than 5 degrees, the tilt event is released

3.10 Long Range

ZWA055 A (US_LR) can be included using Z-Wave Long Range.
ZWA055 C (EU_LR) can be included using Z-Wave Long Range.

3.11 About Z-Wave Role Type

1. When include to the network using USB power, the role type of the product is Always On. Changing to battery power will keep the role type in its network, which is also a Always On Slave.
2. When powered by batterry and include to the network, the role type of the product is Reporting Sleeping. Changing to USB power supply will keep the role type in its network, which is also Reporting Sleeping Slave.

4 SOFTWARE FUNCTION DEFINITION

4.1 User Behavior Interaction

The following brightness levels are all 100% unless otherwise specified.

User behavior status	Out of the Z-Wave network	In the Z-Wave network
Power OFF	N/A	N/A
Power ON	1, The red and green led will on for 1 second, indicating self inspection. 2, The green led breathing 3 times and then turn off, indication out the Z-Wave network. 3, Send Inclusion Requests for SmartStart Learn Mode.	1, The red and green led will on for 1 second, indicating self inspection 2, LED will light up green for 1 seconds and turn off, indicating in the Z-Wave network. 3, Send Wake Up Notification. 4, Send all sensor data LED will become flash green once, and device will wake up for 15 seconds.
Click Z-Wave button once	**1, Exit Classic Inclusion Learn Mode:** If during the Classic Inclusion Learn Mode, the Classic Learn Mode will exit. LED will turn off. **2, Indicate network status** The green led breathing 3 times and then turn off.	**1, Exit Classic Inclusion Learn Mode:** If during the Classic Inclusion Learn Mode, the Classic Learn Mode will exit. LED will turn off. **2, Send Wake Up Notification** green led will on for 1 second, and device will wake up for 15 seconds(if received wakeup no more information, will go to sleep immediately).
Click Z-Wave button twice	**1. Send Node Info for Adding.** LED will blink green for 30s until it is added into the network. If Adding succeeds, LED will light up green for 2 seconds If Adding fails, LED will turn off. Device will auto-reset and then activate SmartStart Learn Mode again. **2.Exit Classic Inclusion Learn Mode:** If Z-Wave button is clicked again during the Classic Inclusion Learn Mode, the Classic Learn Mode will exit. LED will turn off. Device will auto-reset and then activate SmartStart Learn Mode again.	**1. Send Node Info for Removing.** LED will blink green for 30 seconds until it is removed from the network. If Removing succeeds, LED will light up green for 2 seconds and become breathing light 3 times. If Removing fails, LED will light up green for 1 seconds and turn off **2.Exit Classic exclusion Learn Mode:** If Z-Wave button is clicked again during the Classic exclusion Learn Mode, the Classic Learn Mode will exit. LED will turn off.
Press and hold Z-Wave button for (0, 1s]	LED: OFF	LED: OFF
hold Z-Wave button for (1, 3s]	Green light on 10%	Green light on 10%

hold Z-Wave button for (3，5s]	Green light on 100%	Green light on 100%，Release and enter sensor reporting mode, Send battery report, multilevel sensor report(Temperature/Humidity/ Dew Point Temperature)
Press and hold Z-Wave button for (5, 12s]	Green Led will accelerate Falsh.	Green Led will accelerate Falsh.
Press and hold Z-Wave button for >12s	**Factory Reset And Restart** Green Led will become constantly light for 1 second, and become breathing light indicates the reset is success.	**Factory Reset AND Restart.** Green Led will become constantly light for 1 second, and become breathing light. The device will issue a Device Reset Locally Command via its Lifeline to notify the Lifeline destination that the device has been reset to its factory default state. And it will perform the reset operation regardless of whether or not the delivery of the Device Reset Locally Notification is successful.
wakeup notification of Periodic	N/A	LED will light up green for 1 seconds and turn off
Multilevel report of Periodic	N/A	LED will light up green for 1 seconds and turn off
Mould dange alarm or idle	N/A	LED will light up red for 1 seconds and turn off
Plug in or unplug the USB	The red led will light up green for 1 seconds and the green led breathing 3 times and then turn off.	LED will light up red for 1 seconds and turn off
Tamper triggered or released	The red led will light up green for 1 seconds and the green led breathing 3 times and then turn off.	LED will light up red for 1 seconds and turn off
acceleration report	N/A	LED will light up green for 1 seconds and turn off
Door opened or closed	The red led will light up green for 1 seconds and the green led breathing 3 times and then turn off.	LED will light up red for 1 seconds and turn off

