



Freude am Fahren

BMW Wallbox Essential

Instructions for use



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Legal notice

Bayerische Motorenwerke Aktiengesellschaft

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Original operating instructions

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Contraventions are liable to compensation.

About this manual

We are delighted that you have decided to buy a BMW Wallbox.

Read the manual for this device carefully before you charge your vehicle. Keep this document to hand at all times near the Wallbox since it contains important information for charging the high voltage batteries found in electric or plug-in hybrid vehicles.

Use the installation manual to install the Wallbox and to store and transport it. The manual contains all the technical data and details of the ambient conditions.

Have fun and enjoy your BMW Wallbox.

BMW AG

Symbols used

You will find information and warnings about possible dangers at various points in the manual. The symbols used in the manual have the following meanings:



WARNING

Means that death or serious physical injury may occur if the appropriate precautions are not taken. ◀



CAUTION

Means that property damage or minor physical injury may occur if the appropriate precautions are not taken. ◀



IMPORTANT

Means that property damage may occur if the appropriate precautions are not taken. ◀



ESD

This warning points out the possible consequences of touching electrostatically sensitive components. ◀



Note

Indicates procedures which do not involve any risk of injury. ◀

INFORMATION

Safety information



WARNING

- ▷ Electrical danger!
The Wallbox must be installed, commissioned and serviced by appropriately trained, qualified and authorised electricians⁽¹⁾ who bear full responsibility for compliance with current standards and installation regulations. See the installation manual for details.
- ▷ Electrical danger/fire hazard!
Never use defective, worn or dirty charging cable plugs.
- ▷ Electrical danger!
If the status LED is permanently lit in red, the Wallbox must be disconnected from the supply until the device has been replaced. The voltage on the charging cable cannot be switched off.
- ▷ The owner (end customer) must ensure that the Wallbox is operated only if it is in perfect condition.
- ▷ The Wallbox must be checked at regular intervals for defects on the socket or charging cable plug (including charging cable) and for signs of damage to the housing (visual inspection).
- ▷ Repair work to the Wallbox is not permitted, and may be completed only by the manufacturer or a trained expert (Wallbox replacement).
- ▷ A damaged Wallbox must be switched off and replaced without delay.
- ▷ Do not make any unauthorised changes or modifications to the Wallbox.
- ▷ Do not remove any identifiers such as safety symbols, warning instructions, rating plates, labels or cable markings.
- ▷ The Wallbox does not have a main switch. The device plug and circuit breaker for the building installation can be used to disconnect the supply circuit.
- ▷ Do not use an extension cable for connecting an electric or plug-in hybrid vehicle to the Wallbox.
- ▷ Connect only electric or plug-in hybrid vehicles or their chargers. Do not connect any other loads (electric tools, etc.).
- ▷ Ensure that the charging cable is not mechanically damaged (kinked, jammed, or run over) and that the contact area does not come into contact with heat sources, dirt or water.
- ▷ Always conduct a visual inspection for signs of damage before charging. Pay particular attention to dirt and moisture on the charging plug, cuts on the charging cable or chafing on the insulation, and also ensure that the cable output from the Wallbox is securely fastened. ◀

⁽¹⁾ People who, as a result of their specialist training, skills and experience and knowledge of the relevant standards can assess the work and identify possible dangers.



CAUTION

- ▷ Ensure that the Wallbox is not damaged by incorrect handling (housing cover, internal parts, etc.).
- ▷ Protect the charging plug from dirt and water with the dust cap when not in use.
- ▷ Ensure that the charging cable is not mechanically damaged (kinked, jammed, or run over) and that the contact area does not come into contact with heat sources, dirt, or water. ◀



IMPORTANT

- ▷ If it is raining or snowing and the Wallbox is installed outdoors, do not open the terminal panel cover.
- ▷ Wait until a current charging cycle has been finished and the vehicle has been disconnected before you open the covers. ◀

Intended use

The Wallbox is a charging station for indoor and outdoor use, designed to charge electric or plug-in hybrid vehicles. Do not connect any other devices such as electric tools. The Wallbox is designed for installation on a wall or a column. Comply with the relevant national regulations for installing and connecting the Wallbox.

The intended use of the device in every case includes compliance with the ambient conditions for which this device was developed.

The Wallbox was developed, manufactured, tested and documented on the basis of the relevant safety standards. If you comply with the instructions and safety information described for its intended use, the product will therefore not normally pose any danger in terms of property damage or to the health of people.

