Aeon Labs Door/Window Sensor

(Z-Wave Door/Window Sensor)

Aeon Labs Door/Window Sensor– Functions for Developers（software V3.01+）

Objective:

The Aeon Labs Door/Window Sensor is a routing binary sensor device based on Zwave routing slave libruray V4.51. Door/Window Sensor application lists the following supported command classes in the Node Information Frame:

- COMMAND_CLASS_SENSOR_BINARY
- COMMAND_CLASS_BATTERY
- COMMAND_CLASS_WAKE_UP
- COMMAND_CLASS_ALARM
- COMMAND_CLASS_SENSOR_ALARM
- COMMAND_CLASS_CONFIGURATION
- COMMAND_CLASS_ASSOCIATION
- COMMAND_CLASS_MANUFACTURER_SPECIFIC,
- COMMAND_CLASS_VERSION

If d/w sensor is included into a SIS or SUC z-wave network, it will be associated to SIS or SUC automatically.

As soon as d/w sensor is removed from a z-wave network it will restore itself into factory Settings.

Version 3.01 don't support wake up interval set command. This command will be supported from Version 3.02 onward.

Interface:

Event And Response:

Event	Response
tamper switch Clicked	Node Info Frame/Enter learn mode
tamper switch Held	Sensor Alarm report Alarm report
tamper switch Released	Sensor Alarm Report Alarm report Wake up Notification
magnet switch open/close	Sensor Binary Report（**configurable**） Battery report（**configurable**） Basic Set Command（**configurable**）
tamper switch Triple pressed	Start/Stop 10 minutes wake up state.
Power on	Wake 10 minutes（**configurable**）

We can configure d/w sensor send or don't send the configurable commands.

The destination nodes of Basic set command are all associated nodes. If d/w sensor don't have associated nodes, basic set command will not be sent.

The destination nodes of Sensor Alarm Report, Alarm report, Sensor Binary Report

Battery report are listed in the following table.

Destination nodes	Priority
SIS OR SUC Node	High
First Associated Node	Middle
Broadcast	Low

It means if the network has SIS or SUC node, d/w sensor will send to SIS or SUC node; Else, if d/w sensor has Associated Node, it will send to first associated node .If d/w sensor doesn't have Associated Node, it will send these command as broadcast.

The destination node of Wake Up Notification are listed in the following table.

Destination nodes	Priority
The Node configured by Wake up Interval set command	Supreme

SIS or SUC Node	High
First Associated Node	Middle
Broadcast	Low

LED Show

Status	LED
Wake up	Out of network: Blink In network: ON
Sleeping	OFF

Wake up time:

D/W sensor will keep wake up for 8 seconds after it send wake up notification command.

if it receive a command,it will keep wake up for 8 seconds to wait next command.

Press tamper switch 3 times, then D/W sensor will wake 10 minutes.

If configured,d/w sensor will wake 10 minutes too when power on.

Only 3 ways can abort this status:

- Pressing tamper switch 3 times, sleep right now;
- D/W sensor received “Wake up no more information CC”, sleep right now;
- Received other command, wake 8 seconds to wait next command.

Using the Configuration Command Class:

Configuration Set Command

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_CONFIGURATION							
Command = CONFIGURATION_SET							

Parameter Number		
Default	Reserved	Size
Configuration Value 1(MSB)		
Configuration Value 2		
……		
Configuration Value n(LSB)		

1.Parameter Number(8 bit)

Currently the following parameter numbers are defined:

Description	Parameter Number
1	Toggle Sensor binary report value when Magnet switch open/close
2	Enable wake up 10 minutes when power on
3	Toggle Basic set value when Magnet switch open/close
121	Flag values for which reports to send when the D/W Sensor is triggered
255	Reset to the default Configuration

2.Default(1 bit)

If the default bit is set to 1 the device is set to default factory setting and the configuration values is ignored. If the default bit is set to 0 then the configuration values is used. Refer to the table below with respect to default value for the relevant parameter number.

Parameter Number	default factory setting
1	0
2	0
3	0
121	0x00000100

3.Reserved(4 bit)

Reserved bits must be set to zero.

4.**Size(4 bit)**

The size field indicates the number of bytes that is used for the configration value. It's depended on the parameter Number. Refer to the table below with respect to size for the relevant parameter number.

Parameter Number	Size
1	1
2	1
3	1
121	4
255	1

5. **Configuration Value((variable)**:

a. Parameter number equals 121

	7	6	5	4	3	2	1	0
configuration Value 1(MSB)	Reserved							
configuration Value 2	Reserved							
configuration Value 3	Reserved							**Basic Set**
configuration Value 4(LSB)	Reserved	Reserved	Reserved	**Sensor Binary**	Reserved	Reserved	Reserved	**Battery**

- Reserved

Reserved bits or bytes must be set to zero.

- **Basic Set** (1 bit)

The **Basic set** flag signals that d/w sensor send(1) or don't send(0) Basic Set Command when magnet switch open/close .

- **Sensor Binary** (1 bit)

The **Sensor Binary** flag signals that d/w sensor send(1) or don't send(0) Sensor Binary Report when magnet switch open/close.

- **Battery** (1 bit)

The **Battery** flag signals that d/w sensor send(1) or don't send(0) **battery** Report when magnet switch open/close.

b. Other Parameter Numbers

Parameter Number	Configuration Value	Size (byte)	Description
1	0x00	1	Open:FF,Close:00
	0x01		Open:00,Close:FF
2	0x00	1	Disenable
	0x01		Enable
3	0x00	1	Open:FF,Close:00
	0x01		Open:00,Close:FF

Configuration Get Command

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_CONFIGURATION							
Command = CONFIGURATION_GET							
Parameter Number							

1. Parameter Number (8 bit)

Refer to description under the Configuration Set Command

Configuration Report Command

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_CONFIGURATION							
Command = CONFIGURATION_GET							
Parameter Number							
Reserved					size		

Refer to description under the Configuration Set Command.