High-Load Control

CE

WORKS WITH Yubii® OS

Controlling electrical devices remotely

EN - Instructions and warnings for installation and use

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v0.7

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1 WARNINGS AND GENERAL PRECAUTIONS

- **CAUTION! Important:** This device is intended for control and automation purposes only. It must not be used as a safety, protective, or emergency shut-off device. Appropriate external protection mechanisms should be implemented where required by applicable regulations or system design.
- **CAUTION!** High Load-Control itself may be damaged if the applied load exceeds the technical specifications.
- Using this product for purposes other than those specified in this manual is strictly forbidden.
- All installation and connection operations must be performed exclusively by suitably qualified and skilled personnel with the unit disconnected from the mains power supply.
- This manual contains important instructions and warnings for personal safety. Read all parts of this manual carefully. If in doubt, suspend installation immediately and contact Nice Technical Assistance.
- The product packaging materials must be disposed of in full compliance with local regulations.
- Never apply modifications to any part of the device. Operations other than those specified can cause malfunctions. The manufacturer declines all liability for damage caused by makeshift modifications to the product.
- Never place the device near sources of heat or expose it to naked flames. These actions can damage the product and cause malfunctions.
- Do not use the product in damp or wet locations, near a bathtub, sink, shower, swimming pool, or anywhere else where water or moisture are present.
- This product isn't intended for use by people (including children) with reduced physical, sensory or mental capabilities or who lack experience and knowledge, unless they are supervised by a person responsible for their safety.
- Ensure that children do not play with the product.
- The device is designed to operate in an residential electrical installation. Faulty connection or use can result in a fire or electric shock.
- Even when the device is turned off, voltage can be present at its terminals. Any maintenance introducing changes to the configuration of connections or the loads must always be performed with the fuse disconnected.

2 PRODUCT DESCRIPTION

High Load-Control is a compact Z-Wave Plus® relay module for controlling resistive electrical loads up to 16 A.

The device is installed in a standard wall switch box or in another suitable electrical enclosure. The connected load can be controlled remotely from a Z-Wave® controller or locally by a wall switch connected to the S terminal.

2.1 - Main features of High Load-Control

- Three operating modes: **Switch mode (Mode 0)**, **Temperature control mode (Mode 1)**, and **Temperature-assisted control mode (Mode 2)**
- Compatible with any Z-Wave® or Z-Wave Plus® controller
- Supports protected Z-Wave® communication with AES-128 encryption
- Active power and energy metering functionality
- External NTC temperature sensor support
- Supports momentary and toggle wall switches
- Overheat protection with configurable threshold (in switch mode)
- Auto-off timer functionality (in switch mode)

⚠ **Important**: This device is intended for control and automation purposes only. It must not be used as a safety, protective, or emergency shut-off device. Appropriate external protection mechanisms should be implemented where required by applicable regulations or system design.

⚠ **Important**: The NTC sensor input is connected to mains voltage. The NTC sensor and its wiring must be treated as live conductors. Installation and maintenance must be performed only by qualified personnel and only with mains power disconnected.

2.2 - Full compatibility with Z-Wave Plus® devices

This device can be used with all devices certified for Z-Wave Plus® and is compatible with such devices produced by other manufacturers. All non-battery-operated devices within the network act as repeaters to improve network reliability.
The device is a Security Enabled Z-Wave Plus® product and should be added to a Security Enabled Z-Wave® controller to use the available security features.

⚠ **The connected load and High Load-Control itself may be damaged if the load does not comply with the technical specifications!**

2.3 - Mode overview

The device supports three operating modes, which can be selected via Parameter 202:

- **Mode 0** – **Switch mode**: direct relay control for switching the connected load on and off.

- **Mode 1** – **Temperature control mode**: control of the connected load based on temperature readings from an external NTC sensor.
- **Mode 2** – **Temperature-assisted control mode**: control of the connected load based on commands, temperature setpoints, and measurements provided by the Z-Wave controller.
  An external NTC sensor must be used as an additional temperature input to influence device operation according to configurable thresholds.

External NTC sensor: For the device to operate in Mode 1 or Mode 2, an external NTC temperature sensor must be connected. In Mode 0, the external NTC sensor is optional.

The device supports external NTC sensors with a nominal resistance at 25 °C, from 1 kΩ to 50 kΩ and a Beta coefficient from 2000 K to 6000 K. The nominal resistance value is configured with Parameter 207, and the Beta value is configured with Parameter 208. NICE recommends using a 10 kΩ NTC sensor with β = 3950 K, which is the default setting.

The NTC sensor input is connected to mains voltage. The NTC sensor and its wiring must be treated as live conductors. Installation and maintenance must be performed only by qualified personnel and only with mains power disconnected.

Table 1 - High Load-Control - Control mode configuration

Mode	Parameter 202	Temperature reference	External NTC sensor	Typical use
Switch mode (Mode 0)	0	Not used for control	Optional	Direct on/off control of the connected load
Temperature control mode (Mode 1)	1	External NTC sensor	Required - controls the connected load based on temperature readings from an external NTC sensor	Local temperature control based on the external sensor
Temperature-assisted control mode (Mode 2)	2	Sensor Multilevel Report from the Z-Wave controller	NTC sensor must be used as an additional temperature input to influence device operation according to configurable thresholds	Controller-based temperature control

To ensure consistent terminology throughout the remainder of this document, the device operating modes will be referred to as **Mode 0, Mode 1**, and **Mode 2**.

Note: Changes to parameters 202, 203, and 204 affect the device's functionality and depending on the system, it may be necessary to re-interview the High Load-Control module or re-add it to the system after making these changes.

Note: High Load-Control uses different Product Type IDs depending on the active Device Type.
Mode 0 - Switch mode - **Product Type ID: 0x2F01**
Mode 1 and 2 - Thermostat modes - **Product Type ID: 0x2F11**

Note: Because the resistance of an NTC sensor increases as the temperature decreases, not every combination of nominal resistance and Beta (β) coefficient can be measured over the same temperature range. Sensors with higher nominal resistance values or higher Beta coefficients may have a reduced measurable temperature range at lower temperatures. The table below shows the typical supported measurement ranges.

Table 2 - High Load-Control - Supported NTC Temperature Measurement Ranges

Resistance/Beta	β = 3000K	β = 4000K	β = 5000K
5 kΩ	-20 °C ... 105 °C	-20 °C ... 105 °C	-20 °C ... 89 °C
10 kΩ	-20 °C ... 105 °C	-19 °C ... 105 °C	-11 °C ... 105 °C
20 kΩ	-16 °C ... 105 °C	-7 °C ... 105 °C	-1 °C ... 105 °C
50 kΩ	+6 °C ... 105 °C	+11 °C ... 105 °C	+13 °C ... 105 °C

3 SPECIFICATIONS

Table 3 - High Load-Control - Hardware parameters	
Parameter	**Value**
Power supply voltage range:	230 VAC / 50 Hz
Radio protocol:	Z-Wave (800 series chip)
Radio frequency band:	EU: 868.4 MHz, 869.85 MHz AH: 919.8 MHz, 921.4 MHz
Max. transmitting power:	+ 6dBm
Range:	• Up to 100 m outdoors • Up to 30 m indoors Depending on terrain and building construction
Max. load:	16 A single-pole relay 3680 W
Supported device type:	Resistive
Recommended wires	For loads exceeding 12 A, use wires with a cross-sectional area of 2.5 mm^2 or larger. Recommended insulation stripping length: 7 mm
NTC sensor:	Supported range: 1 kΩ to 50 kΩ, with a Beta coefficient from 2000 K to 6000 K. The NTC sensor characteristics can be configured using Parameters 207 (resistance) and 208 (Beta coefficient).
Internal power consumption:	0.3 W
Operating temperature:	0–35 °C
Dimensions (H x W x D):	45 mm x 36 mm x 23 mm
Ambient humidity:	Up to 95% without condensation and aggressive gases
Ingress Protection class:	IP20
Compliance with EU directives:	RoHS 2011/65/EU, 2015/863/EU, and RED 2014/53/EU

Power of the load
Measuring the active power of the load connected to the output enables the active power of the connected load to be monitored in real time. The power is expressed in Watts [W].

