SWEDISH • AUDIO • PASSION

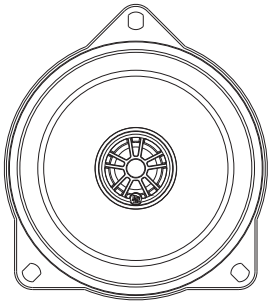


CRPP-BMW1.4CX

User Manual

BMW / Mini

CRUISE



DLS CRUISE
CRPP-BMW1.4CX

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Welcome to DLS!
Thank you for buying the DLS Cruise CRPP-BMW1.4CX coaxial speaker. For us, it's all about the sound experience. We care deeply about sound and construction quality. In order for your experience to be as optimal as possible, it is important that you fully read this manual, preferably before you start your installation. Keep the manual in a safe and accessible place for future reference.

Your speakers must be installed correctly in order to work as intended. Make sure you have all necessary tools nearby before starting and that you are completely confident in how to proceed. If you feel the slightest uncertainty; feel free to take the help of an experienced installer or a car audio dealer.

Warranty
This coaxial speaker is covered by warranty, depending on the conditions in the country where it is sold. If the speaker is returned for service, please include the original dated receipt with the product.

DECLARATION OF CONFORMITY

DLS plug and play speakers for vehicles are manufactured in accordance with the EU directive EEC 95/54 (72/245/ EEC) and are marked with the approval number. They are also marked in accordance with the WEEE-directive 2012/19/EC. The products are also produced in accordance with the EU RoHS directive 2015/863/EU.

DLS speakers are engineered by DLS Sweden, a part of:

Winn Scandinavia AB
Idrottsvägen 37 - SE-702 32 Örebro - Sweden
Tel: +46 19 20 67 65 - E-mail: info@dls.se
www.dls.se

Designed & Sound tuned in Sweden.

Parts Included

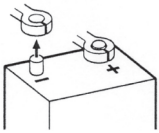
Included products:
1pc Coaxial speaker
1pc Crossover HP tweeter
1pc Crossover HP midrange

Included in box:
1pc Plastic adapter (for type A1 & A2)
1pc Steel adapter (for type B1)
1pc Cable connector
1pc Rubber gasket
1pc EVA gasket 102mm x 1.5mm
1pc EVA gasket 97mm x 1mm
1pc Foam gasket 115mm x 13mm
1pc Foam gasket 115mm x 4mm
4pcs M3 screws
1pc Stainless steel Cruise logo badge
1pc Pry tool
1pc Manual

Pre-installation

Disconnect Battery

Before you start the process of replacing speakers, disconnect and secure the negative terminal from your battery/power source. This prevent risks of damaging yourself or the products.



Place the disconnected terminal in a secure and isolated location away from any possible connection belonging to the battery/power source system.

General Info

BMW offers multiple different sound systems and configurations at the factory, even in the same year/model. This means that a single model vehicle may have several different speaker setups, with different speakers in the front door, dashboard, rear door, rear shelf, side panel and in the ceiling.

Before starting the installation, take a few minutes to double check the speaker system installed in your car. Make sure the speaker you're upgrading has necessary space for a separate tweeter. Because of the different systems various tools may be needed, such as:

- Multi-bit screwdriver
- Multi-bit ratchet
- Torx T15/T20 bit
- Hex bits
- Philips bits
- 8mm & 10mm wrenches/sockets
- Thin screwdriver

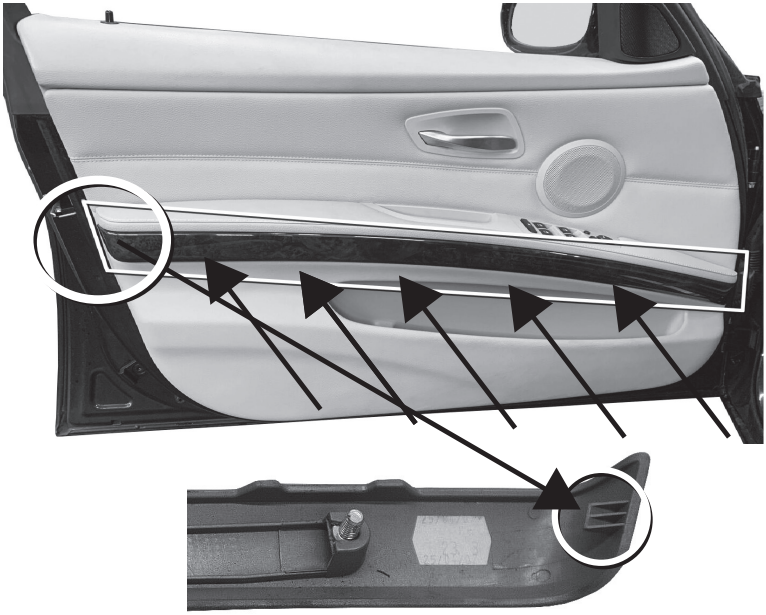
Remember: Use plastic pry tools to avoid marks on panels and damaging plastic clips. Take your time and don't rush the install. Do not use excessive force when removing grills, trims or panels.

