Installation Guide
Stogger Wireless LED Lighting
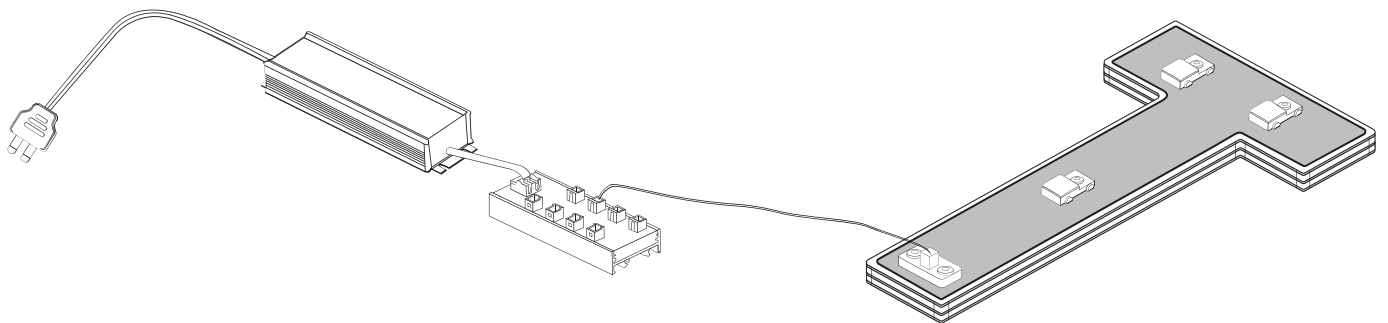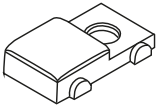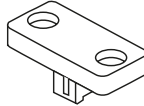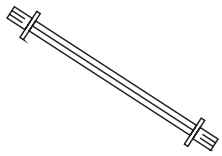
Step 1
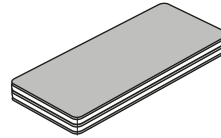
Required components
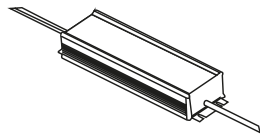
Quantum Flex
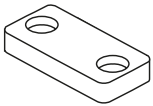(screwable LED module)
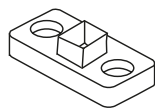
PowerIN Flex and/or PowerEX Flex

PowerBoard

Cable assembly

PowerSupply 48V

Optional components

Lightning
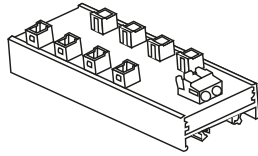
SignFuse / SignTerminal
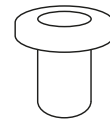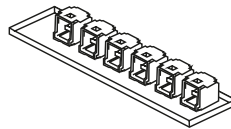
Insulation sleeve

Tools

Preferred tools for quick assembly

Automatic Torque Screwdriver

Automatic
Screw Feeder

Optional tools
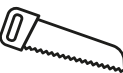
Saw or CNC milling machine
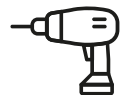
Screw or drill

Cutting knife

Sealant

Step 2

Define LED module pitch

First measure the channel letter box depth (D) which defines the LED module pitch (P).
Refer to the product datasheet to look up the corresponding LED pitch.

Step 3

Define the PowerBoard cut-out

If required, the PowerBoard can be sawed or milled to size.

