

» SRE-Repeater UP

Smart rule-based EnOcean repeater

thermokon[®]
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
Issue date: 28.10.2020 • A111



» APPLICATION

**AirConfig tool is mandatory for SRE Repeater UP! All settings must be programmed using airConfig
SmartACK is not supported**

Wireless Repeater which receives telegrams and re-send's them to enhance and increase the signal distance from the transmitter to the receiver. Typically a repeater will be used when the sensor has been mounted too far from the receiver or there are obstacles between sensor and receiver which absorb the signal to the receiver.

It can operate as a Level-1 or Level-2 repeater and selected telegrams can be defined using the airConfig software to identify and select certain telegrams to be repeated. The parameters can be selected for sensor signals only or sensor signals and already repeated signals.

» SECURITY ADVICE – CAUTION



The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.



CAUTION! Risk of electric shock due to live components within the enclosure, especially devices with mains voltage supply (usually between 90..265 V).

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

» NOTES ON DISPOSAL



As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

» INFORMATION ABOUT EASYSSENS® (RADIO) / AIRCONFIG GENERAL USAGE



EasySens® - airConfig

Basic information about EasySens® radio and about general usage of our airConfig software, please download from our website.

» OVERVIEW OF THE RADIO TELEGRAMS



EEP

The structure of the data contained in the telegram can be found in the EEP (EnOcean equipment profile) list provided by the EnOcean Alliance.

» PRODUCT TESTING AND CERTIFICATION



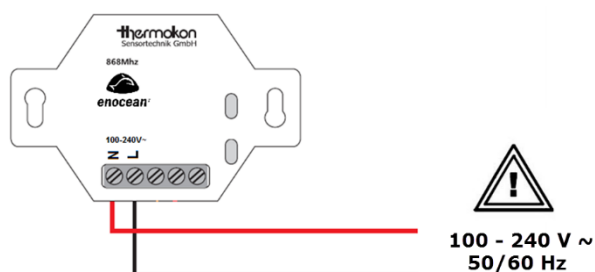
Declaration of conformity

The declaration of conformity of the products can be found on our website <https://www.thermokon.de/>.

» TECHNICAL DATA

Radio technology	EnOcean, (IEC 14543-3-10), transmission power <10 mW
Frequency	868 MHz
Antenna	internal
Data transmission	bidirectional
Power supply	100..240 V ~
Power consumption	typ. 0,5 VA (100..240 V ~)
Functions	level-1, level-2, smart-operation, rule based, max. 10 rules, configured via airConfig
Enclosure	ABS, red
Protection	IP20 according to EN 60529
Connection electrical	terminal block max. 1,5mm ²
Ambient condition	-20..+60 °C, max 85% rH, non-condensing
Weight	55 g
Mounting	flush mounted with standard EU box (Ø=60 mm)

» CONNECTION PLAN



» CONFIGURATION OF SRE-REPEATER WITH AIRCONFIG

Level-1 or Level 2 Repeater

SRE-Repeater can be used as Level-1 or Level-2 repeater. Level-1 repeater repeats only telegrams received from a sensor directly, where Level-2 repeater repeats telegrams received from a sensor or a Level-1 repeater. If a telegram will be received from a sensor and a Level repeater, only the signal received first will be repeated.

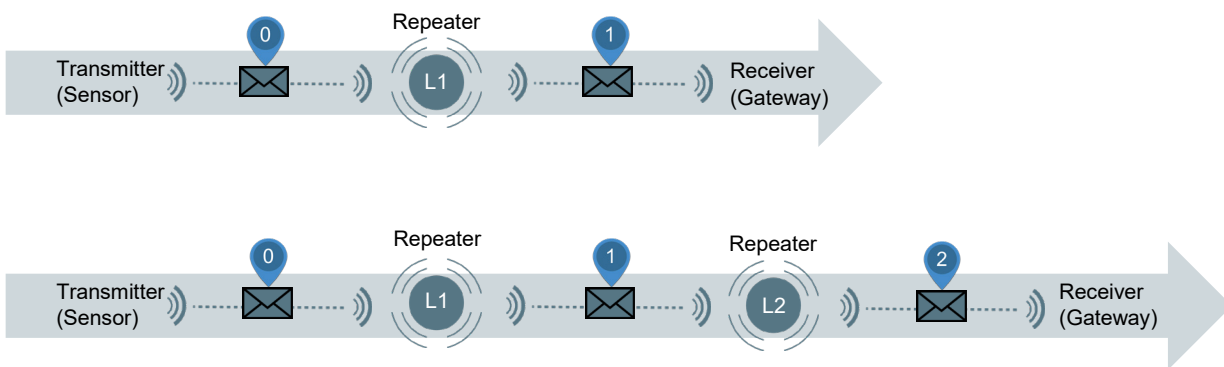
Level-1 and Level-2 Repeater repeat all telegrams received regardless of their need to be repeated. Therefore the number of telegrams in the air is doubled or tripled, because of a few sensors having range problems.