4.2 Supported Command Classes

Command Class	Version	Securely 2 added	
		Non-secure CC List	Secure CC List
ZWAVEPLUS_INFO	2	Support	Support
ASSOCIATION	2		Support
MULTI_CHANNEL_ASSOCIATION	3		Support
ASSOCIATION_GRP_INFO	3		Support
TRANSPORT_SERVICE	2	Support	Support
VERSION	3		Support
MANUFACTURER_SPECIFIC	2		Support

DEVICE_RESET_LOCALLY	1		Support
INDICATOR	3		Support
POWERLEVEL	1		Support
BATTERY	1		Support
SENSOR_BINARY	2		Support
CONFIGURATION	4		Support
SECURITY_2	1	Support	Support
NOTIFICATION	8		Support
WAKE_UP	2		Support
SUPERVISION	1	Support	Support
FIRMWARE_UPDATE_MD	5		Support
MULTILEVEL SENSER	11		Support

4.3 Basic Command Class mapping

Basic Command Class is not mapped to any of the supported command classes.

4.4 Z-Wave Plus Info

Parameter	Value
Z-Wave Plus Version	0x02
Role Type	USB Supply: 5 (ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_END_NODE_ALWAYS_ON) Battery Supply: 6 (ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_SLEEPING_REPORTING)
Node Type	0x00 [ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE)
Installer Icon Type	0x0C06 [ICON_TYPE_SPECIFIC_SENSOR_NOTIFICATION_ACCESS_CONTROL]
User Icon Type	0x0C06 [ICON_TYPE_SPECIFIC_SENSOR_NOTIFICATION_ACCESS_CONTROL]

Mark:

1. When include to the network using USB power, the role type of the product is Always On. Changing to battery power will keep the role type in its network, which is also a Always On Slave.
2. When powered by batterry and include to the network, the role type of the product is Reporting Sleeping. Changing to USB power supply will keep the role type in its network, which is also Reporting Sleeping Slave.
3. Changing the power mode, must re-include the device afterwards to active the change.

4.5 Manufacturer Specific

Parameter	Value
Manufacturer ID 1	0x03
Manufacturer ID 2	0x71
Product Type ID 1	0x00 [EU], 0x01 [US], 0x02 [AU]
Product Type ID 2	0x02 [PRODUCT_TYPE_ID_SENSOR]
Product ID 1	0x00
Product ID 2	0x37 (55)

4.6 Version

Parameter	Value
Z-Wave Protocol Library Type	0x03
Z-Wave Protocol Version	0x07
Z-Wave Protocol Sub Version	0x16
Firmware 0 Version	0x01 [Z-Wave Chip Firmware Version]
Firmware 0 Sub Version	0x00 [Z-Wave Chip Firmware Sub Version]

Hardware Version	0x37 (55)
Number of firmware targets	0x00

4.7 Association Group Info

Root product

ID	Name	Node count	Profile	Function
1	Lifeline	5	General: Lifeline (0x0001)	**Device Reset Locally Notification:** Issued when Factory Reset is performed. **Battery Report:** Issued when battery becomes low. **Sensor Binary Report:** Issued when tilt angle is changed Issued when sensor state is changed. **Notification Report** Issued when door alarm, tamper alarm, Power Management **Multilevel Sensor Report** Issued when timed report, threshold report, limit report.
2	Control	5	Notification:Access Control (0x7106)	**Basic Set:** Control devices when a magnet
3	Alarm	5	Notification:Access Control (0x7106)	**Notification Report:** Sends out alarm message when a magnet
4	Tamper	5	Notification:home Security (0x7107)	**Notification Report:** Sends alarm messages when tamper is trigger
5	Tilting	5	Notification:Access Control (0x7106)	**Basic Set:** Control devices when tilting sensor trips
6	Temperature High Trigger	5	Notification: Heat alarm(0x7104)	**Basic Set** Issured when the temperature detected is higher than set value by Configuration parameter 14.
7	Temperature Low Trigger	5	Notification: Heat alarm(0x7104)	**Basic Set** Issured when the temperature detected is lower than set value by Configuration parameter 15.
8	Humidity High Trigger	5	Notification:Weather alarm(0x7110)	**Basic Set** Issured when the humidity detected is higher than set value by Configuration parameter 16.
9	Humidity Low Trigger	5	Notification:Weather alarm(0x7110)	**Basic Set** Issured when the humidity detected is lower than set value by Configuration parameter 17.
10	Mold danger	5	Notification:Weather alarm(0x7110)	**Notification Report:** Sends alarm messages when Mold danger.
11	Air Temperature	5	Notification:Heat alarm(0x7104)	**Multilevel Sensor Report** Issued when timed report, threshold report, limit report.

