

Multifunction Charger (MFC)

**INSTRUCTIONS FOR USE.
ORIGINAL BMW ACCESSORIES.**



Multifunction Charger (MFC)

Instructions for use

Contents

1 Information	4
2 Overview	10
3 Operation	11
4 LED indicator table	18
5 Specifications	20
6 Technical data	25
7 Disposal	26

1 Information

1.1 Safety Information



WARNING: RISK OF FIRE OR ELECTRIC SHOCK

It is essential to ensure that the electrical power connection is in compliance with national statutory regulations.

Read the entire user manual before using the MFC.

The device must only be used with a sufficiently dimensioned circuit breaker.

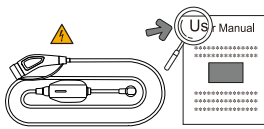
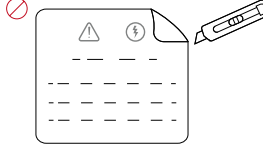
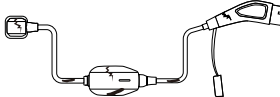
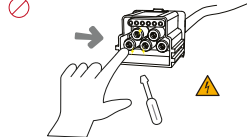
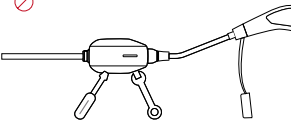
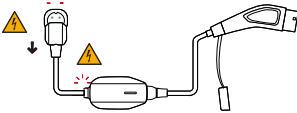
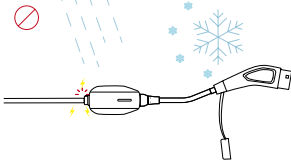
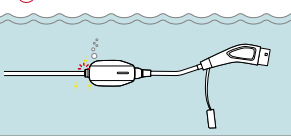
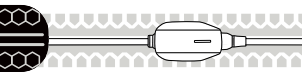
Take increased ambient temperatures in the control cabinet into account. ◀

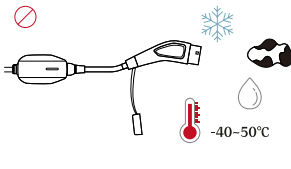
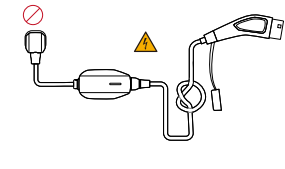
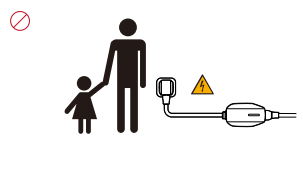
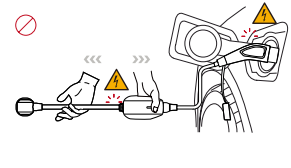
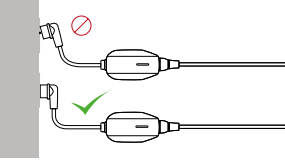
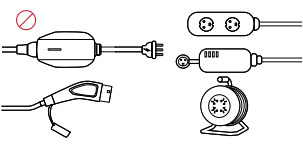
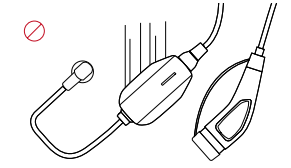
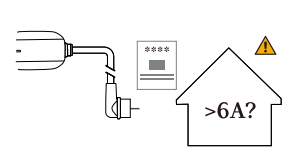


WARNING: HOT SURFACE

Under certain circumstances, operation of the MFC can cause high temperature at the surface of the components. Be aware of the high temperature to avoid being scalded. ◀

1.2 Important safety instructions

		
<p>Read the information carefully and look at the device to familiarise yourself with it before attempt to install, operate or service it. Use only for charging your BMW.</p>	<p>Do not remove any identifiers such as safety symbols, warning instructions, labels or cable markings.</p>	<p>Never use a damaged, worn or dirty mains adapter cable or vehicle connector. Do not use MFC with a damaged socket, cable or housing.</p>
		
