Manual **SOUNDSYSTEM 420R**
applicable for 822.65.004

1. Introduction

Thank you for buying this quality product. Please read this manual carefully, especially the safety and security information.
Please check that you have the correct manual for your product. To do this, please compare the product code number shown above with the product code number displayed on your product.

2. Contents Check List

- SOUNDSYSTEM 420R with cabling
- IR-Receiver
- Indoor antenna
- Remote control unit
- Battery for remote control unit
- Manual

3. Safety & security

Important information
In addition to this guidance please comply with your own country-specific safety & security regulations.

3.1. How to use this guide:

Read these instructions carefully before usage and use this product only in accordance with the instructions listed here.

3.2. Signs & symbols used

This sign warns of the danger of injury and property damage.

This sign warns of injury arising from electricity.

This sign warns of injury and/or explosion.

This symbol refers to additional information.

3.3. Signal words and their meaning

Danger: Potential severe physical injury and acute danger to life.
Warning: Potential physical injury and severe property damage.
Caution: Potential light physical injury or property damage as a result thereof.
Attention: Potential property damage.

Version (Technical and optical modifications reserved)

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Warning
The electrical supply must be disconnected before working on the device.
Improper handling may void warranty.

4. Product Scope
The SOUNDSYSTEM 420R is a Bluetooth receiver with built-in stereo amplifier and tuner.

5. Intended use
Indoors, to store in false ceilings or furniture.

6. Improper use
The device is not suitable for outdoor operation.
The ambient air temperature should not exceed 30 ° C.

Attention
With the use of **electronic transformers** (lighting) and SOUNDSYSTEM 420R, the following points have be observed to avoid potential problems:

- Cables between transformer and lamp < 2m thereby to keep electro-magnetic scattering / interference low.
- Power line cables to be kept at a distance of 5-10 cm from speaker cables, IR-cable and antenna cable (AC coupling).
- RF cables to be kept at a great distance from any metal surfaces (reduction of capacitive coupling).
- When the RF cable to the transformer is > 2m twist the single wires.
- Power line cable and RF cable not too close to the SOUNDSYSTEM 420R.
- Power line cables are not to be crossed or to run at right angles.

7. Specificaions SOUNDSYSTEM 420R

Power Supply	12 V DC
Speaker Power	2 x 5 W
Speaker Impedance	4 ohms each
Bluetooth Standard	Bluetooth CSR 2.1
Bluetooth Profile	A2DP
Max. distance between transmitter and receiver	10 m
Dimensions (H/B/T)	45 x 28 x 140 mm
Weight	165 g
Operating temperature	+5°C ... +30°C

8. Preparatory work before installation
Unpack the unit carefully and keep the original packaging (for future return under warranty if required).

Read the instructions carefully before installation.

9. Mounting and installation

- Install the power cable for 12VDC, antenna, speakers and the IR receiver cable 3 x 1.5qmm to the SOUNDSYSTEM 420R in accordance with installation guidelines, and your desired port scenario.
- Check whether the proposed location of the reception quality is sufficient.

Attention:
Obstruct the device only in locations that ensure sufficient temperature dissipation. Not e.g. in wool, because the device can drop out at high temperature.

Mounting the IR sensor

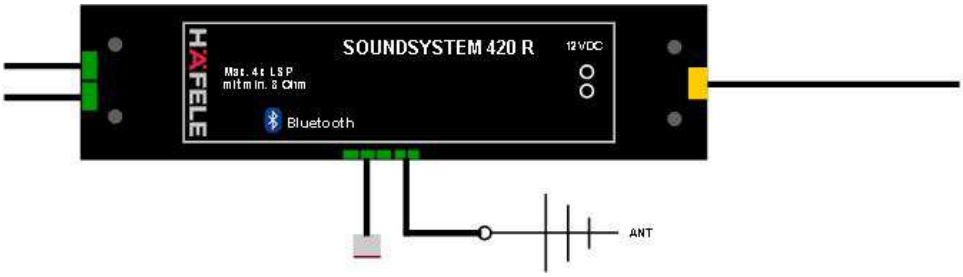
- Cut the hole for the IR sensor and fix it in the ceiling.

Attention:
If fluorescent lamps are mounted, the IR Sensor should not be mounted within the direct cone of light from the lamp.