4.8 Notification

Notification Type		Notification Events		Description
Access Control	0x06	Window/Door is open	0x16	Open Status.
		Window/Door is closed	0x17	Close Status.
		Unknown event/state	0xFE	Titl event
Home Security	0x07	Tamper trigger	0x03	Tamper trigger
		State idle	0x00	Going to idle
Power Management	0x08	State Idle	0x00	Issured when replace new battery that battery power more than 90%.
		Power has been applied	0x01	Power has been applied
		AC mains disconnected	0x02	Supply by battery
		AC mains re-connected	0x03	Supply by USB

		Replace battery now	0x0B	Issued when battery level is less than the value of configuration parameter 23
Heat Alarm	0x04	State Idle	0x00	Issured when overheat or underheat alram removed.
		Overheat detected	0x02	Issured when detect temperature is higher than set value by Configuration parameter 14.
		Underheat detected	0x06	Issured when detect temperature is lower than set value by Configuration parameter 15.
Weather Alarm	0x10	State Idle	0x00	Issured when Moisture Alarm removed.
		Moisture Alarm	0x02	When |T – Td| <= 1 + param13 trigger Mold danger alram.By default, when humidity greater than or equal to 90%, it will trigger mold danger.

4.9 Binary Sensor

Sensor Type		Sensor Value	Description
Door/Window	0x0A	0x00 / 0xFF	Door/Window State
Tilt	0x0B	0x00 / 0xFF	tilt event
GENERAL	0x01	0x00/0xFF	Mold danger

4.10 Multilevel Sensor

Sensor Type		Support Scale	Measure Range
Temperature	0x01	Celcius (C)	-10 to 65°C (+- 1°C)
		Fahrenheit (F)	14 to 146°F (+- 1.8°F)
Relative Humidity	0x05	Percentage value (%)	0 to 90% RH +- 3%
Dew Point Temperature	0x0B	Celcius (C)	-10 to 65°C (+- 1°C)
		Fahrenheit (F)	14 to 146°F (+- 1.8°F)
Acceleration X-axis	0x34	Meter per square second (m/s^2)	0 to 0xFFFF
Acceleration Y-axis	0x35	Meter per square second (m/s^2)	0 to 0xFFFF
Acceleration Z-axis	0x36	Meter per square second (m/s^2)	0 to 0xFFFF

4.11 Wake Up

Parameter	Value	Time
Min Wake Up Interval Seconds	0x000E10	3600s [1 hour]
Max Wake Up Interval Seconds	0xEFF100	15724800s [182days]
Default Wake Up Interval Seconds	0x093A80	604800s [1 week]
Wake Up Interval Step Seconds	0x0000F0	240s [4 minutes]

4.12 Battery

1. The 2.90V or more battery voltage corresponds to 100% battery level, and 2.60V or less corresponds to 0%.
2. If send Battery Get to the device, it will issue Battery Report with battery level to the requester when waked up.
3. If waked up or power on, it will detect battery level, and issue Battery Report via Lifeline when battery level change over 10%.
4. If waked up or power on, it will detect battery level, and issue Battery Report 0xFF via Lifeline when battery level is less than the value of configuration parameter 23.

4.13 Indicator

Indicator ID		Property ID	
Node Identify (Green Led)	0x50	On Off Period	0x03
		On Off Cycles	0x04
		On time within an On/Off period	0x05

4.14 Configuration

Parameter	0x01 (1)			
Name	Set threshold Check Time			
Info	Set threshold Check Time			
Properties	Size	4	Min Value	0
	Format	Unsigned Integer	Max Value	2678400
	Read-only	False	Default Value	900
	Altering capabilities	False	Advanced	False
Description	Serve parameter 2/3/14/15/16/17 When using battery power, follow this configuration, and the minimum time is 30 seconds. When using USB power supply, for real-time detection.			
	Value	Function		
	0	Disable		
	30~65535	Seconds		

Parameter	0x02 (2)			
Name	Minimum temperature change to report			
Info	Trigger temperature report			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	20(EU,ANZ) / 36(US)
	Altering capabilities	False	Advanced	False
Description	The check interval time is set by configuration parameter 1.			
	Value	Function		

	0	Disable
	1~255	0.1~25.5 degree

Parameter	0x03 (3)			
Name	Minimum humidity change to report			
Info	Trigger humidity report			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	50
	Altering capabilities	False	Advanced	False
Description	The check interval time is set by configuration parameter 1.			

