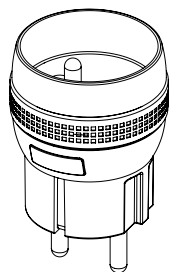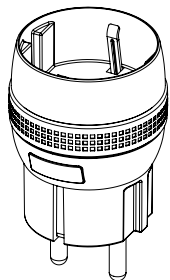# USER GUIDE

nodOn

Z-WAVE PLUS

MICRO SMART PLUG

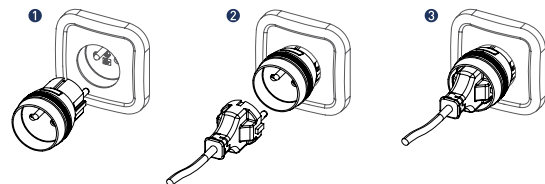Micro Smart Plug Type E
Reference: MSP-3-1-00

Micro Smart Plug Schuko
Reference: MSP-3-1-10

Power supply: 230V AC +/-10% - 50Hz
Self-consumption <1W
Max. power: - 1840W continuous (Resistive load)
- 2000W temporary (Resistive load)
Radio frequency: 868MHz
Range up to 80 meters outdoor
Range up to 40 meters indoor
Operational temperature: -10°C / 50°C
IP20
Radio protocol: Z-Wave Plus® (500 series)
Dimensions: 46mm (Diameter) x 74mm (H)
Weight: 67g
Warranty: 2 years

The NodOn® Micro Smart Plug allows to control (Power ON or Power OFF) an electrical appliance plugged on it: bedside lamp, electrical heater, coffee machine, etc.

The NodOn® Micro Smart Plug is compatible with the worldwide home automation standard, Z-Wave®, and all the products Z-Wave® or Z-Wave Plus® certified from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

INSTALLATION

❶ Plug the NodOn® Micro Smart Plug on your power outlet.
❷ Plug the electrical appliance, you want to control, on the NodOn® Micro Smart Plug.
❸ The Micro Smart Plug allows to switch ON (Power ON) or switch OFF (Power OFF) the electrical appliance you want to control.

Switching ON or OFF can be done through the Micro Smart Plug local button, or any kind of Z-Wave® compatible devices, such as the NodOn® Octan Remote, the NodOn® Soft Remote or a Home Automation Gateway.

If the electrical appliance (ex.: bedside lamp) has an ON/OFF button, make sure it's positioned on "ON", in order that the power ON of the Micro Smart Plug will switch ON the lamp.

MICRO SMART PLUG MODES

"Local Control"

ON

OFF
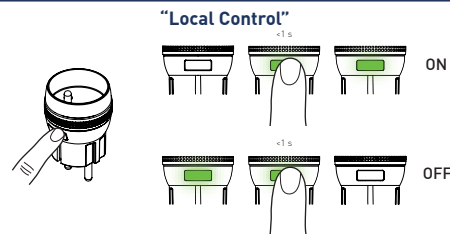
The Micro Smart Plug can be switched ON or OFF locally, through a short press on the local button. By default, the Micro Smart Plug is switched ON when the LED is green, OFF when the LED is OFF.
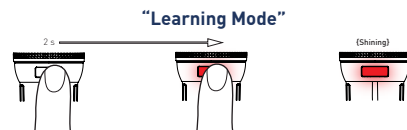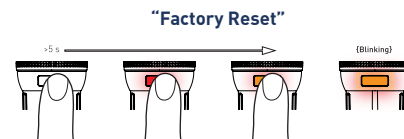
"Learning Mode"

Press on the Micro Smart Plug button during 2 seconds until the LED becomes red. Release the button, the LED will then glow in red. The Micro Smart Plug is in "Learning mode".To add or to remove the Micro Smart Plug from a Z-Wave® network, follow "INCLUSION" or "EXCLUSION" procedures below.

If the Micro Smart Plug is not added or removed from a network within 30 seconds (or if the button is pushed during learning mode), the Micro Smart Plug will

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automatically exit learning mode.

Expert remark: NodOn® created a power efficient « Learning mode ». During this mode, the Micro Smart Plug will send its « Node Information » (NIF) at regular interval.

If the Primary Controller is battery powered (such as the NodOn® Octan Remote), first put the Micro Smart Plug in "Learning mode", and then proceed to the INCLUSION/EXCLUSION procedure of your controller.

To send a single NIF, just triple press on the Micro Smart Plug's button.

LED state	Smart Plug State
Shine Red	Learning mode activated
Blink in Green	Successful Inclusion
Blink in Red	Successful Exclusion
Blink in Orange	"Learning mode" Timeout

"Factory Reset"

To perform a factory reset, press on the Micro Smart Plug button during 5 seconds until the LED becomes orange. Release the button, the LED will blink red/green.

Factory Reset clears the Micro Smart Plug's memory and set parameters to their default value.

Warning: Please use this procedure only when the primary controller is missing or otherwise inoperable.

Resetting the Micro Smart Plug does not mean it has been removed from Z-Wave® network controller's memory.

Use the primary controller to remove the Micro Smart Plug from its Z-Wave® network (follow "EXCLUSION" procedures below), before doing a Factory Reset.

