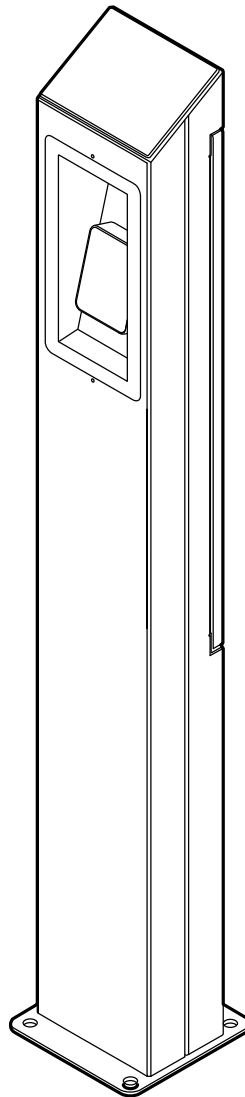


Payment Terminal

Installation manual





Contact

For D-A-CH region:

ABL GmbH


Albert-Büttner-Straße 11
91207 Lauf / Pegnitz
Germany

 +49 (0) 9123 188-0

 info@abl.de

 www.ablmobility.de

Customer Service

 +49 (0) 9123 188-0

 www.ablmobility.de/en/service/support/

For all other countries:

Wall Box Chargers S.L.U.

Carrer del Foc, 68
08038 Barcelona
Spain

 www.wallbox.com

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Additional technical information

The technical data for the Payment Terminal and the POLE Slim concrete foundation 10000238 are collated in product-specific data sheets. You can download these documents from the ABL website using the following link:



<https://www.ablmobility.de/en/service/downloads.php>

NOTE

Displaying the additional information on a computer, tablet or smartphone

Additional technical information is made available in the Portable Document Format (PDF).

- To display PDF files, you need the free Adobe Acrobat Reader or comparable software.

You can find further information about our product range on our website at www.ablmobility.de/en. Please visit:



<https://www.ablmobility.de/en>

Intended use

The Payment Terminal is a metal outdoor mounting pole that uses an integrated payment terminal with a SIM card and LTE antenna to establish wireless communication between a backend and the charging stations at the installation location. In order to ensure the necessary stability, the Payment Terminal can be installed on the separately available POLE Slim concrete foundation 10000238 or on a self-constructed concrete foundation.

Information in this document

This document describes how to install the Payment Terminal on the POLE Slim concrete foundation 10000238 and how to establish the electrical connection: It is recommended that all working steps described in this document are carried out by qualified specialist electrical contractors only.

Technical information

- Installation manual (this document)
- Data sheets

User



Specialist electrical contractor



Important information

General

This manual describes all working steps required to install and/or operate the product it concerns.

Certain sections of this manual are specially formatted for quick and easy reference.

- Descriptions listing equally valid options are indicated by bullet points.
- 1 Descriptions listing operating steps are numbered in chronological order.
- Descriptions that require an additional step are marked with an arrow.

DANGER

Indicates life-threatening electrical voltages

Sections marked with this symbol indicate electrical voltages that present a danger of loss of life or grievous bodily injury.

- Actions marked with this symbol must not be carried out under any circumstances.

ATTENTION

Indicates important actions and further hazards

Sections marked with this symbol indicate further hazards that may result in damage to the product or to other connected components.

- Actions marked with this symbol must be carried out with special care.

NOTE

Indicates important information for operation or installation

Sections marked with this symbol indicate further important information and features necessary for successful operation.

- Actions marked with this symbol should be carried out as required.
- Passages marked with this symbol contain valuable additional information.

Safety instructions

The safety notices serve to ensure the proper and safe installation, as well as subsequent safe operation of the device.

DANGER

Violation of the safety information

Disregard of or actions contrary to the safety information and instructions contained in this manual may lead to electric shock, fire, severe injury and/or death.

Please pay attention to the following points:

- Please read this manual carefully.
- Heed all warnings and follow all instructions.
- Do not install this device in close vicinity to running water, water jets or areas subject to flooding.
- The product must not be installed in explosive atmosphere areas (EX areas).
- Mechanical installation should be carried out by qualified specialist personnel.
- Electrical installation and commissioning must be carried out with reference to local rules by a qualified specialist electrical contractor, who, on the basis of their specialist training and experience, as well as their knowledge of the relevant standards, is able to assess and carry out the working steps described in this manual and recognise potential hazards.