Value	Function
0	Disable
1~255	0.1-25.5%

Parameter	0x04 (4)			
Name	Enable led indication			
Info	Enable led indication			
Properties	Size	1	Min Value	0x00
	Format	Bit field	Max Value	0x3F
	Read-only	False	Default Value	0x3F
	Altering capabilities	False	Advanced	False
Description	This parameter defines when the green or red LED will indicate events. Disabling all indications may extend battery life. Value 0 means no indications. 0 - disable, 1 - enable			

7	6	5	4	3	2	1	0
Reserved	Reserved	acceleration reports (green led)	Device Tampering (red led)	Open/Close Status Change (red led)	Mold danger alarm (red led)	Wake up interval report (green led)	Periodic Reports (green led)

Parameter	0x05 (5)			
Name	State when the magnet is closed			
Info	State when the magnet is closed			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	1
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	This parameter allows to set the states of door/window when the magnet closes to the sensor			

Value	Function
0	Opened is triggered when the magnet is far away, and closed is triggered when the magnet is close
1	closed is triggered when the magnet is far away, and opened is triggered when the magnet is close

Parameter	0x06 (6)			
Name	Group 2 trigger			
Info	Set magnet status that causes sending			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	2
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	This parameter defines the status of the magnet switch that causes sending a BASIC command to all devices of Association Group 2.			

Value	Function
0	Switch after magnet far away and magnet closed
1	Switch after magnet far away
2	Switch after magnet closed

Parameter	0x07 (7)

Name	Command sent to Group 2			
Info	Set which command to send			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	2
	Read-only	False	Default Value	2
	Altering capabilities	False	Advanced	False
Description	This parameter defines which commands is sent to 2nd Association Group			

Value	Function
0	On
1	Off
2	On and Off

Parameter	0x08 (8)			
Name	Basic On of Group 2			
Info	Value of basic set on			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	255
	Altering capabilities	False	Advanced	False
Description	This is the BASIC command value sent in case of On event.			

Value	Function
0-255	Value

Parameter	0x09 (9)			
Name	Basic Off of Group 2			
Info	Value of basic set off			
Properties	Size	1	Min Value	0

	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	This is the BASIC command value sent in case of Off event.			
	Value	Function		
	0-255	Value		

Parameter	0x0A (10)			
Name	Time delay of ON command			
Info	On command is sent after a delay			
Properties	Size	2	Min Value	0
	Format	Unsigned Integer	Max Value	0x7E90 (32400)
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	On command is sent after a delay defined in this parameter, it unit is seconds			
	Value	Function		
	0-32400	seconds		

Parameter	0x0B (11)			
Name	Time delay of OFF command			
Info	Off command is sent after a delay			
Properties	Size	2	Min Value	0
	Format	Unsigned Integer	Max Value	0x7E90 (32400)
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	Off command is sent after a delay defined in this parameter, it unit is seconds			
	Value	Function		

	0-32400	seconds

Parameter	0x0C (12)							
Name	Sensor Limit Enable							
Info	Sensor Limit Enable							
Properties	Size		1		Min Value		0	
	Format		Bit field		Max Value		0x0F	
	Read-only		True		Default Value		0x00	
	Altering capabilities		False		Advanced		False	
Description	0 - disable, 1 - enable							
	7	6	5	4	3	2	1	0
	Reserved	Reserved	Reserved	Reserved	Humidity lower limit	Temperature lower limit	Humidity upper limit	Temperature upper limit

Parameter	0x0D (13)										
Name	Offset value for Mold danger alarm										
Info	Increase the humidity threshold										
Properties	Size		1		Min Value		-10				
	Format		Signed Integer		Max Value		10				
	Read-only		False		Default Value		0				
	Altering capabilities		False		Advanced		False				
Description	When |T – Td| <= 1 + param13 trigger mold danger alram. Mark: Td = T – (95-RH) / 5, The triggered humidity is 95 – 5|1 + param13|										
	Value		Function								
	-10--10		0: humidity greater than or equal to 90%, it will trigger mold danger 10: humidity greater than or equal to 40%, it will trigger mold danger								
	Value	0	1	2	3	4	5	6	7	8	9	10
	Humidity	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%