⚠ Step 3 - Warning

Prevent electric short

The PowerBoard top layer (-) and center layer (+) could cause an electric short when placed inside conductive materials, for example the channel letter box or the aluminium frame.
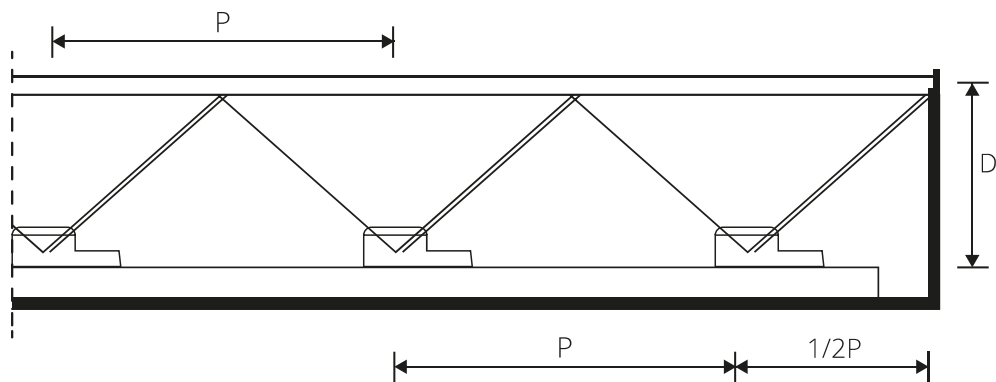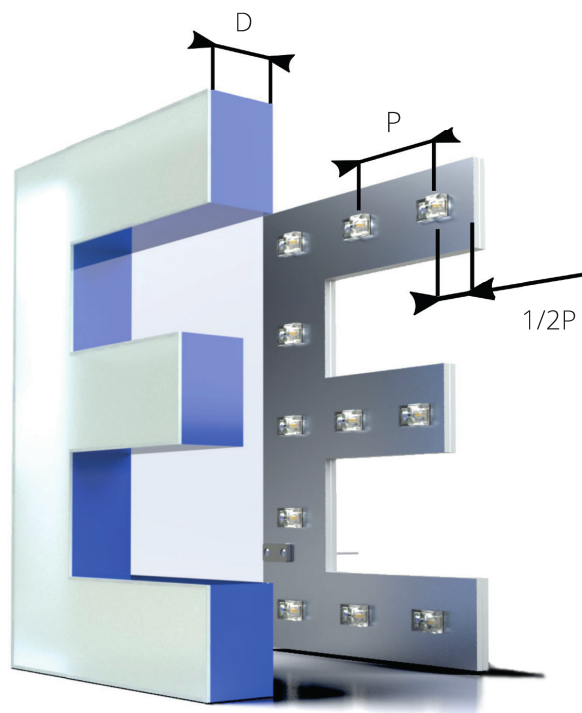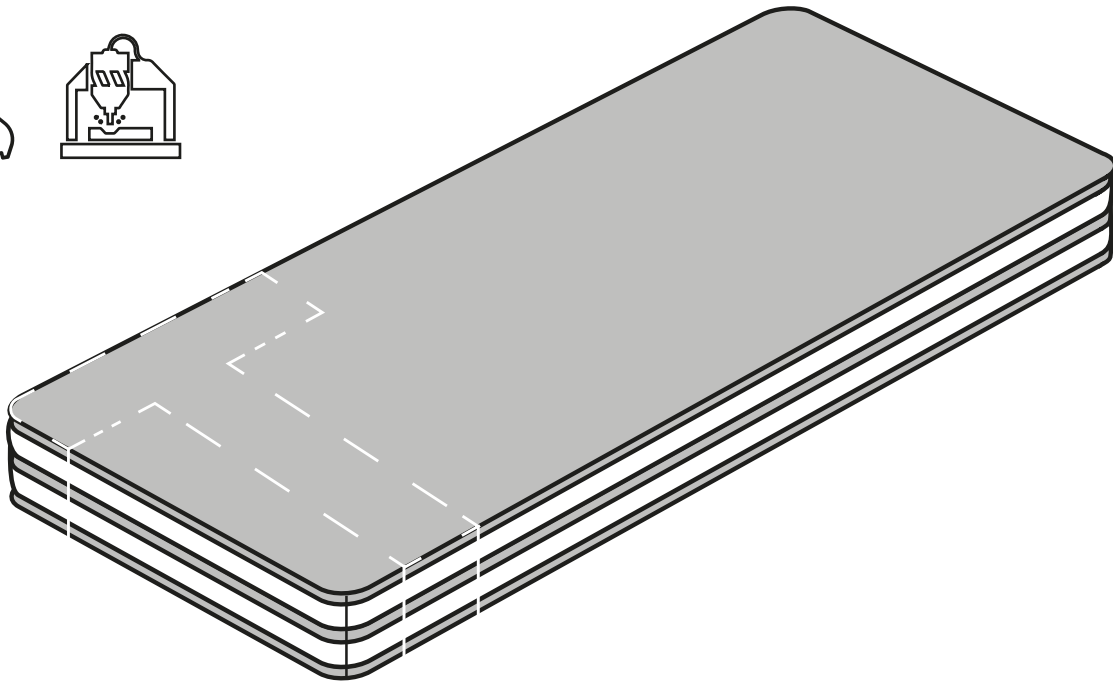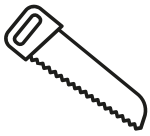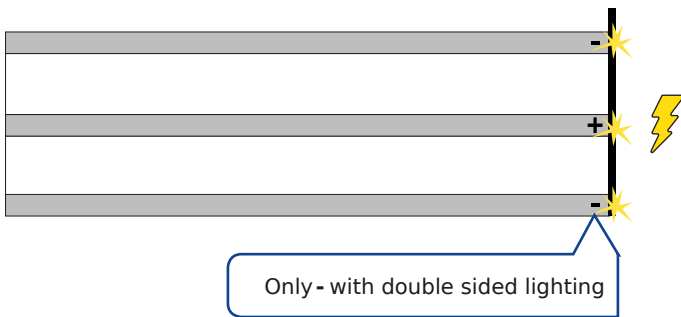
To prevent this electric short, simply cut or mill the edge of the PowerBoard as shown in the following drawings.