- In case of installation faults, or malfunctions that can be traced back to faulty installation, always contact the contractor who carried out the installation first.
- The product must not be covered with stickers or other objects or materials.
- No liquids or receptacles containing liquids must be placed on the product.
- Please note that the Payment Terminal must never be installed directly on asphalt! To ensure stable and safe mechanical installation, the optionally available POLE Slim concrete foundation 10000238 or a functionally equivalent alternative must always be provided.
- Do not under any circumstances make alterations to the product. Any disregard of this instruction represents a safety risk, fundamentally breaches the guarantee provisions and may void the warranty with immediate effect.
- Malfunctions affecting the safety of persons, connected electric devices or the device itself must be resolved by a qualified specialist electrical contractor.
- Should one of the following malfunctions occur, please contact the specialist electrical contractor who has carried out the installation of the Payment Terminal:
 - The housing of the product has been damaged mechanically, or the rear maintenance door has been removed or can no longer be closed.
 - Sufficient protection against splashing water and/or foreign objects is no longer provided.
 - The product does not function properly or has been otherwise damaged.

User information

- Ensure the rated voltage and rated current of the supply cable at the installation location comply with the parameters of your local electricity grid and that the rated output is not exceeded during operation.
- Local safety regulations regarding the operation of electrical devices for the country in which you operate the Payment Terminal always apply.
- Never install the Payment Terminal in confined spaces.
- Make sure that the Payment Terminal is always closed and locked when in use. All authorised users must be aware of the 'unlock' position of the key.
- You must under no circumstances make any changes to the housing or the internal wiring of the Payment Terminal: Any disregard of this instruction fundamentally breaches the guarantee provisions and voids the warranty with immediate effect.
- No user-maintainable parts are located inside the device.
- Only have the Payment Terminal repaired by a qualified specialist electrical company.

NOTE

Changes to functions and design features

Please note that all technical details, specifications and design characteristics of the product may be changed without prior notice.

Presentation of the Payment Terminal and the foundation

Thank you very much for choosing the Payment Terminal!

The Payment Terminal incorporates a high-performance payment terminal from Payter that enables contactless payment for charging. A SIM card inserted in the Payment Terminal ensures smooth communication between the charging stations and a backend via LTE. Alternatively, a wired connection via the LAN interface of the Payment Terminal is possible. Thanks to the powder-coated metal housing, the Payment Terminal is optimally protected against corrosion and, with housing impermeability in accordance with IP55, it is ideal for outdoor installation. On the inside, an additional top-hat rail is available for further internal components, as well as a C-rail for installing a strain relief for the supply cable.

To ensure a stable and secure position outdoors, ABL recommends installing the Payment Terminal on the optionally available POLE Slim concrete foundation 10000238. Alternatively, a self-constructed foundation can be used, but it must meet the same specifications.

Further information on technical data is available in the appendix from page 18.

NOTE

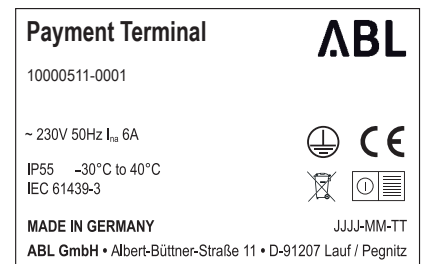
Information on setup

The Payment Terminal comes with a SIM card inserted that is used to establish wireless communication with the selected backend. To register, you will need the ICCID and serial number of the Payter payment terminal, which are printed on the supplied SIM card holder. Please contact the respective backend operator for further information on registration.

Identification

A rating plate for identification is located above the maintenance door on the rear of the Payment Terminal. Check the rating plate to make sure that the product you have is the ABL Payment Terminal.

You can find further information on this topic in section "Technical specifications" on page 18.



Rating plate: sample image, deviations possible

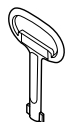
Items supplied

The Payment Terminal is supplied with the following components:

- Payment Terminal, 1 pc.



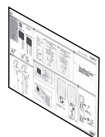
- Double-bit key for unlocking the maintenance door, 1 pc.



- Safety information (multilingual), 1 pc.



- Instructions for surge arresters (multilingual), 1 pc.



- SIM card holder, 1 pc.



NOTE

Checking the components included

Check immediately after unpacking whether all components are included: should any components be missing, please contact the dealer from whom you purchased the Payment Terminal.

