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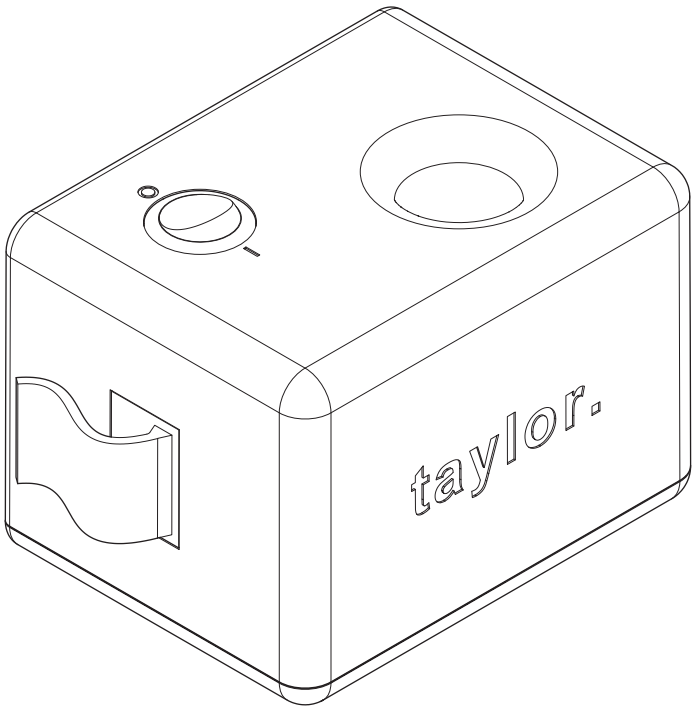
Gateway

Installation manual



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Gateway

Table of contents

1 About this document

1.1 Purpose of this document

This document is only applicable for the gateway. Refer to the technical specifications for the applicable part numbers.
From here on, this document refers to the gateway as the equipment.
The equipment is part of a solar power system, from here on in this document referred to as the system.
The document is for approved personnel and gives the information that is necessary to install the equipment.

1.2 How to use this document

1. Make sure that you know the structure and contents of this document.
2. Read the safety chapter and make sure that you know all the instructions.
3. Do the steps in the procedures fully and in the correct sequence.
4. Keep the document in a safe location that you can easily access.
   This document is a part of the equipment.

1.3 Language

The original instructions of this document are in English (EN-US). All other language versions are translations of the original instructions.

1.4 Symbols and signal words used in this document

Symbol	Signal word	Description
	Warning	Obey the instruction. If not, this can cause injury.
	Caution	Obey the instruction. If not, this can cause damage to the machine, to equipment or to property.
	Note	A note gives more data, to make it easier to do the steps, for example.
	-	Read the instructions.

2 Safety

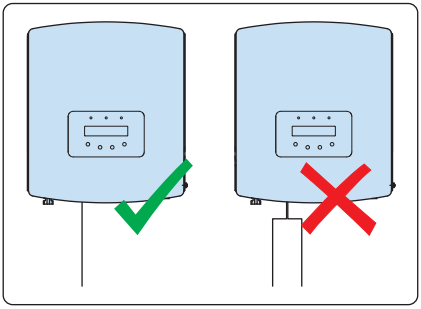
2.1 General

- Incorrect installation can cause electric shock or can cause damage to the equipment and property. Obey the local regulations and electrical standards. The system must be installed and maintained by trained and authorized personnel.
- The gateway is designed to apply within the Taylor system, do not use it for any other purposes.
- Use the equipment only in combination with inverters that are approved by Taylor.
- Before you install the equipment, read all instructions.
- Read the documentation and safety instructions of the inverter.
- Do not disconnect the junction box under load.
- Do not install the equipment in areas that contain flammable materials or gases.
- Install the equipment in a dry location.
- If the power cable has damage, switch off the gateway and remove the power source before you touch the power cable.
- If the equipment has damage, disconnect the power cable. Replace the equipment.
- Do not open the equipment.
- Do not make changes to the equipment.
- Recycle the equipment as electronic waste. Do not put the equipment in unsorted municipal waste. Obey the local regulations.