Only - with double sided lighting

Variant #1: remove an outline of the aluminium top layer

If an outline in the aluminium top layer is manually cut and removed, possible electric shorts can be prevented.
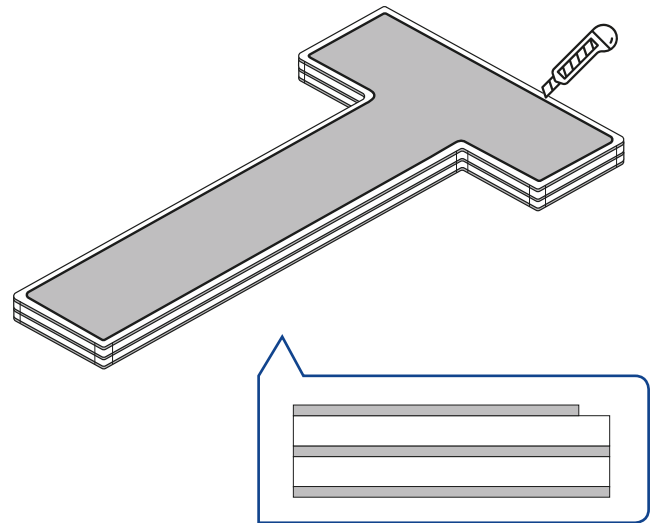
Variant #2: mill a slit

If a circumferential slit is milled by a CNC milling machine, possible electric shorts can be prevented.
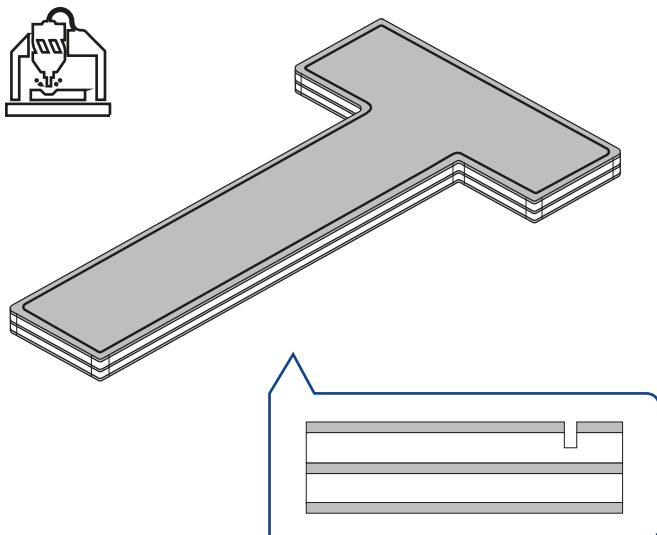
Variant #3: mill a deep slit

If a deep circumferential slit is milled by a CNC milling machine, possible electric shorts can be prevented. Stogger prefers this variant.