<p>Do not put your objects into the connector.</p>	<p>Do not make any unauthorised changes or modifications to MFC.</p>	<p>Do not disconnect the mains adapter cable while it is in charging session, neither from the function box nor from the power socket.</p>
		
<p>Do not expose contacts to water or snow.</p>	<p>Do not put device under water.</p>	<p>Do not drive over MFC or Adapter.</p>

		
<p>Ensure that the contact area is not close to heat sources, dirt, water or snow.</p>	<p>Do not bend or knot the cables.</p>	<p>Children should be supervised when in the vicinity of MFC when it is connected.</p>
		
<p>Remove MFC from the domestic outlet using the plug rather than the cable.</p>	<p>Note that MFC should not be used if the plug is not fully connected to a domestic outlet.</p>	<p>Do not use MFC with an extension cord, cable drum, multiple sockets, travel adapters, timers and any adapter of vehicle connector.</p>
		
<p>Do not drop MFC and adapter cable.</p>	<p>Verify that the electrical installation is suitable for the voltage and amperage requirements.</p>	

Do NOT use this product if the MFC or EV cable is frayed, has broken insulation, or any other signs of damages.

You can find the maximum charging voltage / current in the chapter International Plugs.

1.3 Intended use

Attention

- The MFC may only be operated under the specified environmental conditions (see chapter 'Technical data').
- Do not use the MFC in areas where explosive atmospheres may exist.
- The housing of the MFC heats up at high temperatures or in direct sunlight. Avoid direct sunlight on the MFC to achieve optimum charging performance.
- The MFC may not operate if used on IT or other unearthed systems such as an isolated winding generator or isolating transformer.
- The MFC must be grounded. If there is malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The MFC is equipped with a mains adapter that has a grounding conductor and a grounded plug.
- Only use original adapters cables.
- Do not connect the mains adapter or Mode 3 adapter to any other electrical power source, such like electric generators etc.
- The MFC shall be plugged in directly into the fixed socket-outlet without the use of an extension cord.
- To reduce the risk of fire, connect only to a circuit provided with branch circuit over current protection in accordance with Local National Installation Standards. The size of over current protection equals 120% of the input current rating. For the MFC, the size of over current protection should be maximum 20 amperes.
- The adapters of the MFC shall not be connected or disconnected while the MFC is in use.
- It is essential to disconnect the mains plug from the domestic outlet during the install and uninstall of the mains adapter and MFC. Always seal the MFC vehicle connector with the cap after use.
- MFC shall only be cleaned with a dry cloth.
- Ensure that the device is disconnected from both the power grid and the vehicle while cleaning.
- Do not use cleaning supplies or flammable solvents, such as alcohol or benzene.
- Do not wash your vehicle with the MFC plugged in.
- Repair work to MFC must only be performed by the manufacturer.



WARNING

It is imperative that the instructions outlined in the manual be followed precisely. Otherwise, there is a possibility that dangerous situations may be created or that safety equipment may become inoperable. In addition to the safety information, it is essential to adhere to the safety and accident prevention regulations that pertain to the specific device. ◀

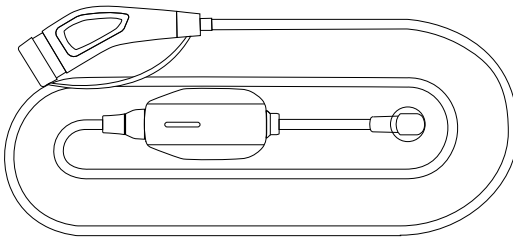
1.4 About this manual

Please note that the manual and functions described herein are applicable to the following type:

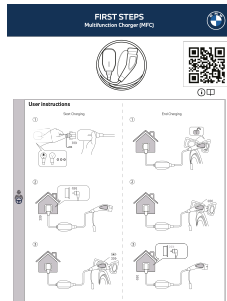
Multifunction Charger (MFC) Type2 Variant 3 Phase 16A.

The illustrations and explanations contained in this manual refer to a typical version of the device. Please note that your device version may differ from the one described here. This manual is intended for specific target groups, such as end customers (users of MFC).