Connecting the antenna

- Connecting the antenna cable: Connect the outer screen at **(-)** and the inner conductor at **(+)**.
- Conntcting the included wire antenna: to **ANT**.

Connections



Loudspeakers IR-Receiver Antenna Power Supply

9.1. Connections in general

The SOUNDSYSTEM 420R is applicable for Haefele cabling system.

Note
Speaker connection: green
Power connection: yellow

Accessory: Loox Power Supply / 12 V DC

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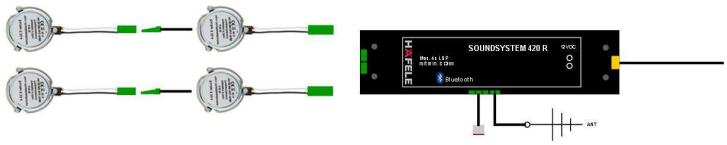
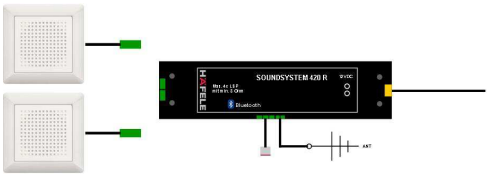
9.2. Connecting power supply and speakers

Connect the cables to the appropriate components (power supply / speaker).
Up to 4 Exciters/speakers are possible.
Please plug in the speakers symmetrically at channel R and L.

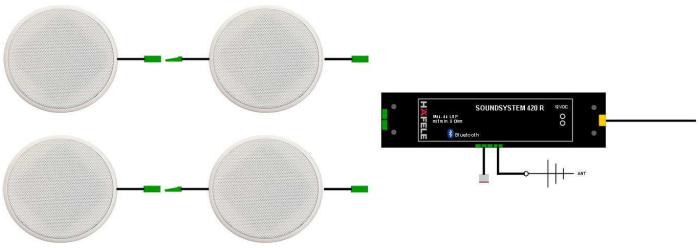
Attention:
Remove the cable protector(s) only when more than 2 Exciters/speakers are needed!



Exciter
822.65.002



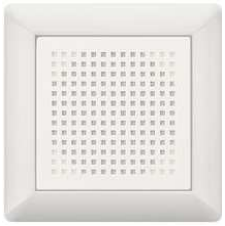
BuiltIn Speaker 68
833.02.822



BuiltIn Speaker 140
833.02.823

Note:
The power supply is not part of the SOUNDSYSTEM 420R. It must be ordered separately.
Recommendation: Loox Power Supply / 12 V DC

Suitable Loudspeakers



Art.Nr.: 833.02.822
Loudspeaker 70,5x70,5x38mm
Fitting for installation in flush-mounting boxes ø 68 mm,
B x T x H: 70,5 x 26 x 70,5 mm
Material: plastic

Specifications

Load Rating / Music Power	3 / 4 watt
Impedance	4 ohms
SPL	1W/1m: 78 dB
Frequency Range (-3dB)	140-21.000 Hz
Installation Depth	26 mm

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Art.Nr.: 833.02.823
Fitting for installation in furniture,
ø x depth: 140 x 48 mm
(Dimensions: ø 120 x 48 mm)
Material: plastic / metal

Specifications

Load Rating / Music Power	6 / 8 watt
Impedance	8 ohms
SPL	1W/1m: 86 dB
Frequency Range (-3dB)	170-16.000 Hz
Installation Depth	48 mm

