



RCF MR 40 Two-Way Passive Speaker User Manual

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RCF MR 40 Two-Way Passive Speaker



SAFETY AND OPERATING PRECAUTIONS

Before connecting and using this product, please read this user manual carefully and keep it on hand for future reference. This manual is to be considered an integral part of this product and must accompany it when it changes ownership as a reference for correct installation and use as well as for the safety precautions. RCF S.p.A. will not assume any responsibility for the incorrect installation and / or use of this product.

1. All the precautions, in particular the safety ones, must be read with special attention, as they provide important information.
2. Speaker lines (amplifier outputs) can have a sufficiently high voltage (i.e. 100-70 V) to involve a risk of electrocution: never install or connect speakers when the line is alive.
3. Make sure all connections have been made correctly and the input voltage of every speaker is suitable for the amplifier output.
4. Protect speaker lines from damage. Make sure they are positioned in a way that they cannot be stepped on or crushed by objects.
5. Make sure that no objects or liquids can get inside speakers, as this may cause a short circuit.
6. Never attempt to carry out any operations, modifications or repairs that are not expressly described in this manual.

Contact your authorized service centre or qualified personnel should any of the following occur:

1. A speaker does not function (or works in an anomalous way).
 2. A cable has been damaged.
 3. Objects or liquids have got inside a speaker.
 4. A speaker has been damaged due to heavy impacts or fire.
7. Should a speaker emit any strange smell or smoke, remove it from the line after having immediately switched the amplifier off.
 8. Do not connect speakers to any equipment or accessories not foreseen. For suspended installation, only use the dedicated anchoring points and do not try to hang speakers by using elements that are unsuitable or not

specific for this purpose. Also check the suitability of the support surface to which the product is anchored (wall, ceiling, structure, etc.) and the components used for attachment (wall plugs, screws, brackets not supplied by RCF, etc.), which must guarantee the security of the system / installation over time, also considering, for example, the mechanical vibrations normally generated by transducers.

9. RCF S.p.A. strongly recommends that speakers are only installed by professional qualified installers (or specialised firms) who can ensure a correct installation and certify it according to the regulations in force. The entire audio system must comply with the current standards and regulations regarding electrical systems.
10. Mechanical and electrical factors need to be considered when installing professional audio systems (in addition to those which are strictly acoustic, such as sound pressure, angles of coverage, frequency response, etc.).
11. Hearing loss Exposure to high sound levels can cause permanent hearing loss. The acoustic pressure level that leads to hearing loss is different from person to person and depends on the duration of exposure. To prevent potentially dangerous exposure to high levels of acoustic pressure, anyone who is exposed to these levels should use adequate protection devices. When a transducer capable of producing high sound levels is being used, it is necessary to wear ear plugs or protective earphones. See the technical specifications in this user manual to know the maximum sound pressure of each speaker.
12. To ensure a correct sound reproduction, speaker phase is to be respected (speakers are connected respecting the amplifier polarity). This is important when speakers are installed adjacent one another, for instance, in the same room. Make sure speaker lines are not shorted before turning the amplifier on.
13. To prevent inductive effects from causing hum, noise and a bad system working, speaker lines should not be laid together with other electric cables (mains), microphone or line level signal cables connected to amplifier inputs.
14. Speaker cables shall have wires with a suitable section (twisted, if possible, to reduce inductive effects due to surrounding electro-magnetic fields) and a sufficient electrical insulation. Refer to local regulations since there may be additional requirements about cable characteristics.
15. Install every speaker far away from any heat source.
16. Do not use solvents, alcohol, benzene or other volatile substances for cleaning the external parts. Use a dry cloth instead.

RCF S.p.A. thanks you for purchasing this product, which has been designed to guarantee reliability and high performance.