Step 4

Place the Quantum LED module on the desired position	Take a Stogger screw and fix the LED in the PowerBoard

Recommendations

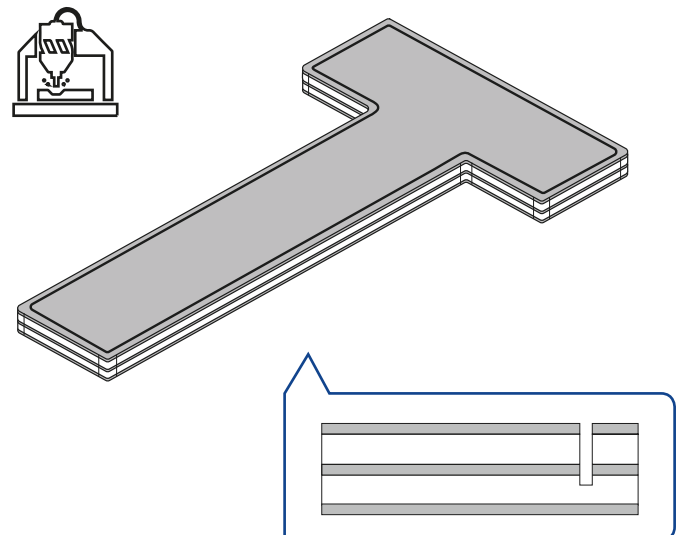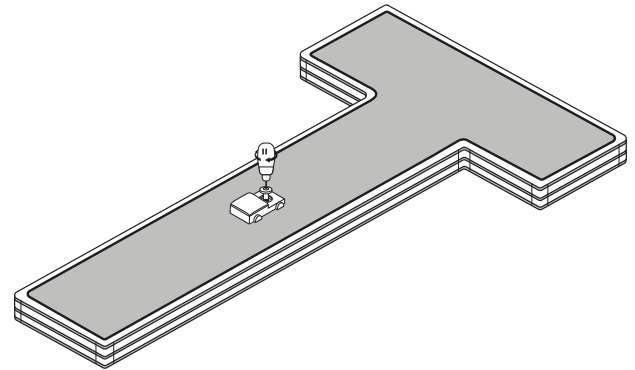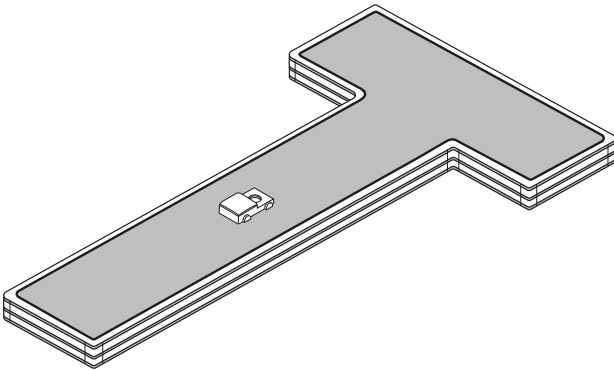| Option #1: Use the Automatic Torque Screwdriver	Option #2: Use the Automatic Screw Feeder