Installation

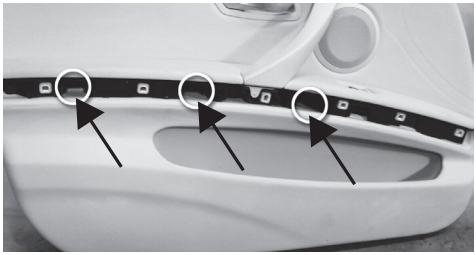
Remove Door Panel

Disassemble the front door by first removing the door panel. This is done by removing various decor trim panels using a pry tool to expose hidden screws, taking care not to break any hooks or clips.

The trims needing removal varies depending on your vehicle. Removal of the rear door panel is done in a similar way.



In most cases the screws used are Torx T20. Unscrew them and store the screws in a safe place, for later use when reinstalling the door panel. If your door panel has a handle trim, it usually needs to be removed as well to expose a hidden screw.







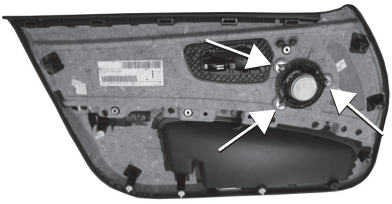
Loosen the door panel by inserting the pry tool between the panel and the door. Pry the door panel gently, but firm, outward to release the clips.

There are several electrical and mechanical connectors on the backside of the panel. Release the door lock wire and disconnect any electrical connectors.

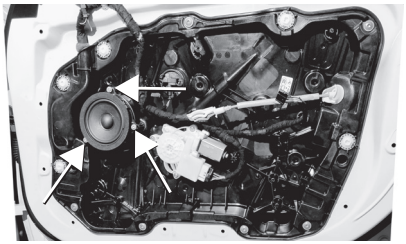
Remove Speaker

The midrange speaker is either mounted in the door panel or in the door frame.

Speakers mounted in the door panel are removed using a size 8 mm or 10 mm wrench to remove the 3 nuts fixing the speaker in place. Save the nuts for installing the DLS speaker.



Speakers mounted in the door frame are fixed with T20 screws. Save the screws for installing the DLS speaker.



Assemble DLS Speaker



The DLS CRPP-BMW1.4CX coaxial speaker is suitable for most BMW and Mini-models.

The speaker includes many different parts, read the compatibility list on page 18 to understand what configuration fits your car.

On the following pages, you will find a guide on how to assemble the speaker to make it fit your car. Be careful when assembling, take your time and do no rush. Not all included parts will be used.

The speaker adapters are called A1, A2 & B1.

Parts used:

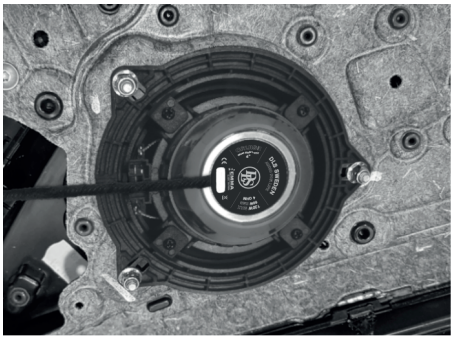
	Plastic adapter	A1, A2
	Steel adapter	B1
	Rubber gasket (118x1.5 mm)	A1
	Foam gasket (115x13 mm)	A2
	Foam gasket (115x4 mm)	A1, A2
	EVA gasket (102x1.5 mm)	B1
	EVA gasket (97x1 mm)	A1, A2, B1
	Screws (M3)	A1, A2, B1
	Y-adapter (20 cm extension)	A2

Identify Adapter

A1 (rear mounting)

The plastic A1 adapter is used when the speaker is mounted with nuts or screws from the rear, with the speaker connector on the back.

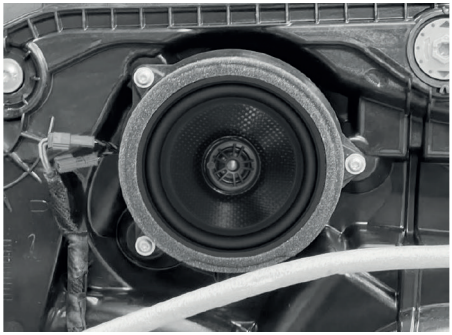
See page 6 for assemly.



A2 (front mounting)

The plastic A2 adapter is used when the speaker is mounted with nuts or screws from the front, with the speaker connector on the front or side.

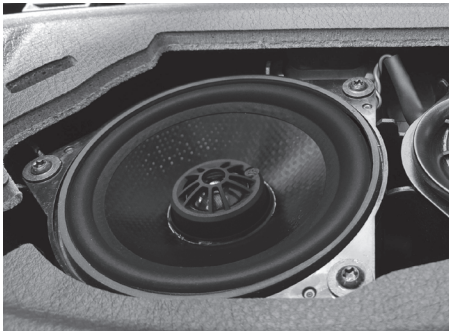
See page 7 for assembly.



B1 (small basket)

The steel B1 adapter is smaller and thinner, and is used mostly for center and rear speakers.

