Manuals+ — User Manuals Simplified.

AUDIOTEC FISCHER HELIX PF K165.2 2-Way Component System User Manual

Contents

AUDIOTEC FISCHER

AUDIOTEC FISCHER HELIX PF K165.2 2-Way Component System

Congratulations!

- Dear Customer,
- Congratulations on your purchase of this high-quality HELIX speaker system.
- This system highlights best quality, excellent manufacturing and state-of-the-art sound quality.
- Thanks to more than 30 years of experience in research and development of audio products this speaker system generation sets new standards.
- We wish you many hours of enjoyment with your new HELIX speakers.
- Yours
  AUDIOTEC FISCHER Team

General instructions

General instructions for installing a HELIX speaker system

- To prevent damage to the speakers and possible injury, read this manual carefully and follow all installation instructions. This product has been checked for proper function prior to shipping and is guaranteed against manufacturing defects.
- For a proper performance and to ensure full warranty coverage, we strongly recommend to get this product installed by an authorized HELIX dealer. If you choose to perform your own installation read the following information and precautions carefully.
- Failure to follow the stated precautions may result in personal injury and / or damage to the audio system or vehicle.

1. Always make sure that the speaker will fit into the intended mounting location and that there is adequate depth

for the magnet system.

2. Check for adequate space between speaker and window, window crank, power window mechanism, seat, rear deck torsion bars, and other items which may interfere with the speaker`s mounting. This is very important if any hole cutting is required. Detailed size information is indicated in the dimension section of this manual. Take care that the mounting surface is flat and free from all obstructions.
3. Ensure that the loudspeakers are correctly connected (phase), i.e. plus to plus and minus to minus. Exchanging plus and minus may result in significant loss of sound quality.
4. Make sure that the crossovers are mounted properly.
5. Do not mount the speakers and crossovers where water may splash on them.
6. The quality of the installation has a significant effect on the overall performance of the speaker system. Treat each installation step with a high degree of attention.
7. Avoid low frequency cancellation caused by air leakage between the speaker basket and the mounting surface (e.g. mounted on a bended or uneven surface or mounted in an oversized hole).
8. Mounting panel reinforcement may be necessary in some cases in order to ensure a stable, torsion-free and even surface. This can be achieved by mounting the speaker on a metal or wooden sub-baffle behind the body or door panel. Consult an installation specialist for further advices.
9. In most cases you can use the original speaker mounting locations in the doors, body panels or the rear deck. If these are not available you have to prepare your own secure installation place. Due to their structural integrity and accessibility the precut mounting holes should be used whenever possible. Information on a proper mounting can be found in the section “Installation” of this manual.
   IMPORTANT: Never cut any metal that is an integral part of an automobile`s safety or structural car body.