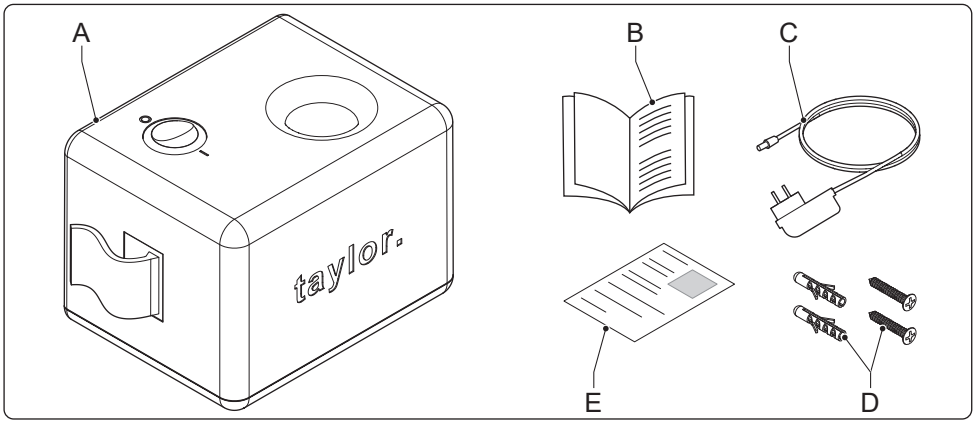
2.2 Connect to the inverter

Caution:

- On the inverter, do not connect more than one string of solar panels to an MPPT connection.
- Refer to the documentation of the inverter.



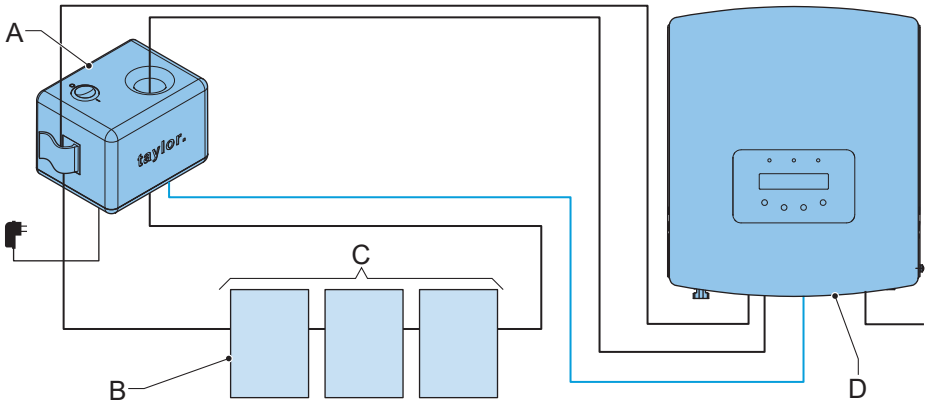
3 Packaging



A. Gateway
B. Installation manual
C. Power cable
D. Fastening materials
E Drill template

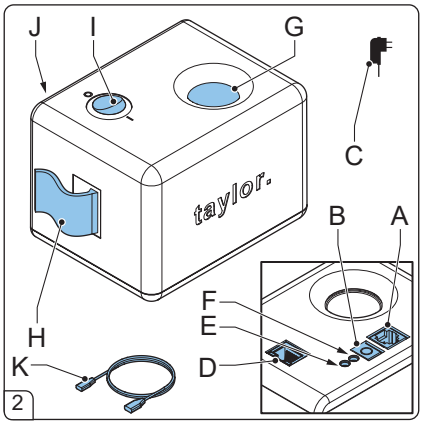
4 Description

4.1 Overview of the system



A. Gateway
B. Solar panel
C. String of solar panels
D. Inverter

4.2 Overview of the gateway



A. Inverter data connection
B. Power connection
C. Power adapter
D. LAN connection
E. Indicator light 1
F. Indicator light 2
G. PV cable feed-through hole
H. Cable clamp
I. Power switch with indicator light
J. Identification plate
K. Datacable

4.3 Data cables delivered seperate from gateway

Data cable	Part number (P/N)	To use with this inverter
A.	TAYLOR-GTW-C-00	Goodwe
B.	TAYLOR-GTW-C-SL	Solis

4.4 Status shown by the indicator light in the power switch

Indicator light in the power switch		Status of the gateway	Remarks
	On	On	The system produces energy. The cable from the solar string is energized.
	Off	Off	When the gateway is off, the system is in safety mode. The cable from the solar string has approximately 1 Volt per solar panel.  **Warning**: To make sure that the system is in safety mode, disconnect the power adapter of the gateway.