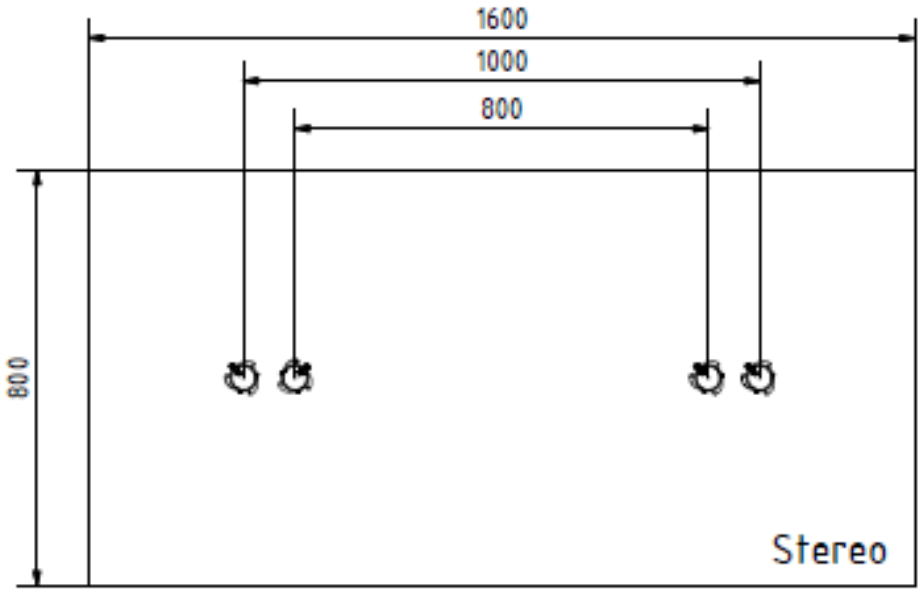
Art.Nr.: 822.65.001
Exciter, fitting for installation in furniture
(pasting/screwing)
ø x depth: 70 x 26 mm
Material: plastic / metal

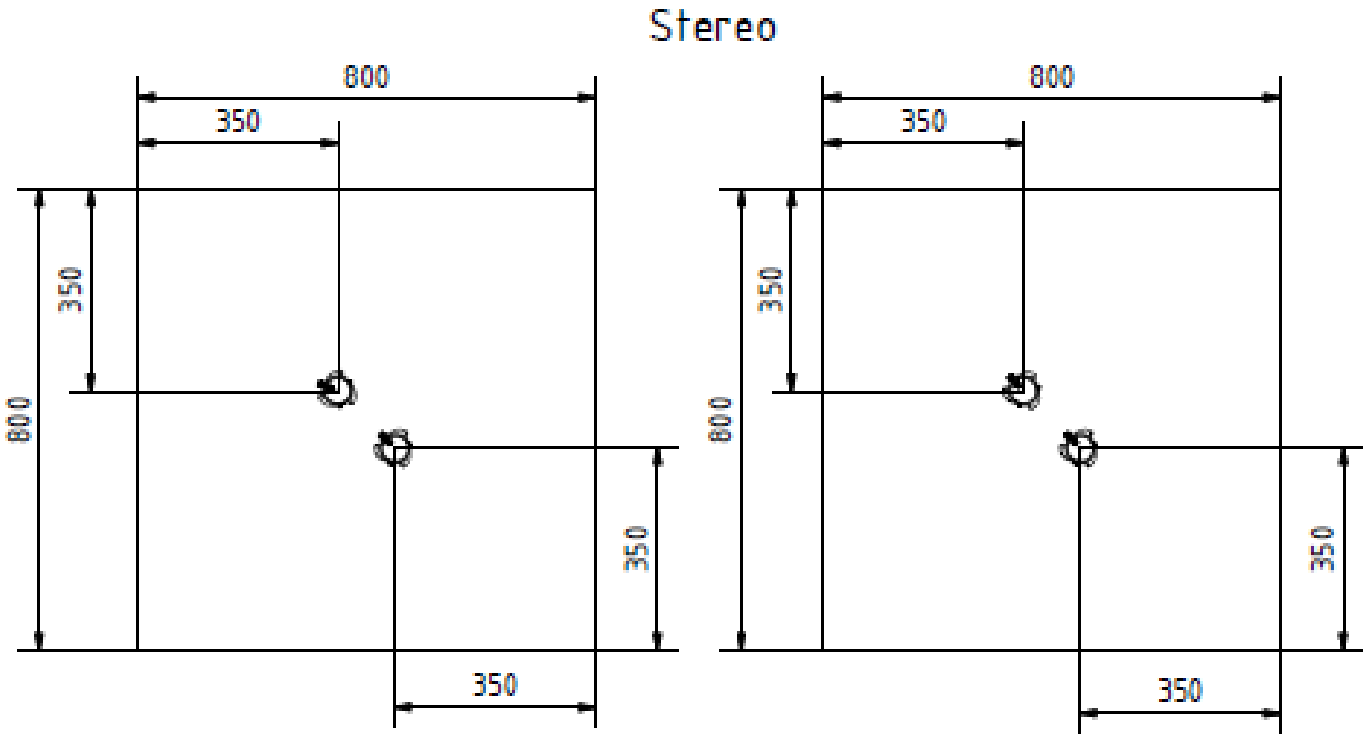
Specifications

Load Rating / Music Power	4 / 15 watt
Impedance	8 ohms
SPL	depending on material
Frequency Range (-3dB)	depending on material
Installation Depth	26 mm