Mains voltage
The device enables monitoring the status of the mains supply in real time. The value is given in Volts [V].

4 INSTALLATION

4.1 - Safety notes

Danger of electrocution!

- High Load-Control is designed to operate in an electrical home installation. Faulty connection or use can result in a fire or electric shock.
- All works on the device can be performed only by a qualified and licensed electrician. Observe national regulations.
- Even when the device is turned off, voltage can be present at its terminals. Any maintenance involving changes to wiring or connected loads must always be performed with the fuse disconnected.
- Connecting the device in a manner inconsistent with the manual can pose a risk to health or life, or cause material damage.

Connect the High Load-Control device in accordance with the following rules:

- Connect the device only as shown in the connection examples.
- The device should be installed in a wall switch box compliant with applicable national safety standards and with a depth of at least 60 mm.
- Electrical switches used in the installation should be compliant with relevant safety standards.
- Wires used to connect the control switch must not exceed 100 m in length.
- If more conductors must be connected than a device terminal can safely accept, use an external certified splicing connector, for example a WAGO-type connector, suitable for the conductor type and current rating.
- High Load-Control does not have an Earth/PE terminal. The Earth/PE conductor must bypass the device and must be connected directly to the load and the installation protective earth according to local electrical regulations.

4.2 - Switch (Mode 0) connection examples

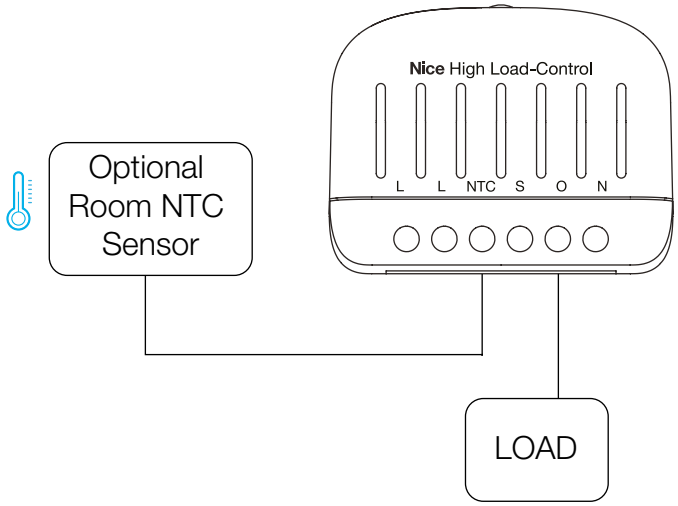


Figure 1: Graphic illustration of the operating principle in Mode 0.

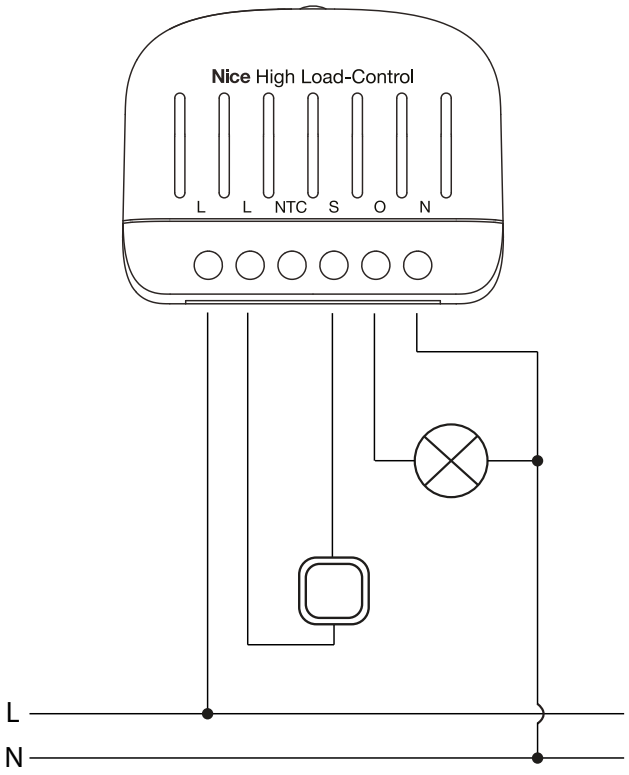


Figure 2: Connection for Mode 0 (switch).

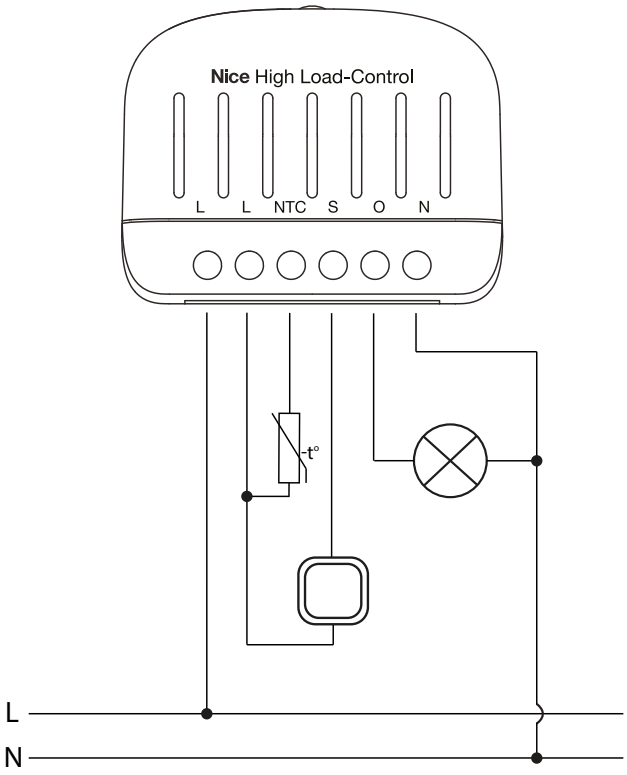


Figure 3: Connection for Mode 0 (switch) with optional NTC sensor.

Notes for the figures:

- **L** - Terminal for the live lead
- **N** - Terminal for the neutral lead
- **O** - Output terminal
- **NTC** - Terminal for external NTC temperature sensor
- **S** - Terminal for the wall switch