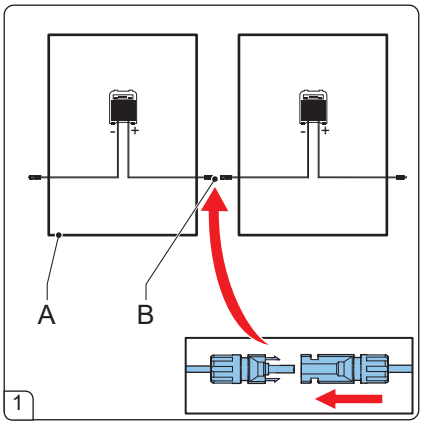
4.5 Status shown by indicator lights 1 and 2

Indicator light 1	Indicator light 2	Equipment status
Flashes 7 times	Off	There is a connection with the 4G network.
On	Off	The gateway updates the software
Flashes	Off	The gateway does a factory reset.

5 Installation

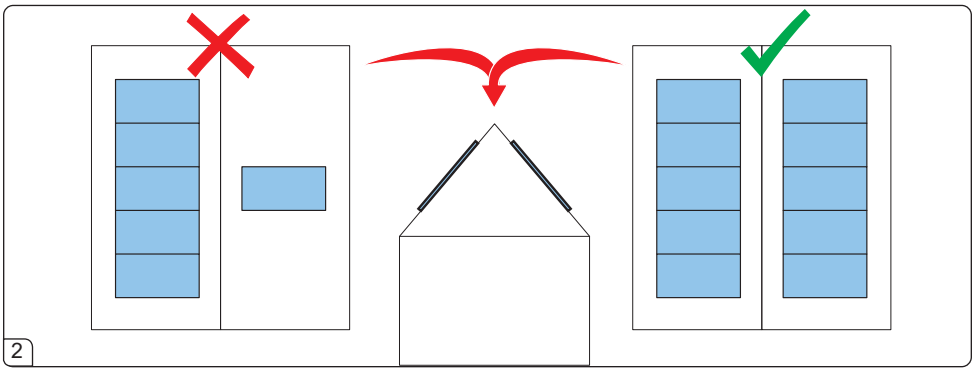
5.1 Preliminary requirements

1. The solar panels (A) are installed and the smart modules (B) are connected.
2. The inverter is installed.



Design rules

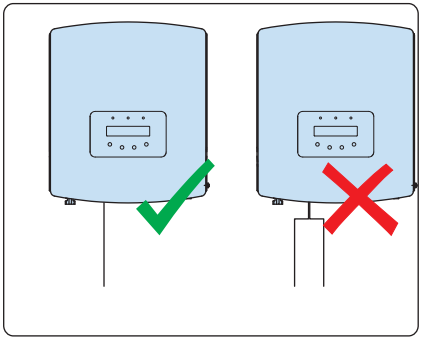
- Multiple orientations within one string are allowed
- Each orientation should reach the start-up voltage (input DC)



5.2 Install the gateway.

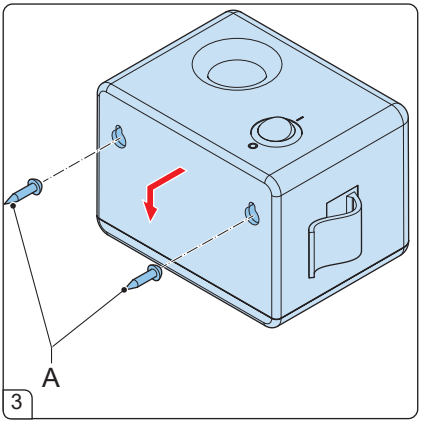
Warning:

- Obey the safety instructions of the inverter.
- Make sure that the inverter is off and de-energized.
- Do not connect more than one string of solar panels to a per MPPT connection.
- Do not connect parallel module strings per MPPT tracker



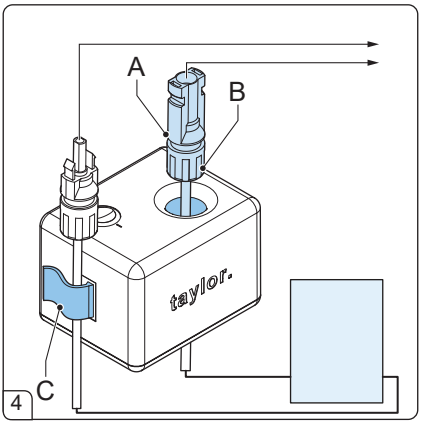
Note: If necessary, drill holes. Drill safely. Do not drill or screw in electricity lines, water pipes, and such items. Use the correct type of wall plugs.

