



1 Precautions / 安全注意事项

1.1 Safety Precautions / 遵守所有安全注意事项

To ensure safety of humans and the equipment, pay attention to the safety symbols on the equipment and all the safety instructions in this document. The "NOTE", "CAUTION", and "WARNING" marks in this document do not represent all the safety instructions. They are only supplements to the safety instructions. When operating Huawei equipment, in addition to following the general precautions in this document, follow the specific safety instructions given by Huawei. Huawei will not be liable for any consequences that are caused by the violation of safety regulations and design, production, and usage standards.

为保障人身和设备安全，在安装、操作、维护设备时，请遵循设备上标识及手册中说明的所有安全注意事项。手册中的“安全警告”、“注意”、“说明”事项，并不代表所应遵守的所有安全事项，只作为所有安全注意事项的补充。在进行本公司产品、设备的各项操作时，必须严格遵守由华为公司提供的相关设备注意事项和特殊安全指示。手册中列出的“安全警告”仅代表了华为公司知道的部分，华为公司不承担任何因违反通用安全操作要求或违反设计、生产和使用设备安全标准而造成损失的责任。

1.2 Local Safety Regulations / 遵守当地法规和规范

When operating the equipment, you must follow the local laws and regulations. 操作设备时，应遵守当地法规和规范。

1.3 Personnel Requirements / 人员要求

Only trained and qualified personnel are allowed to install, operate, and maintain Huawei equipment. 负责安装维护华为设备的人员，必须先经严格培训，掌握正确的操作方法及安全注意事项后，方可安装、操作和维护设备。

Before installation, get familiar with the following documents: Parts documents. 安装开始前，确保已经学习并掌握了除本文档以外的以下文档信息：随货的其它部件资料。

1.4 Human Safety / 人身安全

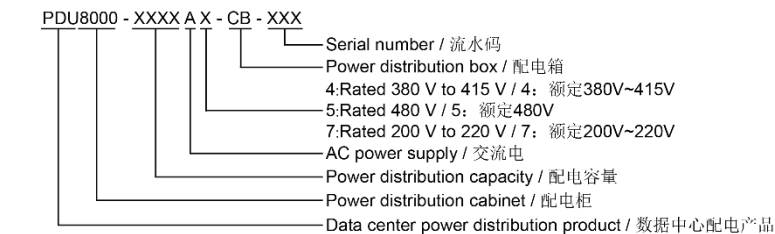
To ensure human safety, connect the ground cable first when connecting cables. 为确保人身安全，连接电缆时先连接接地电缆。

Only trained and qualified personnel are allowed to install, operate, and maintain Huawei equipment, and they must understand basic safety precautions to avoid hazards. 系统接线的操作人员必须具备基本的安全操作知识，需经过培训，掌握正确的操作方法，并具有相应作业资格。

To prevent electric shocks, get tools insulated and wear electrostatic discharge (ESD) gloves when connecting cables. 进行接线操作时，操作人员需对工具进行绝缘处理，佩戴绝缘手套，避免触电。

2 Model Description / 设备型号说明

The following figure shows the model naming conventions for a power distribution box. 配电箱的设备型号说明如下所示：

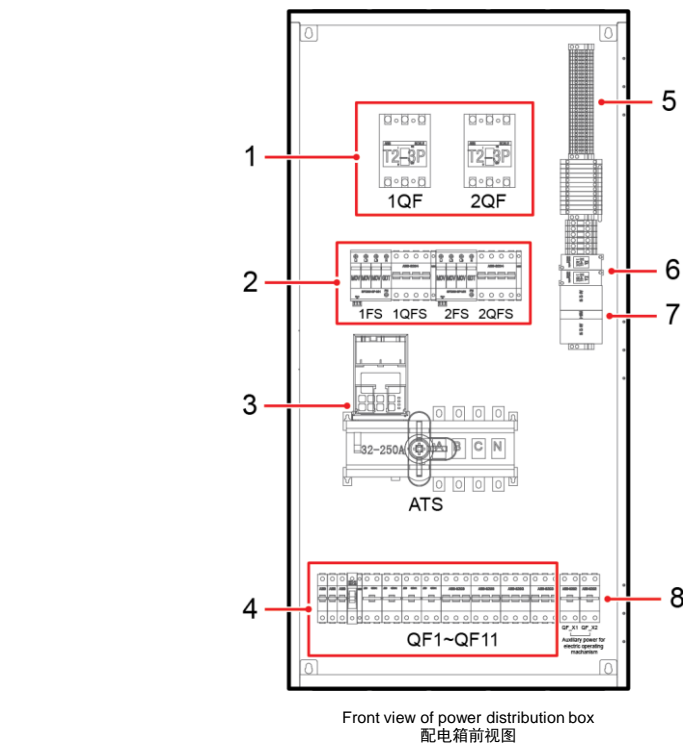


3 Tools / 安装工具



4 Power Distribution Box Layout / 配电箱布局图

NOTE / 说明
Box dimensions (H x W x D): 1200 mm x 600 mm x 400 mm
箱体尺寸（高×宽×深）：1200mm×600mm×400mm