4.3 - Thermostat temperature control (Mode 1) connection examples

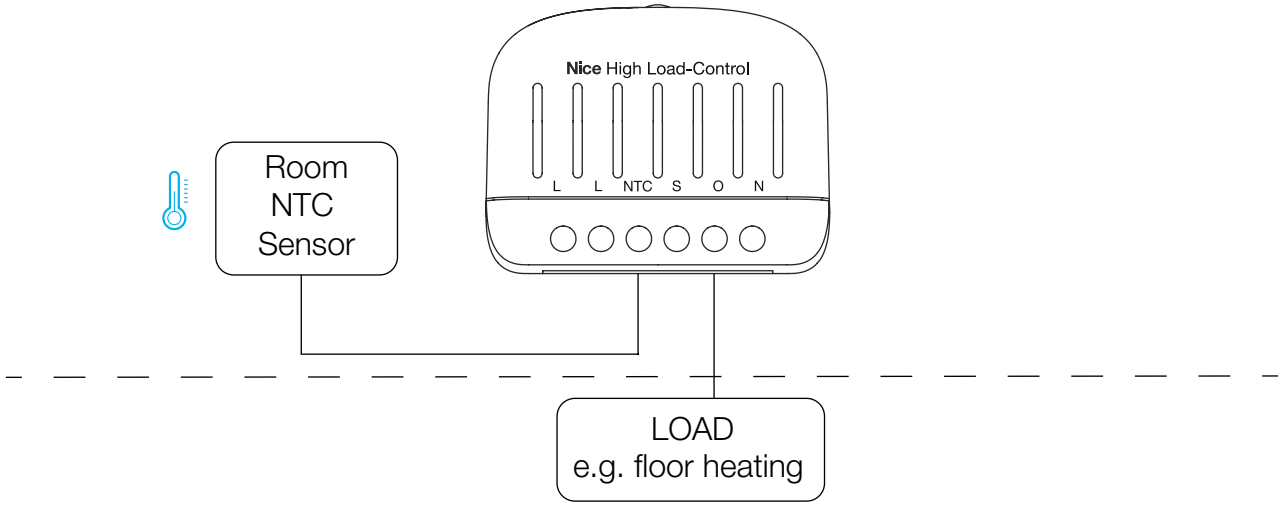


Figure 4: Graphic illustration of the operating principle in Mode 1.

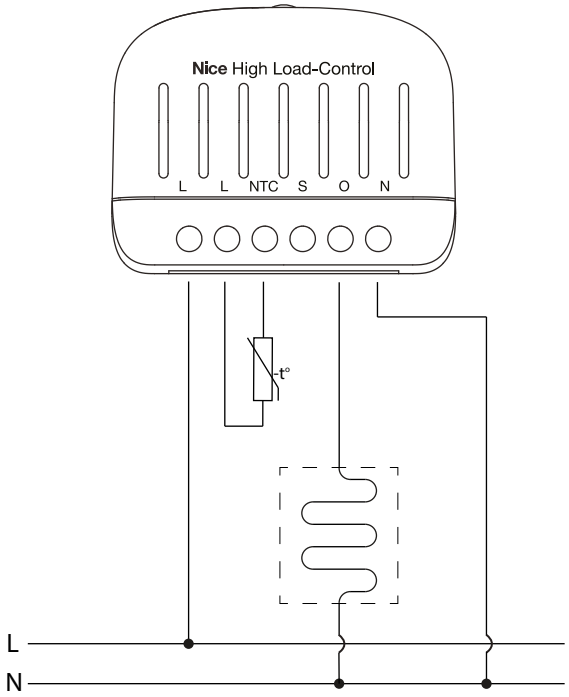


Figure 5: Connection for Mode 1 (Thermostat) with external NTC sensor.

4.4 - Thermostat temperature-assisted control (Mode 2) connection examples

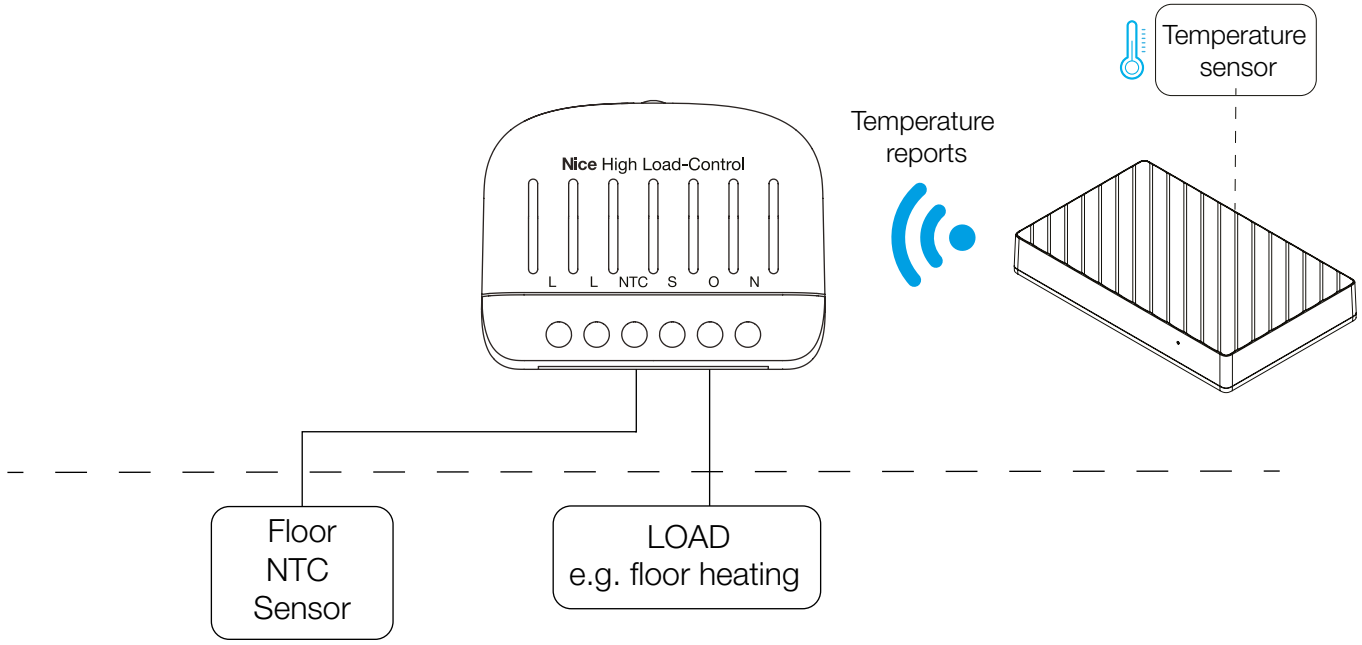


Figure 6: Graphic illustration of the operating principle in Mode 2.

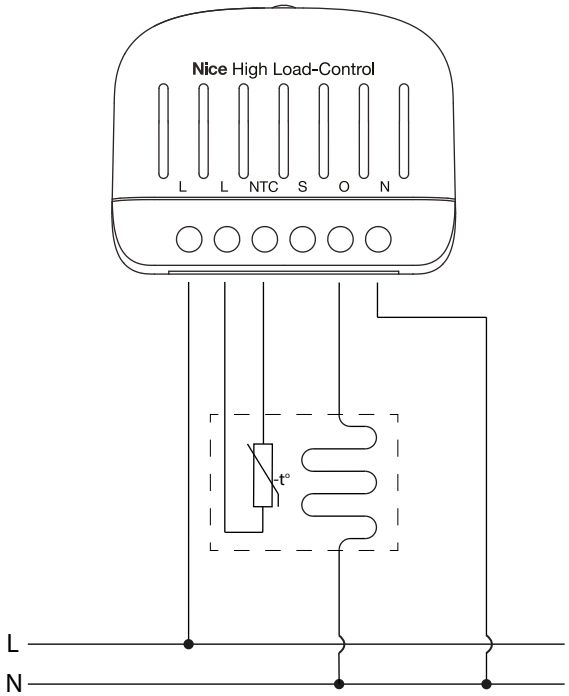


Figure 7: Connection for Mode 2 (Thermostat) with external NTC sensor only for floor overheating protection.

4.5 - Installation of High Load-Control

1. Switch off the mains voltage (disconnect the fuse).
2. Open the wall switch box.
3. Connect the device in accordance with the appropriate wiring diagram.
4. After verifying that the connection is correct, switch on the mains voltage.
5. Add the device to the Z-Wave network **(see section 5)**.
6. Ensure the mains voltage is switched off before placing the device in the wall switch box.
7. Close the wall switch box and turn on the mains voltage.

