Data Sheet

Description of Z-Wave Command Classes Supported by *living connect*®

Introduction

living connect® is an electronic radiator thermostat communicating on Z-Wave.

This document provides information about the Z-Wave commands supported by *living connect*®

and guidelines on the implementation of Z-Wave controllers.

Implemented Z-Wave Device Classes

Z-Wave Device Classes	Device Class Implemented
Generic Device	GENERIC_TYPE_THERMOSTAT
Specific Device	SPECIFIC_TYPE_SETPOINT_THERMOSTAT

Supported and Controlled Z-Wave Command Classes

Z-Wave Command Classes Supported	Description
COMMAND_CLASS_BATTERY	Get current battery status of *living connect*®.
COMMAND_CLASS_CLIMATE_CONTROL_SCHEDULE	Control a temperature offset to the thermostat setpoint of *living connect*®. The temperature offset is defined by schedules and schedule overrides.
COMMAND_CLASS_CLOCK	Set or get the current *living connect*® clock.
COMMAND_CLASS_MANUFACTURER_PROPRIETARY	Special command used for communication with a Danfoss Link system.
COMMAND_CLASS_MANUFACTURER_SPECIFIC	Get manufacturer ID of system.
COMMAND_CLASS_MULTI_CMD	A special Z-Wave command used by *living connect*® to encapsulate multiple commands in one command and thereby conserve battery life.
COMMAND_CLASS_PROTECTION	Set or get *living connect*® local protection mode. Possible local protection values are: 0 = no protection 2 = fully locked (tamperproof)
COMMAND_CLASS_THERMOSTAT_SETPOINT	Set or get current thermostat setpoint of *living connect*®. Heating setpoint is the only supported setpoint type.

Z-Wave Command Classes Supported	Description
COMMAND_CLASS_VERSION	Get version of product and command classes.
COMMAND_CLASS_WAKE_UP	A special Z-Wave command used by *living connect*° to synchronize communication with its controller.

living connect° and Z-Wave Repeaters

living connect° may benefit if more mains powered Z-Wave devices are added to a Z-Wave network.

Mains powered Z-wave devices improve the reliability of a Z-wave network as they can act as repeaters and thus provide alternate routes for communication.

Connect living connect° to a Z-Wave Controller

In Z-Wave connecting a device is called "Inclusion" or "Learn mode".

To connect *living connect*° to a Z-Wave controller then:

- Ensure *living connect*° is factory reset as explained in the user manual.
- Activate "Inclusion" on the Z-Wave controller.

- Quickly press and release the select button on living connect®.
- Observe both controller and *living connect*° for status of the process.

Technical requirements:

- After a succesful "Inclusion" the controller must send a WAKE_UP_INTERVAL_SET command to *living connect*° in order to specify where and when living connect® should communicate wirelessly.
- After sending the WAKE_UP_INTERVAL_SET command, the controller must assign return routes, so *living connect*° can reach its destination i.e. the nodeID set in the WAKE_UP_INTERVAL_SET command.
- *living connect*°will not commence its periodic communications if it is in

"Installation mode". "Installation mode" is for physical installation and should not be confused with "Inclusion". Please consult the user manual of *living connect*° for instructions on how to leave "Installation mode".

- A Z-Wave controller will have access to all *living connect*° features, which are exposed using standard Z-Wave command classes. See other section of this document for more information.

Disconnect living connect° from a Z-Wave Controller

In Z-Wave disconnecting a device is called "Exclusion".

To disconnect *living connect*° from a Z-Wave controller then:

- Activate "Exclusion" on the Z-Wave controller.
- Quickly press and release the select button on *living connect*°.
- Observe both controller and *living connect*° for status of the process.

Activate Special Awake Mode on living connect°

living connect° will turn on radio communication for short periods of time at specific intervals in order to communicate with its controller, unless such a controller has yet to be configured. When radio communication is not needed by *living connect*° it will turn the radio off to conserve battery life.

If a user needs to configure a controller for *living connect*° or send more information to *living connect*° then the user can activate a special 5 seconds awake mode by pressing the select button on *living connect*°.

Important

The nodeID set in the WAKE_UP_INTERVAL_SET command must be for a permanently listening device which reponds to the commands sent from *living connect®*. This means PC's with USB sticks will only work if the PC is never turned off. If the controller is turned off for extended periodes, *living connect®* will use the batteries too fast.

Although *living connect®* supports single commands, multi commands must always be used to ensure two years battery lifetime.

If multiple thermostats are installed in the same room it is important that the controller ensures that they all have the same schedule and the same setpoint.

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