DESCRIPTION

MR series monitors are two-way compact speakers. Enclosures are made of self-extinguishing high-density plastic, with a frontal protective grille and four M6 threaded inserts for either the included or the optional mounting hardware. MR 40 (black) and MR 40 W (white) are equipped with a 4" woofer and a 1" dome tweeter, these can only be used for a low impedance connection (8 Ω). MR 40T (black) and MR 40T W (white) are identical to the previous ones, but also include an internal transformer (with a power selector on the rear side) that allows the connection to 70 / 100 V constant voltage lines. MR 50 (black) and MR 50 W (white) are bigger and equipped with a 5" woofer and a 1" dome tweeter, these can only be used for a low impedance connection (8 Ω). MR 50T (black) and MR 50T W (white) are identical to the previous ones, but also include an internal transformer (with a power selector on the rear side) that allows the connection to 70 / 100 V constant voltage lines.

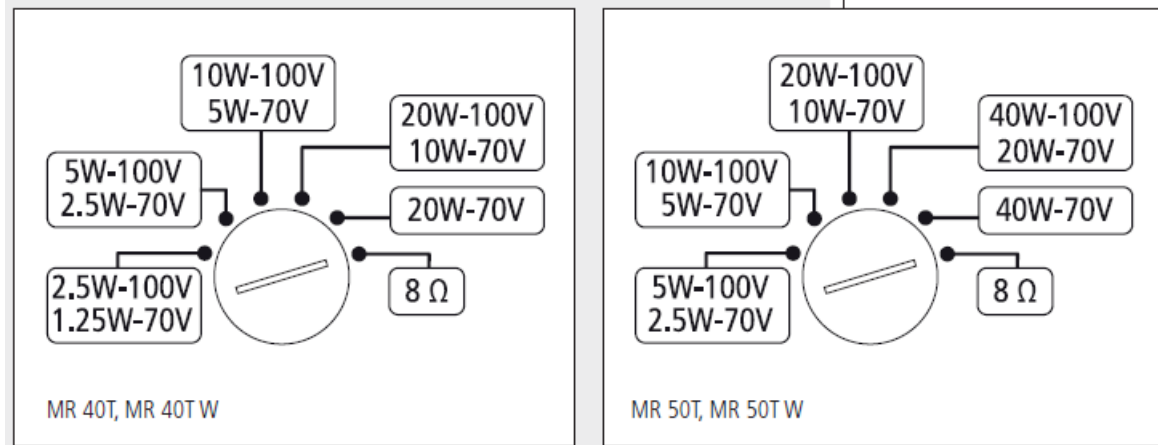
CONNECTION

WARNING: speaker connections should be only made by qualified and experienced personnel having the technical know-how or sufficient specific instructions to ensure that connections are made correctly and prevent

any electrical danger. To prevent any risk of electric shock, do not connect speakers when the amplifier is switched on. Before turning the system on, check all connections and make sure there are no accidental short circuits. The entire sound system shall be designed and installed in compliance with the current local laws and regulations regarding electrical systems. Make sure all speakers are connected in phase to ensure a correct sound reproduction.

NOTES ABOUT THE LOW IMPEDANCE CONNECTION (8 Ω)

– IMPORTANT: on models MR 40T, MR 40T W, MR 50T, MR 50T W (equipped with an internal transformer), it is necessary to set the rear power selector to 8 Ω .