Notes:

- An external switch connected to the S terminal has the function of activating the learning mode. You can activate the basic functionality of the device and activate the learning mode (adding/removing). The device can be removed within 10 minutes after power-up.
- After switching on the mains voltage, the LED indicator signals the Z-Wave network inclusion state with a color:
  - » **GREEN** - the device added to the non-secure, S0 or S2 Unauthenticated mode
  - » **MAGENTA** - the device added to the S2 Authenticated mode
  - » **RED** - the device not added

5 ADDING THE DEVICE TO THE Z-WAVE® NETWORK

- In case of problems with adding or removing, use the PROG-button located on the housing.
- The device tries to add itself when the switch is pressed three times.

5.1 - Adding the device to the Z-Wave® network manually

1. Place High Load-Control within the direct range of your Z-Wave controller.
2. Set the main controller in the (security/non-security) add mode (for more information, see the controller manual).
3. Press quickly three times the switch or the PROG button.
4. If you are adding the device in the Security S2 Authenticated mode, input the PIN Code, which is labelled on the device.
5. Wait for the adding process to end.
6. Successful inclusion is confirmed by the Z-Wave controller message and the green LED diode (non-secure, S0, S2 Unauthenticated) or magenta LED diode (S2 Authenticated).

5.2 - Adding device using the SmartStart method

1. Enter the full DSK string into your controller. If your controller is capable of QR scanning, scan the QR code placed on the label.

Note: The product has two QR codes. Scanning either one will add the device to the Yubii ecosystem.

2. Power the device (turn on the mains voltage).
3. The LED indicator starts blinking yellow. Wait for the inclusion process to finish.
4. Successful adding is confirmed by the Z-Wave controller message and the device LED indicator.
   - **Green** - the device has been added to the non-secure, S0 or S2 Unauthenticated mode
   - **Magenta** - the device has been added to the S2 Authenticated mode
   - **Red** - the device has not been added

6 REMOVING THE DEVICE FROM THE Z-WAVE® NETWORK

⚠ You can remove the device from the Z-Wave Network using external switch connected to the S terminal within 10 minutes after powering up the device.

Removing (Exclusion) - The Z-Wave device remove mode enables removing the device from the existing Z-Wave network.

1. Place High Load-Control within the direct range of your Z-Wave controller.
2. Set the main controller in remove mode (for more information, see the controller manual).
3. Quickly press the S switch or the PROG button three times.
4. Wait for the removal process to complete.
5. Successful removal is confirmed by a Z-Wave controller message and the red LED indicator.

7 DEVICE MENU

High Load-Control is equipped with the **PROG (button)** which enables using the menu, selecting device mode, and performing factory reset.

- To enter the menu, press and hold the PROG (button).
- To confirm the position, press PROG (button) once.

Table 4 - High Load-Control - PROG (button) actions

Action	Result
1x click	Toggle output ON/OFF (in switch mode); Select menu position (if menu is active)
3x click	Send the Node Info Z-Wave Command Frame (adding/removing)
Hold	Enter the menu

Menu positions

1st position - Device mode selection
After pressing once, enter sub-menu. Each press cycles through the available modes. The setting is automatically saved 3 seconds after the last button press. After saving, the device exits the menu.

- **Red** - Switch mode (Mode 0)
- **Green** - Temperature control mode with NTC as reference sensor (Mode 1)
- **Blue** - Temperature-assisted control mode with NTC as floor overheating protection (Mode 2)

Note: When switching between switch mode and thermostat mode, the device resets. After this process, the device must be interviewed/ reconfigured again.

2nd position - Factory reset
The device will return to its default values. The mode will also be reset to mode 0.

8 OPERATING THE DEVICE

8.1 - Resetting the device to factory defaults

1. Switch off the mains voltage (disable the fuse).
2. Remove High Load-Control from the wall switch box.
3. Switch on the mains voltage.
4. Press and hold the PROG-button to enter the menu.
5. Wait for the visual LED indicator to glow yellow.
6. Quickly release and click the PROG-button again.
7. After a few seconds the device is restarted, which is signaled with the red LED indicator color.

Note: Resetting the device is not the recommended way of removing the device from the Z-Wave network. Use reset procedure only if the primary hub is missing or inoperable. The device should normally be removed using the procedure described in Chapter 6, “Removing the device”.

9 THERMOSTAT REGULATION

In mode 1 and 2, switching follows hysteresis control. Heating starts when the measured temperature drops below setpoint minus hysteresis and stops when the setpoint is reached plus hysteresis. The default value of Parameter 205 (hysteresis) is 0.5 °C. Parameters 203 (Minimum value) and 204 (Maximum value) define the allowed setpoint range.

Thermostat operation is available when Parameter 202 is set to 1 or 2. Parameters 203 to 205 define the control window, Parameter 25 defines the output logic, and Parameters 209 and 210 affect only reporting behavior.

- **Parameter 202** - Operating mode: 0 = Switch mode, 1 = Temperature control mode, 2 = Temperature-assisted control mode
- **Parameter 203** - Minimum setpoint: 4.0 to 50.0 ˚C
- **Parameter 204** - Maximum setpoint: 4.1 to 100.0 ˚C
- **Parameter 205** - Hysteresis: 0.1 to 2.0 ˚C
- **Parameter 206** - Temperature sensor status (external)
- **Parameter 207** - NTC Sensor nominal resistance
- **Parameter 208** - NTC Sensor nominal Beta Coefficient
- **Parameter 209** - Temperature threshold reporting
- **Parameter 210** - Temperature interval reporting
- **Parameter 211** - Maximum cut-off temperature used in mode 2
- When Parameter 202 is changed to mode 2, the maximum cut off temperature threshold is set to 350 (35.0 ˚C).

9.1 - Mode 1 - Temperature control mode (Parameter 202 = 1)

Heating is controlled based on the external NTC sensor. The output turns on when the measured temperature is at or below the setpoint minus hysteresis turns off when the measured temperature reaches the setpoint plus the hysteresis value.

- Setpoint limits are defined by Parameters 203 and 204.
- Switching hysteresis is defined by Parameter 205.
- Parameters 209 and 210 configure temperature reporting behavior.

9.2 - Mode 2 - Temperature-assisted control mode (Parameter 202 = 2)

Heating is controlled based on temperature reports from the Z-Wave controller. The external NTC sensor is used only for floor overheating protection, and the device must receive a Lifeline temperature report before heating can start.

- Setpoint limits are defined by Parameters 203 and 204.
- Switching hysteresis is defined by Parameter 205.
- Parameter 211 defines the maximum cut-off temperature.

Note: The device must be added to the Z-Wave network for thermostat modes to work correctly.

Note: If the device is removed from the Z-Wave network, the output is turned off (Thermostat mode - OFF).

10 POWER AND ENERGY CONSUMPTION

- High Load-Control measures active power, energy consumption, and mains voltage for the connected load.
- Measured power may vary with mains voltage fluctuations within ± 10%.

Active electrical power - power converted by the connected load into work or heat. The unit of active power is watt [W].

Electric energy - energy consumed by a device over a period of time. Consumers of electricity in households are billed by suppliers based on active power used over a given unit of time. Most commonly measured in kilowatt-hour [kWh]. One kilowatt-hour is equal to one kilowatt of power consumed over a period of one hour, 1 kWh = 1000 Wh.

Voltage measurement - is controlled by Parameter 200 and is disabled by default. When enabled, the device sends a report after a voltage change equal to the configured threshold (3-10 V). Parameter 201 defines the threshold for overvoltage notification reports.

11 ASSOCIATIONS

Association (linking devices) means direct control of other devices within the Z-Wave network.

