Aeon Labs Door/Window Sensor (2nd Edition)

(Z-Wave Door/Window Sensor (2nd Edition))

Change history

Revision	Date	Change Description
1	6/7/2013	Initial draft.

Aeon Labs Door/Window Sensor (2nd Edition)
Engineering Specifications and Advanced Functions for Developers
(V1.18)

Aeon Labs Door/Window Sensor (2nd Edition) is a binary sensor device based on Z-wave routing slave library V4.55.00

1. Library and Command Classes:

1.1 SDK:4.55.00

1.2 Library:

l   Basic Device Class: BASIC_TYPE_ROUTING_SLAVE
l   Generic Device class: GENERIC_TYPE_SENSOR_BINARY
l   Specific Device Class: SPECIFIC_TYPE_ROUTING_SENSOR_BINARY

1.3 Commands:

l   COMMAND_CLASS_SENSOR_BINARY_V1,
l   COMMAND_CLASS_BATTERY_V1,
l   COMMAND_CLASS_WAKE_UP_V2,
l   COMMAND_CLASS_ALARM_V1,
l   COMMAND_CLASS_CONFIGURATION_V1,
l   COMMAND_CLASS_ASSOCIATION_V1,
l   COMMAND_CLASS_VERSION_V1,
l   COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2

2. Technical Specifications

Operating distance: Up to 100 ft/ 30 meters indoors and 300 ft/100 meters outdoors.

3. Familiarize Yourself with Your Door/Window Sensor (2nd Edition)

3.1Interface

4. All Functions of Each Trigger are like the following
4.1 Event and Response

Event	Response
Z-wave Button clicked	Node info frame/Enter learn mode, Wake up notification, Wake up for 8 seconds.
Z-wave Button held	Held 20 seconds, then d/w sensor will be reseted .
Tamper switch held	Alarm report
Tamper switch released	Alarm report
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 Door/Window Sensor(2nd Edition) send or don't send the configurable commands.
The destination nodes of Basic set command, Alarm report, Sensor Binary Report,
Battery report are all associated nodes. If Door/Window Sensor(2nd Edition) don't have associated nodes, these command will not be sent.

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

4.2 LED Show

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

4.2 Wake up time
Door/Window Sensor(2nd Edition) will keep wake up for 8 seconds after it send wake up notification command.
If received a command, it will keep wake up for 8 seconds to wait next command.
Press tamper switch 3 times, then Door/Window Sensor(2nd Edition) will wake 10 minutes.
If configured, Door/Window Sensor(2nd Edition) will wake 10 minutes when power on.
Only 3 ways can abort this status:
1. Pressing tamper switch 3 times, sleep right now;
2. Door/Window Sensor(2nd Edition) received "Wake up no more information CC", sleep right now;
3. Received other command, wake 8 seconds to wait next command.

5. Special Rule of Each Command

5.1 Association Command Class

Door/Window Sensor(2nd Edition) supports grouping 1.
If Door/Window Sensor(2nd Edition) is included into a SIS or SUC z-wave network, it will be associated to SIS or SUC automatically.

5.2 Alarm Command Class

Door/Window Sensor(2nd Edition) only supports ALARM_GET_V2 and ALARM_TYPE_SUPPORTED_GET_V2.

5.3 Configuration Set Command Class

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)							

Parameter Number Definitions (8 bit):

Parameter Number	Description	Default Value	Size
1	Toggle sensor binary report value when Magnet switch open/close (Value=01, Open: 00, Close: FF; Value=00, Open: FF, Close: 00).	0	1
2	Enable wake up 10 minutes when power on (00== Disenable; 01== Enable).	0	1
3	Toggle basic set value when Magnet switch open/close (Value=01, Open: 00, Close: FF; Value=00, Open: FF, Close: 00).	0	1
121	Flag values for which reports to send when the water level fluctuation	0x00000100	4
254	Device Tag.	0	2
255	Reset to the default Configuration	--	--

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 Door/Window Sensor(2nd Edition) send (1) or don't send (0) Basic Set Command when Magnet switch open/ closed .
- Sensor Binary (1 bit)
  The Sensor Binary flag signals that Door/Window Sensor(2nd Edition) send (1) or don't send (0) Sensor Binary Report when Magnet switch open/close.
- Battery (1 bit)
  The Battery flag signals that Door/Window Sensor(2nd Edition) send (1) or don't send (0) battery Report when Magnet switch open/ close.