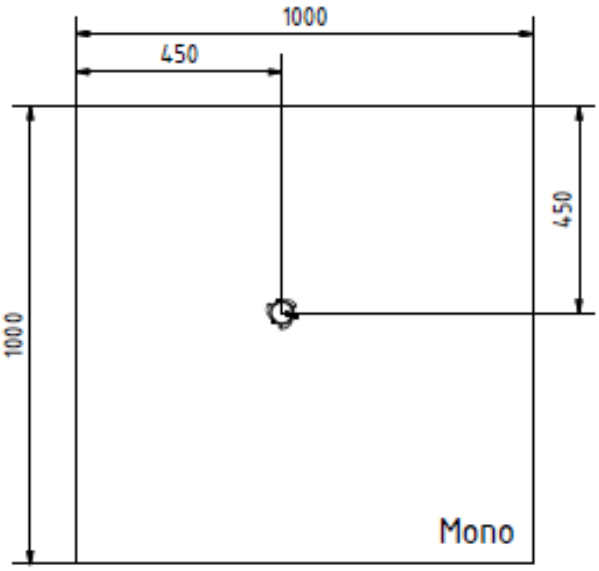
9.3. Notes on mounting the exciters

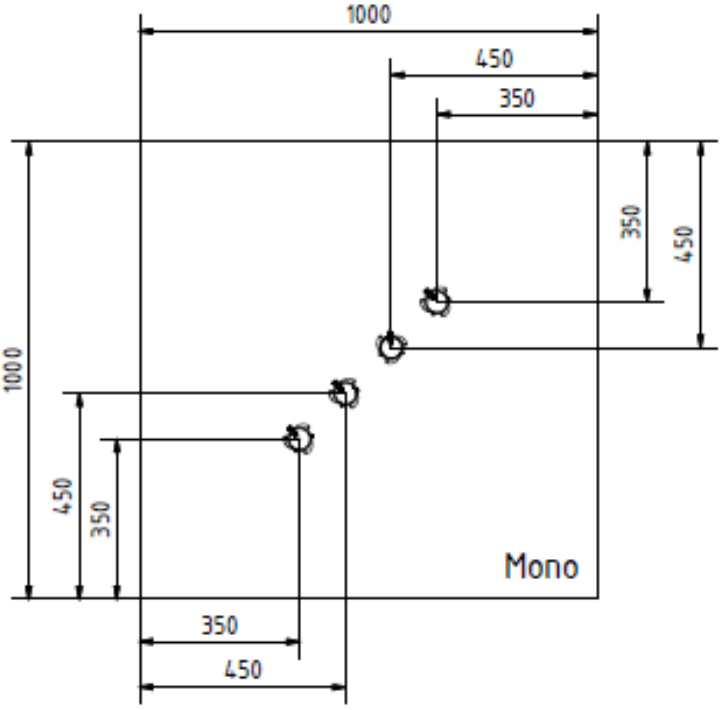
Stereo





Mono





Suitable materials for Exciter use:

Material	Thickness	Suitable	NOT suitable
Chipboard	10...20 mm	X	
Ceramic Hob		X	
Granite Slab			X
Acrylic Bathtub		X	
Mirror		X	
Glass	3...6 mm	X	
Furniture (e.g. Sideboard)		X	
MDF		X	
Wood panel		X	
Laminated wood panel		X	
Plywood		X	
Acrylic glass	3 mm	X	
Mineral-based panel		X	
Concrete Floor			X
Walls / Stone Walls			X
Sheet Metal Cabinet			X

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10. Operation

When power supply is connected, the SOUNDSYSTEM 420R is ready for operation.

The device is operated completely by the IR remote control.

The VOLUME setting in Bluetooth mode is completely done with the Bluetooth-enabled device (e.g. Smartphone).

Note:
The tuner signalizes the RC command for most functions through a "**beep**" on the low frequency outputs

10.1. Tuner operation mode

Switch ON the device by:
Pressing the buttons (**1-9**): Tuner/radio station
Pressing the „**ON/OFF**“ button: Last radio station
Pressing the „**SCAN**“ button: Station scan (started at 87,5 MHz)

Setting music volume by:
Pressing the „**VOLUME**“ button. 36 steps
Setting signal volume (beep) by:
Pressing the „**BEEP**“ button. 3 steps (off, quiet, loud)
Attention:
Confirm your settings by pressing the ‘**ON/OFF**’ button. Now the settings are stored.