See page 8 for assembly.



A1 (rear mounting)

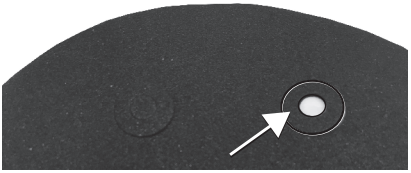
Below is the assembly for a typical application of A1, however any combination of gaskets may be useful for a particular installation.



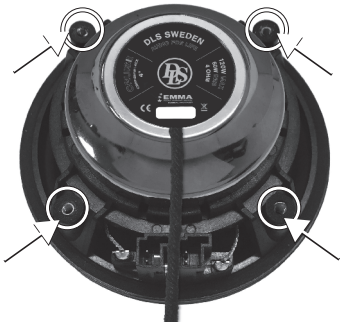
Mount the EVA gasket (97mm x 1mm) on the underside of the basket. Peel off the protective cover of the adhesive tape. Place it on the underside of the basket, press firmly all around the EVA gasket until it sticks properly.



Remove the centerpiece of the small ring of the EVA gasket. This piece will not be used. Use a narrow tool to pick up the small ring from the same EVA gasket.



Place the small foam rings over the four threads on the basket.



Place the plastic adapter over the speaker and fix the frame with four included screws.

Mount the rubber gasket (118mm x 1.5mm) on the underside of the basket.



Mount the foam gasket (115mm x 4mm) on the top of the basket. Peel off the protective cover of the adhesive tape. Press firmly all around the foam gasket to make it stick properly.



A2 (front mounting)

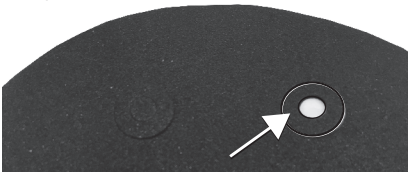
Below is the assembly for a typical application of A2, however any combination of gaskets may be useful for a particular installation.



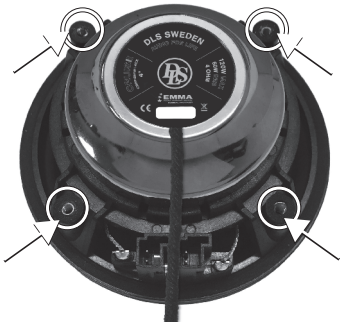
Mount the EVA gasket (97mm x 1mm) on the underside of the basket. Peel off the protective cover of the adhesive tape. Place it on the underside of the basket, press firmly all around the EVA gasket until it sticks properly.



Remove the centerpiece of the small ring of the EVA gasket. This piece will not be used. Use a narrow tool to pick up the small ring from the same EVA gasket.



Place the small foam rings over the four threads on the basket.



Place the plastic adapter over the speaker and fix the frame with four included screws.

Attach the Y-adapter extension and place it in the gap of the plastic adapter.

Mount the foam gasket (115mm x 4mm) on the underside of the basket.



Mount the foam gasket (115mm x 13mm) on the top of the basket. Peel off the protective cover of the adhesive tape. Press firmly all around the foam gasket to make it stick properly.



B1 (small basket)

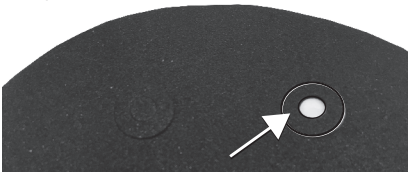
Below is the assembly for a typical application of B1, however any combination of gaskets may be useful for a particular installation.



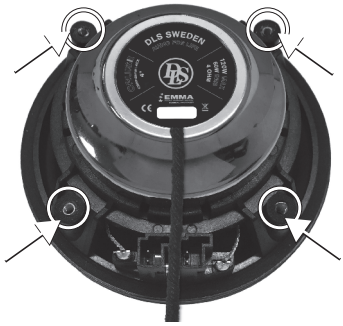
Mount the EVA gasket (97mm x 1mm) on the underside of the basket. Peel off the protective cover of the adhesive tape. Place it on the underside of the basket, press firmly all around the EVA gasket until it sticks properly.



Remove the centerpiece of the small ring of the EVA gasket. This piece will not be used. Use a narrow tool to pick up the small ring from the same EVA gasket.



Place the small foam rings over the four threads on the basket.



Mount the steel adapter over the speaker and fix the frame with four included screws.

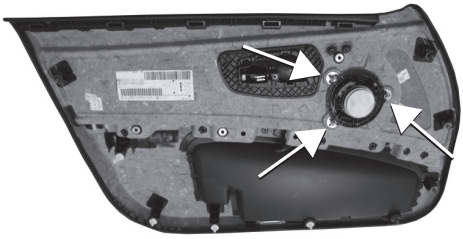


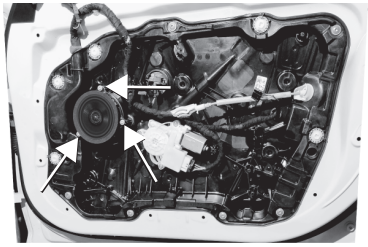
Mount the EVA gasket (102mm x 1.5mm) on the underside of the basket. Peel off the protective cover of the adhesive tape. Place it on the underside of the basket, press firmly all around the EVA gasket until it sticks properly.