⚠ ATTENTION

Storing the original packaging

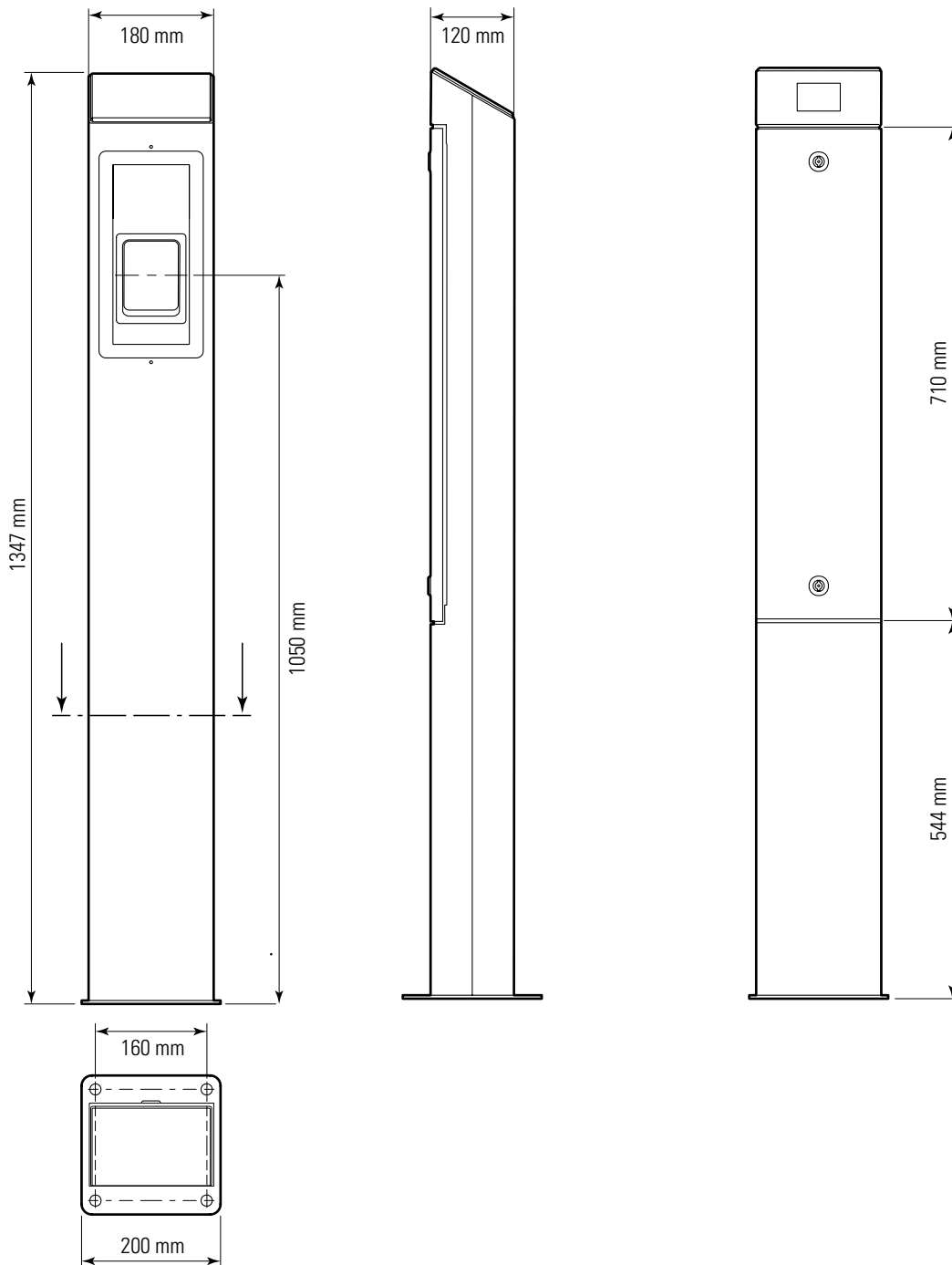
Keep the original packaging in a safe place. In the event of damage that cannot be repaired on site, the Payment Terminal may have to be dismantled and sent in for repair. To ensure proper delivery, the Payment Terminal must be protected from mechanical damage by means of the original packaging or other equivalent packaging. No liability is accepted for damage that occurs during transport.

Dimensional drawings and dimensions

The following dimensional drawings show the dimensions of the Payment Terminal and the separately available POLE Slim concrete foundation 10000238.