Associations allow High Load-Control to control other devices directly within the Z-Wave network.
Association commands are sent directly between devices without the participation of the primary controller. The associated device must be within direct radio range.

High Load-Control provides the following association groups:

Table 5 - High Load-Control - Association groups

Association group	Group name	Description	Max nodes
1st	Lifeline	Reports the device status	1
2nd	On/Off	Assigned to the switch	5

The Lifeline group is reserved for the controller, so only one node can be assigned.

With the auto off mode enabled, associations are not sent with the exception of Lifeline reports.

11.1 - Association behavior

- **In mode 0**, a single press of the external switch triggers the association. Multiple clicks have no effect (only a single click triggers an action).
- **In modes 1 and 2** associations are triggered by Heating/Idle transitions. Heating starts below setpoint - hysteresis and ends when the temperature reaches the setpoint.

12 ADDITIONAL FEATURES

High Load-Control includes multiple protection mechanisms. When any protection triggers, the device switches off the relay and sends a Notification Report to the Z-Wave controller.

Overcurrent protection
The device monitors load current continuously.
- Trigger: load exceeds 1.15 x In (nominal current).
- Action: The output is turned OFF, and operation is blocked for 5 seconds.
- Overcurrent notification is sent to the Z-Wave controller.
- After 5 seconds: If the load drops below the threshold, the overcurrent condition is cleared and the device resumes normal operation.
- After overcurrent, the device remains off and, in Modes 1 and 2, heating mode is turned off.
- Overcurrent threshold: 16A + 15% = 18.4 A.

Overvoltage protection
The device monitors mains voltage using Parameter 201.
- Prerequisite: Parameter 201 must be > 0 (functionality enabled).
- Trigger: voltage exceeds the value configured by Parameter 201.
- Action: overvoltage notification is sent to the Z-Wave controller.
- Cancellation: voltage must drop at least 10 V below the value set in Parameter 201 and remain there for 10 minutes.

Device overheat protection (internal processor)
The device monitors its internal processor temperature.
- Trigger: processor temperature exceeds 85 ˚C.
- Action: output turned OFF.
- Resume: when processor temperature drops below 75 ˚C, the output can be turned on again.
- Hysteresis: 10 ˚C (triggers at 85 ˚C, resumes at 75 ˚C).

Overheat protection (NTC sensor, external)
Configurable via Parameter 211. When the NTC sensor temperature exceeds the threshold, the output is disabled regardless of other factors.
- Prerequisite: Parameter 211 > 0 (functionality enabled).
- Trigger: NTC sensor temperature exceeds the value set in Parameter 211 (in 0.1 ˚C units).
- Action: output disabled.
- Cancellation: temperature drops by 5 ˚C below the threshold.
- Applies only when the device's operating mode is set to 0 (Switch).

NTC sensor disconnection
The device detects when the NTC sensor is disconnected or broken.

- Detection: Parameter 206 (read-only) reports sensor status.
- Status 0: sensor disconnected. Status 1: sensor connected.
- In switch mode, a notification is sent and the device continues operating.
- In thermostat mode, the output is switched OFF for safety.
- Notification: System [0x09] hardware failure, MP code: 0x08 [no sensor detected].

Communication with sensor lost (mode 2 only)
In temperature-assisted control mode, the device monitors Z-Wave temperature reports from the Z-Wave controller.

- Trigger: device did not receive a Z-Wave Sensor Multilevel Report containing temperature data within 3 hours since the last report.
- Condition: only checked if CC Thermostat mode is set to Heating (not checked in Idle mode).
- Action: notification sent to the Z-Wave controller.
- Notification: System [0x09] hardware failure, MP code 0x09 [communication with sensor lost].

13 ADDITIONAL FUNCTIONALITY

Activating scenes
High Load-Control can activate scenes in the Z-Wave controller using Central Scene Command Class. Scene activation is configured by Parameter 40.

Table 6 - High Load-Control - Activating scenes

Action	Scene ID	Attribute
Switch clicked once	1	Key Pressed 1 time
Switch clicked twice	1	Key Pressed 2 times
Switch clicked thrice	1	Key Pressed 3 times
Switch held	1	Key Held Down
Switch released	1	Key Released

Auto-off timer
In Mode 0 (switch mode), Parameter 154 configures the auto-off delay (0–43200 seconds).

Protection
The device supports Protection Command Class for both local and RF control.

Local protection states

- 0 - Unprotected: device can be operated normally with the user interface
- 2 - No operation possible: the button cannot change the relay state; the menu remains available.

RF protection states

- 0 - Unprotected: the device accepts and responds to all RF Commands
- 1 - No RF control: Command Class Basic and Actuator Command Class are rejected; all other command classes are handled

14 ADVANCED PARAMETERS

These parameters define switching behavior, temperature control/temperature-assisted control mode behavior, reporting, and protection thresholds. They are available from the Z-Wave controller interface.

Table 7 - High Load-Control - Advanced parameters

Parameter	Applies to	Description	Available setting	Default setting	Length
1 [0x01] Restore state after power failure	Mode 0	This parameter determines whether the device will return to the state prior to the power failure after the power is restored. Only applicable when the device working mode is set to 0 (switch mode); in thermostat mode, the device will always restore the last state.	• 0 - output remains off after power is restored • 1 - restore the state from before the power failure	1	1B
20 [0x14] Switch type	All	This parameter defines how the device should treat external switches connected to the S terminal.	• 0 - momentary switch • 1 - toggle switch (closed - ON, open - OFF) • 2 - toggle switch (state changes on each switch change) • 3 - no switch connected	2	1B
25 [0x19] Output logic swap	All	This parameter allows the output control logic to be changed.	• 0 - normal (output ON - relay closed) • 1 - inverted (output ON - relay open)	0	1B
40 [0x28] Scenes sent	All	This parameter determines which actions result in sending scene IDs assigned to them.	Range: 0-15 (bitmask) • 1 - key pressed 1 time • 2 - key pressed 2 times • 4 - key pressed 3 times • 8 - key held down and key released	15	1B
154 [0x9A] Auto off	Mode 0	This parameter sets the auto-off time for the output; a value of 0 disables the functionality. Only applicable when the device's working mode is set to 0 (switch mode).	Range: 0-43200 s • 0 - disabled • 1-43200 - time in seconds	0	2B
200 [0xC8] Voltage measurement	All	This parameter allows setting the value by which the mains voltage must change for the device to send the voltage measurement report. When set to 0, the functionality is disabled.	Range: 0 or 3-10 V • 0 - disabled • 3-10 V - threshold	0	1B
201 [0xC9] Voltage value for notification	All	This parameter allows setting the value that the mains voltage must exceed for the device to send the voltage notification report. When set to 0, the functionality is disabled.	Range: 0 or 100-260 V • 0 - disabled • 100-260 V - threshold	0	2B
202 [0xCA] Device working mode	All	This parameter defines how the device identifies itself to the Z-Wave controller and determines its main functionality.	• 0 - Switch mode (Mode 0) • 1 - Thermostat mode with NTC reference sensor (Mode 1) • 2 - Thermostat mode with floor protection (Mode 2)	0	1B
203 [0xCB] Temperature setpoint min level	Mode 1 and 2	This parameter allows defining the minimum temperature, which is used as the lowest supported setpoint for heating mode (unit is 0.1 ˚C). Only applicable when the device's working mode is set to 1 or 2 (thermostat mode).	Range: 40-500 (4.0-50.0 ˚C)	40	2B
204 [0xCC] Temperature setpoint max level	Mode 1 and 2	This parameter allows to define the maximum temperature, which will be used as the highest supported setpoint for heating mode (unit is 0.1 ˚C). This value cannot be lower than "Temperature setpoint min level". Only applicable when the device's working mode is set to 1 or 2 (thermostat mode).	Range: 41-1000 (4.1-100.0 ˚C)	350	2B