	Value	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
	Humidity	90%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%

Parameter	0x0E (14)			
Name	Temperature Upper Watermark value			
Info	Send BASIC Set to Group 6 if exceeded			
Properties	Size	2	Min Value	0x0000 (0)(EU/AU) 0x0020(32)(US)
	Format	Unsigned Integer	Max Value	0x03E8 (1000)(EU/AU) 0x0848(2120)(US)
	Read-only	False	Default Value	0x012C(300)(EU/AU) 0x035C (860)(US)
	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	1~1000	0.1~100 degree		

Parameter	0x0F (15)			
Name	Temperature Lower Watermark value			
Info	Send BASIC Set to Group 7 if below			
Properties	Size	2	Min Value	0xFF38 (-200) (EU/AU) 0xFFD8(-40)(US)
	Format	Signed Integer	Max Value	0x03E8 (1000)(EU/AU) 0x0848(2120)(US)
	Read-only	False	Default Value	0 (EU/AU) 0x0140 (320) (US)
	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	-200~1000	-20~+100 degree		

Parameter	0x10 (16)			
Name	Humidity Upper Watermark value			
Info	Send BASIC Set to Group 8 if exceeded			
Properties	Size	2	Min Value	0
	Format	Unsigned Integer	Max Value	1000
	Read-only	False	Default Value	700

	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	0~1000	0%~100.0%		

Parameter	0x11 (17)			
Name	Humidity Lower Watermark value			
Info	Send BASIC Set to Group 9 if below			
Properties	Size	2	Min Value	0
	Format	Unsigned Integer	Max Value	1000
	Read-only	False	Default Value	300
	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	0~1000	0%~100.0%		

Parameter	0x12 (18)			
Name	High Temperature Trigger BASIC Set send			
Info	Set BASIC Set value send to Group6			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	0~255	Basic Set Value		

Parameter	0x13 (19)			
Name	Low Temperature Trigger BASIC Set send			
Info	Set BASIC Set value send to Group7			
Properties	Size	1	Min Value	0

	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	255
	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	0~255	Basic Set Value		

Parameter	0x14 (20)			
Name	High Humidity Trigger BASIC set Send			
Info	Set BASIC Set value send to Group8			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	255
	Read-only	Fasle	Default Value	0
	Altering capabilities	Fasle	Advanced	Fasle
Description				
	Value	Function		
	0~255	Basic Set Value		

Parameter	0x15 (21)			
Name	Low Humidity Trigger BASIC Set send			
Info	Set BASIC Set value send to Group9			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	255
	Altering capabilities	False	Advanced	False
Description				
	Value	Function		

	0~255	Basic Set Value

Parameter	0x16 (22)			
Name	Enable Binary Sensor Report			
Info	for door, tilt, mold danger state			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	1
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	Backwards compatibility, Binary Sensor for door / tilt / mold danger state			

Value	Function
0	Disable
1	Enable

Parameter	0x17 (23)			
Name	Low battery threshold			
Info	Low battery threshold			
Properties	Size	1	Min Value	10
	Format	Unsigned Integer	Max Value	50
	Read-only	False	Default Value	20
	Altering capabilities	False	Advanced	False
Description	Report low battery report when level goes under threshold setting			

Value	Function
10-50	10-50%

Parameter	0x18 (24)
Name	Periodic Reports

Info	Periodic Reports			
Properties	Size	4	Min Value	0
	Format	Unsigned Integer	Max Value	2678400
	Read-only	False	Default Value	43200
	Altering capabilities	False	Advanced	False
Description	The period of battery, temperature, humidity and acceleration report, the minimum time is 30 seconds.			
	Value	Function		
	0	Disable		
	30~65535	Seconds		

Parameter	0x19 (25)			
Name	Offset value for Temperature			
Info	Calibrate temperature			
Properties	Size	2	Min Value	-200
	Format	Signed Integer	Max Value	200
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	Scale is defined by Param 64.eg: Value 15 means 1.5°C or 1.5F			
	Value	Function		
	-200~200	-20.0~20.0 degrees		

Parameter	0x1A (26)			
Name	Offset value for Humidity			
Info	Calibrate humidity			
Properties	Size	2	Min Value	-200
	Format	Signed Integer	Max Value	200
	Read-only	False	Default Value	0