- 1 Input circuit breaker 输入空开
2 Surge protective device (SPD) and SPD circuit breaker 防雷器及防雷空开
3 Automatic transfer switch (ATS) 自动转换开关
4 Output circuit breaker 输出空开
5 Terminal blocks 端子排
6 Intermediate relay 中间继电器
7 AC contactor 交流接触器
8 AC contactor circuit breaker 交流接触器空开

5 Installing a Power Distribution Box / 安装配电箱

5.1 Checking Before Installation / 安装前检查

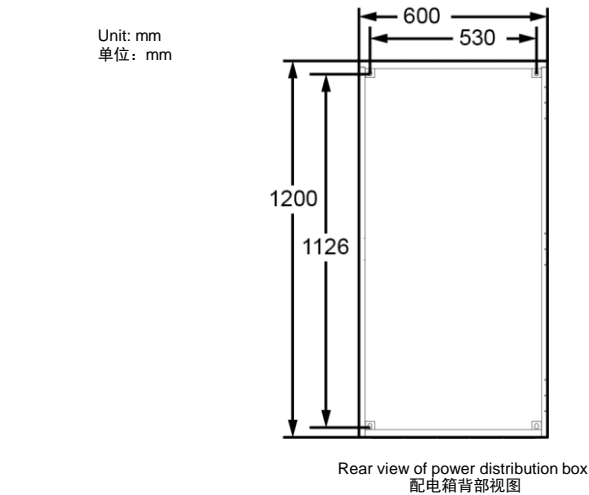
Open the packing case, and check that all components listed in the packing list are intact. Ensure that all components are available before cleaning up the package materials. If components or fittings are damaged during transportation or do not comply with the order contract, make records onsite and contact the local Huawei regional office or representative office immediately.

打开包装箱，根据装箱清单检查设备的配件是否齐全、是否在运输过程中损坏。清除包装材料之前，要确保所有配件都已找到。如设备和配件在运输中损坏或与订货合同不符，应及时现场记录，并与华为公司当地分公司或办事处代表联系。

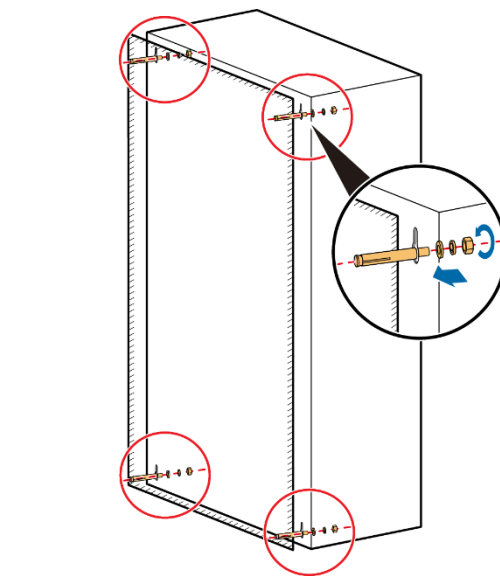
5.2 Installing the Power Distribution Box / 安装配电箱

CAUTION / 注意
Do not replace original components of the product during installation without authorization. If the replacement is required, contact Huawei engineers. 安装过程中，产品出厂原配部件不能擅自更换，如需更换，请联系华为工程师。

1. Plan the PDB installation position based on the following figure. 参考下图规划配电箱安装位置。



2. Drill holes using a hammer drill and install expansion bolts. 用冲击钻钻孔并安装膨胀螺栓。
3. Align the four holes on the power distribution box with the secured bolts. Then move the power distribution box downwards until the holes fit into the bolts. 将配电箱上面的4个安装孔对应扣入紧固好的螺栓，向下移动，使得配电箱安装孔扣入螺栓。





4. Open the door of the power distribution box, and remove the partition board. 将配电箱的门打开，拆除内部隔离板。
5. Tighten the four bolts to secure the power distribution box to the wall. 拧紧4个螺栓，将配电箱固定在墙上。

NOTE / 说明
The following table lists the tightening torque of different bolts. 各螺栓紧固扭矩说明如下表所示。

Bolts / 螺栓	Recommended Torque / 推荐扭矩 (N·m)
M8	13
M10	27
M12	47
M16	120

6 Installing Input and Output Cables / 安装输入输出线缆

NOTE / 说明

1. Cabling mode: Cables can be routed in from the top and out from the top or bottom. The example in the figure illustrates cables routed in and out from the top. The ground terminal is identified by a  sign.
进出线方式：上进线，兼容上下出线。图示以上进上出为例。接地端子通常以  标志标识。