1.5 Scope of delivery



Type2 Variant 3 Phase 16A



Quick Safety Guide

1.6 Warranty

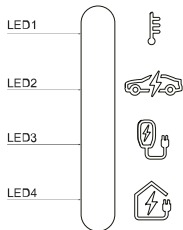
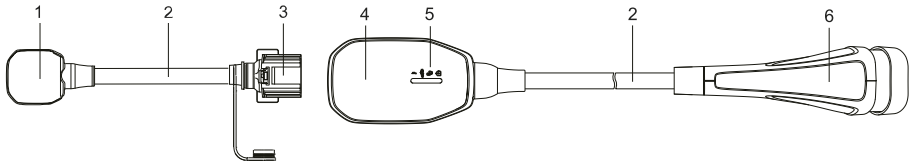
The service department can provide additional information regarding the warranty. Please note that the following cases are not covered:

- Defects or damage caused by installation work that does not follow the instructions or by using the product in a way that is not specified in the manual.
- Costs and damage caused by repair work not carried out by a specialist electrician authorised by a sales outlet or an authorised service workshop.

If you have any questions or need further assistance, please contact customer service. For more information, please refer to your vehicle's manual.

2 Overview

2.1 Overview and description



1	Mains plug
2	Cable
3	Quick change interface
4	Function box
5	LED indicator
6	Vehicle connector



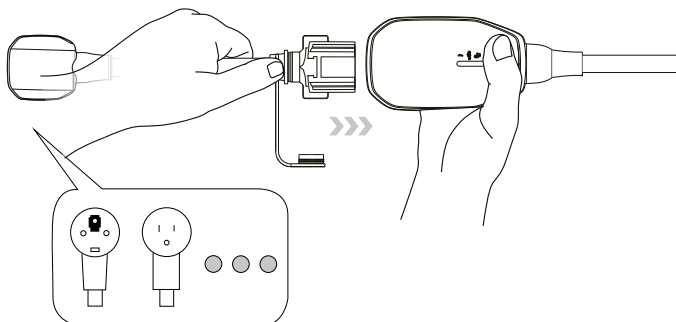
CAUTION:

Ensure the electrical installation is capable of handling the voltage/amperage requirements ahead of usage and if needed, activate the power limitation in the charging settings of your BMW vehicle. You can find the maximum charging voltage / current in the chapter International Plugs. ◀

3 Operation

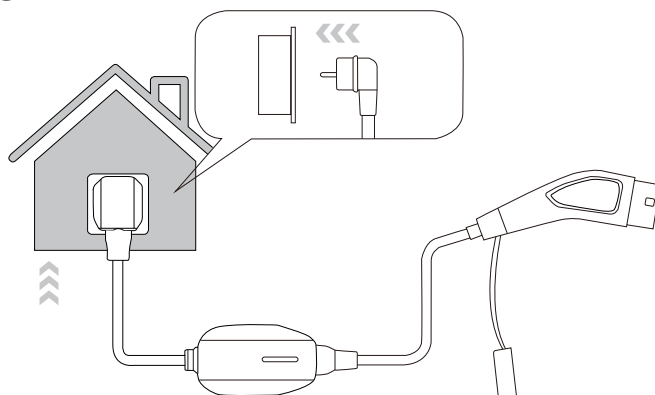
3.1 Start charging

①



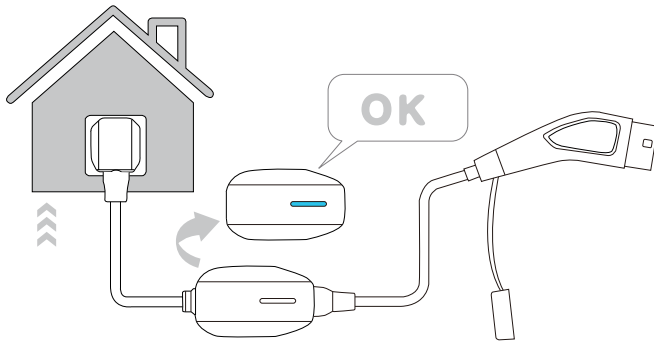
1. Connect the mains adapter to MFC Function Box, plug in the quick change to function box until hearing a click sound.