INCLUSION PROCEDURE

To add the Micro Smart Plug into a Z-Wave® network:
❶ Plug the Micro Smart Plug.
❷ Put the Micro Smart Plug in "Learning mode".
❸ Within 30 seconds put the Z-Wave® Controller in "Learning mode" (See the Controller user guide for its own Inclusion procedure).
The Micro Smart Plug will confirm the success of the Inclusion procedure by blinking its LED in Green.

EXCLUSION PROCEDURE

To remove the Micro Smart Plug from a Z-Wave® network:
❶ Make sure the Micro Smart Plug is plugged.
❷ Put the Micro Smart Plug in "Learning mode".
❸ Within 30 seconds put the Z-Wave® Controller in "Learning mode" (See the Controller user guide for its own Exclusion procedure).
The Micro Smart Plug will confirm the success of the Exclusion procedure by blinking its LED in Red.

METERING

Micro Smart Plug is able to measure the amount of electric energy consumed by the load plugged on it. This function is able to return the power in Watt (W) and the energy in Watt-hour (Wh) consumed since the product was installed or since the last reset.

This energy and power reports are accessible through your gateway's interface.

ASSOCIATION GROUPS

Using association group, the Micro Smart Plug is able to command or notify another device of a Z-Wave® network.

The association groups are set by the Main Controller. Once set, the association groups allow direct control, between Micro Smart Plug and associated devices, without involving the Main Controller in the communication.

The NodOn® Micro Smart Plug proposes 6 association groups:

Group	Group Name
1	Lifeline
2	Follow State
3	Follow Complementary State
4	Metering - High Threshold - Set On/Off
5	Metering - Low Threshold - Set On/Off
6	Metering - Report

Group 1 – Lifeline
Maximum number of devices in group: 5
This group is generally used to report information of the Micro Smart Plug to the Main Controller of the network.

Group 2 – Follow State
Maximum number of devices in group: 5
When the Micro Smart Plug is switched ON (respectively OFF) using the local button, it will send ON (respectively OFF) command to the associated devices. No command is sent if the Micro Smart Plug is switched ON or OFF wirelessly.
This group is configurable through the parameter 3.

Group 3 – Follow Complementary State
Maximum number of devices in group: 5
When the Micro Smart Plug is switched ON (respectively OFF) using the local button, it will send OFF (respectively ON) command to the associated devices. No command is sent if the Micro Smart Plug is switched ON or OFF wirelessly.

Group 4 - Metering - High Threshold - Set On/Off
Maximum number of devices in group: 5
When the Micro Smart Plug reaches over the high threshold of power defined by the configuration parameter, it will send OFF or ON command to the associated devices.
This group is configurable through the parameter 25 and 27.

Group 5 - Metering - Low Threshold - Set On/Off
Maximum number of devices in group: 5
When the Micro Smart Plug reaches below the low threshold of power defined by the configuration parameter, it will send OFF or ON command to the associated devices.
This group is configurable through the parameters 26 and 27.

Group 6 - Metering - Report
Maximum number of devices in group: 5
All the meter reports and notifications triggered by Metering parameters will be reported to the devices present in this group.
This group is configurable through the parameters 21, 22, 23 and 24.

CONFIGURATION

The Micro Smart Plug NodOn® offers a wide range of configurations, which can be set and handled by the Z-Wave® network Main Controller.

Default State

Parameter Number	Default Value	Size
1	2	1 [byte]
This parameter defines the status of the Micro Smart Plug after a power outage or after being plugged.		
Value	Description	
0	OFF	
1	ON	
2	Status before power outage	

Follow State

Parameter Number	Default Value	Size
3	3	1 [byte]
This parameter allows to enable or disable Group 2 & Group 3.		
Value	Description	
0	Group 2 & Group 3 disable	
1	Group 2 enable	
2	Group 3 enable	

The value may be the sum of available values.
For example, if you want to enable Group 2 & 3, the parameter value is 1+2=3.

Always On

Parameter Number	Default Value	Size
4	0	1 [byte]
This parameter forces the Micro Smart Plug status to be ON. While enable it is not possible to switch OFF the plug (local or wireless).		
Value	Description	
0	Always ON disable	
1	Always ON enable	

Power Auto-Sending Report

Parameter Number	Default Value	Size
21	10	1 [byte]
This parameter will send a power report automatically if the power value changes of x % W (Watt) compared to the last report.		
Value	Description	
0	Power Auto-Polling Report Disable	
1 (to 100)	Power Auto-Polling Report Enable with 1% (to100%) differential	

Overload Report

Parameter Number	Default Value	Size
22	1840	2 [byte]
This parameter will switch off the Micro Smart Plug in case the power is above x W (Watt) and send an alarm to the primary controller. This parameter has the highest execution priority between all the metering configurations for security reason.		
Value	Description	
0	Overload Report Disable (Not Recommended)	
1(to 1840)	Overload Report enable with a upper limit of 1 W (to 1840 W)	