Smart Level-1 respectively Smart Level-2 Repeater

To repeat selected telegrams instead of all telegrams, Smart-L1 or Smart-L2 must be selected.

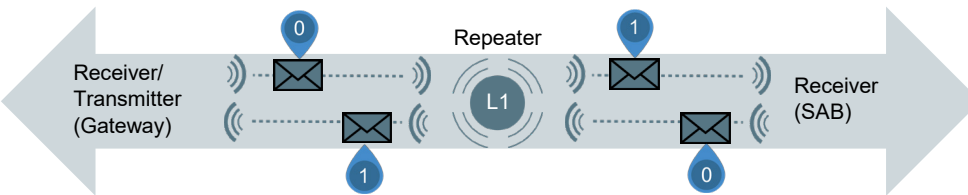
Unidirectional

Repeaters cannot be cascaded in the Level 1 function. Telegrams that have already been repeated cannot be repeated again. If it is necessary to extend the range due to extreme building engineering conditions, the Level-1 must be supplemented with a Level-2 repeater.

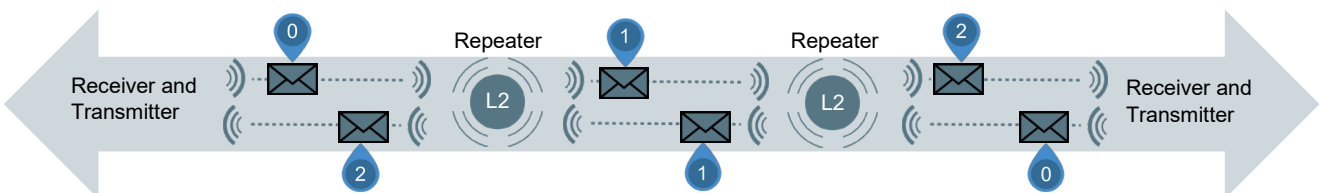


Bidirecional

A radio control path with a SAB may only be extended via **one** repeater.



2 cascaded level 2 repeaters allow to increase the radio range in both directions. This should only be used in exceptional situations. Too many repeaters can cause telegram collisions. In this case it is recommended to select the telegrams using the smart rules.



When planning the radio range, it should be ensured that perfect reception is guaranteed at the receiver location. A buffer of the signal attenuation should be considered for a possible later furnishing of the buildings.

In the configuration interface airConfig various rules can be defined whether a telegram is repeated or not.

There are 4 different types of parameters available from the drop down menu:

- **Sensor-ID** (EnOcean Radio ID of the sensor)
Drag and drop the desired sensor (with range problems) into the Filter of the smart repeater.
- **Signal strength** (RSSI-Level)
All telegrams received at a RSSI level lower than the specified threshold will be repeated.
Higher RSSI telegrams identify weaker signals, i.e. -80dB is weaker than -60dB.

The receiver's technical limit is approx. -90.95dB. Signals weaker than this can not be filtered from the ambient noise. To ensure a reliable transmission the signal must be 15..20 dB above the noise level – signals weaker than -75.-80db will not provide sufficient telegram information.
- **RORG** (Telegram-Type)
Standard EnOcean telegram types are RPS (Switches), 1BS (window contact, window handle), 4BS (4-Byte Sensors), MSC (manufacturer specific), VLD (Variable Length), UTE (Universal Teach-In).
- **Destination-ID** (EnOcean Radio ID)
Only for addressed telegrams (different to broadcasted telegrams). Sensor telegrams typically will be broadcast type telegrams. Addressed telegrams are included in the EnOcean standard, but rarely used. .

Each parameter can be applied or blocked. Blocking inverts the rule – a certain telegram or a certain type of telegram (RORG) would not be repeated.

In case of multiple conditions / the parameters can be AND or OR scenario

Select OR for all telegrams and parameters to be processed independently. When selecting AND the telegram will be repeated only if all conditions are met.

10 parameters / conditions can be selected in total.

» DIMENSIONS (MM)

