Emergency Plug®

USER MANUAL

EUR.2

If it's blue
it's safe for you.



EMERGENCYPLUG®

A PRODUCT OF TOTALSAFETY SOLUTIONS

Emergency Plug®

USER MANUAL

FOREWORD

About this manual

This manual contains all instructions and safety information for the safe use of the Emergency Plug®.
This manual is intended for the end user of the Emergency Plug®.
The Emergency Plug® will also be referred to as “the product” in this manual.

Translated instructions

This manual has been translated into multiple languages. The original manual is written in UK English. All other language versions are translations of the original manual.

Service

Local distributor of Total Safety Solutions can provide an annual service, carrying out several tests and calibration. Alternatively, the Service Kit enables you to carry out your own service via the user portal.

Warranty conditions

The product comes with a warranty period of one year after purchase. Extend the warranty period of your product to two years by registering your product at www.emergency-plug.com. Visit www.emergency-plug.com/#downloads for more information on the warranty conditions.

Symbols used in this manual

The following symbols are used in this manual:

Symbol	Meaning
⚠ DANGER	This symbol indicates a dangerous situation which, if not avoided, will result in serious injury or death.
⚠ WARNING	This symbol indicates a dangerous situation which, if not avoided, could result in serious injury or death.
⚠ CAUTION	This symbol indicates a dangerous situation which, if not avoided, could result in minor injury or damage to the product.
NOTICE	This symbol indicates operations unrelated to personal injury.
ⓘ	This symbol indicates useful additional information.

Contact information

For questions about the product or this manual, please contact:

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TABLE OF CONTENTS

EN

1. PRODUCT INFORMATION 6
1.1. Intended use and reasonably foreseeable unintended use 6
1.2. Symbols and labels on the product 6
1.3. Technical specifications 7

2. DESCRIPTION AND OPERATION 8
2.1. Main parts 8
2.2. Plug types 9
2.3. LED indicator colour coding 10
2.4. LED colour coding plugged in 12

3. SAFETY 16

4. TRANSPORT 17

5. INSTALLATION 18
5.1. Package contents 18
5.2. Product registration 18

6. COMMISSIONING 19
6.1. Insert batteries 19
6.2. Using the self-test function 20

7. USE 21
7.1. Opening the charge port door 21
7.2. Plugging in 22
7.3. Unplugging 23
7.4. Switching off 23

8. PROBLEM SOLVING 24

9. MAINTENANCE 25
9.1. User maintenance 25
9.2. Supplier maintenance 26

10. DISPOSAL 27

11. DISCLAIMER 27

1. PRODUCT INFORMATION

1.1. Intended use and reasonably foreseeable unintended use

This product is intended to temporarily block an electric vehicle from unpredictable vehicle behaviour.

This product is an addition to the current applicable protocols. This product can never be a replacement for the current applicable protocols.

The following is considered as foreseeable unintended use:

- Failure to follow the instructions in this manual.
- Failure to resolve product defects that pose safety risks.
- Unauthorised modifications to parts of the product.

1.2. Symbols and labels on the product

Symbol	Meaning
CE	Products with a CE mark comply with the relevant applicable rules within the European Economic Area.
C DEKRA US	Products bearing the DEKRA Mark have been independently tested and comply with all legal safety requirements. The DEKRA certification mark is based on internationally accepted and recognised standards, enabling the product to gain access to local markets around the world.
IP44 NEMA	Products bearing an IP44 / NEMA rating are dust-resistant and splash-proof.
	Products with the WEEE symbol must be presented for the separate collection of electrical and electronic equipment when the product is disposed of.