	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	-200~200	-20.0~20.0 %		

Parameter	0x1B(27)			
Name	set tilt sensor mode			
Info	set tilt sensor mode			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	2
	Read-only	False	Default Value	1
	Altering capabilities	False	Advanced	False
Description	set tilt sensor mode			
	Value	Function		
	0	Disable		
	1	Enable. It needs to be used with magnets. (default) 1)When the magnet is far away and the tilt angle of the product is greater than 5 degrees, the tilt event is triggered 2)When the magnet is near, the tilt event is released		
	2	Enable. It can be used alone. 1)When the tilt angle of the product is greater than 5 degrees, the tilt event is triggered 2)When the tilt angle of the product is less than 5 degrees, the tilt event is released		

Parameter	0x1C (28)			
Name	State of tilt in Mode 2			
Info	State of tilt in Mode 2			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	1
	Read-only	False	Default Value	0

	Altering capabilities	False	Advanced	False
Description	This parameter allows setting the state of door/window when the sensor is tilted			
	Value	Function		
	0	Opened is triggered when the sensor is tilted, and closed is triggered when wensor is not tilted.		
	1	closed is triggered when the sensor is tilted, and opened is triggered when sensor is not tilted.		

Parameter	0x1D (29)			
Name	Group 5 trigger			
Info	Set the tilt status that causes sending			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	2
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	This parameter defines the status of the tilt sensor that causes sending a BASIC command to all devices of Association Group 5.			
	Value	Function		
	0	Switch after tilted and not tilted		
	1	Switch after tilted		
	2	Switch after not tilted		

Parameter	0x1E (30)			
Name	Commands sent to Group 5			
Info	Setting which command is sent			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	2
	Read-only	False	Default Value	2
	Altering capabilities	False	Advanced	False
Description	This parameter defines which commands is sent to 5th Association Group			

	Value	Function
	0	On
	1	Off
	2	On and Off

Parameter	0x1F (31)			
Name	Basic On of Group 5			
Info	Value of basic set on			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	0xFF (255)
	Read-only	False	Default Value	0xFF (255)
	Altering capabilities	False	Advanced	False
Description	This is the BASIC command value sent in case of On event.			
	Value	Function		
	0-255	Value		

Parameter	0x20 (32)			
Name	Basic Off of Group 5			
Info	Value of basic set off			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	0xFF (255)
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description	This is the BASIC command value sent in case of Off event.			
	Value	Function		
	0-255	Value		

Parameter	0x21 (33)			
Name	Tilt triggered angle			
Info	Tilt triggered angle			
Properties	Size	1	Min Value	1
	Format	Unsigned Integer	Max Value	90
	Read-only	False	Default Value	5
	Altering capabilities	False	Advanced	False
Description	With this parameter, you can adjust the tilt triggered angle if the tilt is too low or too strong.			
	Value	Function		
	1-90	Value		

Parameter	0x22 (34)			
Name	Timeout of tilt detection (mode 1)			
Info	Timeout of tilt detection (mode 1)			
Properties	Size	1	Min Value	5
	Format	Unsigned Integer	Max Value	60
	Read-only	False	Default Value	5
	Altering capabilities	False	Advanced	False
Description	set the timeout of tilt detection (mode 1)			
	Value	Function		
	5-60	unit is second		

Parameter	0x23 (35)			
Name	Timeout of tilt detection (mode 2)			
Info	Timeout of tilt detection (mode 2)			
Properties	Size	1	Min Value	5
	Format	Unsigned Integer	Max Value	60

	Read-only	False	Default Value	8
	Altering capabilities	False	Advanced	False
Description	set the timeout of tilt detection (mode 2)			
	Value	Function		
	5-60	unit is second		

Parameter	0x24 (36)			
Name	Minimum acceleration change to report			
Info	Trigger acceleration report			
Properties	Size	1	Min Value	0
	Format	Unsigned Integer	Max Value	255
	Read-only	False	Default Value	0
	Altering capabilities	False	Advanced	False
Description				
	Value	Function		
	0	Disable		
	30~255	30~255 M/S^2		

Parameter	0x40 (64)			
Name	Temperature & Dew Point Scale			
Info	scale for auto reports and setting			
Properties	Size	1	Min Value	0
	Format	Enumerated	Max Value	1
	Read-only	False	Default Value	0(EU)/1(US)
	Altering capabilities	False	Advanced	False
Description	scale for auto reports and setting			
	Value	Function		

	0	Celsius
	1	Fahrenheit