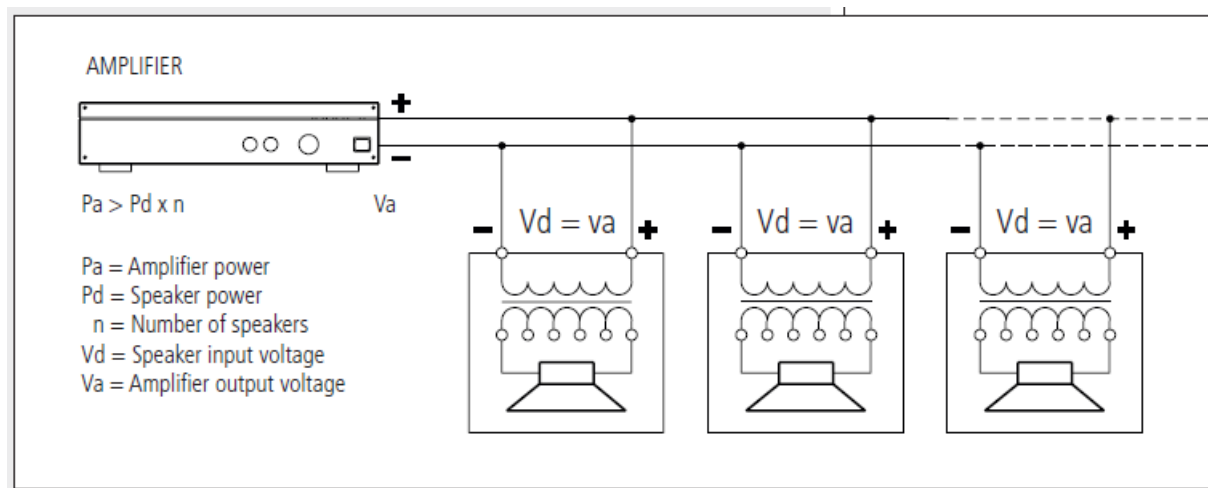


The total speaker impedance must not be lower than the amplifier output impedance.

- A speaker total impedance equal to the amplifier output one permits to get the maximum deliverable power (but a higher impedance entails less power).
- The total speaker power shall be adequate for the amplifier maximum deliverable power.
- Speaker lines shall be as short as possible (for long distances, it may be necessary to use cables with large cross-section wires).
- The impedance of a single speaker is 8 Ω . For example, the total impedance of the parallel of two speakers is 4 Ω (impedance = 8 / speaker number).

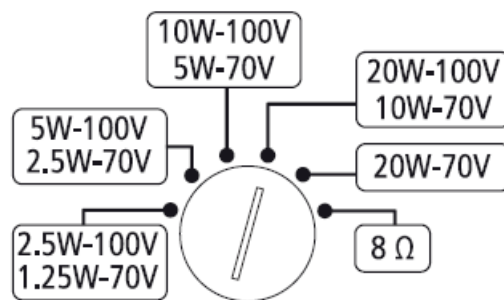
NOTES ABOUT 70 / 100 V CONSTANT VOLTAGE LINES

- The speaker input voltage (V_d) shall correspond to the amplifier output voltage (V_a).
- The sum of nominal power values ($P_d \times n$) of all speakers connected to the line shall not exceed the amplifier power (P_a).



POWER SELECTION WHEN LINKED TO 70 / 100 V CONSTANT VOLTAGE LINE (MR 40T, MR 40T W only)

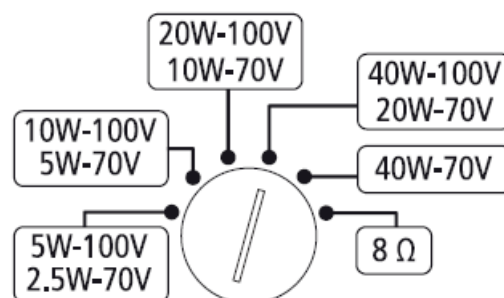
If this speaker is connected to a 100 / 70 V constant voltage line, select its proper power rate by turning its rotary switch (by using a screw-driver) among the values 20 – 10 – 5 – 2.5 W (100 V) or 20 – 10 – 5 – 2.5 – 1.25 W (70 V).



WARNING

- Do NOT select the 8 Ω position (as this may damage the speaker and the amplifier)!
- Do NOT select the 20W-70V position when linked to a 100 V line!