Mount DLS Coaxial Speaker

Install the new DLS coaxial speaker in the factory location (door panel or door frame) with the factory screws/nuts. When the speakers are mounted in the door panel (A1/B1), use a size 8mm or 10mm wrench/-socket to fasten the three screws to fix the speaker. When the speakers are mounted in the door frame (A2), use the T20 screw to refix the speaker.



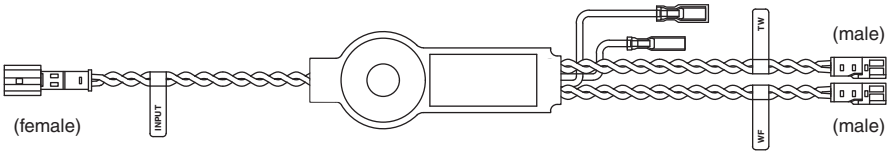


Connect the DLS speaker to the factory speaker connector. On the DLS speaker, there are 2 connectors. Whichever one can be used.

Low Pass and High Pass Crossovers

The crossover is designed with a 6dB / octave slope, featuring a low pass filter for the midrange and a high pass filter for the tweeter, both set at 4800 Hz. To ensure optimal tweeter performance, a Mundorf MCAP capacitor is used. The same type of capacitor is used for several of the Cruise series coaxial speakers and component kits.

The speaker cable from inside of the coaxial speaker should be connected to the cable marked TW (Tweeter) from the crossover. The other speaker cable from the crossover marked with WF (Woofer) should be connected to one of the connectors on the side of the basket.

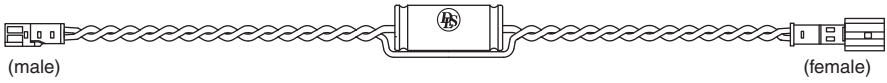


High Pass Filter for Coaxial Speaker

If your car is manufactured before 2019/06 (without a RAM-module) and equipped with the Base sound system (usually without front tweeters), the factory speaker has a built in high pass filter. In these cases, we recommend using the included extension cable with a high pass filter for the coaxial speaker.

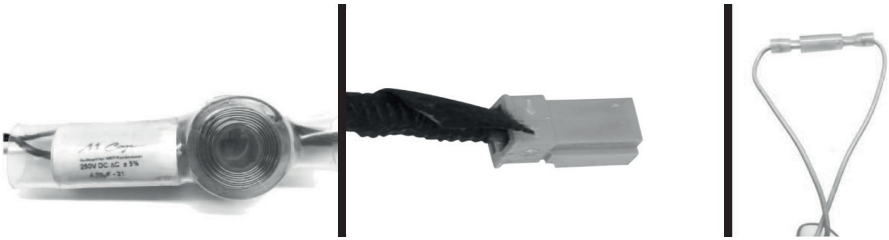
This crossover lowers the output below 250 Hz with a 6 dB/octave slope, to reduce resonances in the door panel and protect the DLS speaker from the lower bass tones.

Connect the factory speaker connector to the female end of the extension and the male end to the DLS speaker. If the factory radio/amplifier is upgraded to one where the front door speakers are run on a separate channel with a built-in high pass filter, this extension won't be needed.



Crossover Settings

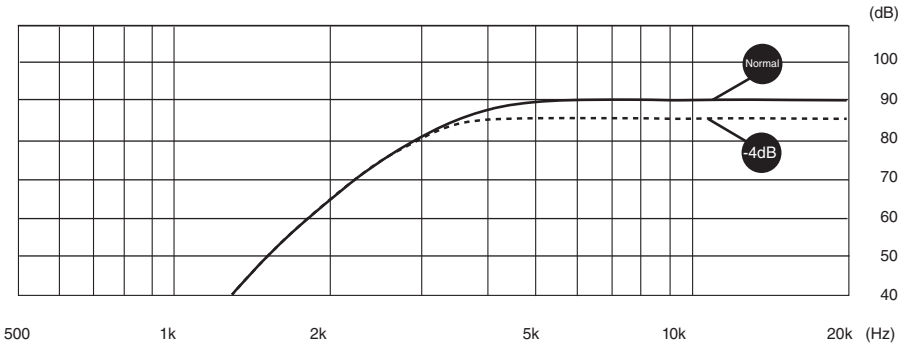
Tweeter Level



The yellow cable loop is a tweeter level selection, enabling fine tuning of the high-frequency sound.

- Closed loop = -4dB (Shown in the picture below)
- Open loop = Normal (Shown in the picture below)

By closing the loop as shown in the picture above, the tweeter gets less power in the higher frequencies, making the sound seem less intense. We recommend using the closed loop setup in installations where the factory tweeters are angled towards the listening position.