This device must be earthed. In the event of an error, the earth connection will reduce the danger of an electric shock.

The instructions contained in this manual must in any event be followed exactly. Otherwise, sources of danger may be created or safety equipment may be rendered ineffective. In addition to the safety information provided in this manual, the safety and accident prevention regulations relating to the specific device must be followed.

As a result of technical or statutory restrictions, not all versions/options are available in all countries.

About this manual

This manual and the functions described in it are valid for devices of the following type:

- ▷ BMW Wallbox Essential

The illustrations and explanations contained in this manual refer to a typical version of the device. Your device version may differ from this.

This manual is aimed at the following target groups:

- ▷ End customers (users of the Wallbox)
- ▷ Commissioning technicians, service technicians

Warranty

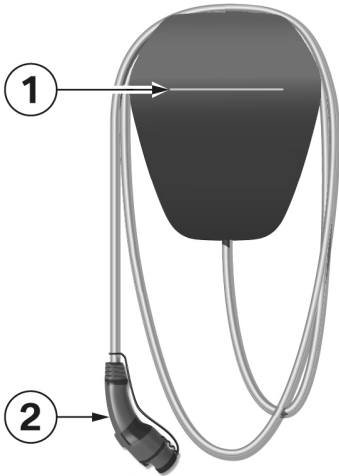
BMW Service can provide more information on the terms of the warranty. However, the following cases are not covered by the warranty.

- ▷ Defects or damage caused by installation work which was not carried out as specified in the BMW Wallbox Essential installation instructions.
- ▷ Defects or damaged cause by the product not being used as specified in the BMW Wallbox Essential operating instructions.
- ▷ Costs and damage caused by repair work not carried out by a specialist electrician authorised by a BMW sales outlet or authorised service workshop.

OPERATION

Displays and controls

Version with charging cable







Functions:

▷ Charging electric or plug-in hybrid vehicles

1 Status LED

2 Charging cable plug

Start the charging cycle

	The status LED is permanently lit in blue when the device is not in use. Connect the vehicle to the Wallbox if it is not already connected.
	The status LED will be lit in orange for several seconds whilst the internal self-tests are being conducted.
	The status LED will then light up again in blue to indicate that the vehicle has been connected successfully. The charging cycle can then be started from the vehicle.
	The status LED will flash in blue whilst the charging cycle is active. The charging cycle is started by the vehicle and the start can also be delayed depending on the setting in the vehicle.

End the charging cycle

The charging cycle is ended by releasing the vehicle and disconnecting the charging cable. Details of this are described in the manual provided by the vehicle manufacturer.

1. Disconnect the charging cable from the vehicle and coil the charging cable around the Wallbox.

Storing the charging cable

1. Coil the charging cable around the Wallbox.
2. For safe storage, place the dust cap on the charging cable plug **1**.



Status LED information






Status LED segments

The status LED provides information on the current state of the Wallbox. It consists of 4 segments, S1 to S4, which may be lit or flash in various colours together or individually.

The status LED is only visible when the power supply is active.

Unless otherwise stated, all 4 segments will be lit together.

	<p>Temperature cut-out</p> <p>If the maximum temperature limit of the Wallbox is exceeded, the charging cycle will be temporarily stopped, and segments S3 and S4 of the status LED will flash in orange. After the cooling phase the charging cycle will restart automatically.</p>
	<p>Commissioning mode</p> <p>When commissioning mode is active, segments S2 and S3 of the status LED will be lit in orange, see installation instructions.</p>
	<p>Faults</p> <p>If faults occur, they will be indicated by the status LED and special colour codes. For further details, see section Troubleshooting.</p>

FAULTS



Note

Additional or updated information such as operating and installation instructions are available on the service page at <https://charging.bmwgroup.com/web/wbdoc/>. ◀



Note

If the displayed error code is not listed here, please contact BMW Service. ◀

Troubleshooting

PROBLEM	Possible cause
Status LED not lit	<ol style="list-style-type: none"> 1. No voltage supply – check the residual-current circuit breaker and power circuit breaker, and switch on if necessary. 2. Fault on the Wallbox – contact your service partner if necessary.
Charging process is not started	<ol style="list-style-type: none"> 1. The charging cable plug has not been inserted correctly – remove the charging cable plug and reconnect it. 2. The vehicle does not require any energy or has a fault – check the vehicle. 3. The vehicle has been programmed for a later starting time for the charging cycle.
Vehicle not fully charged / extended charging time	<ol style="list-style-type: none"> 1. Vehicle settings incorrect, for example charging mode or departure time. 2. Power reduction due to high temperature on the vehicle or Wallbox – protect the vehicle and Wallbox from direct sunlight during the charging cycle (carport, garage). Conduct a visual inspection of the plug connector for dirt, wear, or damage. Contact your service partner if necessary.
Charging cable plug cannot be disconnected	<ol style="list-style-type: none"> 1. The charging cycle has not been ended by the vehicle – end the charging cycle as described in the manual provided by the vehicle manufacturer. 2. The charging cable plug may not be released when pulled – push in the charging cable plug and release it again on the vehicle.