POWER SELECTION WHEN LINKED TO 70 / 100 V CONSTANT VOLTAGE LINE (MR 50T, MR 50T W only)



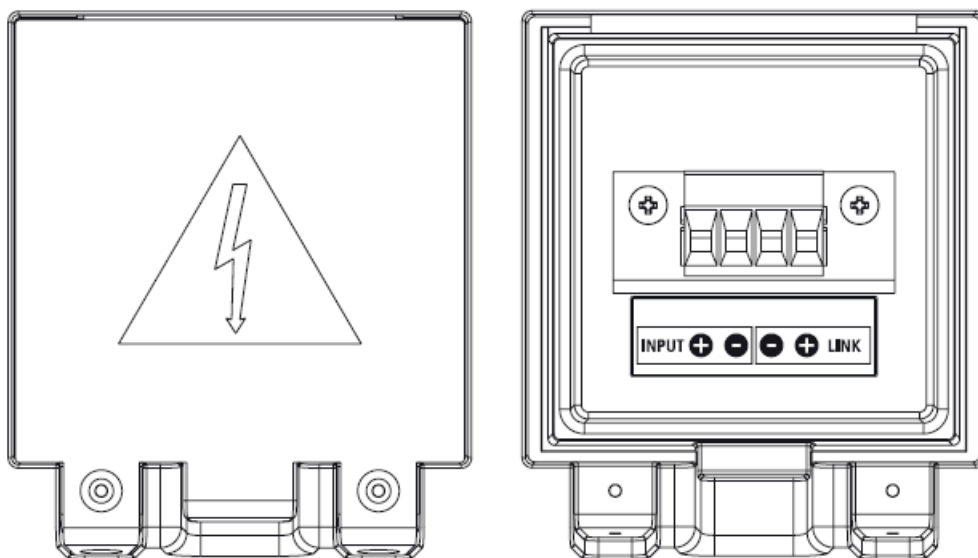
If this speaker is connected to a 100 / 70 V constant voltage line, select its proper power rate by turning its rotary switch (by using a screw-driver) among the values 40 – 20 – 10 – 5 W (100 V) or 40 – 20 – 10 – 5 – 2.5 W (70 V).

WARNING

- Do NOT select the 8 Ω position (as this may damage the speaker and the amplifier)!
- Do NOT select the 40W-70V position when linked to a 100 V line!

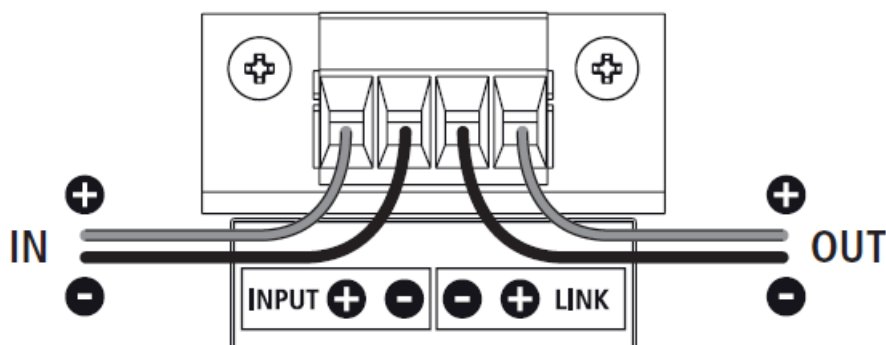
TERMINAL STRIP CONNECTION

Remove the protective cover on the back (by unscrewing the two screws) to access the removable connector (EUROBLOCK type).