205 [0xCD] Temperature control hysteresis	Mode 1 and 2	This parameter defines the hysteresis value for controlling the output of the device. Default value (0.5 ˚C) means that the device will be heating till 0.5 ˚C above the configured setpoint; the temperature will need to drop 0.5 ˚C below the setpoint to resume heating. Only applicable when device working mode is set to 1 or 2 (thermostat mode).	Range: 1-20 (0.1-2.0 ˚C)	5	1B
206 [0xCE] Temperature sensor status (external)	All	This parameter is read-only. Its value indicates the sensor connection status.	Range: 0-1 • 0 - sensor disconnected • 1 - sensor connected	N/A	1B
207 [0xCF] NTC Sensor nominal resistance	All	This parameter allows to set the nominal resistance in Ohms (Ω) of the NTC temperature sensor at the reference temperature. This is necessary to ensure accurate temperature readings from the NTC temperature sensor.	Range: 1000-50000 • 1000 Ω -50000 Ω (1 kΩ- 50 kΩ)	10000	4B
208 [0xD0] NTC Sensor nominal Beta Coefficient	All	This parameter allows setting the Beta (β) constant of the NTC temperature sensor. This is necessary to ensure accurate temperature readings from the NTC temperature sensor.	Range: 2000-6000K	3950	2B
209 [0xD1] Temperature threshold reporting	All	This parameter defines how much the measured temperature must change from the previously reported value for the report to be sent to the main controller (unit is 0.1 ˚C).	Range: 0 or 2-20 • 0 - disabled • 2-20 - 0.2-2.0 ˚C	5	1B
210 [0xD2] Temperature interval reporting	All	This parameter allows to define the time interval of the temperature reports regardless of the “temperature threshold reporting” (unit is 1 minute).	Range: 0, 30-1440 • 0 – interval based reports disabled • 30 – 1440 [30min – 1440min]	0	2B
211 [0xD3] Maximum cut off temperature	Mode 0 + Mode 2	This parameter sets a temperature threshold that controls the output based on the NTC sensor reading. Its behavior depends on the device’s working mode: • When the device working mode is set to switch mode, if the NTC sensor temperature exceeds the set limit, the output is disabled immediately ,and the device sends overheat notification. The output remains in the off state until the temperature drops by 5 ˚C below the limit, at which point protection is automatically cancelled. • When device working mode is set to a mode 2 the NTC sensor acts as a regulator. When the limit is reached, the output is temporarily switched off and will automatically turn on again once the temperature drops 0.5 °C below the set value.	Range: 0 or 40-1000 • 0 - disabled • 40-1000 (4.0-100.0 ˚C)	0	2B

Altering capabilities

Parameters 202, 203, and 204 have “altering capabilities”. This means that changing the value for those parameters affects functions or capabilities; the device reports to the network. Depending on the system, High Load-Control may need to be re-interviewed or re-added to the system.

Chapter 7 (Device mode selections) describes how to perform these actions on the device.

The entire Chapter 15 describes what is changing (what capabilities are being altered)

15 Z-WAVE® SPECIFICATION

15.1 - Manufacturer Specific Command Class (Mode 0)

Table 8 - High Load-Control - Manufacturer Specific CC (Mode 0)

ID	Value
Manufacturer ID	Nice-Polska Sp. z o. o [0x010F]
Product Type ID	0x2F01

15.2 - Manufacturer Specific Command Class (Mode 1 and 2)

Table 9 - High Load-Control - Manufacturer Specific CC (Mode 1 and 2)	
ID	**Value**
Manufacturer ID	Nice-Polska Sp. z o. o [0x010F]
Product Type ID	0x2F11

15.3 - NIF Command Class (Mode 0)

Table 10 - High Load-Control - NIF Command Class (Mode 0)			
No.	**Command Class**	**Version**	**Secure**
1.	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E]	V2	None
2.	COMMAND_CLASS_SWITCH_BINARY [0x25]	V2	Highest Available
3.	COMMAND_CLASS_ASSOCIATION [0x85]	V2	Highest Available
4.	COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E]	V3	Highest Available
5.	COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59]	V3	Highest Available
6.	COMMAND_CLASS_MULTI_CHANNEL [0x60]	V4	Highest Available
7.	COMMAND_CLASS_MANUFACTURER_SPECIFIC [0x72]	V2	Highest Available
8.	COMMAND_CLASS_VERSION [0x86]	V3	Highest Available
9.	COMMAND_CLASS_TRANSPORT_SERVICE [0x55]	V2	None
10.	COMMAND_CLASS_SECURITY [0x98]	V1	None
11.	COMMAND_CLASS_SECURITY_2 [0x9F]	V1	None
12.	COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A]	V1	Highest Available
13.	COMMAND_CLASS_APPLICATION_STATUS [0x22]	V1	None
14.	COMMAND_CLASS_SUPERVISION [0x6C]	V1	None
15.	COMMAND_CLASS_POWERLEVEL [0x73]	V1	Highest Available
16.	COMMAND_CLASS_INDICATOR [0x87]	V3	Highest Available
17.	COMMAND_CLASS_FIRMWARE_UPDATE_MD [0x7A]	V5	Highest Available
18.	COMMAND_CLASS_CONFIGURATION [0x70]	V4	Highest Available
19.	COMMAND_CLASS_CENTRAL_SCENE [0x5B]	V3	Highest Available
20.	COMMAND_CLASS_NOTIFICATION [0x71]	V8	Highest Available
21.	COMMAND_CLASS_METER [0x32]	V5	Highest Available
22.	COMMAND_CLASS_SENSOR_MULTILEVEL [0x31]	V11	Highest Available
23.	COMMAND_CLASS_PROTECTION [0x75]	V2	Highest Available
Command Class - not in NIF			
24.	COMMAND_CLASS_BASIC [0x20]	V2	Highest Available

15.4 - NIF Command Class (Mode 1 and 2)

Table 11 - High Load-Control - NIF Command Class (Mode 1 and 2)			
No.	**Command Class**	**Version**	**Secure**
1.	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E]	V2	None
2.	COMMAND_CLASS_ASSOCIATION [0x85]	V2	Highest Available
3.	COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E]	V3	Highest Available
4.	COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59]	V3	Highest Available
5.	COMMAND_CLASS_MULTI_CHANNEL [0x60]	V4	Highest Available
6.	COMMAND_CLASS_MANUFACTURER_SPECIFIC [0x72]	V2	Highest Available
7.	COMMAND_CLASS_VERSION [0x86]	V3	Highest Available
8.	COMMAND_CLASS_TRANSPORT_SERVICE [0x55]	V2	None
9.	COMMAND_CLASS_SECURITY [0x98]	V1	None
10.	COMMAND_CLASS_SECURITY_2 [0x9F]	V1	None
11.	COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A]	V1	Highest Available
12.	COMMAND_CLASS_APPLICATION_STATUS [0x22]	V1	None
13.	COMMAND_CLASS_SUPERVISION [0x6C]	V1	None
14.	COMMAND_CLASS_POWERLEVEL [0x73]	V1	Highest Available
15.	COMMAND_CLASS_INDICATOR [0x87]	V3	Highest Available
16.	COMMAND_CLASS_FIRMWARE_UPDATE_MD [0x7A]	V5	Highest Available
17.	COMMAND_CLASS_CONFIGURATION [0x70]	V4	Highest Available
18.	COMMAND_CLASS_THERMOSTAT_MODE [0x40]	V3	Highest Available
19.	COMMAND_CLASS_THERMOSTAT_SETPOINT [0x43]	V3	Highest Available
20.	COMMAND_CLASS_THERMOSTAT_OPERATING_STATE [0x42]	V1	Highest Available
21.	COMMAND_CLASS_CENTRAL_SCENE [0x5B]	V3	Highest Available
22.	COMMAND_CLASS_NOTIFICATION [0x71]	V8	Highest Available
23.	COMMAND_CLASS_METER [0x32]	V5	Highest Available
24.	COMMAND_CLASS_SENSOR_MULTILEVEL [0x31]	V11	Highest Available
25.	COMMAND_CLASS_PROTECTION [0x75]	V2	Highest Available
Command Class – not in NIF			
26.	COMMAND_CLASS_BASIC [0x20]	V2	Highest Available