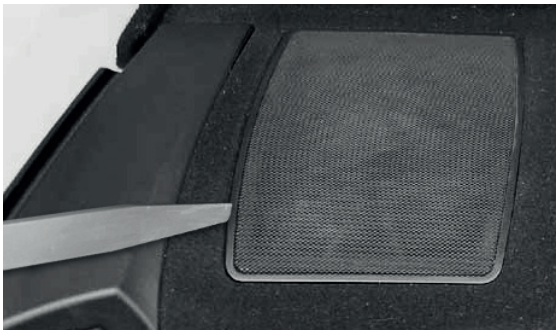
Remount Door Panel

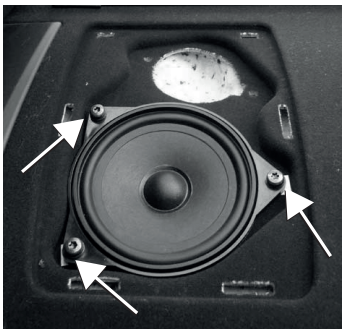
Start the reassembly of the door panels. Follow this manual in reverse order.
Reconnect all cables. Connect all plugs to the door panel and reconnect the door handle cable. Make sure the clips align with their holes and can engage. Give the door panel a push by the hand to attach to the clips. Mount and fasten all screws/bolts at the correct places.

Hint!
Take care when installing the door panel, to make sure no wires get pinched and/or pressed against the midrange speaker when it's installed in the door frame.

Remove Rear Speaker

Remove the speaker grill using a pry tool. As always, be careful when removing trim/covers or grills. Normally the screws are T20, but T15 or even Philips screws are used. Unscrew them and save them. Remove the factory speakers and unplug any speaker connectors.



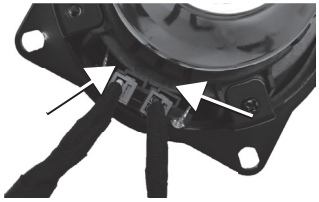


Mount DLS Rear Speaker

Plug in the factory harness in the new coaxial speaker from DLS. If a factory tweeter is installed in the bracket, remove it or at least remove the speaker cable connected to it.

Fix the speaker with the screws/bolts. Finally attach the speaker grill.

Note! Be careful when installing the speakers to not drop any screws.







Remove Center Speaker

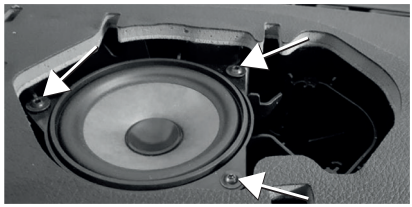
Depending on your car model and its factory sound system, it may or may not have the required space for a tweeter. If there is no space for a tweeter, the CRPP-BMW1.4CX coaxial speaker is perfect for this location!

Remove the speaker grill using a pry tool. Be careful when removing the cover/grille. Normally the screws are T20, but T15 or even Philips screws and bolts are used in some cars. Unscrew them and save them for later assembly when you mount the new DLS speakers.

Note! Be careful when installing the speakers to not drop any screws. You do not want to have them rattling around in your dashboard.

Remove the factory speakers and unplug any speaker connectors.



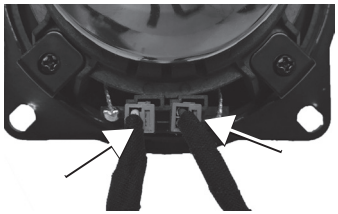


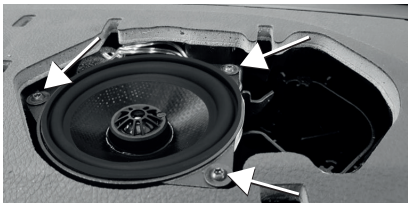
Mount DLS Center Speaker

Connect the factory speaker harness to the new coaxial speaker from DLS. There are two connectors, any of them can be used.

Connect the tweeter harness to the spare connector on the new DLS midrange speaker.

Use the factory screws/bolts to install the speakers. Make sure that the speaker harnesses do not get pinched in the installation. Put the speaker grill back in place and press it down gently.







Run-in period

To ensure optimal performance from your speakers, it's essential to allow for a proper run-in period. Fresh out of production, the moving parts like spider and suspension in a speaker can be stiff. A bit of exercise is necessary. Once they've had a chance to settle, you'll notice an improvement in sound quality.



Plan to let them play for a minimum of 15-20 hours. This can be achieved using a tone sweep or simply by playing music until they reach their intended performance.

Once the run-in period is completed the speakers now provide a more natural and enhanced music experience.

DLS Support

For technical assistance, ask your car audio dealer where the product was sold or the distributor in your country. You can always contact the DLS Support in Sweden via e-mail: info@dls.se. For more information regarding DLS and our products, visit our website: www.dls.se. We follow a policy of continuous advancement in development. For this reason, all or part of specifications and designs may be changed without prior notice.

