



i5

MIDRANGE

USER MANUAL

ENGINEERED IN GERMANY

Congratulations!

Dear Customer,

Congratulations on your purchase of this high-quality product.

HELIX COMPOSE highlights best quality, excellent manufacturing and state-of-the-art sound quality.

Thanks to more than 35 years of experience in research and development of audio products HELIX COMPOSE sets new standards in the car audio speaker market.

We wish you many hours of enjoyment with your new HELIX COMPOSE components.

Yours

AUDIOTEC FISCHER Team

General instructions

General instructions for installing HELIX loudspeakers

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 in polarity. Exchanging plus and minus may result in significant loss of sound quality. The positive leads of the loudspeakers are marked red.
4. 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.

5. Verify that all connection wires are long enough in order to avoid any mechanical stress on the wires or the connectors.
6. Make sure that all components are mounted properly.
7. Do not mount the components where water may splash on them.
8. 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.
9. 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).
10. 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, plastic or wooden sub-baffle behind the body or door panel. Consult an installation specialist for further advices.
11. In most cases you can use the original speaker mounting locations in the doors, A-pillars, 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.

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.

Find your composition

Go to www.audiotec-fischer.com/compose to explore the whole HELIX COMPOSE platform

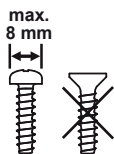
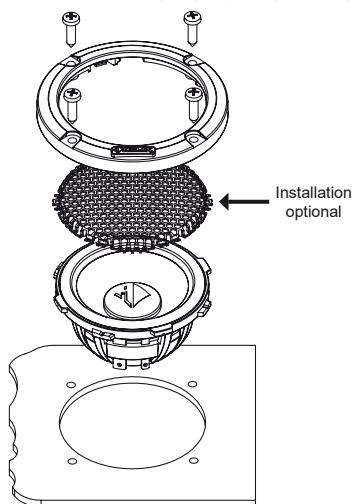


Installation

Mounting Ci5 M50FM-S3

Option a:

Installation with mounting ring & grille (included)



Attention: To avoid damage to the speakers, do not use countersunk screws and do not overtighten the screws!

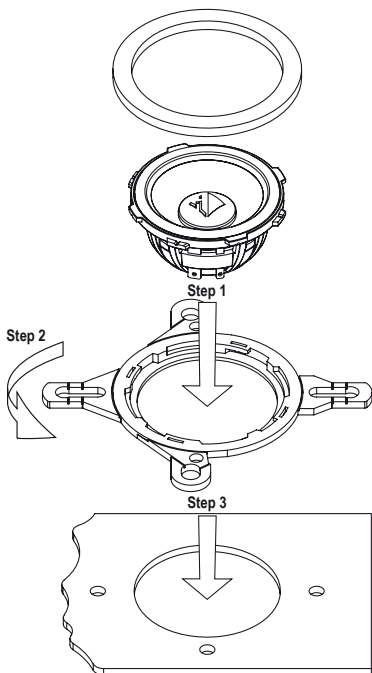
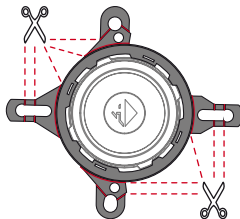
Option b:

Professional integration with universal **FlexMount 50** MULTI.1 (included) or optionally available car-specific **FlexMount 50**

Note: the **FlexMount 50** adaptor rings can be mounted in two directions. Make sure to use the appropriate mounting option for your vehicle. Additionally, the MULTI.1 can be individually adapted to the installation position by removing superfluous mounting ears.

Caution: When cutting or trimming the mounting ears, sharp edges may form and small fragments may break off. To avoid injury, it is recommended to wear appropriate protective gear such as gloves and safety glasses.