Our Automatic Torque Screwdriver is factory adjusted for the right torque. This will ensure correct fixation of the Quantum Flex LED modules onto the PowerBoard.
Note: other screwdrivers available on the market are not capable of the similar precise torque adjustments.
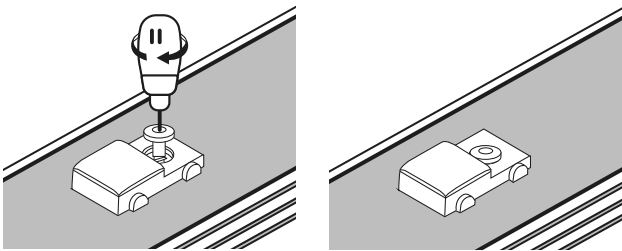
Our Automatic Screw Feeder does exactly what its name implies: it will feed screws automatically. This allows for optimal, quick and easy working when fixing Quantum Flex LED modules to the PowerBoard.
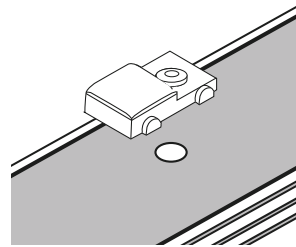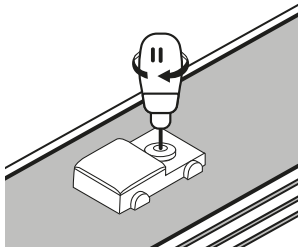
Notice!

Keep following points in mind:

1. Apply some pressure, when commencing LED fixation.

2. To prevent wear-out, apply the right amount of pressure.

3. In case the Automatic Torque Screwdriver applies a too high torque while fixing the screws, the fixing hole might wear and a reliable electrical connection cannot by guaranteed. In such case, re-adjust the torque setpoint using the provided allen-key.
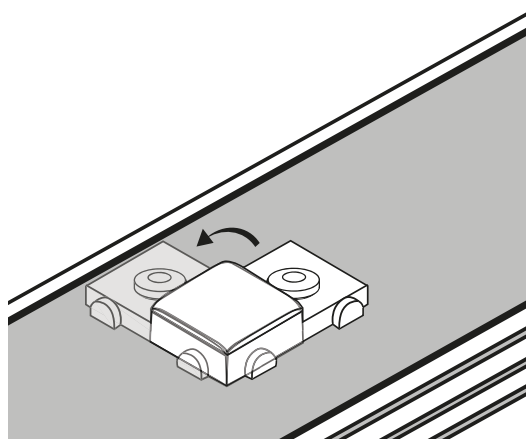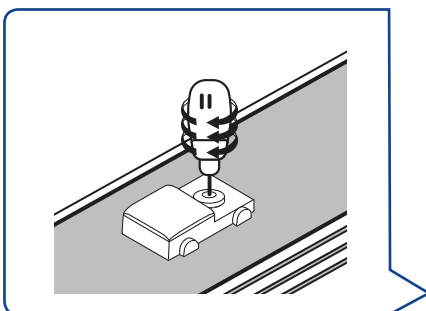
4. In case the LED module can be rotated after fixing it with the Automatic Torque Screwdriver, the fixing torque setpoint should be increased.
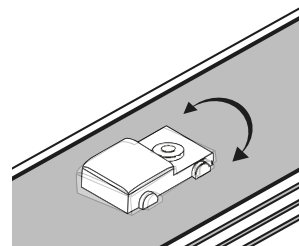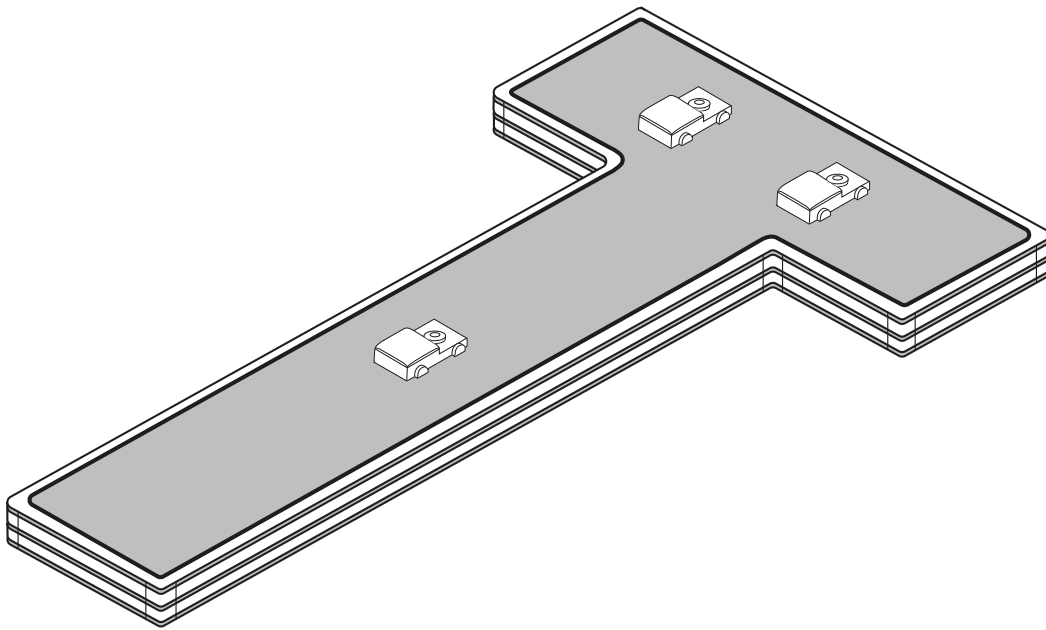
Notice!