Specifications

DLS Cruise CRPP-BMW1.4CX Coaxial Speaker
Technical Specifications

Size	4" /100 mm woofer and 0.36" / 16 mm tweeter
RMS Power	60 W
MAX Power	120 W
Impedance	4 Ohm
Sensitivity	87.5 dB 1W/1m
Freq. range	90 Hz - 23 kHz
Crossover	4800 Hz 6 dB / Oct with Mundorf caps

DLS Cruise CRPP-BMW1.4CX Woofer
Technical Specifications

Size	4" /100 mm
Voice Coil Size	1.2" / 30 mm
Voice Coil Material	CCAW voice coil with Kapton® former
Basket	Glass Fiber Reinforced ABS
Magnet	Neodymium
Cone	Glass Fiber
Suspension	Rubber

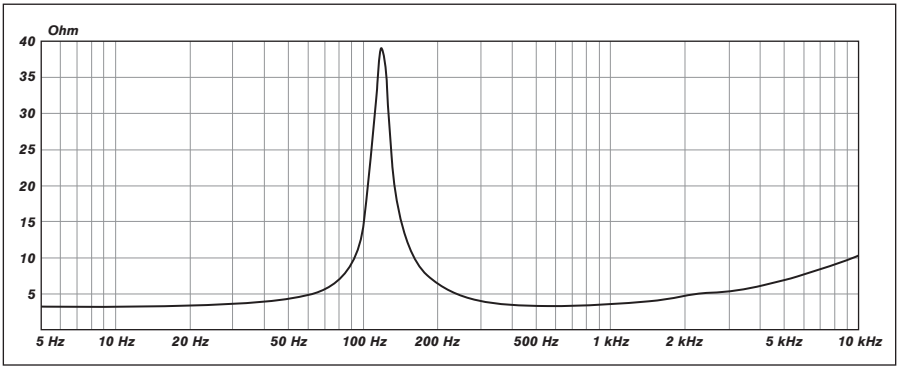
Electro-Acoustic Parameters

Re	3.2 Ohm
Fs	108 Hz
Mms	6.6 gr
Cms	0.21
Vas	0.93 L
Qts	0.63
Qes	0.66
Qms	13.0
Bl	5.17 T.m
Spl	87.5 dB 1W/1m
Sd	54 cm²

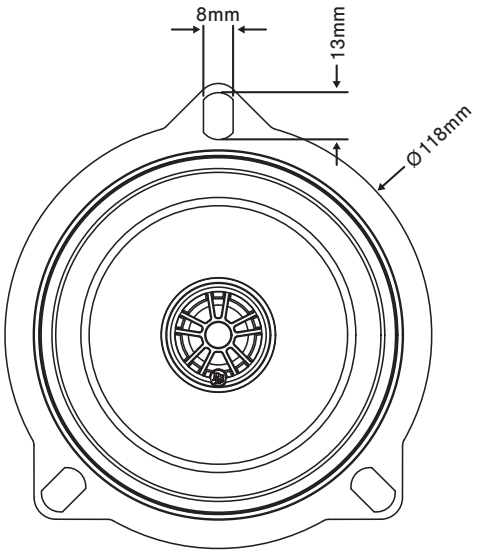
DLS Cruise CRPP-BMW1.4CX Tweeter
Technical Specifications

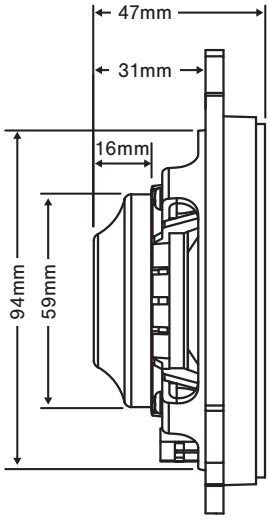
Size	0.6" / 16 mm
Voice Coil Material	CCAW voice coil with aluminum former
Frame	Glass Fiber Reinforced ABS
Magnet	Neodymium with copper shorting ring
Cone	Natural silk dome

Impedance vs. Frequency



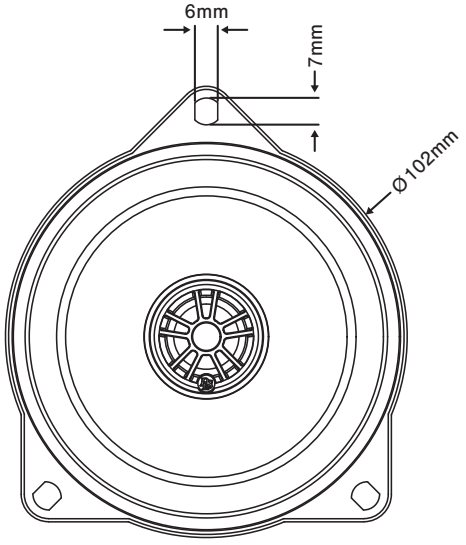
Dimensions

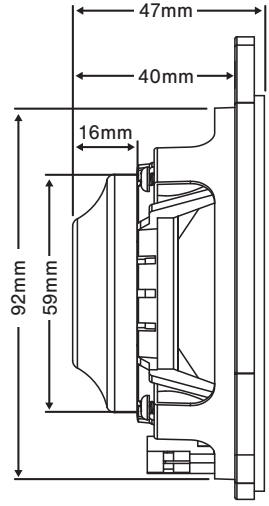




A

B





(mm)