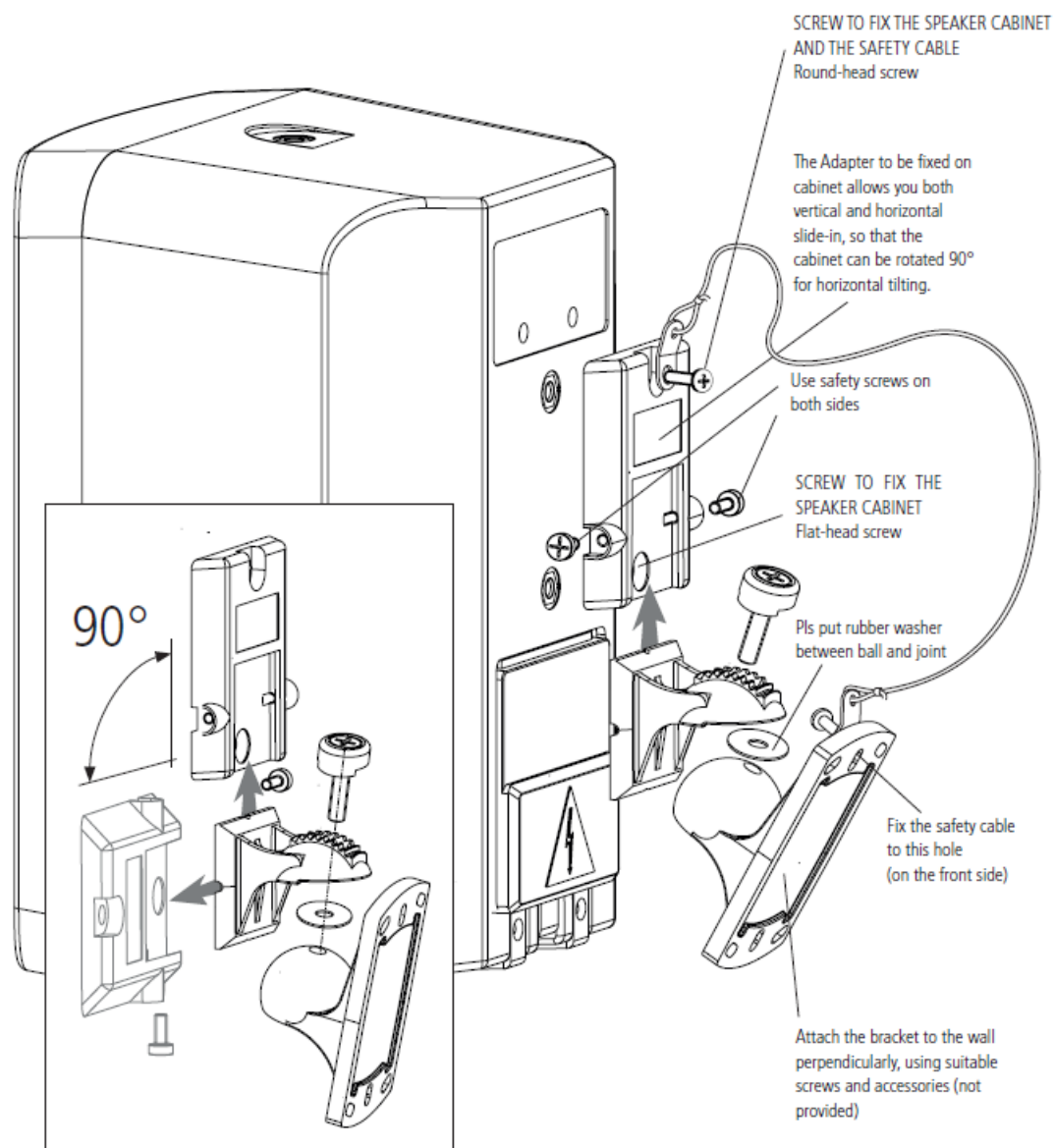
The two INPUT contacts (+ and -) allow the connection of the input cable, the two LINK contacts (+ and -) can be linked to an output cable for the parallel connection of other speakers. Applicable wire section: from 0.75 mm² to 4 mm².

1. Connect the line positive wire to the speaker INPUT +.
2. Connect the line negative wire to the speaker INPUT -.
3. If necessary, connect in the same way the output cable (to link other speakers in parallel) to speaker LINK + and LINK -.