②



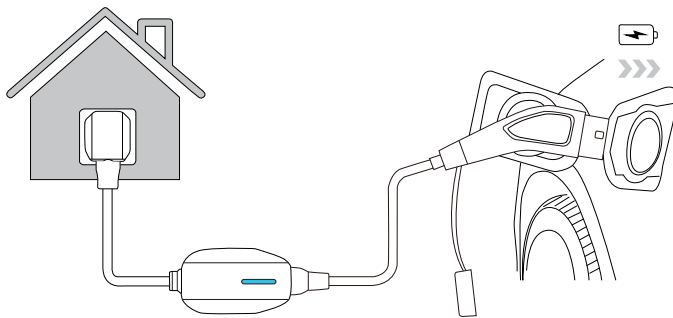
2. Connect the mains plug of adapter to a domestic outlet.

3



3. The MFC will perform a self-check. During this period all four blue LEDs will light up with lower brightness for about 1 second. After the self-check, the blue LEDs show full brightness and no red LED indicates the MFC is ready for charging.

4



4. Connect the MFC vehicle connector to the EV (electric vehicle) inlet. The charging session will start automatically, and the blue LEDs will start breathing.



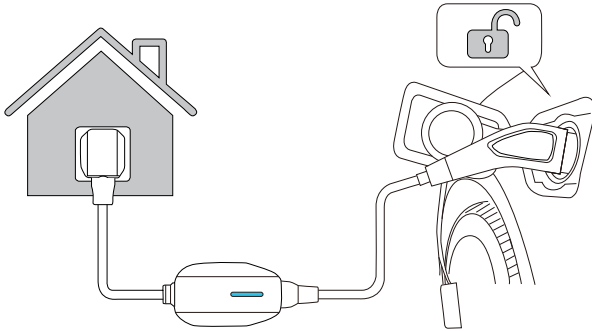
Warning:

EV shall be parked close enough to the domestic outlet without tension on the cable for connection.