Fixing hole wear

In case of fixing hole wear, we recommend to re-align the LED module through a 90 degrees rotation. In this way a new fixing hole can be made and thus ensuring a reliable electrical connection.
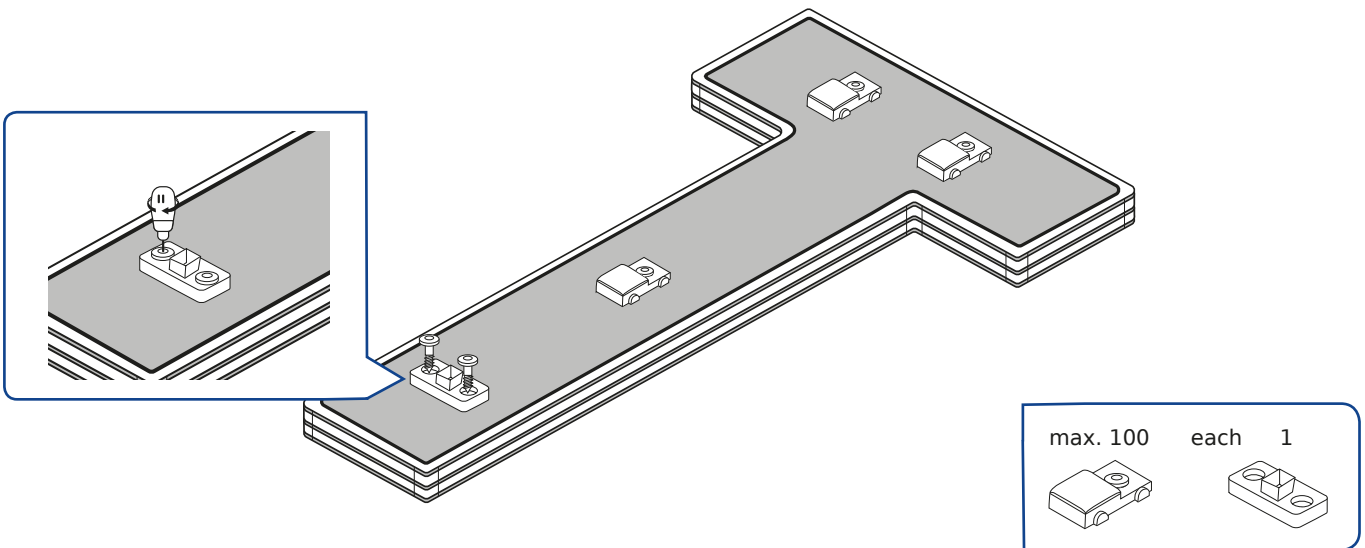
Step 5