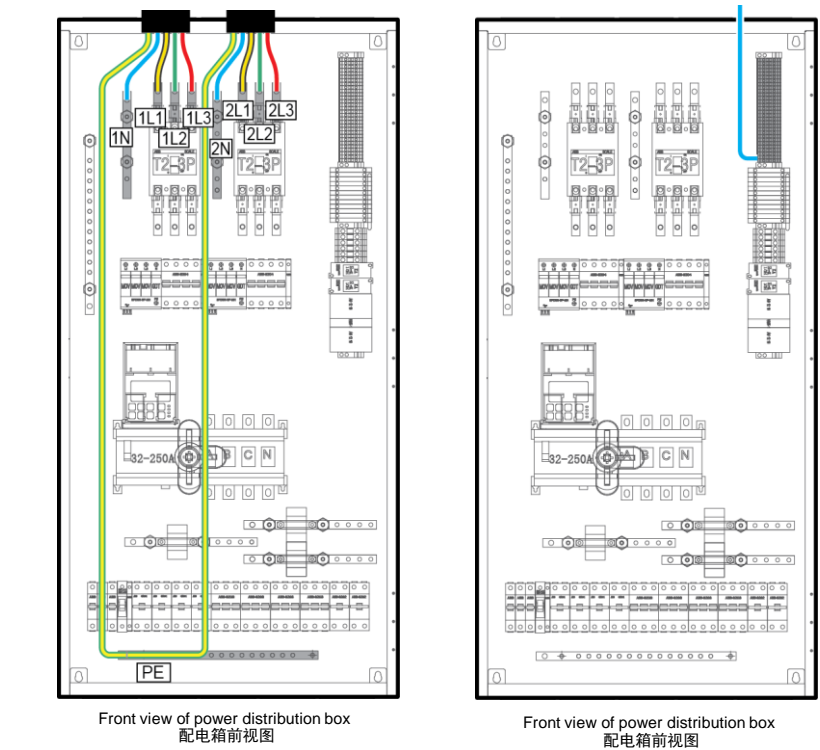
2. The colors of the power cables for your reference. The local cable color standards prevail.
线缆颜色仅供参考，请以当地电源线缆标准为准。

3. Grey shaded area for wiring area.
灰色阴影区域为接线区域。

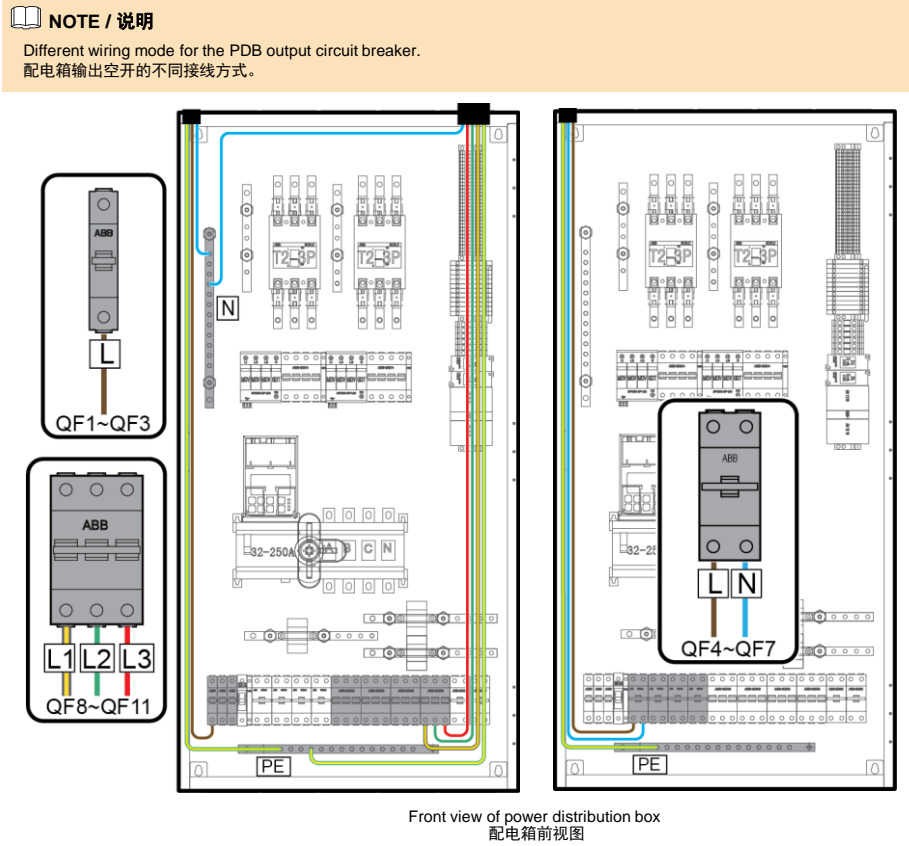
4. For the definitions of wiring terminal blocks, see the Schematic Diagram delivered with the product.
接线端子排定义参见随机附带的原理图。