1.3. Technical specifications

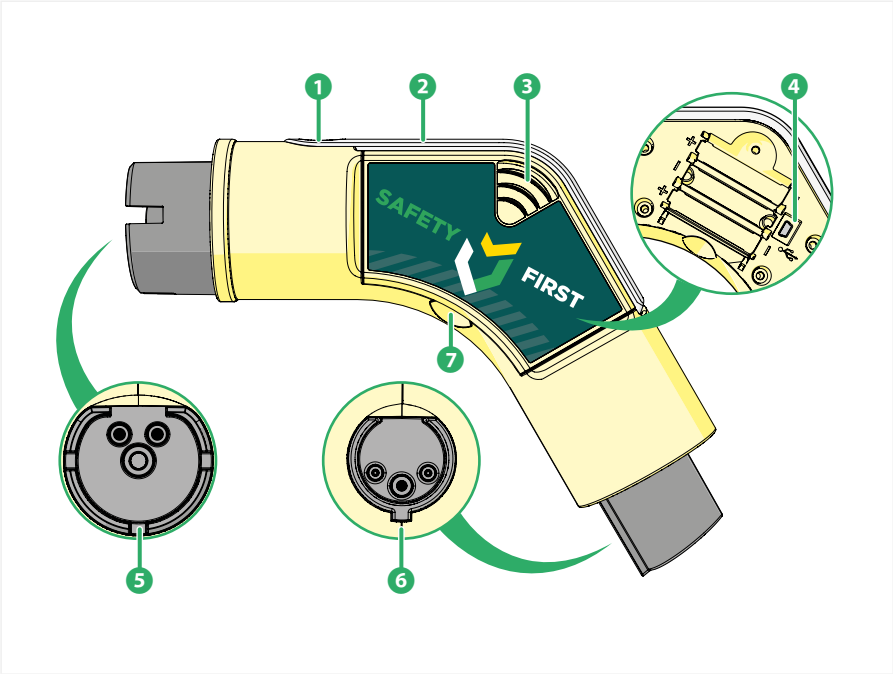
Product name	Emergency Plug®	
Dimensions (length × width × height)	247 × 186 × 69 mm	9.7 × 7.31 × 2.72 in
Operational weight	0.481 kg (+1%)	1.06 lb (+1%)
Weight (excl. battery)	0.408 kg (+1%)	0.90 lb (+1%)
Nominal input	4.5 VDC	
Batteries	3× 1.5V AA	
Battery life	12 hours	
Operating ambient temperature	-20°C – +50°C	-4°F – +122°F
Operating humidity	20% – 80%	
Ambient temperature for storage	+5°C – +30°C	+41°F – +86°F
IP rating	IP44	
Plug types	Type 1 & Type 2	
Suitable for all EV's that meet legislation	UN/ECE Regulation No. R100	
Communication	According to the IEC 61851-1 standard.	

2. DESCRIPTION AND OPERATION

The product sends a charging signal to an electric vehicle. The charging signal automatically switches the vehicle to the P position (parking) or the N position (neutral). The vehicle is blocked so that the vehicle cannot drive away. All other functions of the vehicle remain usable.

- With a hybrid car, the engine can start when the product is plugged in. This does not affect the correct functioning of the product. The car cannot drive away.
- Certain electrical vehicles also engage the handbrake as part of the safety protocols, while older electrical vehicle's may incorporate additional safety measures such as accelerator disablement.

2.1. Main parts



1. Power button
2. LED indicator
3. Battery cover
4. USB port
5. Type 2 connection
6. Type 1 connection
7. Battery cover lock

2.2. Plug types

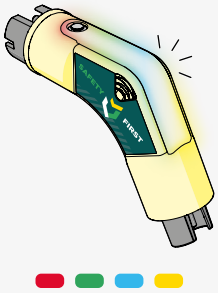
The product is equipped with two different plug types, which means the product can be used with all plug-in hybrid and electric vehicles with a charging or communication port.

