Wallbox PURE

Installation instruction
General safety information

Installation instructions to be retained for future use. Visit our website at www.bmw.com to download the charging station Owner's Manual.

Please Note
- This charging station should be installed, serviced and maintained only by qualified personnel.
- A qualified person is one who has skills and knowledge related to the design and the operation of electrical installations, and has received safety training to recognize and avoid the hazards involved.
- All pertinent regional, national and local safety regulations must be observed when installing and using the charging station.
- BMW cannot be held responsible for failure to follow the instructions given in these installation instructions.
- Follow installation instruction to avoid EMC problem.

Information for use
- The charging station is designed for a domestic use only.
- This charging station is designed for charging an electric vehicle indoors, or outdoors with a shelter.

⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, SHORT CIRCUIT OR OVERHEATING
- To prevent overheating, only use a supply cable with a cross-section suitable for the rated current used by the charging station.
- Do not install the charging station if any damage is observed while unpacking or handling.
- Before charging vehicles from other manufacturers, trained and qualified personnel must always check the electrical installation to insure that it meets the specifications/requirements of the vehicle being charged.
- If the charging cable is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid any hazard.

Failure to follow these instructions will result in death or serious injury.
Scope of delivery

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HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Turn off all power supplying this equipment before working on the equipment. Always use an appropriate voltage detection device to confirm the absence of voltage.

Failure to follow these instructions will result in death or serious injury.
Description

A  LED status indicator
B  Stop/Start button
C  Vehicle connector
D  Charging cable
E  Contactor

F  Connector block
G  Cable duct to E-module
H  Key locking system
I  Storage compartment
Installation positions

BMW i3

Forward parking

Reverse parking

BMW i8

Forward parking

Reverse parking

1 Preferred position

2 Alternative position

NOTICE

DAMAGE TO CHARGING STATION

– The charging station can be installed indoors or outdoors, protected from inclement weather conditions.

– When manipulating and wall-mounting the cables, put the cover on and protect the charging station to prevent dust from entering.

Failure to follow these instructions can result in equipment damage.
Preparation and mounting
The fixing screws must be supplied by the installer and selected according to the charging station weight and the wall type.
Wiring

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HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- The installation must be protected by a circuit breaker and a Residual Current Device 30 mA - Class A, installed in the switchboard. Systems that automatically reset the Residual Current Device are prohibited. An undervoltage remote tripping auxiliary associated with the circuit breaker can be added as an optional protection.
- Those electrical protections and the supply cable must be used only for the charging station and must be compliant with the electrical installation standard in force.
- Do not commission nor use the charging station if the measured earthing resistance is higher than the threshold specified by the local regulation in force.

Failure to follow these instructions will result in death or serious injury.

NOTICE

DAMAGE TO CHARGING STATION

- Do not touch the electronic boards, use Electrostatic Discharge Devices before working inside the charging station.
- A Surge Protection Device should be connected close to the charging station according to the Keraunic level of the installation area (*). The Surge Protection Device should be connected between the circuit breaker and the charging station, close to the charging station.

Failure to follow these instructions can result in equipment damage.
Wiring diagram

(TN-C earthing system forbidden, to be replaced by TN-C-S)

- Q1: main circuit breaker
- Q2: circuit breaker: rating 40 A (recommended) - C curve Residual Current Device: rating 30 mA - A type (A Si type recommended)
- U: undervoltage remote tripping auxiliary (optional additional protection)
- F1: surge protection device (*) type 2 \( U_p = 1.5 \text{ kV} \) (*)

(*) For Russia, Australia and New-Zealand, the Surge Protection Device is mandatory.

Derating option

The charging station has a factory-set rated current of 20 A (rated power of 4.6 kW under 230 V).

The electrical installation must be able to supply the required current. If the existing feeder in the switchboard or the supply cable is not compliant with the rated current, the feeder must be upgraded or the supply cable must be replaced.