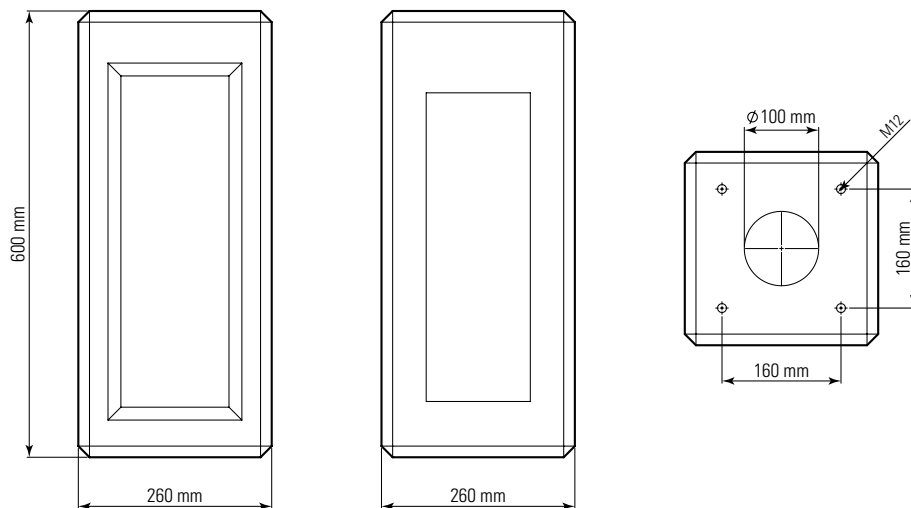
Payment Terminal

- View from the front, from the side, from behind and from below



POLE Slim concrete foundation 10000238

- View from the front, from the side and from above



NOTE

Using a custom foundation

This manual describes how to install the Payment Terminal on the POLE Slim concrete foundation 10000238. In principle, it is possible to make a custom foundation, but this must be based on the specifications of the POLE Slim concrete foundation 10000238.

- If you wish to install and operate the Payment Terminal on a self-made foundation, a stable base and fault-free operation outdoors cannot be guaranteed.

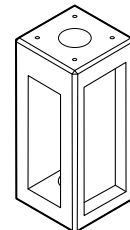
Accessories

The following accessories for the Payment Terminal are available separately:

- **10000238**

Concrete foundation for floor mounting of the Payment Terminal and the POLE Slim mounting poles 100000192, 100000237, 100000245 and 100000246

h = 600 mm, w = 260 mm, d = 260 mm



You can find further information on the **ABL** product range at www.ablmobility.de/en.

Installation

When installing the Payment Terminal, various specifications regarding the location and the connection technology must be met in order to ensure safe operation.

Requirements for the installation site






The Payment Terminal was developed for use both indoors and outdoors. To ensure proper installation, you as the operator must adhere to the following specifications regarding the location and positioning.

- Be sure to observe all local regulations for electrical installations, fire prevention and accident prevention.
- All guidelines for the installation of low-voltage systems in accordance with IEC 60364-1 and IEC 60364-5-52 apply.
- The installation surface must be level and have sufficient strength to withstand the mechanical loads.
- A concrete base is required for installation. This can be an underground concrete foundation such as the POLE Slim concrete foundation 10000238 (installation described below), a self-made concrete foundation with suitable specifications (concrete C35/45 according to EN 206-1:2013) or an above-ground concrete base made by the customer.
- A sufficiently sized power line must be provided at the installation position, which is fed into the Payment Terminal via the opening in the base plate.
- Make sure that a wireless data connection can be set up via LTE at the installation position. Otherwise, a network cable (min. CAT5e S/FTP or better) must be fed into the Payment Terminal through the opening in the base plate for wired data communication with a backend.
- Suitable collision protection must be provided on site to provide the Payment Terminal with mechanical protection from possible collisions with a vehicle.
- For the safe operation of the Payment Terminal, minimum distances to other technical installations must be observed.
- The Payment Terminal should not be installed in high-traffic areas or along thoroughfares.


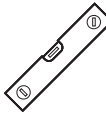
Specifications for mechanical installation

It is recommended to have the entire installation carried out by qualified personnel. At least two people are required for the mechanical installation.

You will need the following components for mechanical installation:

- Payment Terminal  • Double-bit key for unlocking the maintenance door (included with the Payment Terminal) 
- POLE Slim concrete foundation 10000238 for mounting the Payment Terminal (available as an accessory)  • ISO 4017 hexagon screw, M12×25, 4 pcs. (included with the concrete foundation) 
- ISO 7093-1 M12 washers, 4 pcs. (included with the concrete foundation) 

In addition, you will need the following tools:

- Torque spanner, spanner size 17 mm 
- Spirit level 

- Tape measure



- Shovel tool



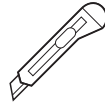
- Bricklaying tools



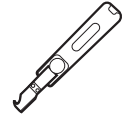
- Concrete screed (mixed)



- Utility knife



- Stripping tool



Placing the POLE Slim concrete foundation

The optional POLE Slim concrete foundation 10000238 from ABL provides a level installation surface and ensures the necessary stability and support via factory-inserted screw anchors.

ATTENTION

Creating a custom foundation

The calculation, design and manufacture of the self-made concrete foundation are the sole responsibility of the operator or the company carrying out the installation on behalf of the operator.

ATTENTION

Laying the cables at the installation position

If a wireless mobile connection cannot be set up at the installation position, a network cable (shown in grey below) must be laid in the empty conduit next to the power line.