Switching ON Bluetooth operation / Bluetooth operation mode described in 10.2.
Press the button „**0**“ on the **remote control**.
If the Bluetooth-enabled device is already connected, the music starts autmatically.
If not, the SOUNDSYSTEM 420R switches into pairing mode (about 1 minute activated).
Proceed with PAIRING according to your Bluetooth enabled device.
Making sure that your device meets the required Bluetooth specification. The pairing process is very different from device to device.
Note: Please, read the manual of your Bluetooth-enabled device carefully.

Station setting via scan (SCAN):
- Press the „**SCAN**“ button.
The command is acknowledged by a triple „**beep**“, the scan starts at 87.5 MHz. It stops at the first found radio station frequency. By pressing the „**SCAN**“ button again the search will continue.
- Saving the frequency: Press the „**MEM**“ button and then the button of your preferred memory space (**button 1-9**).

Station setting via frequency:
- Press the „**FREQ**“button
- Set frequency by pressing the buttons (**1-9**), min 4 figures
  e.g. **104,2**: enter 1 0 4 2 0 or **98,5**: enter 9 8 5 0
- Saving the frequency press the „**MEM**“ button and then the button of your preferred memory space

(**button 1-9**).

Automatic assignment of the channel positions
The radio channels 1-9 can be assigned automatically
- First press the "**MEM**" button and then the "**SCAN**" button
Note:
The complete scan may take a few minutes.

Manual fine adjustment
The device allows a manual channel fine adjustment
- Press the "**MEM**" button and then "**0**"
- Change the frequency by pressing the "**VOLUME + / -**"
- Save the settings with numeric key "**1-9**"
Note:
After about 2 seconds without key operation the fine tuning is completed. The keys "**VOLUME + / -**" then revert to their normal functions.

Activating „Power-Off / Remind Settings“ (PORS)
The tuner can be programmed so that it is back in operation again (in the case of power failures or when it is switched “ON / OFF” with a light switch) with the latest settings when power is re-applied.
This must be activated with the initial start when using the PORS-function:
- Press the „**FREQ**“ button
- Then press the button sequence „**2**“ „**2**“ „**2**“ „**1**“
The command is acknowledged by a double „**beep**”.

Deactivating „PORS“
- Press the „**FREQ**“ button
- Then press the button sequence „**2**“ „**2**“ „**2**“ „**0**“
The command is acknowledged by a double „**beep**”.
Note: After disconnecting power supply in this mode the SOUNDSYSTEM 420R starts again with the last tuner settings (not in Bluetooth pairing mode!).

Actvating „PowerOff / Remind Settings“ / back to Bluetooth pairing mode
The tuner can be programmed so that it is back in Bluetooth pairing mode again (in the case of power failures or when it is switched “ON / OFF” with a light switch) with the latest settings when power is re-applied. This must be activated with the initial start when using the PORS-function:
- Press the„**FREQ**“ button
- Then press the button sequence „**3**“ „**3**“ „**3**“ „**1**“
The command is acknowledged by a double „**beep**”.

Deactvating „PowerOff / Remind Settings“ / back to Bluetooth pairing mode
- Press the „**FREQ**“ button
- Then press the button sequence „**3**“ „**3**“ „**3**“ „**0**“
The command is acknowledged by a double „**beep**”.

General features in Tuner operation

Saving configuration settings
The station selection and the volume setting are saved automatically every 10 seconds.

Power recovery
The tuner returns to operation with the re-applied power with the last saved settings (volume, channel 1-9).
Message signal at frequency range (Triple „beep“)
If the boundary of the selectable frequency band is reached or there is a false entry in the direct frequency input the status is acknowledged by a triple “beep”.
Bluetooth operation locks memory functions
Memory scan and station setting via frequency input is not possible.
Choose a station (button 1-9) first.

10.2. Bluetooth Operation Mode

Notes:
- The SOUNDSYSTEM 420R remains in the Pairing Mode for max. 1 minute and then if there is no external Bluetooth device connected automatically switches to the Stand-By Mode
- The SOUNDSYSTEM 420R can handle and save a **maximum of 8 separate Pairings** to Bluetooth-enabled devices. When adding a new device the first Pairing will be overwritten.