Ensure that MFC will not be stepped on to avoid damage. ◀

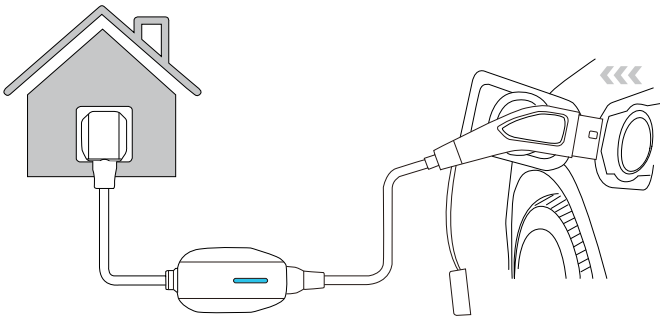
3.2 Stop charging

①

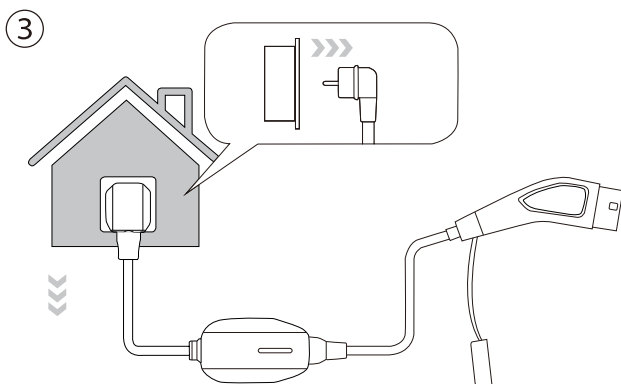


1. Stop charging sessions at the EV. (For detailed instructions, refer to the EV instruction manual.)

②



2. Disconnect the vehicle connector from the EV (Electric Vehicle) inlet.



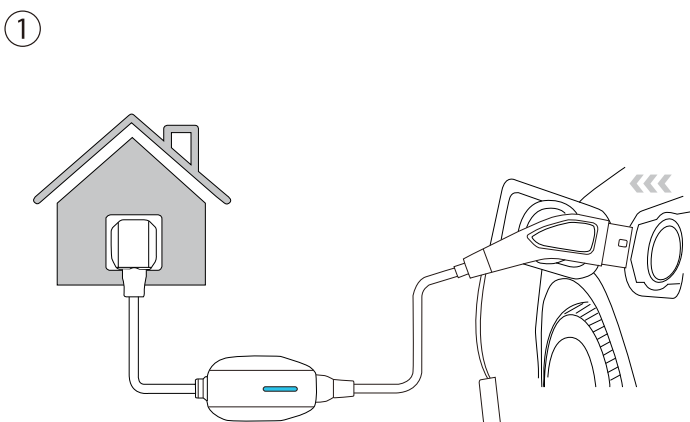
3. Disconnect the mains plug from the domestic outlet.



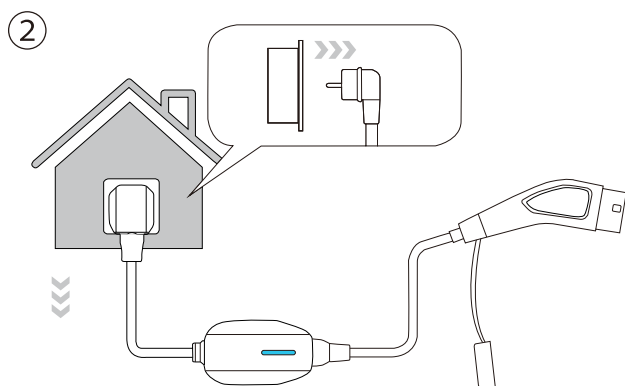
WARNING:

Disconnection abnormally or disconnection under load (during charging) with domestic outlet, MFC could be damaged and may cause a dangerous situation. ◀