DANGER

Danger from electrical voltages

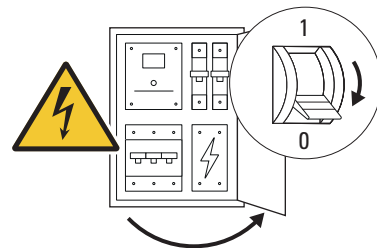
Always observe the 5 safety rules:

- 1 Cut power source
- 2 Secure all cut-off devices
- 3 Verify absence of voltage
- 4 Ground and short-circuit
- 5 Cover or bar access to adjacent components under voltage

The supply cable must not be reconnected to the electricity grid until **Step 3** in the section "Electrical connection" on page 14!

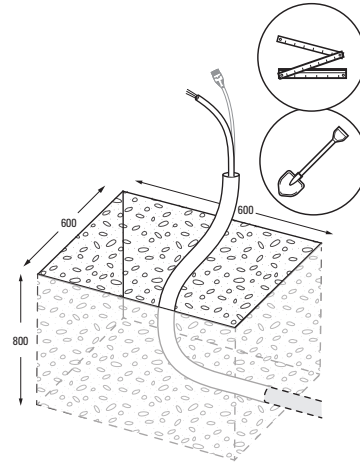
Proceed as follows:

- 1 Disconnect the power supply and secure it against being switched on again.

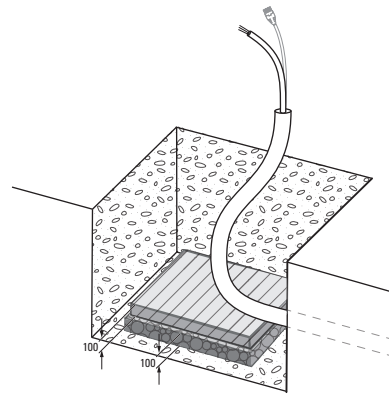


2 Dig a ditch suitable for the foundation (recommended: 600 × 600 × 800 mm).

→ Take into account the dimensions of the foundation (H × W × D: 600 × 260 × 260 mm) as well as a levelling layer (crushed rock/gravel) and a cement mortar layer of about 100 mm under the foundation.



3 At the location where the foundation is to be set, lay a levelling layer (crushed rock/gravel) and then a cement mortar layer, each about 100 mm thick.

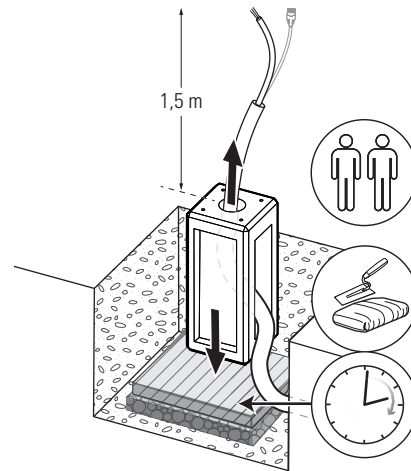


4 Place the foundation centrally on the cement mortar layer. This step must be performed by two people.

- Make sure the empty conduit with the power line can be inserted into the pipe opening on the foundation in this position.

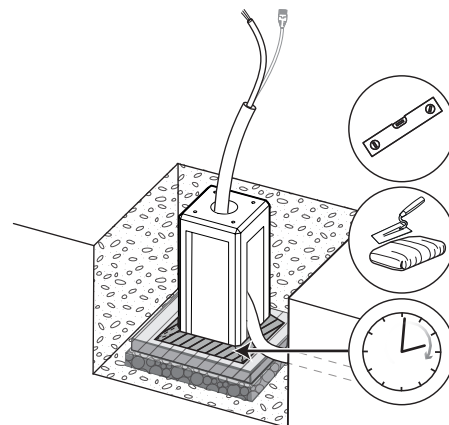
5 Route the empty conduit with the power line of sufficient length through the pipe opening in the foundation.

- The power line (and network cable, if installed) should be routed out of the foundation with a length of approx. 1.5 m.

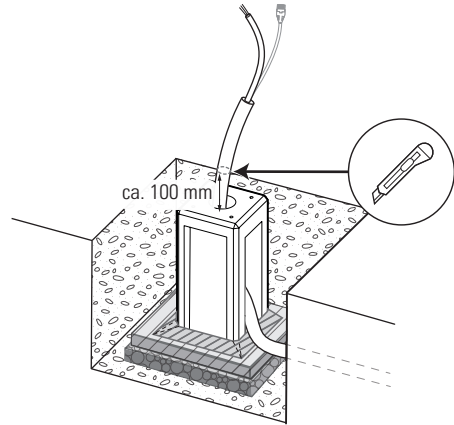


6 Make sure the foundation is level in all planes on the cement mortar layer and then create a supporting structure all the way around the foundation with concrete screed (45° smooth line to around the lower edge of the cable opening for the supply cables).