15.5 - Z-Wave Plus CC (Mode 0)

Table 12 - High Load-Control - Z-Wave Plus CC (Mode 0)	
Root / Endpoint 1	
Role Type	(AOEN) ROLE_TYPE_END_NODE_ALWAYS_ON [0x05]
Node Type	NODE_TYPE_ZWAVEPLUS_NODE [0x00]
Installer Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH [0x0700]
User Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH [0x0700]
Root / Endpoint 2	
Role Type	(AOEN) ROLE_TYPE_END_NODE_ALWAYS_ON [0x05]
Node Type	NODE_TYPE_ZWAVEPLUS_NODE [0x00]
Installer Icon Type	ICON_TYPE_SPECIFIC_SENSOR_MULTILEVEL_TARGET_TEMPERATURE [0x0D22]
User Icon Type	ICON_TYPE_SPECIFIC_SENSOR_MULTILEVEL_TARGET_TEMPERATURE [0x0D22]

15.6 - Z-Wave Plus CC (Mode 1 and 2)

Table 13 - High Load-Control - Z-Wave Plus CC (Mode 1 and 2)	
Root / Endpoint 1	
Role Type	(AOEN) ROLE_TYPE_END_NODE_ALWAYS_ON [0x05]
Node Type	NODE_TYPE_ZWAVEPLUS_NODE [0x00]
Installer Icon Type	ICON_TYPE_GENERIC_THERMOSTAT_HVAC [0x1200]
User Icon Type	ICON_TYPE_GENERIC_THERMOSTAT_HVAC [0x1200]
Root / Endpoint 2	
Role Type	(AOEN) ROLE_TYPE_END_NODE_ALWAYS_ON [0x05]
Node Type	NODE_TYPE_ZWAVEPLUS_NODE [0x00]
Installer Icon Type	ICON_TYPE_SPECIFIC_SENSOR_MULTILEVEL_TARGET_TEMPERATURE [0x0D22]
User Icon Type	ICON_TYPE_SPECIFIC_SENSOR_MULTILEVEL_TARGET_TEMPERATURE [0x0D22]

15.7 - Association CC

Table 14 - High Load-Control - Association CC		
Root Device		
Group	**Max Nodes Supported**	**Comment**
1	1	Lifeline
2	5	ON/OFF

15.8 - Association Group Information CC (Mode 0)

Table 15 - High Load-Control - Association Group Information CC (Mode 0)			
Group	**Profile**	**Command Class & Command**	**Group Name**
Root			
1.	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_SWITCH_BINARY [0x25] SWITCH_BINARY_REPORT [0x03] COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A] DEVICE_RESET_LOCALLY_NOTIFICATION [0x01] COMMAND_CLASS_INDICATOR [0x87] INDICATOR_REPORT [0x03] COMMAND_CLASS_CONFIGURATION [0x70] CONFIGURATION_REPORT [0x06] COMMAND_CLASS_CENTRAL_SCENE [0x5B] CENTRAL_SCENE_NOTIFICATION [0x03] COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05] COMMAND_CLASS_METER [0x32] METER_REPORT [0x02] COMMAND_CLASS_SENSOR_MULTILEVEL [0x31] SENSOR_MULTILEVEL_REPORT [0x05]	Lifeline
2.	Control: KEY01 (0x20: 0x01)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off
Endpoint 1			
1.	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_SWITCH_BINARY [0x25] SWITCH_BINARY_REPORT [0x03] COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05] COMMAND_CLASS_METER [0x32] METER_REPORT [0x02]	Lifeline
2.	Control: KEY01 (0x20: 0x01)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off
Endpoint 2			
1.	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05] COMMAND_CLASS_SENSOR_MULTILEVEL [0x31] SENSOR_MULTILEVEL_REPORT [0x05]	Lifeline

15.9 - Association Group Information CC (Mode 1 and 2)

Table 16 - High Load-Control - Association Group Information CC (Mode 1 and 2)			
Group	**Profile**	**Command Class & Command**	**Group Name**
Root			
1.	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A] DEVICE_RESET_LOCALLY_NOTIFICATION [0x01] COMMAND_CLASS_INDICATOR [0x87] INDICATOR_REPORT [0x03] COMMAND_CLASS_CONFIGURATION [0x70] CONFIGURATION_REPORT [0x06] COMMAND_CLASS_THERMOSTAT_MODE [0x40] THERMOSTAT_MODE_REPORT [0x03] COMMAND_CLASS_THERMOSTAT_OPERATING_STATE [0x42] THERMOSTAT_OPERATING_STATE_REPORT [0x03] COMMAND_CLASS_THERMOSTAT_SETPOINT [0x43] THERMOSTAT_SETPOINT_REPORT [0x03] COMMAND_CLASS_CENTRAL_SCENE [0x5B] CENTRAL_SCENE_NOTIFICATION [0x03] COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05] COMMAND_CLASS_METER [0x32] METER_REPORT [0x02] COMMAND_CLASS_SENSOR_MULTILEVEL [0x31] SENSOR_MULTILEVEL_REPORT [0x05]	Lifeline
2.	Control: NA (0x20: 0x00)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off
Endpoint 1			
1.	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_THERMOSTAT_MODE [0x40] THERMOSTAT_MODE_REPORT [0x03] COMMAND_CLASS_THERMOSTAT_OPERATING_STATE [0x42] THERMOSTAT_OPERATING_STATE_REPORT [0x03] COMMAND_CLASS_THERMOSTAT_SETPOINT [0x43] THERMOSTAT_SETPOINT_REPORT [0x03] COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05] COMMAND_CLASS_METER [0x32] METER_REPORT [0x02]	Lifeline
2.	Control: NA (0x20: 0x00)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off
Endpoint 2			
1.	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05] COMMAND_CLASS_SENSOR_MULTILEVEL [0x31] SENSOR_MULTILEVEL_REPORT [0x05]	Lifeline

15.10 - Switch Binary CC (Mode 0)

Table 17 - High Load-Control - Switch Binary CC (Mode 0)		
Command	**Value**	**State**
SET/REPORT	0 (0x00)	OFF
SET	1-99 (0x01-0x63)	ON
SET/REPORT	255 (0xFF)	ON

15.11 - Basic CC (Mode 0)

Table 18 - High Load-Control - Basic CC (Mode 0)	
Command	**Root Mapping**
Basic Set (0xFF)	Binary Switch Set=ON
Basic Set (0x00)	Binary Switch Set=OFF

Basic Get	Binary Switch Get
Basic Report	Binary Switch Report

15.12 - Basic CC (Mode 1 and 2)

Table 19 - High Load-Control - Basic CC (Mode 1 and 2)

Command	Root	EP1 Mapping	EP2
Basic Set (0xFF)	= EP1	THERMOSTAT_MODE_SET Mode=HEAT	-
Basic Set (0x00)	= EP1	THERMOSTAT_MODE_SET Mode=OFF	-
Basic Get	= EP1	THERMOSTAT_MODE_GET	-
Basic Report (0xFF)	= EP1	Mode = HEAT	-
Basic Report (0x00)	= EP1	Mode = OFF	-