<p>Status LED flashes in red (all parts of the status LED flash in red combined with white or blue)</p>	<ol style="list-style-type: none"> 1. Fault – first check the possible causes of the fault, see section Possible causes of faults. Switch off the supply voltage to the Wallbox using the appropriate mains cut-off device. Disconnect the charging cable and switch on the supply voltage again.
<p>Status LED permanently lit in red</p>	<ol style="list-style-type: none"> 1. The Wallbox cannot shut down the voltage on the charging cable – restart the Wallbox. If the problem persists, disconnect the Wallbox from the mains and replace it. 2. The protective conductor is not connected – connect the protective conductor correctly. 3. The protective conductor connection has too high a resistance – connect the protective conductor correctly. 4. The CCID test was not successful. If the problem persists, replace the Wallbox.





Reset an error

If an interruption occurs during a connection or charging cycle, the Wallbox will attempt to restart the cycle automatically (a maximum of five times).




If the charging cycle cannot be restarted, this must be acknowledged by correctly ending the charging cycle or, if necessary, by restarting the Wallbox. If an error occurs repeatedly or for no obvious reason, contact your service partner.

Possible causes of faults

General errors (displayed in red and white)

 <p>"white/white/white/red"</p>	<p>Error 1 [0001]</p> <p>The charging cable plug was disconnected during the charging cycle: The charging cable plug was not correctly locked – disconnect the charging cable plug and reconnect correctly, ensuring that it locks properly.</p>
 <p>"white/white/orange/orange"</p>	<p>Error 3 [0011]</p> <p>Temperature cut-out: The maximum temperature in the Wallbox was exceeded. After briefly displaying the error code, status LED segments S2 and S4 will flash in orange until the Wallbox has cooled down.</p>
 <p>"white/red/white/red"</p>	<p>Error 5 [0101]</p> <p>The Wallbox has not detected an electric or plug-in hybrid vehicle, but instead an unauthorised load: Only electric vehicles which comply with the standard may be charged. Remove the unauthorised load and restart the charging process.</p>
 <p>"red/white/white/white"</p>	<p>Error 8 [1000]</p> <p>The charging cable plug on the Wallbox is emitting an invalid state: Cable hardware error – disconnect the charging cable plug and reconnect properly, if necessary replace the cable.</p>

Errors on the power unit (displayed in red and blue)

 <p>"blue/blue/blue/red"</p>	<p>Error 8001 [0001]</p> <p>The charging voltage cannot be switched on; internal error or hardware defective: Reconnect the vehicle or restart the Wallbox. If the error occurs again, contact your service outlet.</p>
 <p>"blue/blue/blue/red"</p>	<p>Error 8005 [0101]</p> <p>Residual current monitor: An error was identified during the self-test or the monitor has tripped as a result of an excessive fault current. Check your charging cable for signs of damage or water accumulation in the plug. The monitor may also trip due to a lightning strike in the surrounding area.</p>
 <p>"blue/red/red/red"</p>	<p>Error 8007 [0111]</p> <p>Safety monitor: A problem relating to the internal safety circuit has been identified. It is possible that the contacts on the charging contactor can no longer be opened. In this state the Wallbox cannot perform an automatic restart attempt. The Wallbox must be restarted at the mains. In certain cases the error may relate to a problem in this software. A software update may rectify the error, see section SOFTWARE UPDATE. If the device continues to display the error after the software has been updated, please contact your service partner.</p>

MAINTENANCE

Cleaning



IMPORTANT

Danger of damage.

Avoid possible damage through the following:

- ▷ Aggressive solvents and cleaning products
- ▷ Scouring materials
- ▷ Cleaning with water jets, for example a pressure cleaner
- ▷ Excessive pressure

Comply with the instructions on the cleaning product. ◀

Clean the housing of the Wallbox Pure using a damp cloth as required. Stubborn dirt can be removed using a mild, solvent-free, non-scouring cleaning product.