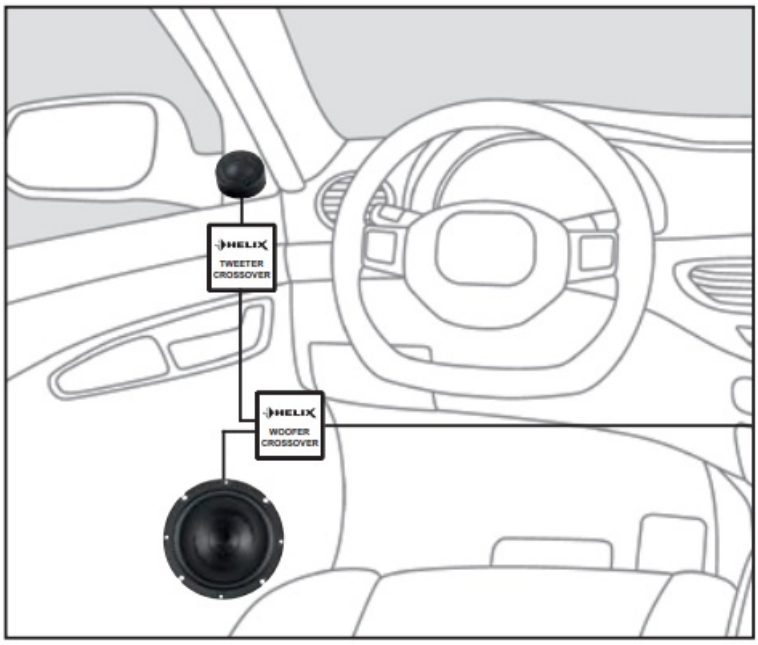
General instructions

General instructions for connecting HELIX speaker systems

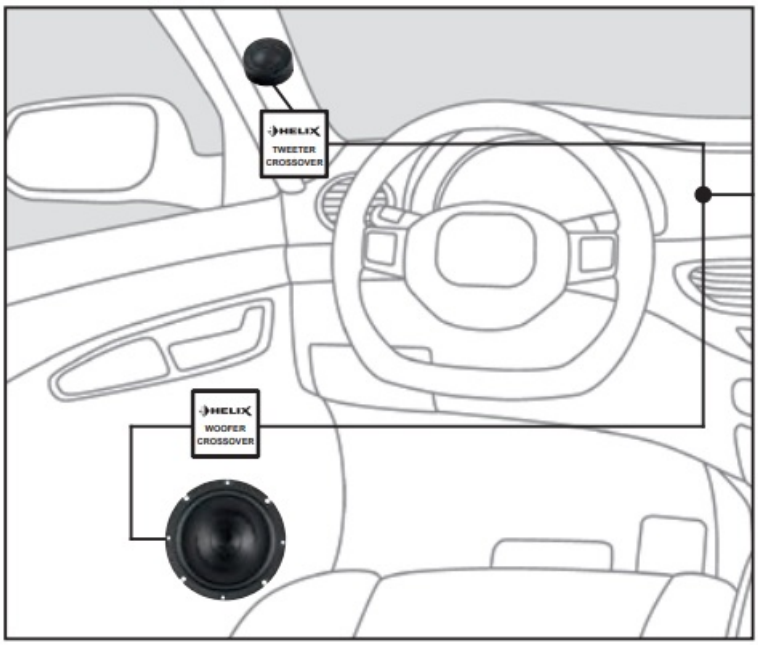
- We strongly recommend that you operate the complete audio system at low volume before final installation. So you can check whether each speaker is working before securing the loudspeakers into their mounting locations.
- Make sure that all speaker wiring is fully protected from cutting or wear at sharp edges, which can lead to short circuits that may damage your head unit, amplifier and/or speaker system.
- Make sure that all speaker wires are long enough in order to avoid any mechanical stress on the wires or the connectors.
  Attention: Ensure that the loudspeakers are correctly connected (phase), i.e. plus to plus and minus to minus. Exchanging plus and minus will result in a significant loss of sound quality.
- The positive leads of the loudspeaker system are marked with a red stripe.

General instructions for connecting the HELIX “Flex-Crossovers”

- The crossovers of the PF K165.2 / PF K130.2 / PF K100.2 component kit offer two configuration options.
  - **Option a:** Connecting the crossovers in vehicles with mounting positions of tweeter and woofer close to each other, e.g. in the car door.



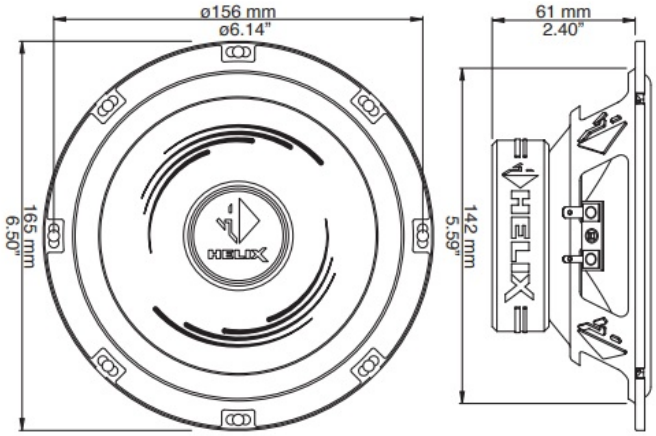
- **Option b:** Connecting the crossovers in vehicles with separate mounting positions of tweeter and woofer, e.g. tweeter in the A-pillar and woofer in the car door.