Energy Auto-Sending Report

Parameter Number	Default Value	Size
23	1000	2[byte]
This parameter will send a new energy report automatically if the energy value changes of x Wh (Watt-hour) compared to the last report.		
Value	Description	
0	Energy Auto-Polling Report Disable	
1 (to 65535)	Energy Auto-Polling Report enable with 1 Wh (to 65535 Wh) diffential	

Metering Pulse

Parameter Number	Default Value	Size
24	3600	2 [byte]
Whatever other metering reports, this parameter will send one power and one energy report to the lifeline every x s (Seconds).		
Value	Description	
0	Metering Pulse disable	
1 (to 65535)	Metering Pulse enable and send report every 1 s (to 65535 s)	

Power High Threshold

Parameter Number	Default Value	Size
25	20	2 [byte]
This parameter defines the High Threshold power value.		
Value	Description	
0	Power High Threshold disable	
1 (to 65535)	Power High Threshold enable with the value from 1 W (to 65535 W)	

Power Low Threshold

Parameter Number	Default Value	Size
26	5	2 [byte]
This parameter defines the Low Threshold power value.		
Value	Description	
0	Power Low Threshold disable	
1 (to 65535)	Power Low Threshold enable with the value from 1 W (to 65535 W)	

Power Threshold Action

Parameter Number	Default Value	Size
27	7	1 [byte]
This parameter will define the Micro Smart Plug actions if the power Low and High Threshold are reached.		
Value	Description	
0	Power Threshold Action is disable.	
1	Power High Threshold Action is enable and send the command OFF to Group 4	
3	Power High Threshold Action is enable and send the command ON to Group 4	
4	Power Low Threshold Action is enable and send the command OFF to Group 5	
12	Power Low Threshold Action is enable and send the command ON to Group 5	

The value may be the sum of available values.
For example, if you want:
- Power High Threshold Action is enable and sent ON to Group 4(3)
- Power Low Threshold Action is enable and sent OFF to Group 5 (4)
the parameter value must be 3+4=7.

ALARMS

The NodOn® Micro Smart Plug embeds Smart Alarm management features, in order to react to different kinds of notifications and events (According to "Notification V1" command class).
Up to 8 Alarms can be configured, through configuration parameters #5 to #20.
For each Alarm, the set-up is done through 2 configuration parameters, as below:

Alarm Number	Alarm Type Config. Parameter	Alarm Specifications Config. Parameter
1	5	6
2	7	8
3	9	10
4	11	12
5	13	14
6	15	16
7	17	18
8	19	20

Parameter #	Default Value	Size
5/7/9/11/13/15/17/19	0	1 [byte]
This parameter is to set the Alarm X Type		
Value	Description	
Use the Home Automation Gateway interface or our Alarm set-up form to define the value corresponding to your need*.		

Parameter #	Default Value	Size
6/8/10/12/14/16/18/20	0	4 [byte]
This parameter is to set the Alarm X Specifications.		
Value	Description	
Use the Home Automation Gateway interface or our Alarm set-up form to define the value corresponding to your need*.		

*In order to configure properly each alarm, please use your Home Automation Gateway interface or our online form at :

Over the Air Firmware Update (OTA)

The Micro Smart Plug can update its firmware throught an gateway compatible Z-Wave Plus installed in your network.
During the update the LED blink alternately from green to red
When the LED is blinking, the product cannot be commanded locally or by radio.
The OTA procedure last few minutes.
At the end of the Update the product will automatically restart.
Note: The update keeps the Node ID and network pairing.
Do not unplug the Micro Smart Plug during the OTA. Do not press on the local button neither.
For more information please check your gateway user manual.

COMMAND CLASS

The NodOn® Micro Smart Plug supports the following Command Class :

COMMAND CLASS	VERSION
All switch	V1
Application status**	V1
Association	V2
Association Group Information	V1
Basic***	V1
Binary Switch	V1
Configuration	V1
Device Reset Locally	V1
Firmware Update Meta Data	V2
Indicator	V1
Manufacturer Specific	V2
Meter	V4
Notification	V4
Power Level	V1
Protection	V2
Version	V2
Z-Wave® Plus info	V2

** Controlled only (not supported)
*** Controlled AND supported

DECLARATION OF CONFORMITY

EN61058-1 :2002+A2 :2008
NF C 61-314 :2008+A1 :2010 (Type E)
DIN VDE 0620 -1: 2013 (Schuko)
DIN VDE 0620 -2-1: 2013 (Schuko)
EN301489-1 V1.9.2
EN301489-3 V1.6.1
EN300220-2 V2.4.1
2012/19/EC WEEE Directive

LOGOTYPE

CE	This product is compliant with all relevant European standards.
	When sorting your waste, please observe the disposal regulations in force. Please place your waste in the facilities provided for that purpose and with all due respect for the environment.
	This product must be used indoor only.
	This product uses a wireless communication protocol.
	This product must not be in contact with water.
	This product must not be exposed to a temperature higher than 50°C.
	This product must not be exposed to any kind of fire or heat source.
	This product must not be exposed to a temperature lower than -10°C.
Z-WAVE PLUS	This product is compatible with Z-Wave® and Z-Wave Plus® protocol.

CONTACT

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AFTER SALES

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