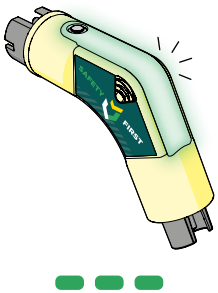
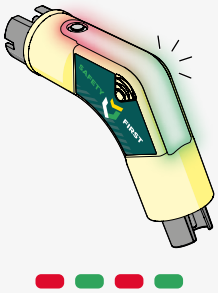
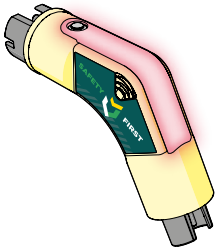
	Type 1	Type 2	Tesla adapter*
 Type 1 J1772	✓	✗	✗
 Type 2 Mennekes	✗	✓	✗
 CCS1	✓	✗	✗
 CCS2	✗	✓	✗
 Supercharger	✗	✗	✓
 Type 1 J1772 & CHAdeMO	✓	✗	✗
 Type 1 J1772 & GB/T	✓	✗	✗
 Type 1 J1772 & Supercharger	✓	✗	✓
 Type 2 Mennekes & CHAdeMO	✗	✓	✗
 Type 2 Mennekes & GB/T	✗	✓	✗
 Type 2 Mennekes & Supercharger	✗	✓	✓

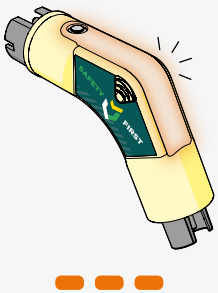
*The Tesla adapter is only supplied in countries where a Tesla Supercharger is used.

2.3. LED indicator colour coding

The LED indicator indicates the status of the product.
Refer to the following table for the meanings of the different LED indicator statuses:

LED indicator status	Meaning	Explanation	Action point
Off. 	The product is switched off.	–	Switch the product on.
	The self-test failed.	The product has not been used for a long time. The batteries are depleted.	Replace the batteries.
		The product is damaged and does not work properly. It is not safe to use the product. Do not continue to use the product.	Please contact your local distributor.
Flashes alternately red, green, blue and yellow. 	The product is performing a self-test.	Every time the product is switched on, the product performs a self-test, flashing red, green, blue, and yellow to check if the prodict is fully working.	Wait until the self-test is complete. The self-test is successful when the LED indicator lights up green.

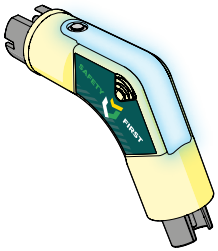
LED indicator status	Meaning	Explanation	Action point
Flashes green. 	The product is ready for use.	When the self-test has been completed, the LED indicator flashes green and is ready for use.	Plug the product into the charging port of the vehicle.
Flashes alternately red and green. 	The self-test was successful, but the batteries are running low.	–	1. Replace the batteries. 2. Perform the self-test function again.
Lights up red. 	The self-test failed.	The product is damaged and does not work properly. It is not safe to use the product. Do not continue to use the product.	Please contact your local distributor.

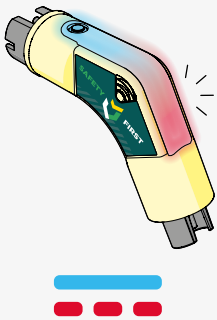
LED indicator status	Meaning	Explanation	Action point
Flashes orange briefly. 	The product is switching off.	The product can be switched off by pressing and holding the power button until the LED indicator flashes orange briefly.	–

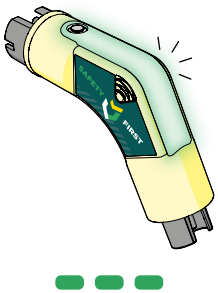
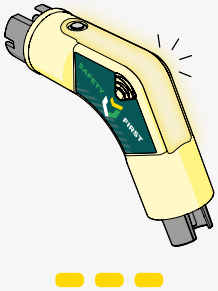
2.4. LED colour coding plugged in

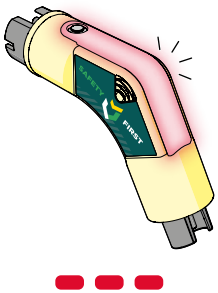
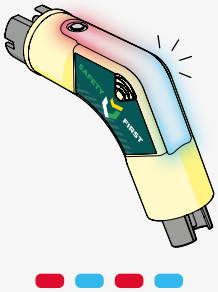
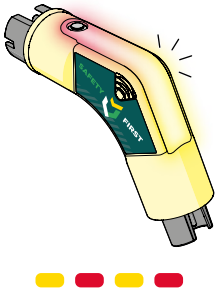
The LED indicator also indicates the connection with the vehicle when the product is plugged in.