INSTALLATION

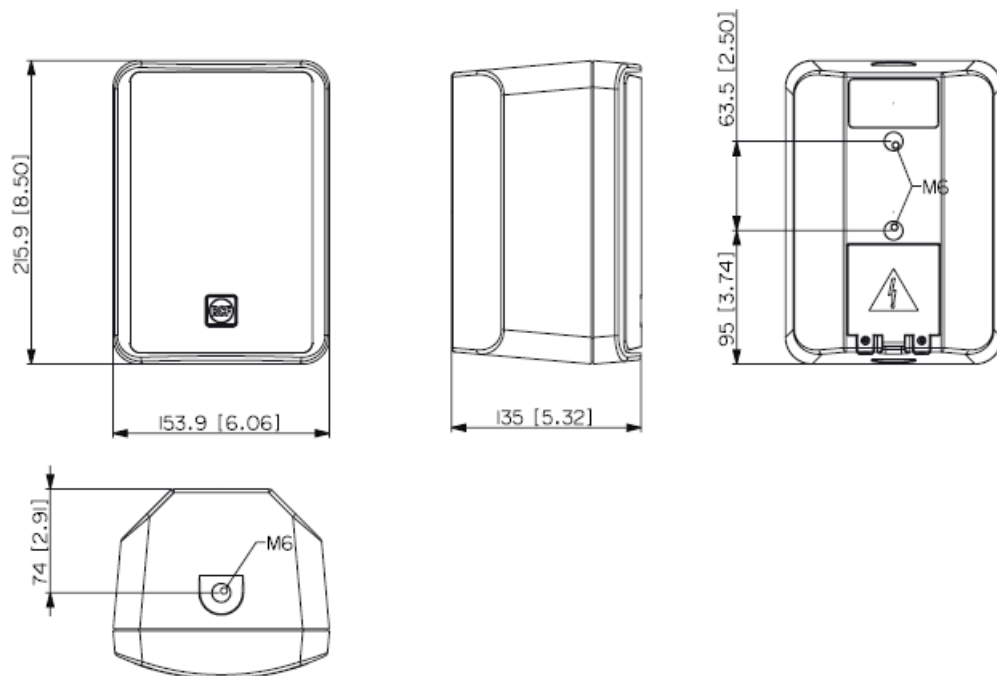
WARNING: Make sure all speakers are installed in a stable and secure way in order to avoid any conditions that may be dangerous for persons or structures. Ensure the support surface (walls, ceilings, etc.) has the necessary mechanical characteristics to support the speaker weight. Before installing every speaker, carefully check all components to be used and make sure there is no damage, deformation, corrosion and/or missing or damaged parts that could reduce the safety of the installation.