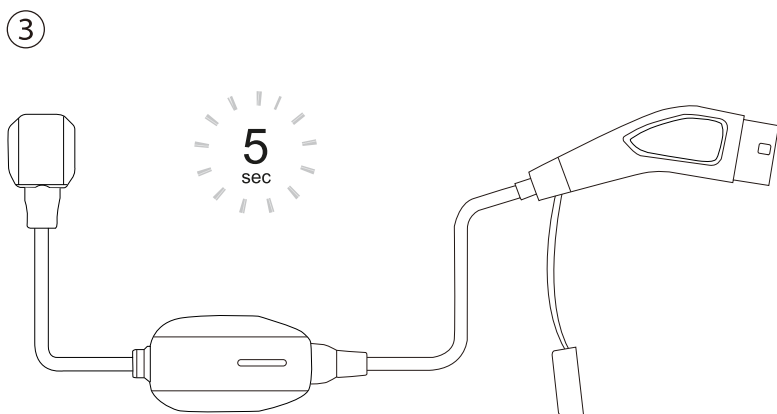
3.3 Manual restart



1. Disconnect the MFC from the vehicle by unplugging the vehicle connector.

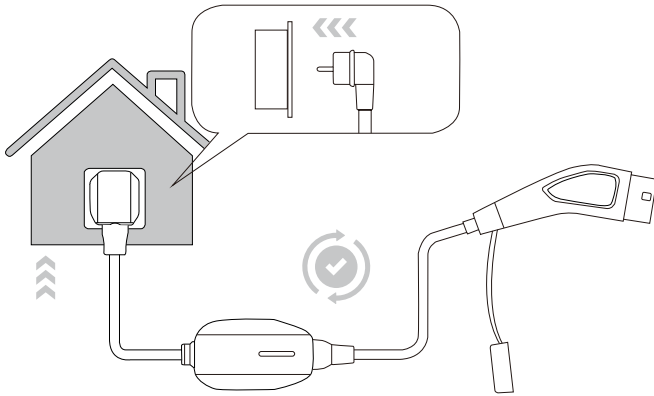


2. Disconnect the MFC from the mains supply by unplugging the mains plug from the socket outlet.



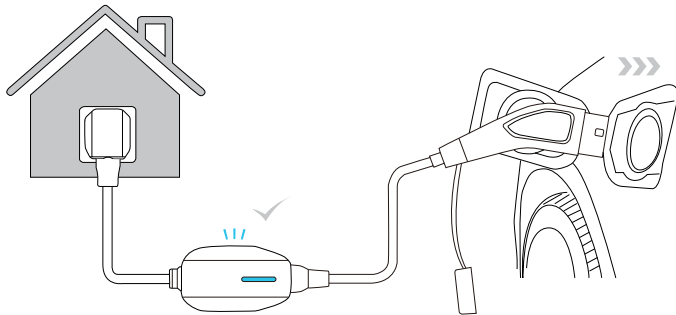
3. Wait for at least 5 seconds.

4



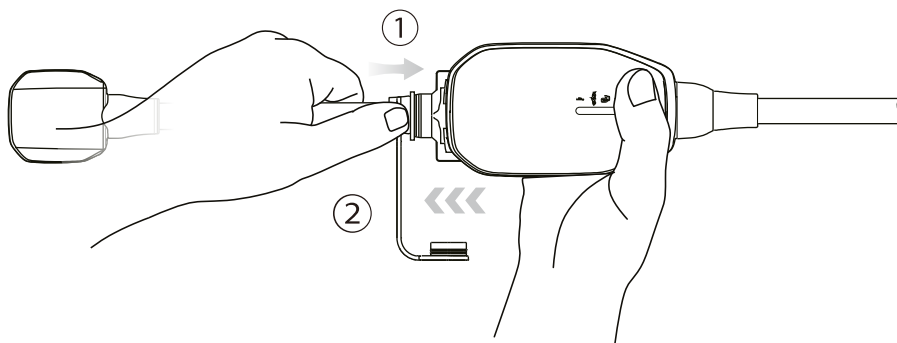
4. Reconnect the MFC to the mains supply and wait for the completion of the MFC self-check.

5



5. Reconnect the MFC to the vehicle and check if the charging process is starting.

3.4 Uninstall mains adapter



1. Pressing the button on adapter.
2. Pull out function box using the other hand.

4 LED indicator table

Contact your local dealer or customer support if the product malfunctions or the LED indicators display a fault status. Do not open the product or remove circuit protective devices or any other component.

LED1	Temperature error
LED2	Vehicle side error
LED3	MFC inner error
LED4	Infrastructure error

Status	LED Color	LED Brightness
Self testing	LED 1-4: Blue	10% stable
Readiness / completed	LED 1-4: Blue	100% stable
Charging / discharging	LED 1-4: Blue	10% to 100% breathing
Derating / MFC Function Box too Hot	LED 1&3: White LED 2&4: Blue	80% stable 10% to 100% breathing
Derating / Plug too Hot	LED 1&4: White LED 2&3: Blue	80% stable 10% to 100% breathing
Overtemperature charging PAUSE MFC Function Box too Hot	LED 1&3: White LED 2&4: Blue	100% stable
Overtemperature charging PAUSE plug too Hot	LED 1&4: White LED 2&3: Blue	100% stable
Overtemperature charging STOP caused by function box	LED 1&3: Red	100% stable
Overtemperature charging STOP caused by infrastructure	LED 1&4: Red	100% stable
Fault caused by vehicle	LED 2: Red	100% stable

Status	LED Color	LED Brightness
Fault caused by MFC	LED 3: Red	100% stable
Failure caused by infrastructure	LED 4: Red	100% stable
Relay welding or other unrecoverable errors	LED 3: Red	Blink

5 Specifications

5.1 Infrastructure information

- Maximum charging voltage and current are specified in the chapter International Plugs.
- The device is designed for use with a selection of electrical outlets. These outlets must comply with the relevant national regulations (connection and installation standards), regardless of whether they are already existing or installed separately.
- It is highly recommended that the device is connected to an electrical outlet with a separate residual-current-operated circuit breaker. Connect no other circuits to this residual-current-operated circuit breaker.
- All electrical outlets must be installed, commissioned, and serviced by appropriately trained, qualified, and authorised electricians. These electricians must be knowledgeable of the relevant standards and bear full responsibility for compliance with current standards and installation regulations.