Refer to the following table for the meanings of the different LED indicator statuses:

LED indicator status	Meaning	Explanation	Action point
Lights up blue. 	The product is plugged into the charging port and is in contact with the vehicle.	When plugging in the product, most vehicles are automatically set to 'Neutral' or 'Park'. In some vehicles, the handbrake is also automatically activated. Older vehicles may have additional safety protocols, such as automatic throttle release.	Block the wheels to prevent the vehicle from rolling. Follow the locally applicable regulations.

LED indicator status	Meaning	Explanation	Action point
Lights up blue and flashes red. 	The product is plugged into the charging port and is in contact with the vehicle, but a raised battery temperature is detected.	When plugging in the product, most vehicles are automatically set to 'Neutral' or 'Park'. In some vehicles, the handbrake is also automatically activated. Older vehicles may have additional safety protocols, such as automatic throttle release. The vehicle also detects an increased risk of the battery pack overheating.	Block the wheels to prevent the vehicle from rolling. Take (depending on the circumstances) preventive measures to avoid a thermal runaway. Follow the locally applicable regulations.

LED indicator status	Meaning	Explanation	Action point
Flashes green. 	The product is plugged into the charging port but has no contact with the vehicle.	The vehicle is not responding to the product because there is no contact between the Proximity Pilot (PP) and the Communication Pilot (CP). The airbags and the interlock are deployed or one of the cables from the charging port is severly damaged.	Visually check in the vehicle that the vehicle is no longer in the D position (drive) and follow the locally applicable protocols.
Flashes yellow. 	The product is plugged into the charging port but has limited contact with the vehicle.	There is only contact with either the Proximity Pilot (PP) or the Communication Pilot (CP). The interlock has deactivated one of the signals (PP or CP) or one of the cables from the charging port is severly damaged.	Visually check in the vehicle that the vehicle is no longer in the D position (drive) and follow the locally applicable protocols.

LED indicator status	Meaning	Explanation	Action point
Flashes red. 	The product has lost contact with the vehicle.	The connection with the vehicle was lost during safety work or the product has been accidently unplugged from the charging port.	Check that the product is correctly plugged in the vehicle.
Flashes alternately blue and red. 	The product is plugged into the charging port and has contact with the vehicle, but the batteries are running low.	–	Replace the batteries after use.
Flashes alternately yellow and red. 	The product is plugged into the charging port but has limited contact with the vehicle. The batteries are also running low.	–	Visually check in the vehicle that the vehicle is no longer in the D position (drive) and follow the locally applicable protocols.

3. SAFETY

The following safety instructions must be followed to prevent dangerous situations:

⚠ DANGER

Collision hazard!

- Never plug the product into a moving vehicle. Always wait for the vehicle to come to a standstill before pluggin the product into the charging port.

Crushing hazard!

- Only use the product as described in this manual.
- Only use the product as an aid. Always follow the locally applicable rules.
- Always ensure the vehicle is secured according to locally applicable protocols before unplugging the product from the vehicle.

⚠ WARNING

Fire hazard!

- Never use a generator as a power source for the product. Always use the recommended battery type as the power source for the product.

Electrocution hazard!

- Never disassemble, repair, isolate, or modify the product yourself. For maintenance and repair, contact a service point approved by Total Safety Solutions.
- Do not insert any objects into the openings of the product.

⚠ CAUTION

Short-circuiting hazard!

- Do not use the product when the product is damaged or defective. In case of a defective product, please contact your supplier.

NOTICE

- Do not drop the product and avoid impacts. Excessive vibration may cause loose connections, which may adversely affect the proper operation of the product.
- Always check the product for damage before use.
- Do not transport, use, or store the product outside a temperature range of -20°C to +50°C.
- Do not use rechargeable batteries in the product. The battery life of the product cannot be guaranteed when using non-recommended battery types.
- Always ensure that the plus (+) and minus (-) markings on the battery match the plus (+) and minus (-) markings in the product when inserting the batteries.
- Do not use harsh chemical cleaning agents to clean the product. Always use a soft, damp cloth to clean the product.
- Do not use the product if there is visible damage to the charging port of the vehicle.
- Use the product only with a vehicle that complies with the R100 directive or with the 49CFR571.305 / 49CFR571.305aS6 regulations. Only under these conditions is correct operation of the product guaranteed. Do not use the product with converted vehicles. Converted vehicles may not comply with the R100 directive.