The factory setting can be modified to decrease the rated current if the electrical installation cannot supply enough current or cannot be modified. However, this will increase the charging time!

The rated current decrease must only be determined and performed by a trained electrician. Please contact the Wallbox Installation Service.
Undervoltage remote tripping auxiliary (optional)

1. 1.2 N.m  \[10.6 \text{ lb-in}\]
2. 3 mm

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Cross Section (mm²)</th>
<th>Torque (N.m)</th>
<th>Screw Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1.5...2.5 mm²</td>
<td>0.5</td>
<td>3</td>
</tr>
</tbody>
</table>

1. Undervoltage remote tripping auxiliary (optional)

2. Typical assembly needs:
   - 7 mm diameter screws
   - 1.5 to 2.5 mm² cross section wires
   - 0.5 N.m torque
   - 3 mm drill bit
Type plate and safety label

Remove the safety label 1 and the warning label 2 in the corresponding language from the supplied sheet and attach to the marked location.
Key locking system

1. Open the door
2. Insert the key
3. Turn the key
4. Remove the key
5. Close the door
6. Lock the door
7. Unlock the door
8. Close the door
**Commissioning**

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ready for charging</strong></td>
<td>Continuously illuminated</td>
<td>blue</td>
</tr>
<tr>
<td><strong>Charging</strong></td>
<td>Flashes</td>
<td>blue</td>
</tr>
<tr>
<td><strong>Charging process halted via the Stop/Start button</strong></td>
<td>Continuously illuminated</td>
<td>green</td>
</tr>
<tr>
<td><strong>Error</strong></td>
<td>Flashes</td>
<td>red</td>
</tr>
</tbody>
</table>
### Lighting behaviour of the LED indicator

<table>
<thead>
<tr>
<th>LED status</th>
<th>Key locking system</th>
<th>Vehicle connected or not connected</th>
<th>Wallbox Pure status</th>
</tr>
</thead>
<tbody>
<tr>
<td>blue</td>
<td><img src="image" alt="Icon" /></td>
<td><img src="image" alt="Icon" /></td>
<td>Waiting for vehicle connection</td>
</tr>
<tr>
<td>blue</td>
<td><img src="image" alt="Icon" /></td>
<td><img src="image" alt="Icon" /></td>
<td>Charging halted by vehicle Waiting for the charging process</td>
</tr>
<tr>
<td>blue</td>
<td><img src="image" alt="Icon" /></td>
<td><img src="image" alt="Icon" /></td>
<td>Charging</td>
</tr>
<tr>
<td>green</td>
<td><img src="image" alt="Icon" /></td>
<td><img src="image" alt="Icon" /></td>
<td>Charging halted by user</td>
</tr>
<tr>
<td>pink</td>
<td><img src="image" alt="Icon" /></td>
<td><img src="image" alt="Icon" /></td>
<td>Charging disabled</td>
</tr>
<tr>
<td>red</td>
<td><img src="image" alt="Icon" /></td>
<td><img src="image" alt="Icon" /></td>
<td>Error</td>
</tr>
</tbody>
</table>
### Charging the vehicle

#### Starting the charging process

<table>
<thead>
<tr>
<th>Step</th>
<th>Procedure</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Turn the key to the &quot;unlocked&quot; position.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The LED indicator must be illuminated in solid blue. If not, please refer to the Troubleshooting section.</td>
<td>Vehicle is unplugged. A solid blue light from the LED indicator means that the Wallbox Pure is waiting to begin charging.</td>
</tr>
<tr>
<td>3</td>
<td>Connect the charging cable to the charge point on the vehicle: The LED indicator is illuminated in solid blue if charging has not yet started. A vehicle timer can delay the start of charging.</td>
<td>The vehicle performs an initialisation procedure: The indicator on the vehicle's charge point flashes orange. The vehicle indicates that it is not ready for charging in the following situations: - The battery is already charged. - The battery temperature is too high. - The vehicle’s charging management system has interrupted the charging process.</td>
</tr>
<tr>
<td>4</td>
<td>Charging starts as soon as the vehicle is ready for charging: The LED indicator then flashes blue.</td>
<td>The vehicle starts the charging process: The indicator on the vehicle's charge point flashes blue.</td>
</tr>
</tbody>
</table>
## Completing the charging process