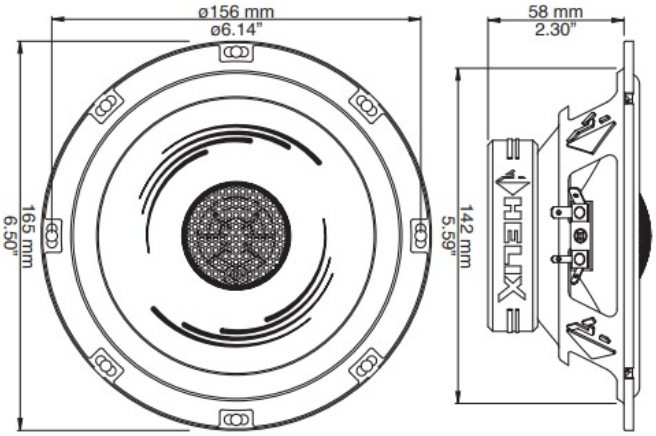
- For further information regarding the connection of the crossovers see section “Connecting the Flex-Crossover” in this manual.

Dimensions

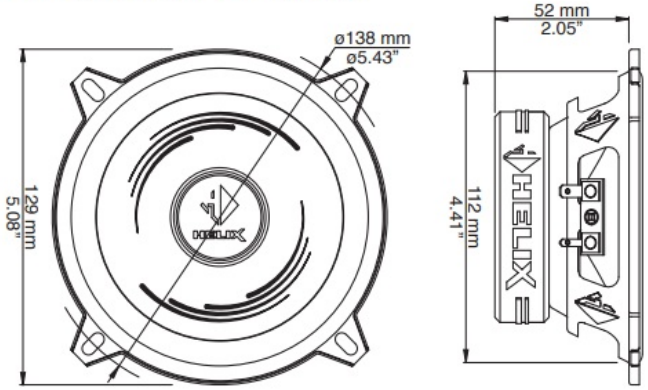
PF K165.2 / PF W165



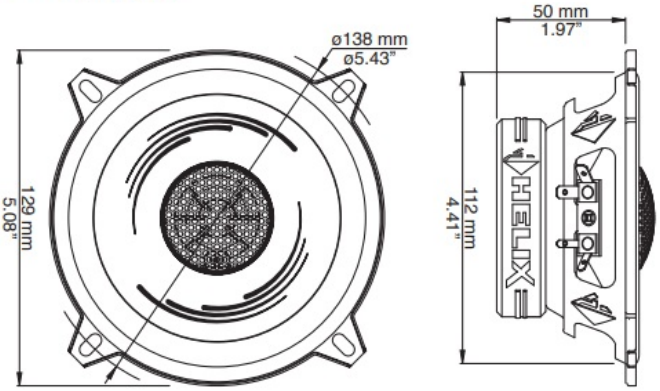
PF C165.2



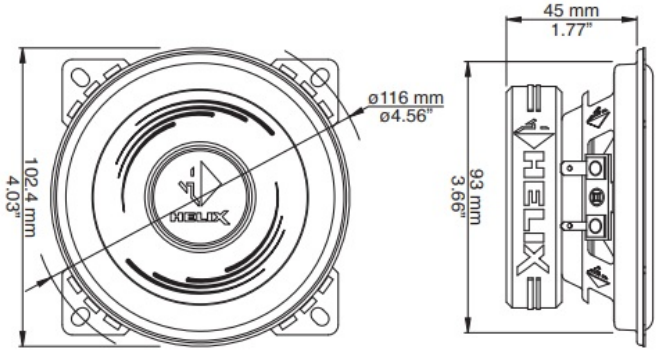