7 Allow the concrete to set completely over a reasonable period of time so that the foundation is protected from slipping when the ditch is eventually filled and compacted with compactable soil.

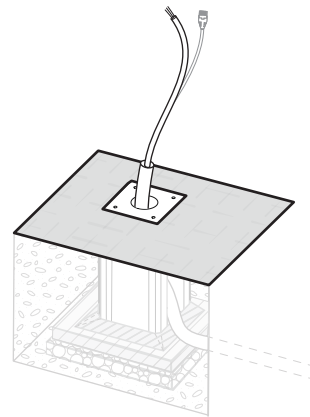


- 8 Shorten the empty conduit to a length of about 100 mm above ground level (top of the foundation).



- 9 Fill the entire ditch around the foundation to ground level with compactable soil.
- The soil must be filled and compacted in layers and evenly on all sides.

- 10 Smooth out the surface.

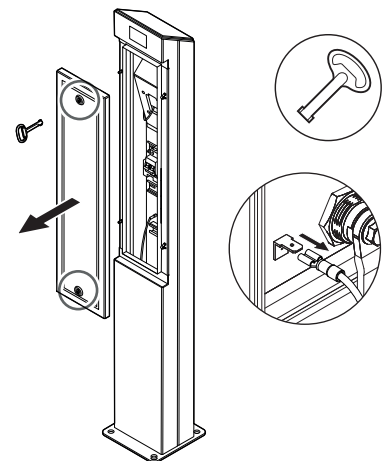


Mounting the Payment Terminal on the foundation

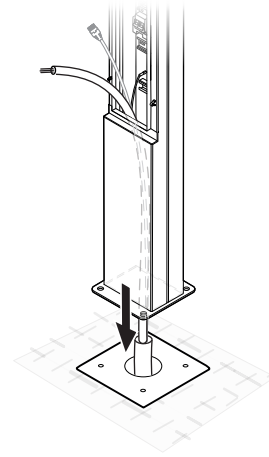
The next step is to mount the Payment Terminal on the foundation.

Proceed as follows:

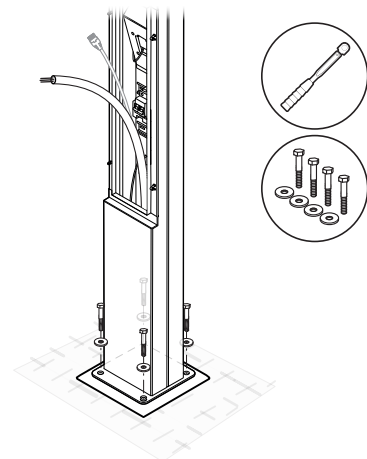
- 1 Open the maintenance door on the rear of the Payment Terminal using the supplied double-bit key and remove it.
- Disconnect the earth cable from the contact on the inside of the maintenance door.



- 2 Place the Payment Terminal on the foundation and insert the power line (and the network cable, if installed) into the Payment Terminal via the cable opening in the base plate.



- 3 Align the Payment Terminal over the holes on the foundation and screw the four hexagon screws over washers into the ground anchors on the foundation.



Electrical connection

The following section describes how to connect the power line to the Payment Terminal.

DANGER

Danger from electrical voltages

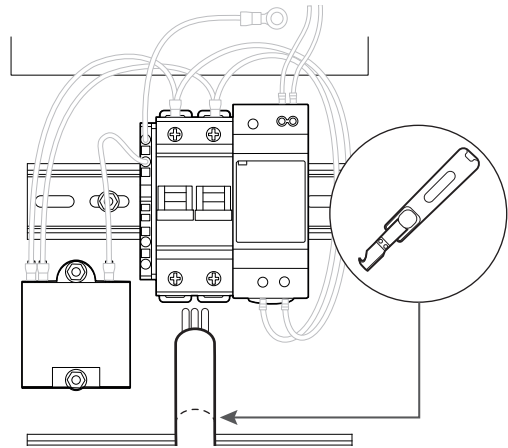
Always observe the 5 safety rules:

- 1 Cut power source
- 2 Secure all cut-off devices
- 3 Verify absence of voltage
- 4 Ground and short-circuit
- 5 Cover or bar access to adjacent components under voltage

The supply cable must not be reconnected to the electricity grid until **Step 3** in this section!

Proceed as follows to connect the power line:

- 1 Shorten the power line to the required length for connection to the internal miniature circuit breaker and the PE terminal block.
→ Remove the sheath from the conductor.