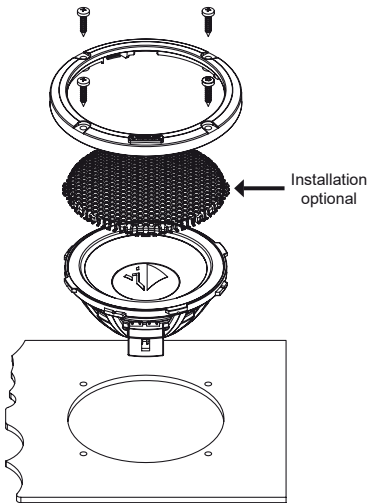
MULTI.1



Mounting Ci5 M80FM-S3

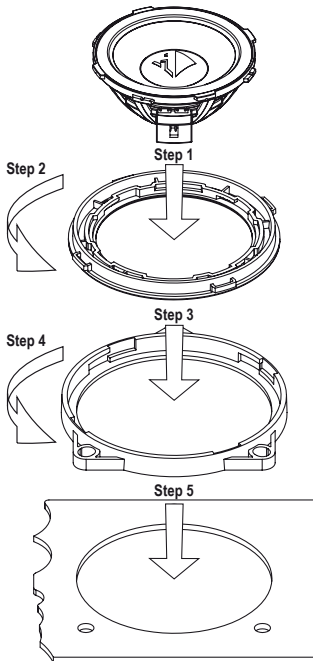
Option a:

Installation with mounting ring & grille (included)



Option c:

Mounting with **FlexMount 80** to **FlexMount 100** adaptor (included in scope of delivery)



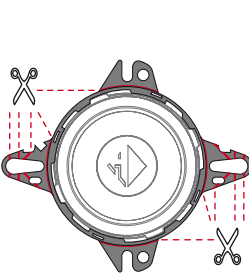
Option b:

Professional integration with universal **FlexMount 80** MULTI.1 or MULTI.2 (included) or optionally available car-specific **FlexMount 80**

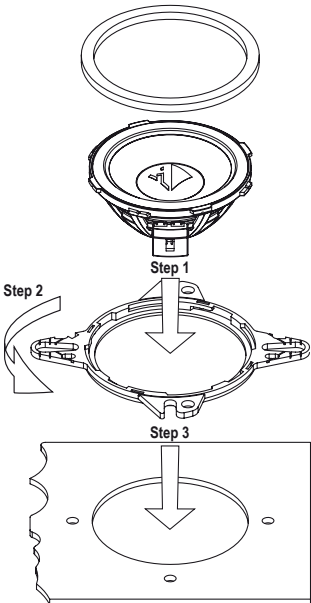
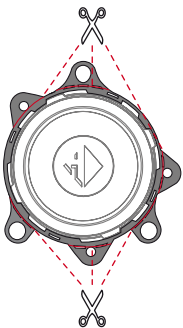
Note: the **FlexMount 80** adaptor rings can be mounted in two directions. Make sure to use the appropriate mounting option for your vehicle. Additionally, the rings MULTI.1 & MULTI.2 can be individually adapted to the installation position by removing superfluous mounting ears.

Caution: When cutting or trimming the mounting ears, sharp edges may form and small fragments may break off. To avoid injury, it is recommended to wear appropriate protective gear such as gloves and safety glasses.

MULTI.1



MULTI.2

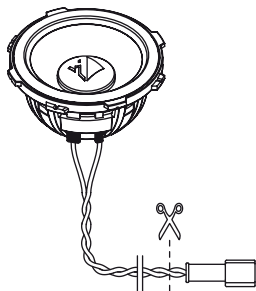


Installation

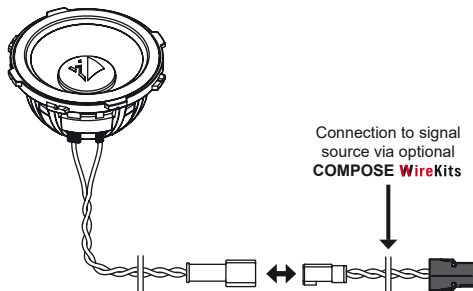
Wiring Ci5 M50FM-S3

Option a: Universal connection, e.g. in active applications

Cut off the plug of the connection cable and connect it to the amplifier.