PF K130.2 / PF W130



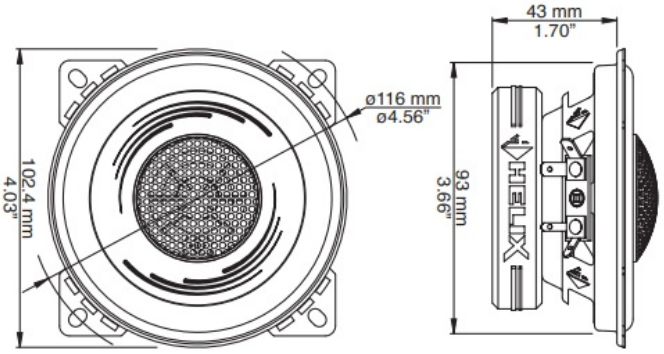
PF C130.2



PF K100.2 / PF W100

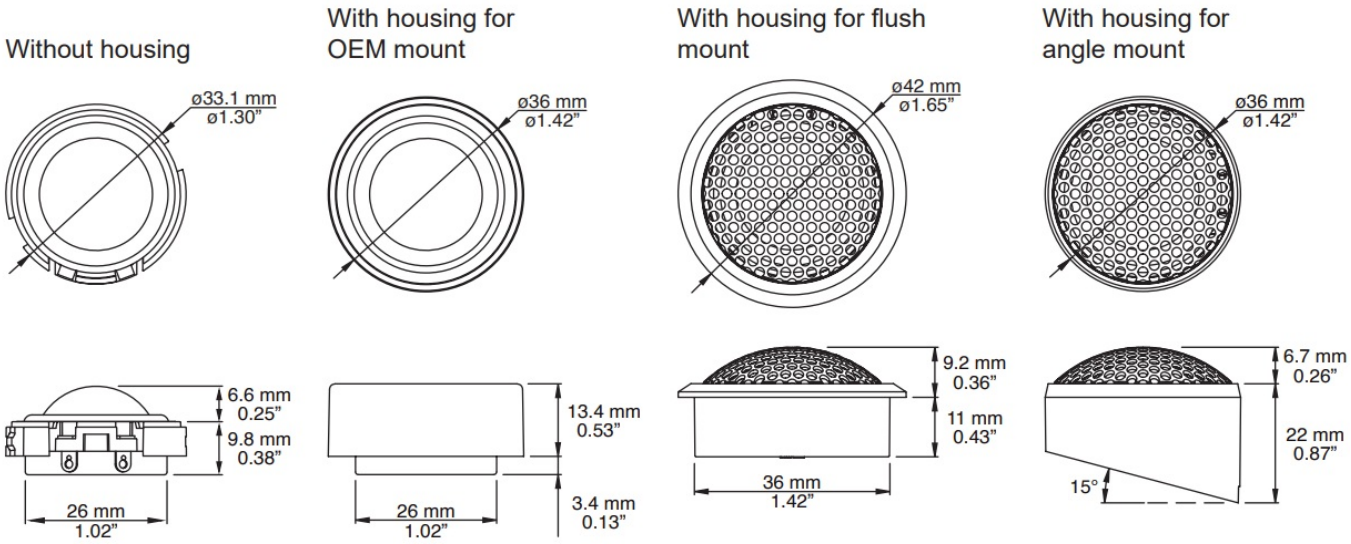


PF C100.2

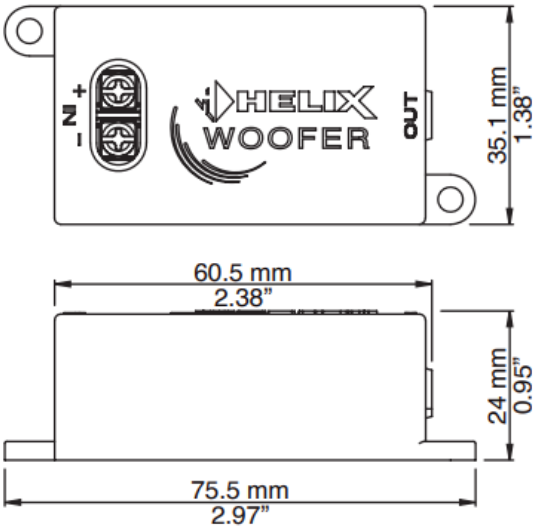


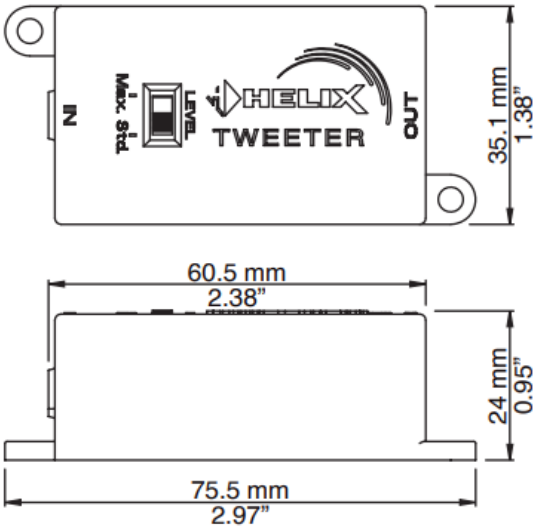
Dimensions

PF T20-S



Flex-Crossovers

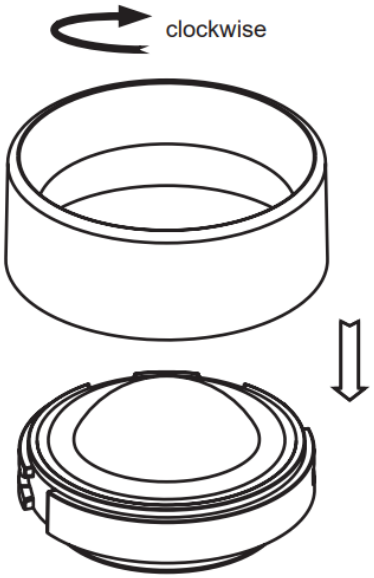