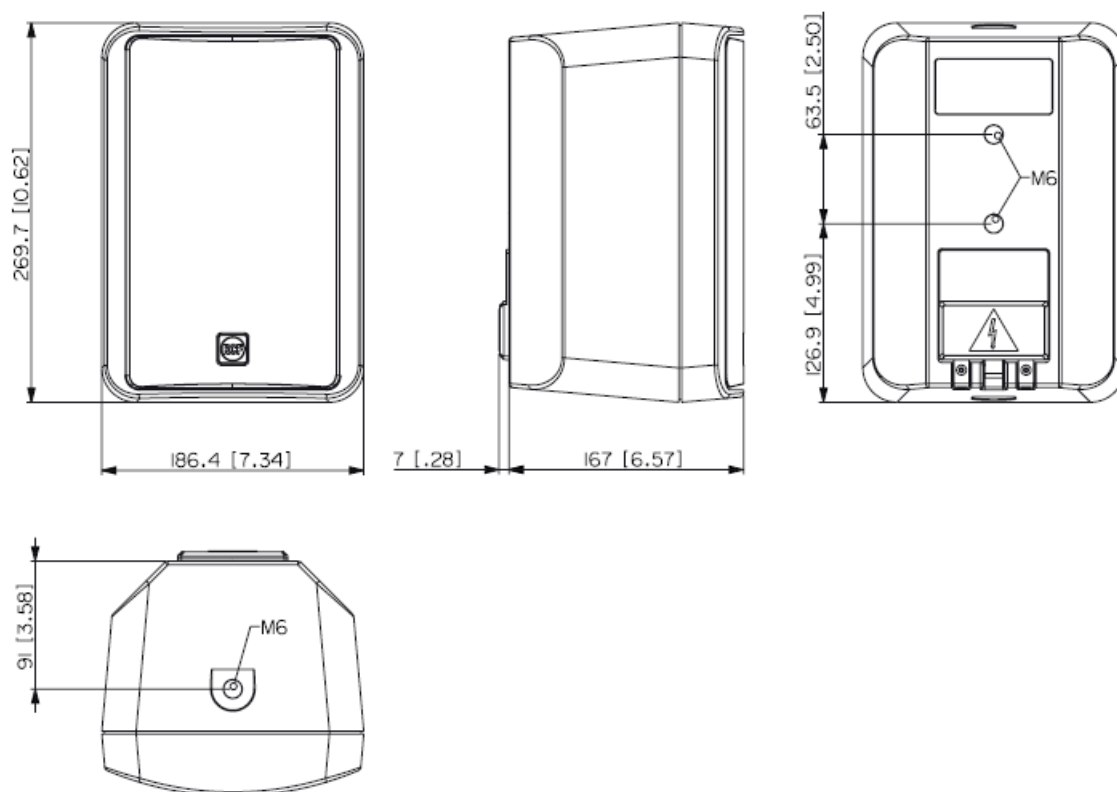
SPECIFICATIONS

	MR 40, MR 40 W	MR 40T, MR 40T W	MR 50, MR 50 W	MR 50T, MR 50T W
ACOUSTICAL / ELECTRICAL S.				
Low frequency transducer:	4" woofer (1" voice coil)		5" woofer (1" voice coil)	
High frequency transducer:	1" dome tweeter (0.8" voice coil)		1" dome tweeter (0.8" voice coil)	
Frequency response (–10 dB):	70 Hz ÷ 20 kHz		60 Hz ÷ 20 kHz	
Horizontal coverage angle (– 6 dB):	110°		110°	
Vertical coverage angle (– 6 dB):	100°		100°	
Sensitivity (1 W, 1 m):	86 dB		87 dB	
Max. sound pressure level (1 m) (max. power @ 8 Ω):	108 dB		110 dB	
Power handling:	40 W (RMS)	100V: 20–10–5–2.5 W 70V: 20–10–5–2.5–1.25 W 8 Ω: 40 W (RMS)	60 W (RMS)	100V: 40–20–10–5 W 70V: 40–20–10–5–2.5 W 8 Ω: 60 W (RMS)
Nominal input impedance:	8 Ω	8 – 250 – 500 Ω 1 – 2 – 4 kΩ	8 Ω	8 – 125 – 250 Ω 0.5 – 1 – 2 kΩ
Crossover frequency:	3 kHz		3 kHz	
Passive filter:	12/12 dB/octave		12/12 dB/octave	
Bass reflex tuning frequency:	80 Hz		65 Hz	
High frequency protection:	Dynamic (LICC)		Dynamic (LICC)	
Connector:	Euroblock removable screw terminals		Euroblock removable screw terminals	
PHYSICAL SPECIFICATIONS				
Cabinet material:	Self-extinguishing plastic		Self-extinguishing plastic	
Front protective grille:	Painted zinc plated metal		Painted zinc plated metal	
Included accessory:	Wall-mount support		Wall-mount support	
Rigging inserts:	4 x M6		4 x M6	
Colour:	MR 40, MR 40T: black (RAL 9005) MR 40 W, MR 40T W: white (RAL 9003)		MR 50, MR 50T: black (RAL 9005) MR 50 W, MR 50T W: white (RAL 9003)	
Net weight:	2.2 kg	2.3 kg	3.8 kg	4.0 kg
Dimensions (w, h, d):	154 mm, 216 mm, 135 mm		187 mm, 270 mm, 167 mm	


MR 40T, MR 40T W



MR 50T, MR 50T W



Documents / Resources

	<p>RCF MR 40 Two-Way Passive Speaker [pdf] User Manual</p> <p>MR 40, MR 40 W, MR 40T, MR 40T W, MR 50, MR 50 W, MR 50T, MR 50T W, MR 40 Two-Way Passive Speaker, MR 40, Two-Way Passive Speaker, Passive Speaker, Speaker</p>
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