Compatible Car Models

DLS Cruise CRPP-BMW1.4CX

Serie	Body	Year	Front	Back door	Shelf/Roof	Side	Center
1-Serie	E81	2007 - 2011	A1		B1		
1-Serie	E82	2007 - 2013	A1		B1		
1-Serie	E87	2005 - 2011	A1		B1		
1-Serie	E88	2004 - 2013	A1			A1	
1-Serie	F20	2011 - 2018	A2		B1		B1
1-Serie	F21	2014 - 2018	A2		B1		B1
1-Serie	F52	2017 -	A2	A2	B1		B1
1-Serie	F40	2019 - 2023	A2	A2		A1	
1-Serie	F70	2024 -	A2	A2			
2-Serie	F22	2014 - 2021	A2		B1		B1
2-Serie	F23	2014 -	A2			A2	B1
2-Serie	F45	2014 - 2021	A2			A2	B1
2-Serie	F46	2015 -	A2			A2	B1
2-Serie	F87	2015 - 2022	A2		B1		B1
2-Serie	F44	2015 -	A2	A2	B1		B1
2-Serie	U06	2022 -	A2				B1
2-Serie	G42	2022 -	A2		B1	A2	B1
3-Serie	E90	2005 - 2011	A1	A1	B1	A1	B1
3-Serie	E91	2005 - 2012	A1	A1			B1
3-Serie	E92	2006 - 2013	A1			A1	B1
3-Serie	E93	2007 - 2013	A1			A1	B1
3-Serie	F30	2012 - 2018	A2	A2		A1	B1
3-Serie	F31	2012 - 2018	A2	A2		A1	B1
3-Serie	F34	2012 - 2018	A2	A2	B1	A1	B1
3-Serie	F35	2012 - 2018	A2	A2	B1	A1	B1
3-Serie	F80	2014 - 2018	A2	A2	B1	A1	B1
3-Serie	G20	2019 -	A2	A2	B1	A1	B1
3-Serie	G21	2019 -	A2	A2		A1	B1
3-Serie	G28	2020 -	A2	A2	B1	A1	B1
3-Serie	G80	2020 -	A2	A2	B1	A1	B1
3-Serie	G81	2022 -	A2	A2	B1	A1	B1
4-Serie	F32	2014 - 2020	A2		B1	A2	B1
4-Serie	F33	2014 - 2020	A2			A2	B1
4-Serie	F36	2013 - 2021	A2	A2	B1	A2	B1
4-Serie	F82	2014 - 2021	A2		B1	A2	B1
4-Serie	F83	2014 - 2021	A2			A2	B1
4-Serie	G22	2020 -	A2		B1	A2	B1
4-Serie	G23	2021 -	A2			A2	B1
4-Serie	G26	2021 -	A2		B1	A2	B1
4-Serie	G82	2021 -	A2			A2	B1

5-serie	E60	2004 - 2010	B1	B1	B1	B1	B1
5-serie	E61	2004 - 2010	B1	B1	B1	B1	B1
5-serie	F07	2009 - 2017	B1	B1	B1	B1	B1
5-serie	F10	2010 - 2016	A1	A1	B1		B1
5-serie	F11	2010 - 2016	A1	A1	B1		B1
5-serie	F18	2010 - 2017	A1	A1	B1	B1	B1
5-serie	F90	2016 -	A1	A1	B1	B1	B1
5-serie	G30	2017 - 2022	A2	A2	B1		B1
5-serie	G31	2017 - 2022	A2	A2	B1		B1
5-serie	G38	2017 - 2022	A2				B1
5-serie	G60	2017 - 2022	A2				B1
5-serie	G61	2017 - 2022	A2				B1
5-serie	G90	2017 - 2022	A2				B1
6-Serie	E63	2004 - 2010	A1			A1	B1
6-Serie	E64	2004 - 2011	A1			A1	B1
6-Serie	F06	2011 - 2017	A2	A2	B1		B1
6-Serie	F12	2012 - 2017	A2		A1		B1
6-Serie	F13	2012 - 2017	A2		A1	B1	B1
6-Serie	G32	2017 -	A2	A2	B1	A1	B1
7-Serie	E65	2001 - 2008	B1	B1			B1
7-Serie	E66	2001 - 2008	B1	B1			B1
7-Serie	E67	2001 - 2008	B1	B1			B1
7-Serie	F01	2008 - 2015	B1	B1	B1		B1
7-Serie	F02	2008 - 2015	B1	B1	B1		B1
7-Serie	F04	2008 - 2012	B1	B1	B1		B1
7-Serie	G11	2015 - 2022	A2	A2	B1		B1
7-Serie	G12	2015 - 2022	A2	A2	B1		B1
7-Serie	G70	2022 -	A2	A2	B1		B1
8-Serie	G14	2018 -	A2	A2	B1	A1	B1
8-Serie	G15	2018 -	A2	A2	B1	A1	B1
8-Serie	G16	2018 -	A2	A2	B1	A1	B1
8-Serie	F92	2018 -	A2	A2	B1	A1	B1
8-Serie	F93	2018 -	A2	A2	B1	A1	B1
i3	i01	2013 - 2017		A2	A2	A2	B1
i3	i01	2017 -	A2	A2		A2	B1
i3s	i01	2017 -	A2	A2		A2	B1
i3	G28	2023 -	A2	A2		B1	
i4	G26	2022 -	A2	A2	B1	A2	B1
i5		2023 -	A2	A2		A2	B1
i5		2024 -	A2	A2		A2	B1
i7		2022 -	A2	A2		B1	
i8	i12	2014 - 2019		A2	A2	B1	
i8	i12	2018 - 2019		A2	A2	B1	B1
iX1	U11	2022 -	A2	A2		A2	B1
iX2		2023 -	A2	A2			B1