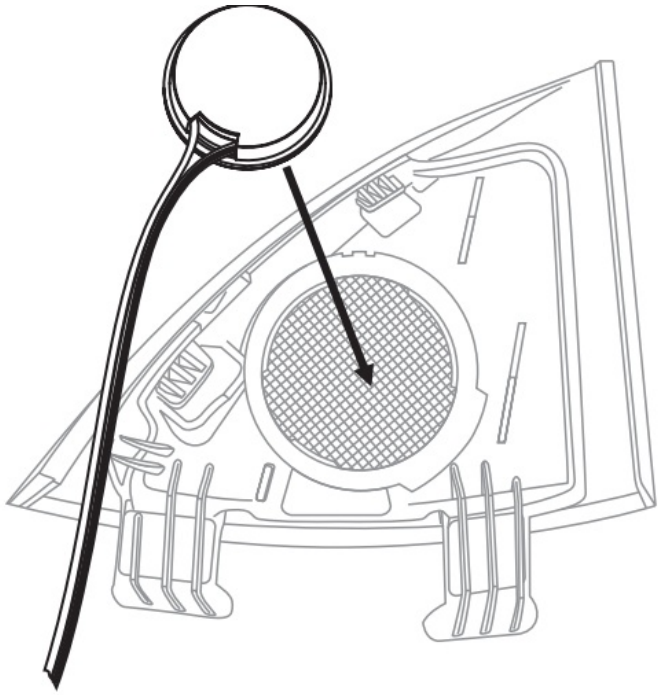
Installation

Tweeter mounting

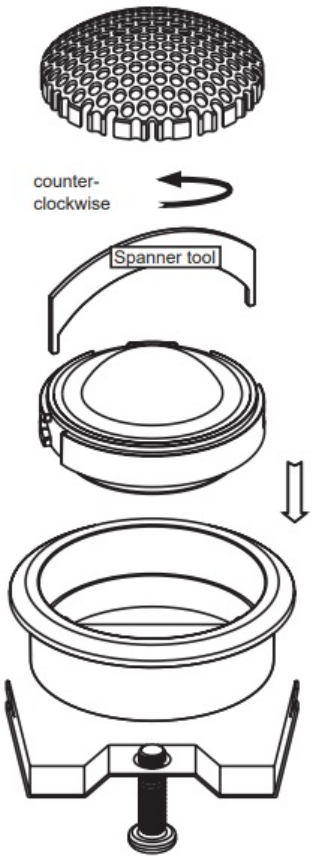
- **Option a:** OEM integration
    1. Preparing the tweeter



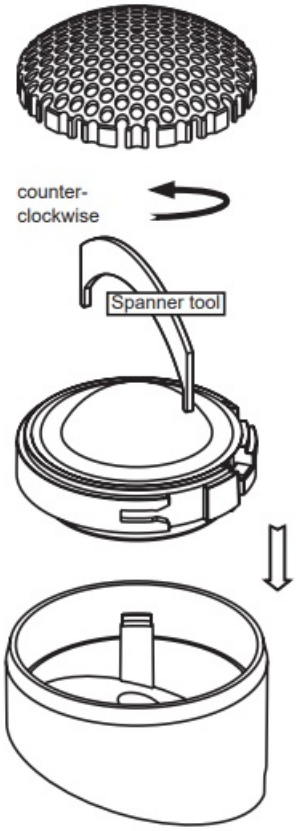
2. Fix the tweeter in original mirror triangle, e.g. with an appropriate adhesive or sealant