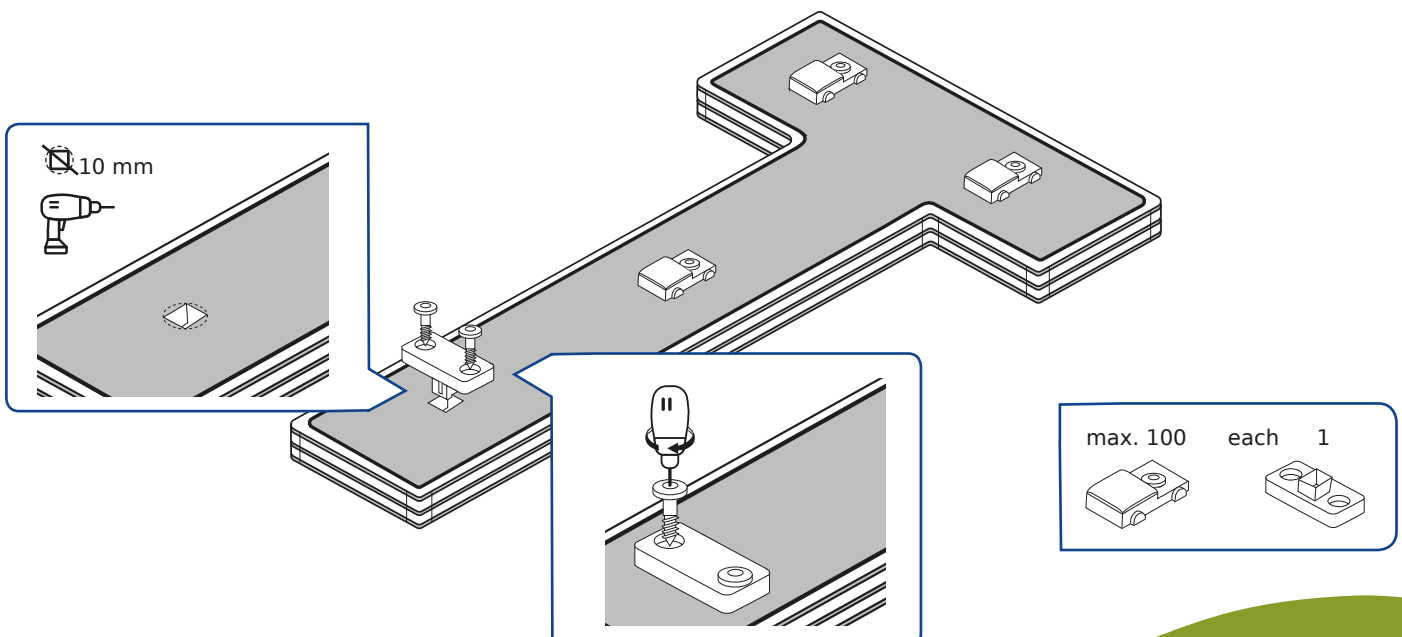Place the required amount of LED modules

Step 6

Variant #1: Using a PowerIN

In case cabling should enter on the frontside of the PowerBoard, use a PowerIN device.

max. 100   each   1

Variant #2: Using a PowerEX

In case cabling should enter on the backside of the PowerBoard, use a PowerEX device.

10 mm

max. 100   each   1

Variant with double-sided lighting

Stogger PowerBoard is suitable for double-sided lighting as standard

PowerBoard is aluminium laminated on both sides, hence it can be used for double-sided illumination as standard.