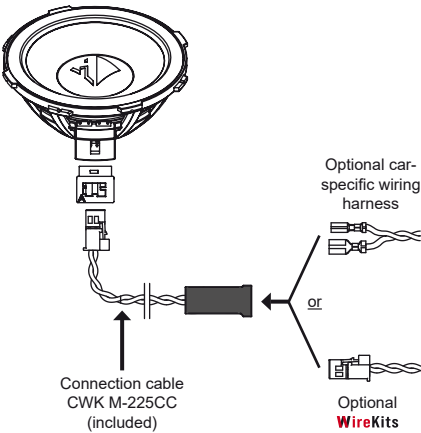
Option b: Connection to the original cable harness of the vehicle via optional car-specific **COMPOSE WireKits**, e.g. in active applications



Wiring Ci5 M80FM-S3

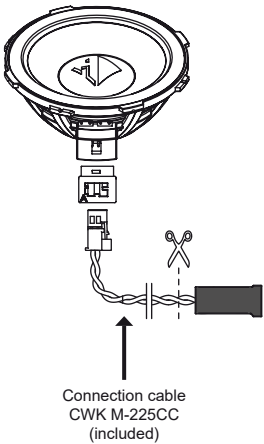
Option a: Universal connection via optional car-specific wiring harness, e.g. in active applications

Insert the enclosed **FlexConnect** inlay A and plug in the enclosed connection cable. Then connect it to the optional car-specific wiring harness.

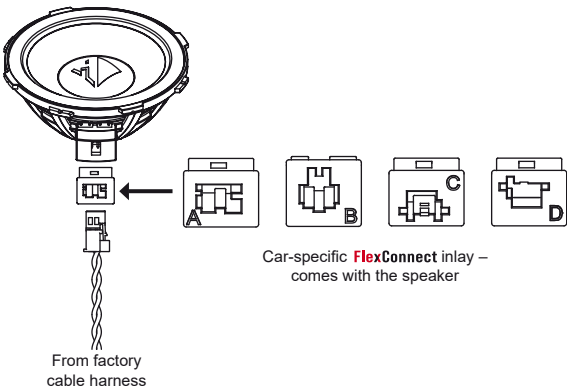


Option b: Universal connection, e.g. in active applications

Insert the enclosed **FlexConnect** inlay A, cut off the plug of the enclosed connection cable and connect it to the amplifier.



Option c: Direct connection to OEM connector with car-specific **FlexConnect** inlay



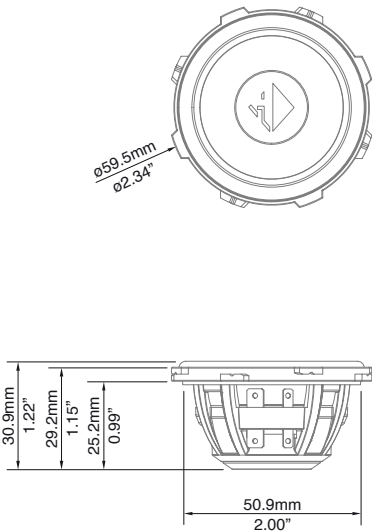
Inlay	Vehicle compatibility
A	Mercedes
B	Audi Tesla
C	BMW Ferrari Mini Rolls Royce
D	Porsche

Ensure that all components are correctly connected in polarity, i.e. plus to plus and minus to minus. The positive leads of the loudspeaker system are marked red.