iX3	G08	2021- 2024	A2	A2	B1		B1
iX		2022 -	A2	A2	B1		B1
iX5		2023 -	A2	A2	B1		B1
Z4	E85	2003 - 2008	B1		B1		B1
Z4	E89	2009 - 2016	B1	B1	B1		B1
Z4	G29	2018 - 2023	A2		A2		B1
X1	E84	2009 - 2015	A1		B1		B1
X1	F48	2016 - 2022	A2	A2	B1		B1
X1	F49	2016 - 2022	A2	A2	B1		B1
X1	U11	2022 -	A2	A2	B1		B1
X2	F39	2018 - 2023	A2	A2			B1
X2	U10	2023-	A2	A2			B1
X3	E83	2004 - 2010	B1	B1		B1	
X3	F25	2010 - 2017	A2	A2	B1		B1
X3	G01	2017 - 2024	A2	A2	B1		B1
X3	G08	2017 - 2024	A2	A2	B1		B1
X3	F97	2017 - 2024	A2	A2	B1		B1
X3	G97	2024 -	A2	A2	B1		B1
X4	F26	2014 - 2018	A2	A2		B1	B1
X4	G02	2019 -	A2	A2		B1	B1
X4	F98	2017 - 2019	A2	A2		B1	B1
X5	E70	2007 - 2013	B1	B1	B1	B1	B1
X5	F15	2013 - 2018	A2*	A2*	B1	A2	B1
X5	F85	2015 - 2018	A2*	A2*	B1*	A2*	B1
X5	G05	2018 -	A2	A2	B1	A2	B1
X5	F95	2018 -	A2	A2		A2	B1
X6	E71	2008 - 2014	B1	B1	B1	B1	B1
X6	E72	2009 - 2010	B1	B1	B1	B1	B1
X6	F16	2014 - 2019	A2*	A2*	A2*	A2*	B1
X6	F86	2015 - 2019	A2*	A2*	A2*	A2*	B1
X6	G06	2019 -	A2	A2	B1	B1	B1
X7	G07	2019-	A2	A2	B1		B1

*Spacer needed

BMW Motorrad	**Year**	**Front**
K1600	2010 - 2017	B1
R 1250 RT	2017 - 2023	B1

Mini	Body	Year	Front	Back door	Side	Center
Clubman	R54/R55	2008 - 2015	B1	B1		
Hatch 3-door	R56	2006 - 2014	B1	B1		
Cabrio	R57	2006 - 2014	B1	B1		
Coupe	R58	2012 - 2015	B1	B1		
Roadster	R59	2012 - 2016	B1	B1		
Countryman	R60	2010 - 2017	B1	B1	B1	
Spaceman	R61	2013 - 2017	B1	B1		
Clubman	F54	2016 - 2023	A2	A2	A2	B1
Hatch 5-door	F55	2014 - 2023	A2	A2		B1
Hatch 3-door	F56	2014 - 2023	A2	A2		B1
Hatch 3-door	F56 SE	2020 -2023	A2	A2		B1
Cabrio	F57	2016 -2023	A2	A2		B1
Countryman	F60	2017 -2023	A2	A2		B1
Aceman		2024 -	A2	A2		B1
Hatch 3-door		2024 -	A2	A2		B1

Disclaimer

The DLS CRPP-BMW1.4CX might not be fully compatible, or requires extensive modifications to install in some original sound systems. For more information, visit www.dls.se

The coaxial speaker may not function properly if the factory speaker is of a higher impedance than 4 Ohms, and may cause harm to the factory amplifier in the car. Consult your local DLS dealer for advice.

Product Markings



The crossed-out wheelie bin symbol means that the product, literature and packaging included must be taken to separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste: take them for recycling. For info on your nearest recycling point, check with your local waste authority.



This product has been granted with the CE certification mark to show that the product follows the health, safety, and environmental protection standards for products sold within the European Economic Area (EEA).



DLS products comply with the relevant provisions of the RoHS Directive for the European Union. In common with all Electrical and Electronic Equipment (EEE) the product should not be disposed of as household waste. Alternative arrangements may apply in other jurisdictions.



DLS is a global partner of the European Mobile Media Association, an organisation that focus on promoting the custom made mobile media installations to consumers.

We follow a policy of continuous advancement in development. For this reason all or part of specifications & designs may be changed without prior notice. We reserve for possible typos, factual or numeric errors that may have been printed on any products, package designs, user manuals and/or other included accessories.



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