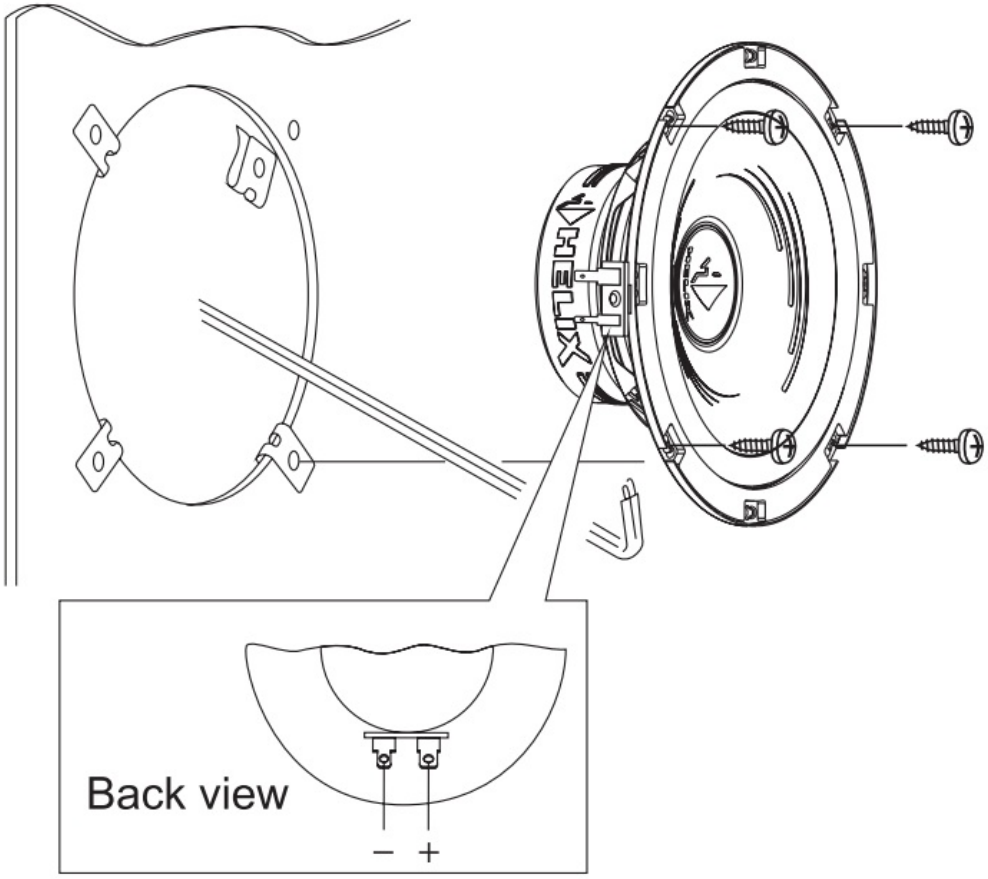
- **Option b:** flush mount



- **Option c:** angle mount

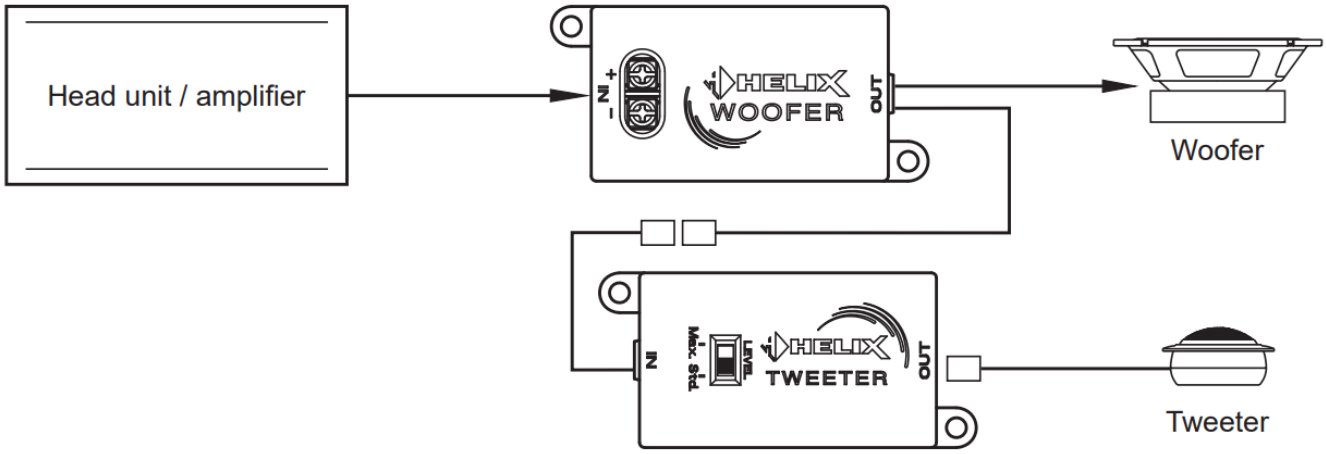


Woofer mounting

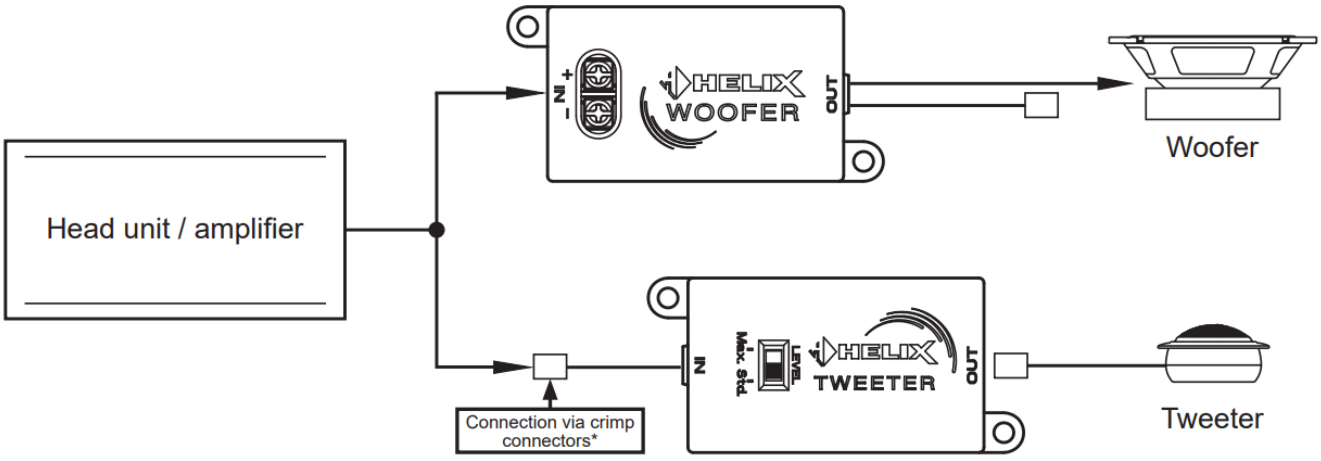


Connecting the Flex-Crossover

- **Option a:** Connecting the crossovers in vehicles with mounting positions of tweeter and woofer close to each other, e.g. in the car door.



- **Option b:** Connecting the crossovers in vehicles with separate mounting positions of tweeter and woofer, e.g. tweeter in the A-pillar and woofer in the car door.



Ensure that all components are correctly connected (phase), i.e. plus to plus and minus to minus. The positive leads of the loudspeaker system are marked with a red stripe.

Adjusting the level of the tweeter:

- The crossover allows to optimize the level of the connected tweeter.
- Therefore adjust the slide switch which is located at the top of the crossover to the desired position.
  - **Std.:** The tweeter has the optimum level for most applications (tweeter level reduction PF K165.2: -3 dB / PF K130.2: -3 dB / PF K100.2: -4 dB).
  - **Max.:** The tweeter is driven with the maximum level.

Technical data

Component kits:

Power RMS / Max.	60 / 120 Watts	50 / 100 Watts	40 / 80 Watts
Frequency response	55 Hz – 22,000 Hz	65 Hz – 22,000 Hz	100 Hz – 22,000 Hz
Impedance	3 Ω	3 Ω	3 Ω
Sensitivity	92.5 dB @ 2.83V / 1m 88.5 dB @ 1W / 1m	91.0 dB @ 2.83V / 1m 87.0 dB @ 1W / 1m	90.0 dB @ 2.83V / 1m 86.0 dB @ 1W / 1m