5.2 Grounding instructions

This device must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.



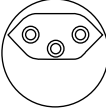

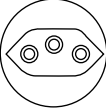


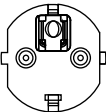


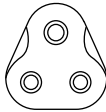
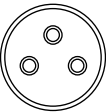
WARNING

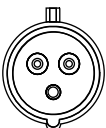

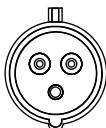


Improper connection of the equipment-grounding conductor is able to result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do NOT modify the plug provided with the product, if it will not fit the outlet, have a proper outlet installed by a qualified electrician. ◀

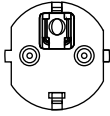

5.3 International Plugs

Interface

Plug type	Type K (AFSNIT 107-2-D1)	Type I (IRAM 2073)	Type J (SN 441011)	Type L (CEI 23-50)	Type N NBR 14136, 10 A)
					
Rated current	6 A	8 A	8 A	8 A	8 A

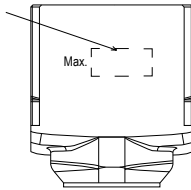
Plug type	Type E+F (CEE 7/7)	Type I (AS 3112)	Type G (BS 1363)	Type M (SANS 164-1/ IS1293)	Type O (TIS 166-2549)
					
Rated current	8A / 10 A	10 A	10 A	10 A	10 A

Plug type	CEE blue 16 A (16 A - 1-phase, 230 V)	NEMA 5-15 with Type2 (Philippines)	CEE blue 16 A (16 A - 1-phase, 230 V)	CEE red 16 A (16 A - 1-phase, 400 V)	CEE red 32 A (16 A - 3-phase, 400 V)
					
Rated current	10 A	12 A	16 A	16 A	16 A

Plug type	Type E+F	Type B (NEMA 5-15)			
					
Rated current	10 A	10 A / 12 A			













Allowed maximum charging current can also be seen at specific part of quick change adapter (see picture below). ◀









Mains plug

Mains plug cable can be changed to adapt the specific electrical environment.

Optional accessory: Please contact your dealer or the BMW Online-Shop for optional accessory.

Available adapters	
	
Type K	Type E+F
	
Type I	Type I (AS 3112)
	
Type N	Type O (TIS 166-2549)
	
NEMA 5-15 with Type2	Type L
	
Type J	Type M (SANS 164-1 / IS1293)

Available adapters	
	
Type G (BS 1363)	CEE blue 10 A (16 A -1- phase, 230 V)
	
CEE blue 14 A (16 A -1- phase, 230 V)	CEE blue 16 A (16 A -1- phase, 230 V)
	
CEE red 16 A (16 A -3 phase, 400 V)	CEE red 32 A (16 A -3 phase, 400 V)

6 Technical data

Rating	1-phase: 16 A 220-240 V AC 3-phase: 3x16 A 400 V AC
Frequency	50-60 Hz Rating is adjusted based on actual usage in combination with different adapters.
IP protection class	IP67 – Totally protected against dust. Protected against the effects of temporary water immersion between 15 cm and 1 m. Duration of test 30 minutes. The MFC is able to operate outdoors in the rain. Harmlessness on contact with MFC during charging/standby, when covered with water/snow/ice
Flame retardant class	V1
Cable length	6 m

Environmental Specifications

Humidity	75% at 40°C Higher relative humidities are admitted at lower temperature.
Altitude	Max. 4000 m
Operating temperature	-40°C to +50°C
Storage temperature	-40°C to +70°C

7 Disposal



After correctly decommissioning the device, please have it disposed of by the service department in compliance with current waste disposal regulations.

The electrical and electronic devices including accessories must be disposed of separately from general household waste. There are instructions on the product, in the instructions for use or on the packaging.

The materials can be recycled as shown by their labelling. You can make a significant contribution to protecting our environment by reusing, recycling the material or other forms of recycling of end-of-life devices.



RACCOLTA CARTA

Verifica le disposizioni
del tuo Comune.