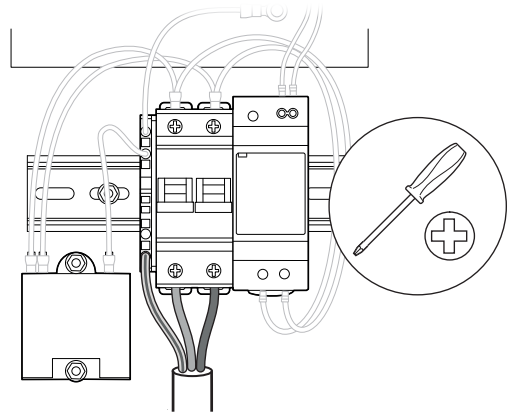


NOTE

Strain relief of the supply cable

It is advisable for the power supply cable be attached to the lower C-rail of the Payment Terminal via a suitable strain relief.

- 2 Insert the live and neutral conductors into the terminals of the miniature circuit breaker and tighten them using a Phillips-head screwdriver.
→ End ferrules must be fitted on flexible conductors.
→ Connect the PE conductor to the PE terminal block.

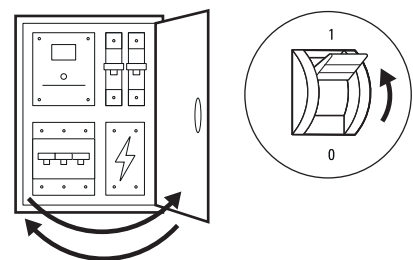


ATTENTION

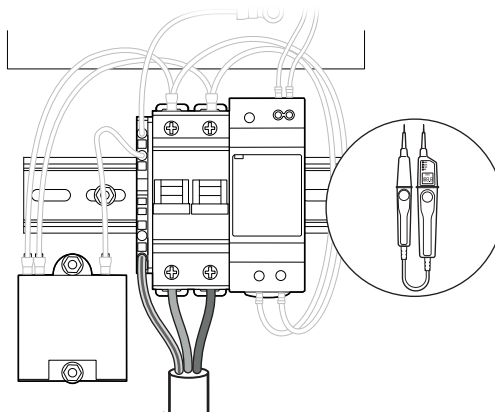
Inspection after connection

Please ensure that the conductors that are pre-fixed to the internal components remain attached correctly after connecting the power line.

- 3 Connect the power line to the mains.



4 Measure the voltage at the terminals using a voltage tester.



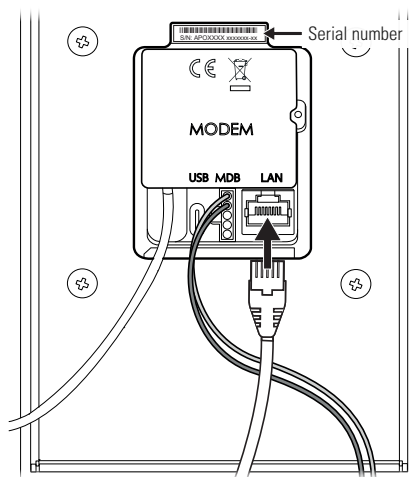
If you are connecting the Payment Terminal to your backend wirelessly, insert the maintenance door and lock it for operation (see step 2 in the next section).

Connecting the network cable (optional)

If a wireless mobile connection cannot be set up at the installation position, the Payment Terminal must be connected to an IT infrastructure via the LAN interface on the rear of the Payment Terminal. A connection to the backend can then be established via the IT infrastructure.

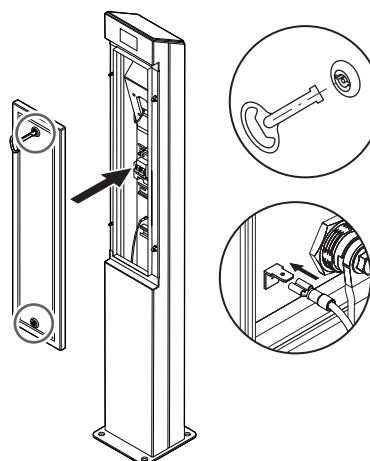
1 Connect the network cable to the LAN interface on the rear of the Payment Terminal.

- Please contact your backend operator for information on how to register. To register, you will need the serial number of the Payment Terminal, which you will find directly above the cover.



2 Close the maintenance door of the terminal and lock it with the double-bit key.

- Attach the earth cable to the contact on the inside of the maintenance door.



Troubleshooting and maintenance

If a malfunction should occur during operation, first check the points mentioned below. If the error cannot be rectified, contact your local sales partner and jointly determine how to proceed.