4. TRANSPORT

NOTICE

- Do not drop the product and avoid impacts. Excessive vibration may cause loose connections, which may adversely affect the proper operation of the product.

Always transport the product in the storage case.

5. INSTALLATION

5.1. Package contents

1×	Emergency Plug®
1×	Tesla adapter*
2×	Prybar
3×	Energizer Ultimate Lithium L91 AA batteries
1×	Storage case

*The Tesla adapter is only supplied in countries where a Tesla Supercharger is used (model EPH2 NA1).

5.2. Product registration

Register the product to extend the warranty period and to be kept informed of software updates.

To update the product, the product must be registered:

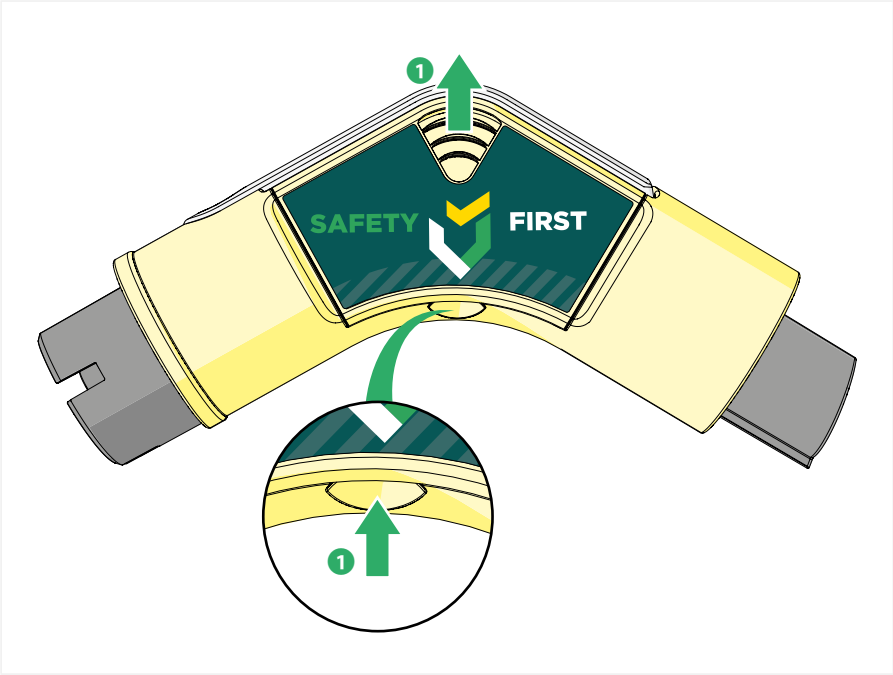
1. Visit **www.emergency-plug.com**
2. Go to 'Register'.
3. Fill in the required details.

ℹ The serial number can be found under the battery cover under the middle battery.

4. Push in the battery cover lock and slide the battery cover backwards to remove the battery cover.
5. Follow the online instructions.

6. COMMISSIONING

6.1. Insert batteries



Before you can use the product, you must remove the battery protector:

1. Push in the battery cover lock and slide the battery cover backwards to remove the battery cover.
2. Remove the batteries from the foam and insert them into the product. Always ensure that the plus (+) and minus (-) markings on the battery match the plus (+) and minus (-) markings in the product when inserting the batteries.
3. Replace the battery cover on the product.

ℹ Place three new Energizer Ultimate Lithium L91 AA batteries as spares in the foam.

6.2. Using the self-test function

NOTICE

- Always check the product for damage before use.