Outer diameter	Tweeter: 33.1 mm / 1.30” Woofer: 165.0 mm / 6.50” (more data page 13 et sqq.)	Tweeter: 33.1 mm / 1.30” Woofer: 129.0 mm / 5.08” (more data page 13 et sqq.)	Tweeter: 33.1 mm / 1.30” Woofer: 102.4 mm / 4.03” (more data page 13 et sqq.)
Installation diameter	Tweeter: 33.1 mm / 1.30” Woofer: 142.0 mm / 5.59” (more data page 13 et sqq.)	Tweeter: 33.1 mm / 1.30” Woofer: 112.0 mm / 4.41” (more data page 13 et sqq.)	Tweeter: 33.1 mm / 1.30” Woofer: 93.0 mm / 3.66” (more data page 13 et sqq.)
Installation depth	Tweeter: 9.8 mm / 0.39” Woofer: 61.0 mm / 2.40” (more data page 13 et sqq.)	Tweeter: 9.8 mm / 0.39” Woofer: 52.0 mm / 2.05” (more data page 13 et sqq.)	Tweeter: 9.8 mm / 0.39” Woofer: 45.0 mm / 1.77” (more data page 13 et sqq.)
Dimensions Flex-Cross over	75.5 x 35.1 x 24 mm / 2.97 x 1.38 x 0.95”	75.5 x 35.1 x 24 mm / 2.97 x 1.38 x 0.95”	75.5 x 35.1 x 24 mm / 2.97 x 1.38 x 0.95”
Features			
Tweeter	Ultra compact, silk dome, neodymium magnet and d etachable grille	Ultra compact, silk dome, neodymium magnet and d etachable grille	Ultra compact, silk dome, neodymium magnet and d etachable grille

Woofer	Injected polypropylene cone with embedded carbon fibers	Injected polypropylene cone with embedded carbon fibers	Injected polypropylene cone with embedded carbon fibers
Flex-Crossover	Tweeter: 12 dB highpass, protection and level adjustment Woofer: 12 dB lowpass	Tweeter: 12 dB highpass, protection and level adjustment Woofer: 12 dB lowpass	Tweeter: 12 dB highpass, protection and level adjustment Woofer: 6 dB lowpass

Coaxial systems:

Power RMS / Max.	60 / 120 Watt	50 / 100 Watt	40 / 80 Watt
Frequency response	60 Hz – 22.000 Hz	70 Hz – 22.000 Hz	100 Hz – 22.000 Hz
Impedance	3 Ω	3 Ω	3 Ω
Sensitivity	92.5 dB @ 2.83V / 1m 88.5 dB @ 1W / 1m	91.0 dB @ 2.83V / 1m 87.0 dB @ 1W / 1m	90.0 dB @ 2.83V / 1m 86.0 dB @ 1W / 1m
Outer diameter	165.0 mm / 6.50”	129.0 mm / 5.08”	102.4 mm / 4.03”
Installation diameter	142.0 mm / 5.59”	112.0 mm / 4.41”	93.0 mm / 3.66”
Installation depth	58.0 mm / 2.30”	50.0 mm / 1.97”	43.0 mm / 1.70”

Features			
Tweeter	Mylar dome, neodymium magnet	Mylar dome, neodymium magnet	Mylar dome, neodymium magnet
Woofer	Injected polypropylene co ne with embedded carbon fibers	Injected polypropylene co ne with embedded carbon fibers	Injected polypropylene co ne with embedded carbon fibers
Crossover	Integrated, 6 dB highpass	Integrated, 6 dB highpass	Integrated, 6 dB highpass

Warranty Disclaimer

The warranty service is based on the statutory regulations. Defects and damage caused by overload or improper handling are excluded from the warranty service. Any return can only take place following prior consultation, in the original packaging together with a detailed description of the error and a valid proof of purchase. Technical modifications, misprints and errors excepted! For damages on the vehicle and the device, caused by handling errors of the device, we can't assume liability. All HELIX speakers are tagged with a CE-Certification mark. Thereby these devices are certified for the use in vehicles within the European Community (EC).

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Documents / Resources

	**AUDIOTEC FISCHER HELIX PF K165.2 2-Way Component System** [pdf] User Manual HELIX PF K165.2 2-Way Component System, HELIX PF K165.2, 2-Way Component System, Component System, System

References

- **High-End Car Hifi & Audio - Made in Germany | Audiotec Fischer**

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