1. Install the fasteners. Use the drill template on the last page of this manual.
2. Attach the gateway to the fasteners.

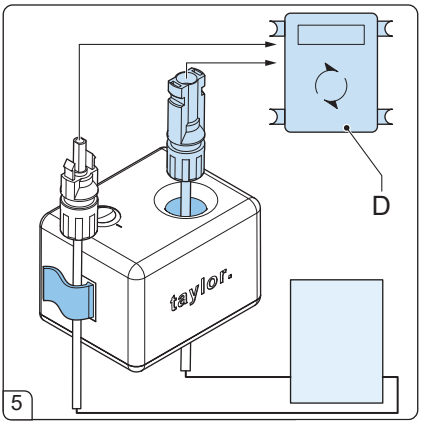


Caution: Never put both cables through the hole (B).

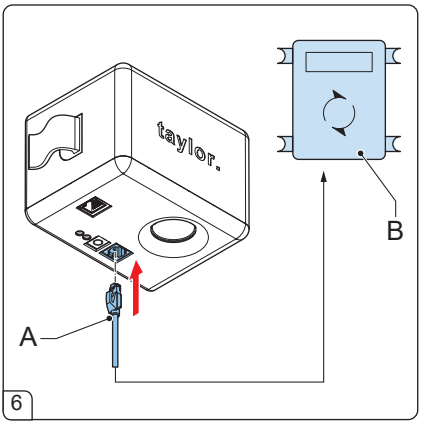
3. Put one of the cables (A) (either + or -) through the hole (B).
4. Put the other cable through the clamp (C)



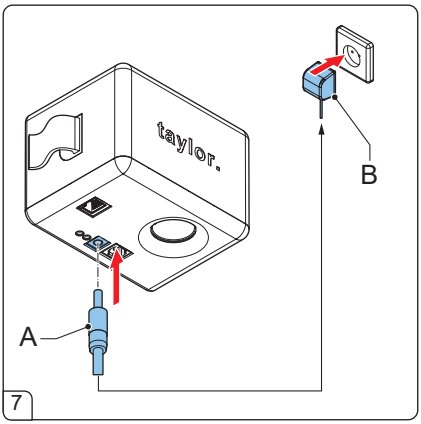
5. Connect the cables to the inverter (D). Refer to the documentation of the inverter



6. Connect the data cable to the inverter (B). Refer to section 5.
7. Connect the data cable to the data connection (A).



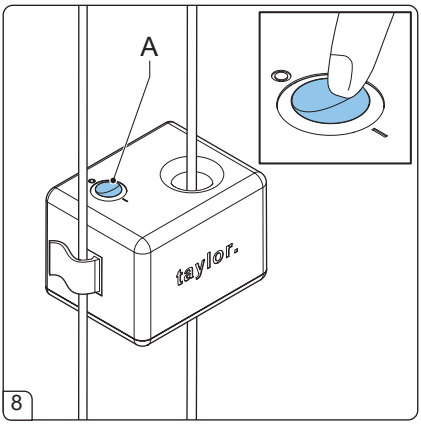
8. Connect the power cable (A).
9. Put the power adapter (B) in a wall socket.



Warning:
Make sure that all inverter & module related installations are okay & followed.

10. Set the switch (A) in the on position. The light in the switch comes on.

Note:
A few seconds may be necessary for the system to start.



6 Connect the data cable

Choose the procedure for the applicable inverter. If there is no procedure for the inverter, refer to the vendor.

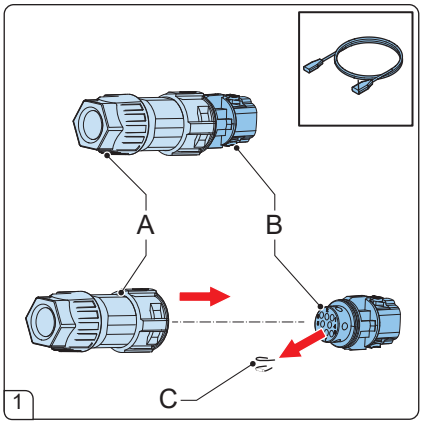
6.1 Goodwe XS-serie

Necessary items:

A. Data cable: part number TAYLOR-GTW-C-00, delivered with the gateway.

B. RS-485 Connector, delivered with the inverter.

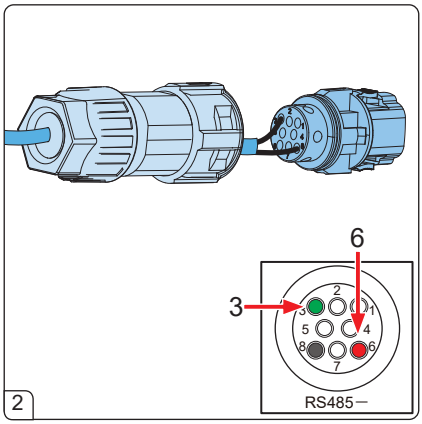
1. Disassemble the connector(A)(B).
2. Remove the resistor (C).



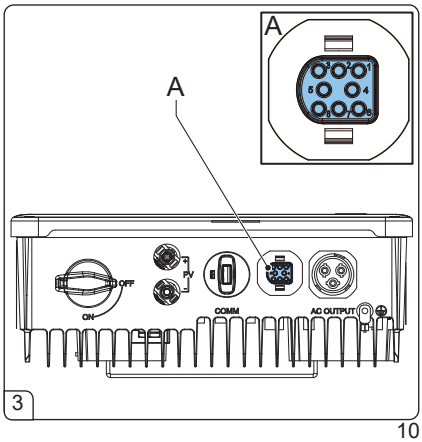
3. Connect the data cable, refer to the table:

Wire	Wire color	Connect to pin
+	Red	6
-	Green	3

4. Assemble the connector.



5. Connect the plug to connection (A).

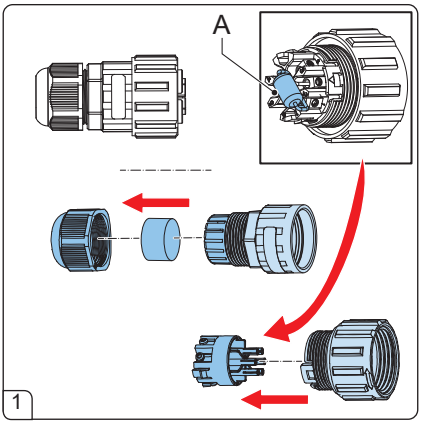


6.2 Goodwe SDT G2-serie

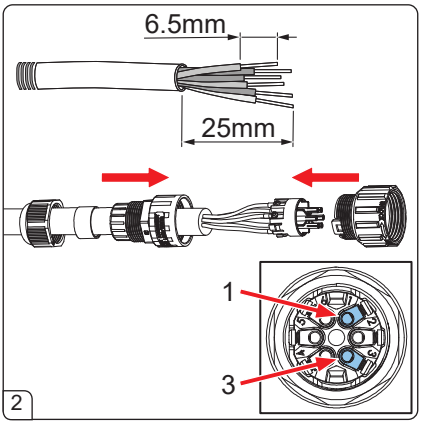
Necessary items:

A. Data cable: part number TAYLOR-GTW-C-00, delivered with the gateway.

B. 6-Pin DRED Connector, delivered with the inverter.



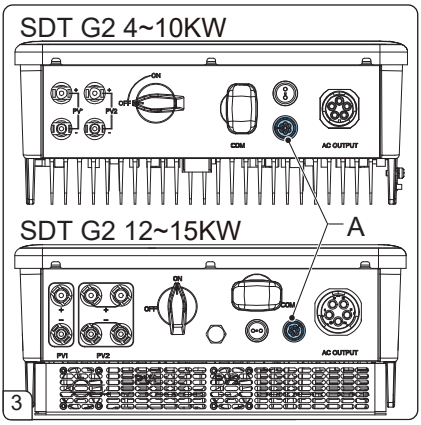
1. Disassemble the connector.
2. Remove the resistor (A).



3. Connect the data cable, refer to the table:

Wire	Wire color	Connect to pin
+	Red	3 or 4
-	Green	1 or 2

4. Assemble the connector.



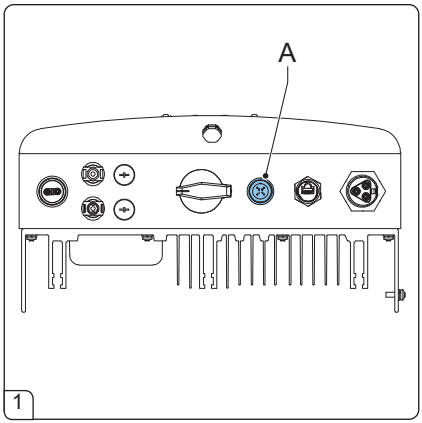
5. Connect the plug to connection (A).