15.13 - Protection CC

Table 20 - High Load-Control - Protection CC

Type	State	Description
Local	0	Unprotected - device can be operated normally with the user interface
Local	2	No operation possible - button cannot change relay state, menu is available
RF	0	Unprotected - device accepts and responds to all RF Commands
RF	1	Command Class Basic and Actuator Command Class are rejected, every other command class will be handled

15.14 - Notification CC

Table 21 - High Load-Control - Notification CC

Endpoint 1			
Notification Type	**Event / State**	**Event Parameter**	**Status**
Power Management [0x08]	Voltage drop/drift [0x05/V2]	-	0xFF - enabled (not changeable)
Power Management [0x08]	Over-current detected [0x06/V3]	-	0xFF - enabled (not changeable)
Power Management [0x08]	Over-voltage detected [0x07]	-	0xFF - enabled (not changeable)
System [0x09]	System hardware failure [0x03]	MP code: 0x01 [device overheat]	0xFF - enabled (not changeable)
System [0x09]	System hardware failure [0x03]	MP code 0x09 Communication with sensor lost - applies only to Mode 2	0xFF - enabled (not changeable)
Endpoint 2			
Heat [0x04]	Overheat detected [0x02]	Overheat status Overheating applies only to Mode 0	0xFF - enabled (not changeable)
System [0x09]	System hardware failure [0x03]	MP code: 0x08 [no sensor detected]	0xFF - enabled (not changeable)

15.15 - Multichannel CC (Mode 0)

Table 22 - High Load-Control - Multichannel CC (Mode 0)	
Endpoint 1 (Output)	
Property	**Value**
Generic Type	GENERIC_TYPE_SWITCH_BINARY [0x10]
Specific Type	SPECIFIC_TYPE_NOT_USED [0x00]
Supported CC	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E] COMMAND_CLASS_SWITCH_BINARY [0x25] COMMAND_CLASS_ASSOCIATION [0x85] COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E] COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59] COMMAND_CLASS_SECURITY [0x98] COMMAND_CLASS_SECURITY_2 [0x9F] COMMAND_CLASS_APPLICATION_STATUS [0x22] COMMAND_CLASS_SUPERVISION [0x6C] COMMAND_CLASS_NOTIFICATION [0x71] COMMAND_CLASS_METER [0x32] COMMAND_CLASS_PROTECTION [0x75]
Description	Output
Endpoint 2 (Temperature)	
Generic Type	GENERIC_TYPE_SENSOR_MULTILEVEL [0x21]
Specific Type	SPECIFIC_TYPE_ROUTING_SENSOR_MULTILEVEL [0x01]
Supported CC	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E] COMMAND_CLASS_ASSOCIATION [0x85] COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E] COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59] COMMAND_CLASS_SECURITY [0x98] COMMAND_CLASS_SECURITY_2 [0x9F] COMMAND_CLASS_APPLICATION_STATUS [0x22] COMMAND_CLASS_SUPERVISION [0x6C] COMMAND_CLASS_NOTIFICATION [0x71] COMMAND_CLASS_SENSOR_MULTILEVEL [0x31]
Description	Temperature

15.16 - Multichannel CC (Mode 1 and 2)

Table 23 - High Load-Control - Multichannel CC (Mode 1 and 2)	
Endpoint 1 (Thermostat)	
Property	**Value**
Generic Type	GENERIC_TYPE_THERMOSTAT [0x08]
Specific Type	SPECIFIC_TYPE_THERMOSTAT_GENERAL_V2 [0x06]
Supported CC	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E] COMMAND_CLASS_ASSOCIATION [0x85] COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E] COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59] COMMAND_CLASS_SECURITY [0x98] COMMAND_CLASS_SECURITY_2 [0x9F] COMMAND_CLASS_APPLICATION_STATUS [0x22] COMMAND_CLASS_SUPERVISION [0x6C] COMMAND_CLASS_THERMOSTAT_MODE [0x40] COMMAND_CLASS_THERMOSTAT_SETPOINT [0x43] COMMAND_CLASS_THERMOSTAT_OPERATING_STATE [0x42] COMMAND_CLASS_NOTIFICATION [0x71] COMMAND_CLASS_METER [0x32] COMMAND_CLASS_PROTECTION [0x75]
Description	Thermostat
Endpoint 2 (Temperature)	
Generic Type	GENERIC_TYPE_SENSOR_MULTILEVEL [0x21]
Specific Type	SPECIFIC_TYPE_ROUTING_SENSOR_MULTILEVEL [0x01]

Supported CC	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E] COMMAND_CLASS_ASSOCIATION [0x85] COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E] COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59] COMMAND_CLASS_SECURITY [0x98] COMMAND_CLASS_SECURITY_2 [0x9F] COMMAND_CLASS_APPLICATION_STATUS [0x22] COMMAND_CLASS_SUPERVISION [0x6C] COMMAND_CLASS_NOTIFICATION [0x71] COMMAND_CLASS_SENSOR_MULTILEVEL [0x31]
Description	Temperature

15.17 - Thermostat Mode CC

Table 24 - High Load-Control - Thermostat Mode CC	
Supported Mode	**Value**
OFF	[0x00]
HEAT	[0x01]

15.18 - Thermostat Setpoint CC

Table 25 - High Load-Control - Thermostat Setpoint CC					
Type	**Precision**	**Scale**	**Size**	**Min**	**Max**
Heating [0x01]	1	Celsius [0x00]	4	According to Parameter 203	According to Parameter 204

15.19 - Thermostat Operating State CC

Table 26 - High Load-Control - Thermostat Operating State CC	
Operating State	**Value**
Idle	[0x00]
Heating	[0x01]
Pending heat	[0x04]

15.20 - Meter CC

Table 27 - High Load-Control - Meter CC				
Meter Type	**Scale**	**Rate Type**	**Precision**	**Size**
Electric [0x01]	Electric_V [0x04]	Import [0x01]	0	4
Electric [0x01]	Electric_W [0x02]	Import [0x01]	1	4
Electric [0x01]	Electric_kWh [0x00]	Import [0x01]	2	4

15.21 - Sensor Multilevel CC (Endpoint 2)

Table 28 - High Load-Control - Sensor Multilevel CC (Endpoint 2)			
Sensor Type	**Scale**	**Precision**	**Size**
Temperature (v1) [0x01]	Celsius (C)	1	4

15.22 - Indicator CC

Table 29 - High Load-Control - Indicator CC			
Command	**Indicator ID**	**Property ID**	**Value**
SET	All	On/Off Period [0x03]	0x00-0xFF
SET	All	On/Off Cycles [0x04]	0x00-0xFF
SET	All	One time On/Off period [0x05]	0x00-0xFF
GET	All	-	Device sends Indicator Report

16 REGULATIONS

Legal Notices

All information, including, but not limited to, information regarding the features, functionality, and/or other product specification are subject to change without notice. NICE reserves all rights to revise or update its products, software, or documentation without any obligation to notify any individual or entity.

NICE logo is a trademark of NICE SpA Oderzo TV Italia. All other brands and product names referred to herein are trademarks of their respective holders.

Declaration of conformity

Hereby, NICE SpA Oderzo TV Italia declares that High Load-Control is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The full text of the EU declaration of conformity is available at: www.niceforyou.com/en/download?v=18

WEEE Directive Compliance



Device labelled with this symbol should not be disposed with other household wastes. It shall be handed over to the applicable collection point for the recycling of waste electrical and electronic equipment.

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