Resolving errors

The following malfunctions may occur:

Malfunction	Possible cause and suggested solution
The Payment Terminal is not working.	The power line was not correctly connected to the miniature circuit breaker. <ul style="list-style-type: none">• Check the connection.
	The upstream fuses for the power line are switched off. <ul style="list-style-type: none">• Check the upstream RCCB/MCB.
	The internal miniature circuit breaker is not switched on. <ul style="list-style-type: none">• Check the miniature circuit breaker in the Payment Terminal.
	The conductors that are pre-connected to the internal components have come loose. <ul style="list-style-type: none">• Check the internal wiring of the Payment Terminal.
	The MDB connector is not correctly connected to the MDB port of the Payment Terminal. <ul style="list-style-type: none">• Check the MDB connector is seated correctly.
No connection to the backend can be established.	For a wireless data connection: The cable of the internal LTE mobile antenna has come loose from the Payment Terminal. <ul style="list-style-type: none">• Make sure the antenna cable is connected to the left MMCX antenna socket of the Payment Terminal.
	For a wired data connection: The network cable is not correctly connected to the LAN interface of the Payment Terminal. <ul style="list-style-type: none">• Check the network cable is seated correctly in the LAN interface of the Payment Terminal. Also check the network connection to the external IT infrastructure.
	The login details were not entered correctly. <ul style="list-style-type: none">• Please enter the login details again.• Please contact the backend operator to check the configuration.

Maintenance

The Payment Terminal is essentially maintenance-free. However, we still recommend the Payment Terminal is regularly cleaned and its function checked:

- Use a dry or slightly damp, well-wrung cloth to clean the Payment Terminal.
- Do not use aggressive cleaning agents, waxes or solvents (such as cleaning fluid or paint thinner) as they can cloud the display of the Payter payment terminal or damage the paintwork.
- Never clean the Payment Terminal with a high-pressure cleaner or similar device that applies liquid at high pressure to the surface of the housing.
- Check the surge arrester at regular intervals. This is located inside the housing below the upper top-hat rail. If the function display on the right-hand side reports a defect (status: red), contact a qualified specialist electrical contractor. Please also read the instructions supplied with the surge arrester.
- Check the housing of the Payment Terminal regularly for signs of damage.
- Check the locks on the maintenance door and ensure that they move freely if necessary.


Appendix

Technical specifications

Model code	Payment Terminal
Product number	100000511
External power supply	For supply cable sizes up to 3 × 2.5 mm ²
Rated voltage (power supply)	230 V
Rated current (power supply)	16 A
Rated frequency	50 Hz
Ambient temperature	-30 to 40°C
Storage temperature	-30 to 85°C
Relative humidity	5 to 95%, no condensation
Class of protection	I
Degree of protection (housing)	IP55
Impact resistance	IK07
Corrosion protection class	C3
Housing material	Stainless steel sheet (1.4016)
Housing surface	Fine-textured, satin powder coated
Housing colour	RAL 9011
Card reader	Payter Apollo, contactless
Communication	Integrated modem with separate LTE mobile antenna; LAN (RJ45), USB-C
Integrated components	Upper top-hat rail with 24 V power supply unit and miniature circuit breaker (6 A, 2-pole, type C tripping characteristic); lower top-hat rail; C-profile rail; 2-pole surge arrester
Payment system	EMVCo. L1 v3.0 certified; ISO14443 Type A & B (T=CL); Mifare Classic; Desfire; ISO18092: NFC support
Locking mechanism	Twist lock, double bit with 3 mm mandrel, 2 pcs.
Maximum elevation	≤ 2,000 m above mean sea level
Dimensions of body (H×W×D)	1,342 × 180 × 120 mm
Dimensions of base plate (H×W×D)	5 × 200 × 200 mm
Weight per unit (net)	Approx. 15.7 kg

Model code	POLE Slim concrete foundation
Product number	100000238
Material	Reinforced concrete
Grade	C35/45
Exposure class	XC4 and XF1
Dimensions (H × W × D)	600 × 260 × 260 mm
Weight per unit	Approx. 45.5 kg

Protection classes & degrees of protection

Protection class / Degree of protection	Explanation
	Protection class I: All electrically conducting parts of the device are connected at low resistance with the protective earth system of the fixed installation.
IP55	Protection class of the device (protection against dust and normal water jets from any angle).

Trademarks

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Disposal notice



The crossed out trash can symbol indicates that electrical and electronic devices including accessories must be disposed of separately from household waste.

The materials are recyclable as marked. The reuse or recycling of materials, or other forms of repurposing of old devices make an important contribution towards protecting the environment.



ABL

ABL GmbH
Albert-Büttner-Straße 11 · 91207 Lauf/Pegnitz
Germany
www.ablmobility.de

wallbox 

Wallbox Chargers S.L.U.
Carrer del Foc, 68 · 08308 Barcelona
Spain
www.wallbox.com