Port Description / 接口说明	Bolts / 螺栓	Recommended Torque / 推荐扭矩 (N·m)
Input circuit breaker / 输入空开	M8	13
Input PE / 输入地线	M8	13
Input N / 输入零线	M8	13
Output circuit breaker QF1-QF11 / 输出空开QF1~QF11	M5	3
Output PE (QF1-QF11) / 输出地线（QF1~QF11）	M6	4.5
Output N (QF1-QF11) / 输出零线（QF1~QF11）	M6	4.5

1. Install the input cables. 安装输入线缆。
2. Install the signal cables. 安装信号线缆。



3. Install the output power cables. 安装输出线缆。



7 Checking After Installation / 安装后检查

After the installation is completed, verify the items in the following tables before power-on.
安装完成后，在上电前，请根据下表内容进行检查。检查合格后方可进行上电操作。

7.1 Electrical connection checklist / 电气连接检查

No. / 编号	Check That / 检查项
1	All cables are correctly connected based on the Schematic Diagram. 参考原理图，检查所有接线是否正确。
2	Ground cables are securely connected. 检查地线是否已连接牢靠。
3	Redundant parts of the ground cables and power cables are cut off instead of coiled. 电源线、地线的余长应被剪除，不能盘绕。
4	Phase cables are connected properly. 各相位连线正确。
5	Power cables and ground cables are routed and bundled separately from other types of cables. 电源线、地线在布放时应与其他电缆分开绑扎。
6	All circuit breakers are OFF. 所有空开处于“OFF”状态。

7.2 Hardware installation checklist / 硬件安装检查

No. / 编号	Check That / 检查项
1	The box is clean, without dust or sundries. 配电箱清洁干净，无灰尘、污物，箱内无杂物。
2	The paint on the cabinet exterior is intact. If paint flakes off, repaint that area immediately to avoid corrosion. 外部漆饰应完好，如有掉漆，立即补漆，以防止腐蚀。
3	The box door and lock work properly. 箱门开闭灵活，门锁正常。
4	All labels are correct, clear, and complete. 各种安全警告标识正确、清晰、齐全。
5	The surrounding area of the box contains no waste tape, cable ties, paper, or packing materials. 配电箱周围不得有胶带、扎带线头、纸屑和包装袋等施工遗留物。

7.3 Cable installation checklist / 线缆安装检查

No. / 编号	Check That / 检查项
1	All bolts are tightened, especially the bolts used for electrical connection. Flat washers and spring washers are installed properly in the correct sequence. 所有螺栓都要拧紧（尤其要注意电气连接部分），平垫、弹垫要齐全，且不能装反。
2	Cables are bundled neatly, and cable ties are secured evenly and properly in the same direction. 电缆绑扎应整齐美观，线扣间距均匀，松紧适度，朝向一致。
3	Cables are routed for ease of future maintenance and expansion. 电缆布放应便于维护和将来扩容。
4	There is no unnecessary adhesive tape or cable tie on the cables. 线缆上无多余胶带、扎带等遗留。
5	Exposed parts near the wiring terminals and lugs are wrapped in PVC insulation tape or heat shrinking tubing. 接线端子处的裸线及线鼻柄应用绝缘胶带缠紧，或套热缩套管，不得外露。
6	The power and signal cables are routed in accordance with the weak- and strong-current cable routing specifications and the cable routing plan. 电源线走线和监控线走线满足强弱电走线要求，符合系统走线规划。

8 Powering On and Commissioning / 上电调测

CAUTION / 注意

Use the handle to switch on and off the ATS manually for one to three times and ensure that no mechanical jams occur during switching. For details, see the ATS documents.
上电前用手柄分合ATS开关1~3次，确保ATS主、备触头切换时无机械卡塞现象。详情请参见ATS相关资料。

1. Switch on the upper-level circuit breaker and the Input circuit breakers to power on the box.
闭合前级电源空开和配电箱输入空开。

2. Switch on SPD circuit breakers, and check the SPD status.
闭合防雷空开，检查防雷器工作状态。

3. Check that all parameters of the input smart electricity meter are normal. Then switch on all circuit breakers in sequence, and check that the output voltage of each loop by using a multimeter.
检查智能电力仪表显示是否正常。若正常，逐一合上所有空开，用万用表检测回路输出电压是否正常。

4. After the check, switch off all circuit breakers in sequence, and disconnect the power supply.
确认正常后，依次断开所有空开，再断开电源。

This guide is for reference only. The actual product prevails.
本指南仅供参考，内容如有改动，请以实物为准。