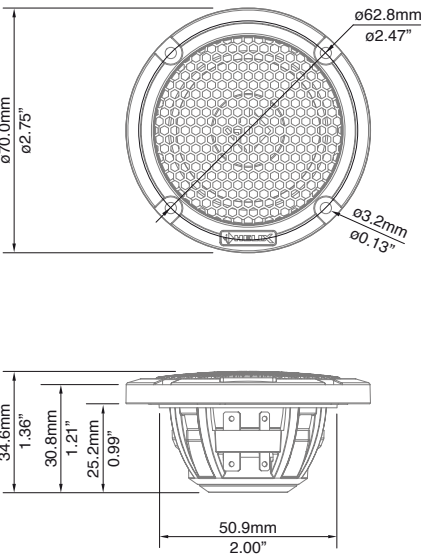
Dimensions

Ci5 M50FM-S3

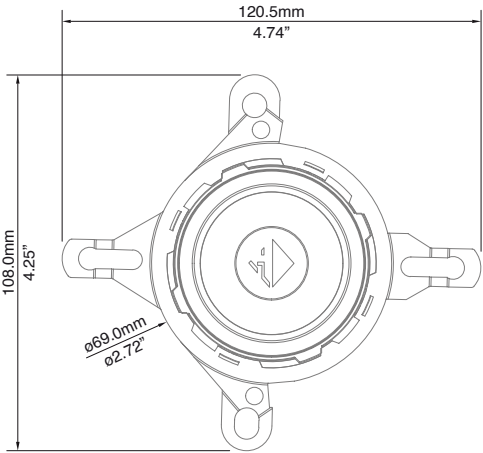
Speaker without FlexMount 50



Speaker with assembled grille and without FlexMount 50

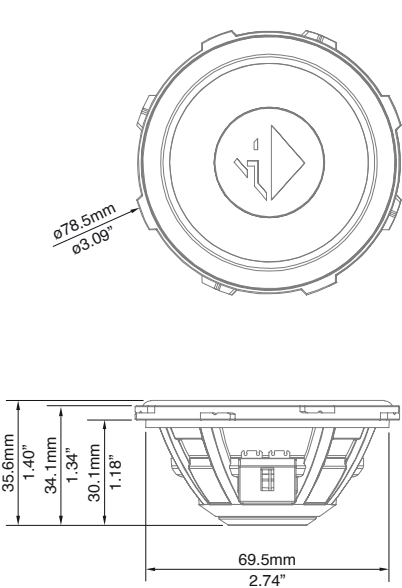


Speaker with assembled universal FlexMount 50 MULTI.1

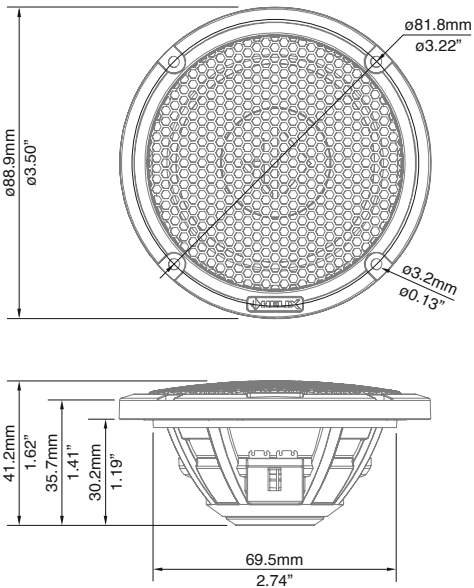


Ci5 M80FM-S3

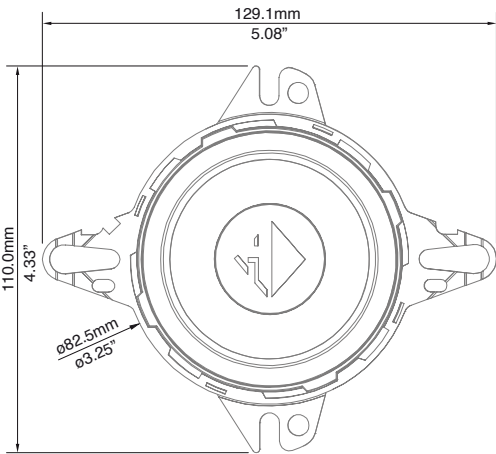
Speaker without **FlexMount 80** and without grille



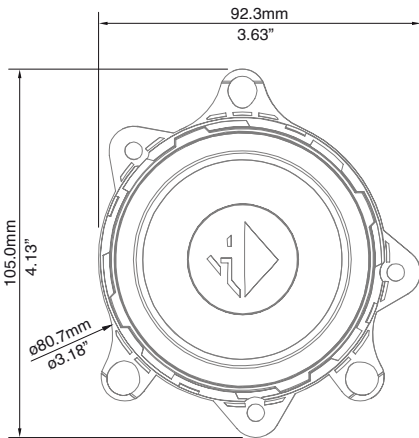
Speaker with assembled grille and without **FlexMount 80**