<table>
<thead>
<tr>
<th>Step</th>
<th>Procedure</th>
<th>Note</th>
</tr>
</thead>
</table>
| 1a   | Vehicle is connected and charging:  
The LED indicator flashes blue. | The indicator on the vehicle's charge point flashes blue. |
| 1b   | The LED indicator must be illuminated in solid blue.  
If not, please refer to the Troubleshooting section. | Vehicle is connected and charging is complete:  
The LED indicator is illuminated in solid blue. |
| 2a   | Ending the charging process:  
Press the Stop/Start button. The LED indicator is illuminated in solid green. If not, please refer to the Troubleshooting section.  
Pressing the Stop/Start button again restarts the charging process. The LED indicator flashes blue as soon as charging actually begins. | The vehicle ends the charging process:  
The indicator on the vehicle's charge point is illuminated in white. |
| 2b   | Charging halted by vehicle:  
The LED indicator is illuminated in solid blue. | Possible reason:  
– The vehicle interrupts the charging process because a timer was programmed:  
The indicator on the vehicle's charge point is illuminated in white.  
– The vehicle interrupts the charging process because the battery is fully charged:  
The indicator on the vehicle's charge point flashes green. |
| 3    | Disconnect the charging cable from the vehicle:  
The LED indicator is illuminated in solid blue. If not, please refer to the Troubleshooting section. | To release the plug lock:  
Open the vehicle using the remote control. |

To release the plug lock:
Open the vehicle using the remote control.
Troubleshooting

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HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Repairs must only be performed by qualified personnel.

Failure to follow these instructions will result in death or serious injury.
<table>
<thead>
<tr>
<th>LED Status</th>
<th>Cause</th>
<th>Actions</th>
</tr>
</thead>
</table>
| red / yellow / red / yellow | Electronics or contactor | – Trip the circuit breaker.  
– Check the contactor connections.  
– Reset the circuit breaker.  
– If the error code persists, contact customer service. |
| red / blue / red / blue   | Cable connection             | – Trip the circuit breaker.  
– Check the charging cable connections to the electronics.  
– Reset the circuit breaker.  
– If the error code persists, contact customer service. |
| red / green / red / green | Charging over-current       | – Trip the circuit breaker.  
– Check the connections inside the Wallbox Pure.  
– Reset the circuit breaker.  
– If the error code persists, contact customer service. |
| blue / green / blue / green | Control circuit             | – Trip the circuit breaker.  
– Check the charging cable connections to the electronics.  
– Reset the circuit breaker.  
– If the error code persists, contact customer service. |
| blue / green / blue / green | Car protective earth ground | – Trip the circuit breaker.  
– Check the protective earth ground connection inside the Wallbox Pure (green and yellow cable).  
– Reset the circuit breaker.  
– If the error code persists, contact customer service. |
Characteristics

Technical data

- Output voltage: 0-30 V (pilot signal), 230 V AC (charging voltage), 32 A (charging current).
- Degree of protection IP54 for electrical parts in use, IP3X for housing parts.
- Operating temperature: -30 °C to +50 °C.
- Storage temperature: -40 °C to +80 °C.
- Application: Indoors or outdoors (with weather protection).
- Cable length: 4 m.
- Made in France.

Declaration of Conformity

The complete CE Declaration of Conformity (Low Voltage Directive LVD and Electromagnetic Compatibility Directive EMC) can be found on the following website of the manufacturer:

https://bmwgroup.com/360electric/

EC_declaration_WBPure_2013