Before using the product, you must first perform the self-test function:
Press the power button.
The product starts the self-test function.
The LED indicator lights up green when the self-test function has been performed successfully.

ⓘ The LED indicator lights up in different colours. Refer to Chapter **2.3.LED indicator colour coding** for more information.

It is recommended to perform the self-test function monthly when the product is not used for a prolonged period. The self-test function checks, among other things, the battery life. By performing the self-test function regularly, you prevent the batteries from being depleted the next time you use the product.

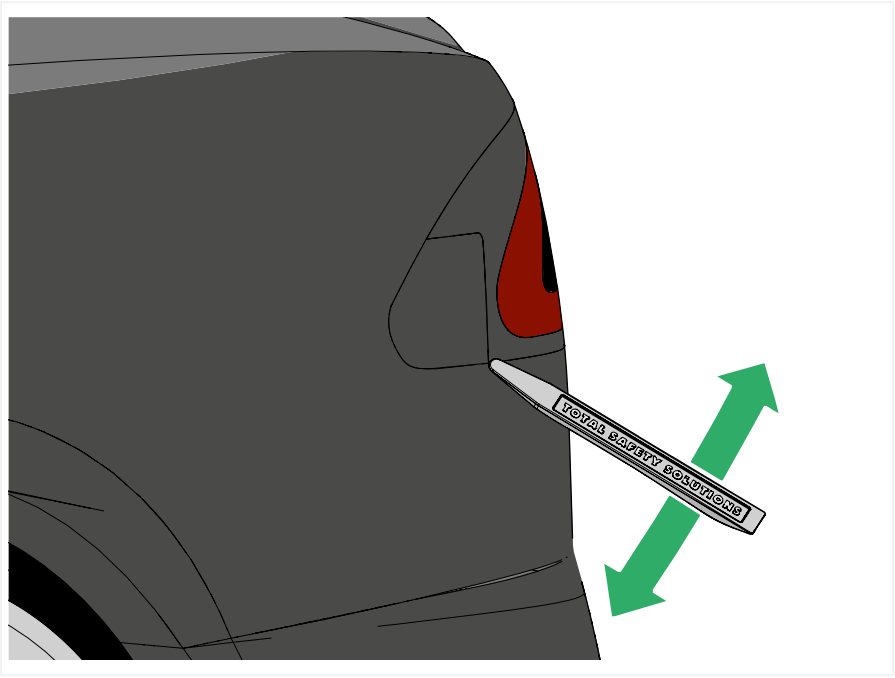
7. USE

7.1. Opening the charge port door

7.1.1. Unlocked charge port door

An unlocked charge port door can be opened by pressing the charge port door.

7.1.2. Locked charge port door



A locked charge port door can be opened with the prybar as follows:

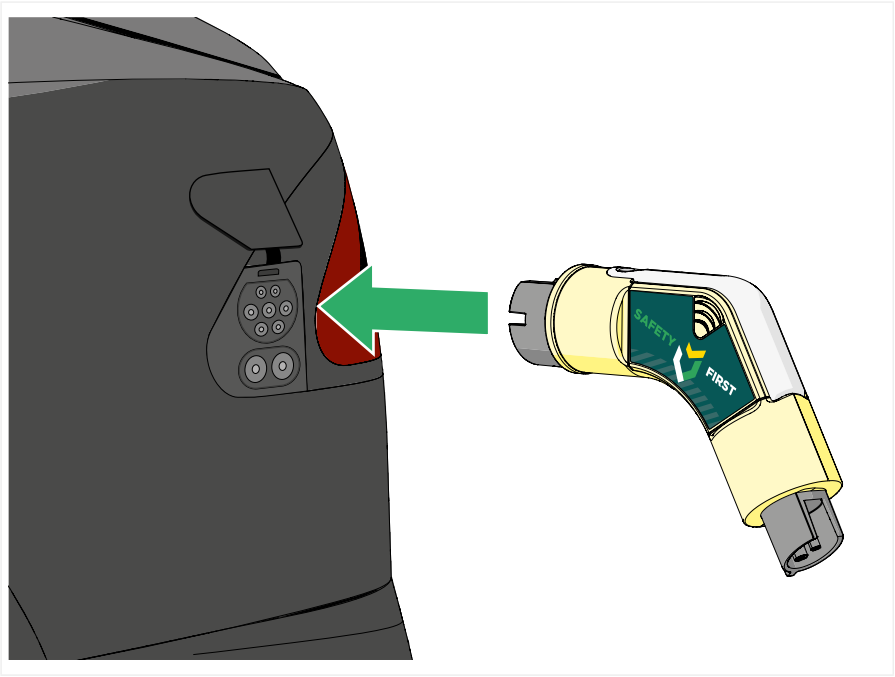
1. Press the prybar behind the charge port door.
2. Use the prybar as follows:

- Tesla vehicle: Move the prybar upwards with a lever movement to open the charge port door.
- Other type of vehicle: Move the prybar towards the front of the vehicle with a lever movement to open the charge port door.

7.2. Plugging in

NOTICE

- Only use the product on an R100 vehicle. The correct operation of the product can only be guaranteed for vehicles that comply with the R100 directive. Do not use the product with converted vehicles, as converted vehicles do not necessarily comply with the R100 directive.



Plug the product into the charging port of the vehicle as follows:

1. Press the power button on the product.
2. Open the vehicle's charge port door.

The product starts the self-test function. Refer to Chapter **6.2.Using the self-test function** for more information.

3. Plug the product into the charging port of the vehicle. Press the product in firmly.

The LED indicator first flashes yellow and then lights up blue.

- Make sure you use the correct plug type when plugging the product into a vehicle. Refer to Chapter **2.2.Plug types** for more information.
- The LED indicator should light up blue within a maximum of 5 seconds. If the LED indicator reacts differently, refer to Chapter **2.4.LED colour coding plugged in**.
- The vehicle may give an error message when the product is plugged in. This error message is caused because the vehicle does not receive power through the charging port. This does not affect the proper functioning of the product. The error message disappears automatically when the product is unplugged and the vehicle is switched on again via the power button.

7.3. Unplugging

⚠ DANGER

Crushing hazard!

- Always ensure the vehicle is secured according to locally applicable protocols before unplugging the product from the vehicle.

Unplug the product as follows:
Pull the product to unplug the product from the charging port.
The LED indicator flashes red.

7.4. Switching off

Switch off the product as follows:

1. Press and hold the power button. The LED indicators light up yellow sequentially.
2. Wait until the LED indicator flashes orange.
3. Release the power button.

The product is switched off.

- If the product is not switched off, the product remains switched on until the batteries are depleted.

8. PROBLEM SOLVING

Problem	Possible cause	Possible solution
The product is plugged into the charging port of the vehicle. The LED indicator lights up blue first but then flashes red.	The connection with the vehicle was lost during safety work or the product has been accidently unplugged from the charging port.	Unplug the product from the charging port of the vehicle. Switch the product off. Wait 5 seconds. Switch the product on. Plug the product into the charging port of the vehicle.
After completing the self-test, the LED indicator lights up red.	The product is damaged.	Follow the locally applicable rules.
After completing the self-test and plugging the product into the charging port of the vehicle, the LED indicator remains lit green.	The wiring in the charging port of the vehicle is defective.	The product can no longer make contact with the vehicle. Please contact your local distributor.
	The wiring in the product is defective.	
	The airbags and the interlock may have deployed.	The vehicle is safe to approach. There is no need to use the product. Follow the locally applicable rules.