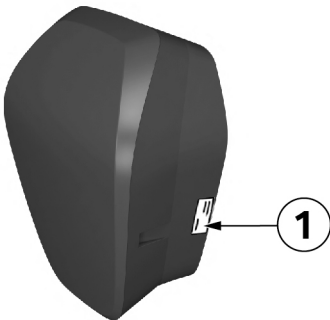
Note

We recommend using cleaning and care products which have been tested by BMW:

Special matt paint cleaner for the housing, number 83 12 2 285 244.

Glass cleaner for high gloss surfaces, number 83 12 2 288 901. ◀

Maintenance and repair work



If you have any questions or problems, please contact your electrical installation contractor. Repair work may only be carried out by trained personnel. Before you contact your service partner:

1. Check the troubleshooting guide in this manual and in the manual supplied with your vehicle.
2. Make a note of the model version and serial number. The model plate **1** is on the right-hand side of the Wallbox.

WASTE DISPOSAL



After proper decommissioning of the device, please have the device disposed of by service or dispose of it in compliance with all currently valid disposal regulations.



Waste disposal information

The symbol of the crossed out really been means that electrical and electronic devices and the accessories must be disposed of separately from general household waste. Information is provided on the product, in the instructions for use or on the packaging.

The materials can be recycled on the basis of their identifying marks. You can make a valuable contribution to protecting our environment by reusing them, recycling the material or other forms of reuse of end of life devices.

SOFTWARE UPDATE

The software for the Wallbox can also be updated using the USB connector inside the device. The housing cover and the terminal panel cover must be removed to gain access to the USB connector.

Follow the instructions in the manual for performing software updates.



The latest **software** and associated instructions can be downloaded from the internet at <https://charging.bmwgroup.com/web/wbdoc/>. A new software version may, for example, take account of changed standards or improve compatibility with new electric or plug-in hybrid vehicles.

PRODUCT INFORMATION PAGE



The complete CE declaration of conformity for this product can be downloaded from the internet at <https://charging.bmwgroup.com/web/wbdoc/>.

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EU Declaration of Conformity

We declare that the following product(s)

Name of product	Wallbox 22kW T2
BMW part number	61 90 2412818
Model / Type Ref.	BMW-10-EC240512-000
Type of product	Electric vehicle conductive charging system

Name of product	Wallbox Essential 22kW T2
BMW part number	61 90 2472421
Model / Type Ref.	BMW-20-EC240512-000
Type of product	Electric vehicle conductive charging system

Name of product	Wallbox Essential 22kW T2
BMW part number	61 90 2472422
Model / Type Ref.	MIN-20-EC240512-000
Type of product	Electric vehicle conductive charging system

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**Registered in
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München HRB 42243

is/are in conformity with the following European Council Directive(s):

- **EU-Directive 2014/30/EU**
- **EU-Directive 2014/35/EU**
- **EU-Directive 2011/65/EU**

The conformity to the directive 2014/30/EU is assured by the compliance with the applicable parts of the following harmonized European standards:

- **EN 61000-6-2:2005**
- **EN 61000-6-3:2007 + A1:2011**
- **EN 61000-3-11:2000**
- **EN 61000-3-12:2011**

The conformity to the directive 2014/35/EU is assured by the compliance with the applicable parts of the following harmonized European standards:

- **EN 61851-1:2011**
- **EN 61851-22:2002**
- **EN 61439-1:2011**

Conformity to the directive 2011/65/EU is assured by the compliance with the applicable parts of the following harmonized European standards:

- **EN 50581:2012**

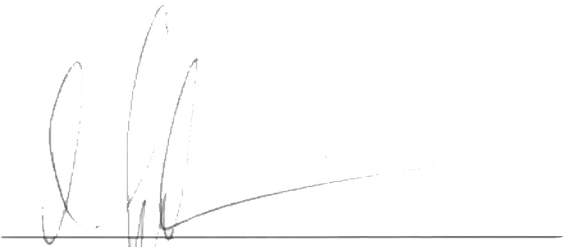
Important notes:

Any modification on the product(s) that is performed without the consent of BMW will render this declaration invalid. This declaration certifies the conformity with the directives mentioned, but does not imply any warranty of the features of the product(s). The safety instructions contained in the documentation supplied with the product(s) must be followed.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

München, 11.04.2019

Place, Date

A handwritten signature in black ink, appearing to read 'M. Fischmann', is written over a horizontal line.

Michael Fischmann
CP-152, Product Management Accessories

Mehr über BMW

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