Speaker with assembled universal **FlexMount 80 MULTI.1**



Speaker with assembled universal **FlexMount 80 MULTI.2**



Technical data

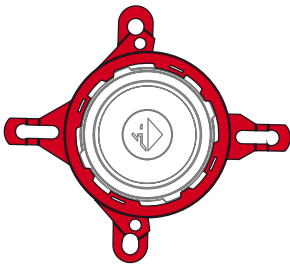
		Ci5 M50FM-S3	Ci5 M80FM-S3
Power RMS / Max.	<i>P</i>	70 / 130 Watts	90 / 135 Watts
Impedance	<i>Z</i>	3 Ω	3 Ω
DC resistance	<i>Re</i>	3.1 Ω	3.1 Ω
Frequency response		300 Hz - 20,000 Hz	200 Hz - 6,000 Hz
Resonance frequency	<i>Fs</i>	240 Hz	156 Hz
Mechanical Q factor	<i>Qms</i>	3.09	3.68
Electrical Q factor	<i>Qes</i>	0.80	0.75
Total Q factor	<i>Qts</i>	0.68	0.63
Compliance	<i>Cms</i>	300 $\mu\text{m/N}$	407 $\mu\text{m/N}$
Equivalent air volume	<i>Vas</i>	0.16 L	0.7 L
Force factor	<i>B*I</i>	2.8 Tm	3.2 Tm
Sensitivity	<i>SPL</i>	89 dB @ 2.83V / 1m 85 dB @ 1W / 1m	92 dB @ 2.83V / 1m 88 dB @ 1W / 1m
Cone area	<i>Sd</i>	19.6 cm ²	36 cm ²
Moving mass	<i>Mms</i>	1.43 g	2.6 g
Cone material		Silicon coated paper cone	Silicon coated paper cone
Mechanical resistance	<i>Rms</i>	0.71 kg/s	0.68 kg/s
Voice coil diameter	\emptyset	20 mm	20 mm
Voice coil winding height		7 mm	7 mm
Max. linear excursion	<i>Xmax</i>	+/- 2.5 mm	+/- 2.5 mm
Max. mechanical excursion	<i>Xmax</i>	+/- 3.5 mm	+/- 4.5 mm
Features		Powerful push-pull neodymium magnet system and FlexMount 50	FlexConnect terminal, powerful push-pull neodymium magnet system and FlexMount 80

FlexMount car-specific adaptors

The **FlexMount 50** and **FlexMount 80** adaptor rings enable acoustically optimized and professional speaker integration in vehicles. Below are the included adaptor rings and compatible car brands. For additional vehicle-specific variants, please contact your retailer or visit www.audiotec-fischer.com/compose for the most up-to-date overview of available adaptors.

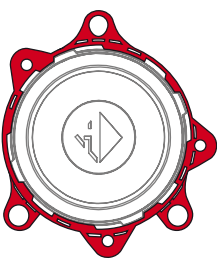
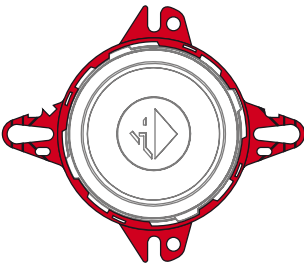
FlexMount 50 MULTI.1

Audi	Mercedes
Ford	Subaru
General Motors	Toyota
Hyundai	
Kia	and universal use



FlexMount 80 MULTI.1 & MULTI.2

Chrysler	Lexus	Toyota
Ferrari	Mazda	Volvo
Ford	Mercedes-Benz	
Jaguar	Porsche	
Land Rover	Tesla	and universal use



Use our **FlexMount Finder** to easily check the compatibility of the provided **FlexMount** with your car model!



Correct disposal of this product

(Applicable in the European Union and other countries with separate collection systems)
If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling. Contact your local government office for details in locating a recycle facility close to you. Proper recycling and waste disposal will help conserve resources and prevent detrimental effects on our health and the environment.

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 / UKCA / EAC-Certification mark. Thereby these devices are certified for the use in vehicles within the European Community (EC) / United Kingdom / Eurasian Customs Union.

AUDIOTEC
FISCHER

AUDIOTEC FISCHER GmbH
Hünegräben 26 - 28
57392 Schmallenberg
Germany

Made in China
CE EAC UK CA 