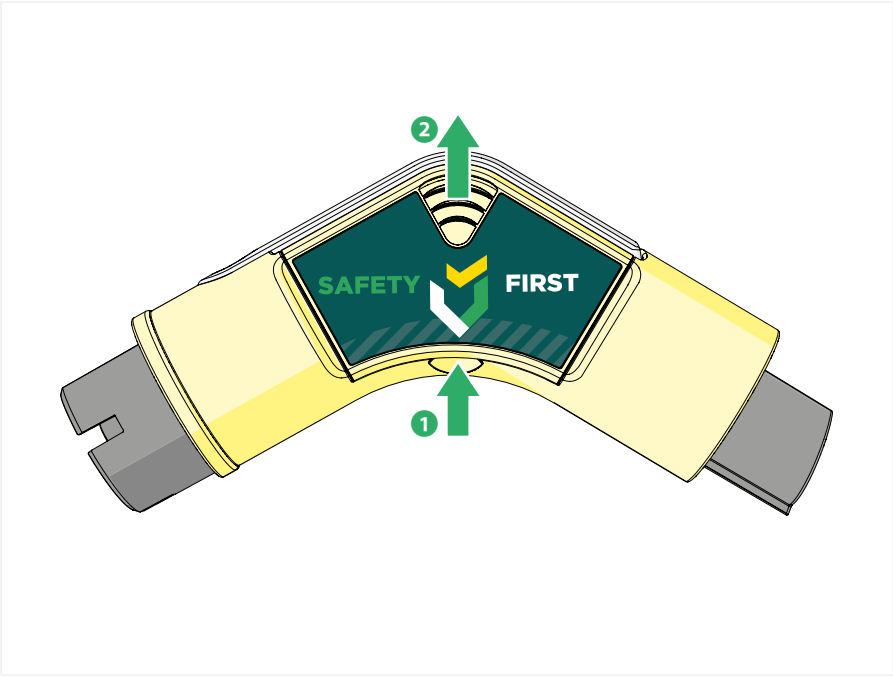
9. MAINTENANCE

9.1. User maintenance

9.1.1. Replacing the batteries

NOTICE

- Do not use rechargeable batteries in the product. The battery life of the product cannot be guaranteed when using non-recommended battery types.
- Always ensure that the plus (+) and minus (-) markings on the battery match the plus (+) and minus (-) markings in the product when inserting the batteries.



The batteries of the product are depleted if the LED indicator - in addition to the current colour - flashes red or does not light up when the power button is pressed.

Replace the batteries of the product as follows:

1. Push the battery cover lock up and slide the battery cover backwards to remove the battery cover.
2. Remove the three AA batteries.
3. Insert three new AA batteries into the product.

ℹ Place three new Energizer Ultimate Lithium L91 AA batteries as spares in the foam.
4. Replace the battery cover on the product.

9.1.2. Updating the software

Register the product to extend the warranty period and to be kept informed of software updates.
After registration, you will be automatically informed of new software updates.

You can install software updates for the product as follows:
1. Visit www.emergency-plug.com
2. Go to 'My login'. For both "Username" and "Password", enter the general login details 'EMP-updater'.
3. Follow the online instructions.

9.1.3. Cleaning

NOTICE

- Do not use harsh chemical cleaning agents to clean the product. Always use a soft, damp cloth to clean the product.

Clean the product after every use.

Clean the product as follows:
1. Clean the housing of the product with a soft, damp cloth.
2. Dry the housing of the product with a soft, dry cloth.
3. Clean the plug connections with a soft, dry cloth.
4. Check the plug connections for sand and other dirt. If necessary, use an air compressor to blow the sand and other dirt out of the plug connections.

9.2. Supplier maintenance

It is recommended to have the product serviced annually.
During the annual service, the product is checked for defects and the software is updated to the latest version.
Local distributor of Total Safety Solutions can provide an annual service, carrying out several tests and calibration. Alternatively, the Service Kit enables you to carry out your own service via the user portal.
For service options and more information, visit www.emergency-plug.com

10. DISPOSAL

In the event of a defective product, first contact Total Safety Solutions. It may still be possible to repair the product. If the product needs to be disposed of, follow the locally applicable rules.

11. DISCLAIMER

- The Volvo V60 (built up to 2017) does not comply with the R100 legislation. Do not use the product on this particular vehicle. Newer versions of the Volvo V60 do respond correctly to the product and are R100-compliant.
- General Motors does not comply with the 49CFR571.305 / 49CFR571.305aS6 regulations, as a delay causes the product to become operational only after one minute.

EMERGENCYPLUG®

TOTALSAFETY SOLUTIONS



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v2.0