6.3 Solis

Necessary items:

A. Data cable: part number TAYLOR-GTW-C-SL, delivered with the gateway.

1. Connect the plug to connection (A).



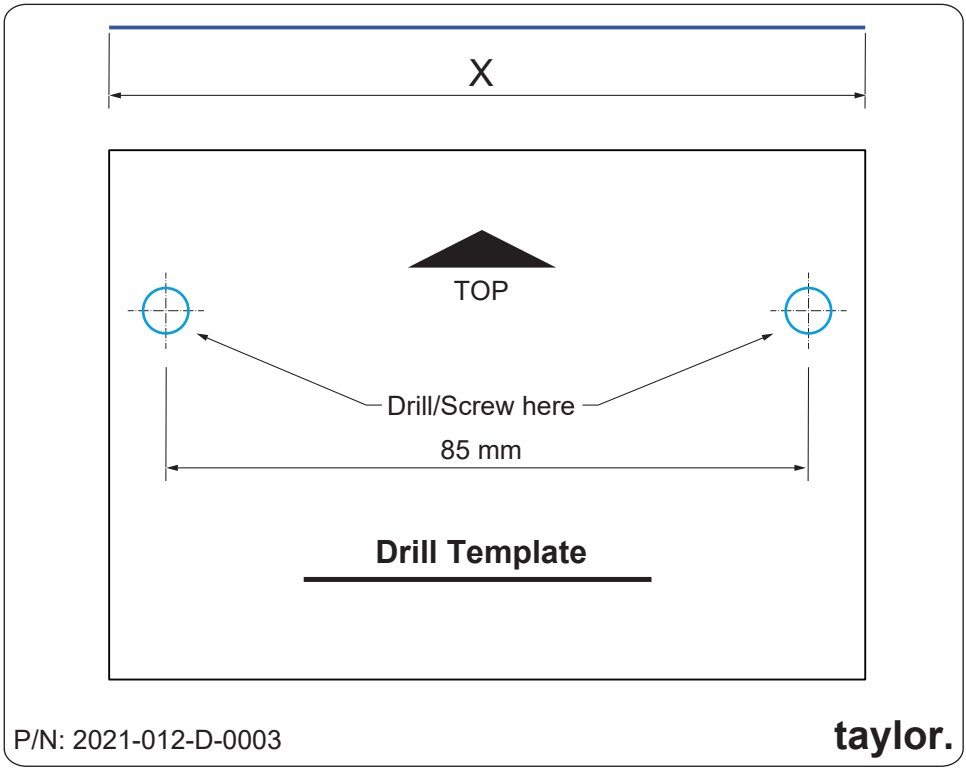
7 Declaration of conformity

Hereby, Taylor Technologies B.V. declares that the radio equipment type TAYLOR-GTW-2A is in compliance with Directive 2014/35/EU. The full text of the EU declaration of conformity is available at this internet address: www.taylor.solar/declaration.

8 Technical specifications

Item	Specification	Value
Gateway	Part number (P/N)	TAYLOR-GTW-2A
	Voltage	12 VDC
	Maximum current	1.5 A
	Maximum power	18 W
	IP code	IP3X
Power adapter	Power in	230 VAC, 50 Hz
	Power out	12 VDC
Frequency bands	Cat-M	B1/B2/B3/B4/B5/B8/B12/B13/B14/ B18/B19/B20/B25/B26/B27/B28/ B66/B85
	Cat-NB	B1/B2/B3/B4/B5/B8/B12/B13/B18/ B19/B20/B25/B26/B28/B66/B71/ B85
	GSM	850/900/1800/1900 MHz
Radio transmitted power	LTE RF Power Class	Class 5 (Typ. 21dbm)

9 Drill template



CAUTION:

- Measure the control line (X). If the control line is not 100 mm, do not use this drill template.
- Do not drill or screw in electricity lines, water pipes, and such items. Drill safely.

Use the wall plugs, use a 06 diameter drillbit size and Pozidriv Z1 for driver.

Notes