Proceed with PAIRING according to your Bluetooth enabled device.

Making sure that your device meets the required Bluetooth specification. The pairing process is very different from device to device.

Note: Please, read the manual of your Bluetooth-enabled device carefully.

Note the following advice for Pairing
Make sure that your Bluetooth device enables A2DP specifications according to IEEE 802.15.1. The Pairing itself may be different concerning manufacturer or device.
Read the user manual of your Bluetooth-enabled device carefully!

Pairing in general:
1. There must be line of sight connection when the Pairing is performed. Make sure that there is a maximum distance of not more than 1m between the SOUNDSYSTEM 420R and your Bluetooth-enabled device.
2. Activate the Bluetooth Mode of your mobile device and start the SEARCH function for other Bluetooth equipment. The SOUNDSYSTEM 420R will show as „**SOUNDSYSTEM 420R**“. Select and continue.
3. If there is a password needed please enter „0000“.

After the first Pairing with an external device the SOUNDSYSTEM 420 identifies the mobile device and no future Pairing is necessary.

Automated Pairing:
If the Bluetooth connection is shut down by the mobile device the SOUNDSYSTEM 420R starts another pairing procedure for 3 minutes.

Point-to-Point (PtP) Connection:
You must not connect another mobile device with Bluetooth to the SOUNDSYSTEM 420R whilst the first device is active. For playing music with another device just disconnect the Bluetooth function on your first device (switch off Bluetooth mode).

Separation is possible only within reach
If the SOUNDSYSTEM 420R and the mobile device can not be separated because they are out of range, then bring everything back to separate them within reach

Password
If the Bluetooth version of your device complies with V2.1 or higher, then no password entry is required.

10.3. Bluetooth Operation

Start the music with your Bluetooth-enabled mobile device with "Play".
! Depending on Hardware/Software of your Bluetooth-enabled mobile device.

The volume and track selection is also performed in operation on the Bluetooth-enabled mobile device.

Note:
If you have lost contact with the SOUNDSYSTEM 420 longer than 20 minutes (outside the radio range), the connection must be re-established. The pairing is maintained.

To prevent battery discharge of your device, turn off the Bluetooth function when it is not needed.

10.4. Changing the battery

- Gently pull and slide the battery compartment tray as shown
- Remove the old battery, making note of the polarity positions
- Insert the NEW replacement battery
- Close battery insert

Attention:
Only use suitable batteries
Battery type: Lithium 3V CR 2025

11. Trouble-Shooting

No radio station reception with the included antenna
Connect an external antenna (home antenna, indoor antenna, etc:...)

Noise (i.e. Static)
Check your installation and cabling carefully concerning electro-magnetic influences (EMC Installation

Guidelines!).

Why does y mobile phone loose its connection to the SOUNDSYSTEM 420R when I was out of the room?
- You were possibly more than 5 minutes out of the Bluetooth transmission range. Your mobile phone needs to be connected again manually.
- Maybe another Bluetooth-enabled device is still connected with the BTR 205. Disconnect it and connect to your device again.

How much mobile devices can be handled by the SOUNDSYSTEM 420R?
Up to 8 different pairings with different devices (9th IN/ 1st OUT).

Noise suppression with interference from electronic ballasts
Through the network disturbances and immunity of the EDC's receipt of the tuner can be negatively affected. Through the following reception interference suppression measures this can be improved:
- Local separation i.e. The radio and mounting of electronic ballast as far as away from each other as possible.
- Connect devices with separate cables.
- If possible, connect the SOUNDSYSTEM 420R antenna to the house.
- Suppression by the EDC's ferrite core to the primary connection. (e.g., Würth Elektronik 7427155)

Examples with ferrite core:

The ferrite core is to be attached as close as possible (max. 10 cm) to the primary line (230 VAC).
Here, the connecting cable is wound at least four times through the core.

12. Disposal

We are member of the INTERSEROH association.

We participate in the dual system as well as other industry-specific solutions. Therefore, plastic, metal and electronic parts can all be recycled.

13. Declaration of Conformity

This product supports all CE-marking criteria.
The declaration of conformity certificate can be obtained from Häfele.

14. Name and address of the manufacturer
CONTACT

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