! Warning! Do not fix screws close to each other

Power IN >

< Power IN

Power IN >

< Power EX
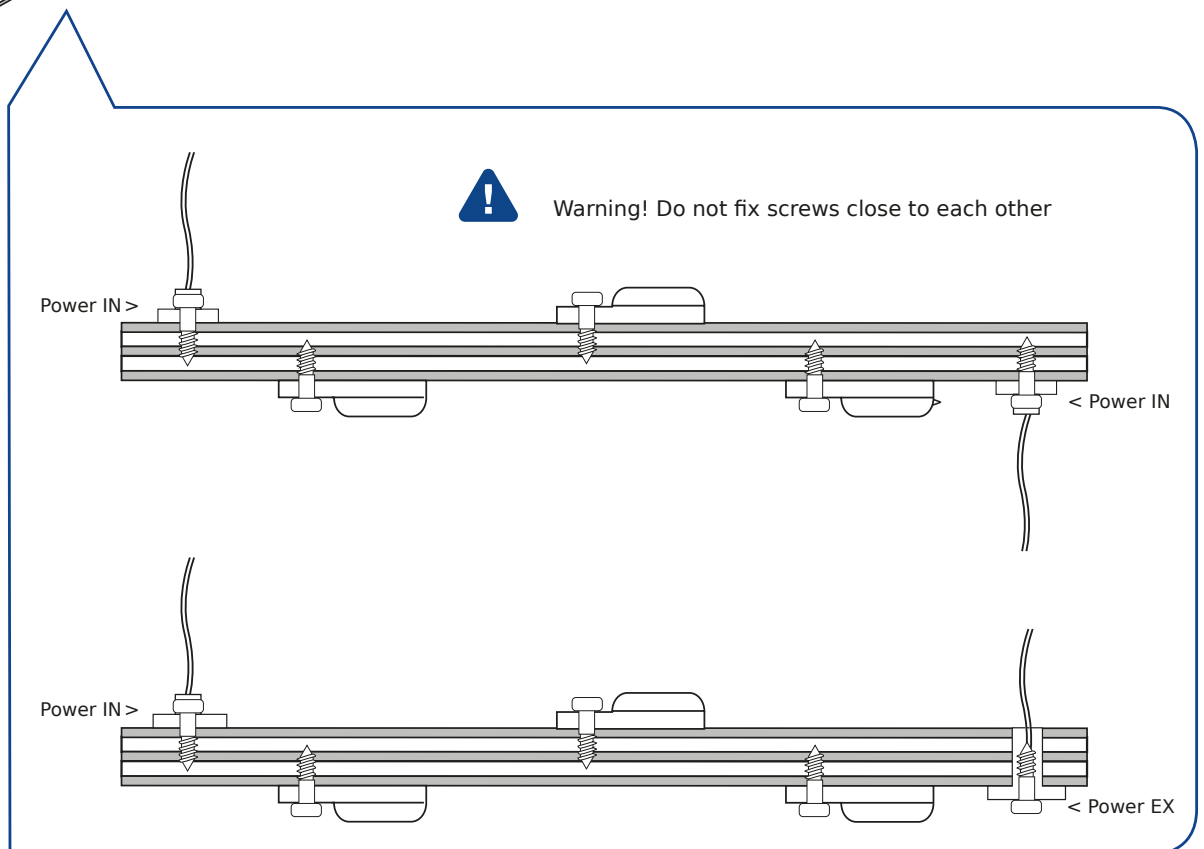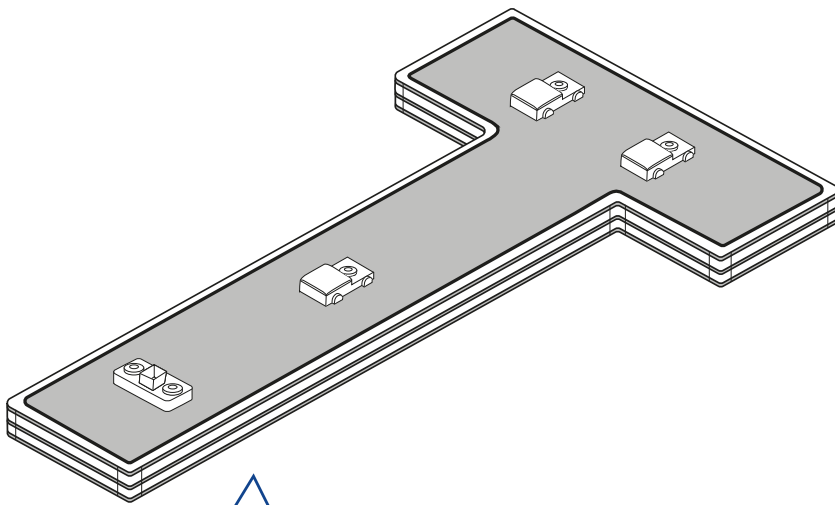
Step 7

Hook up the Stogger cable: connect one end to the PowerBoard, connect the other end to the SignEfuse. The Stogger SignEfuse keeps each output electronically limited to 2A which is equivalent to 100 Quantum LED modules.

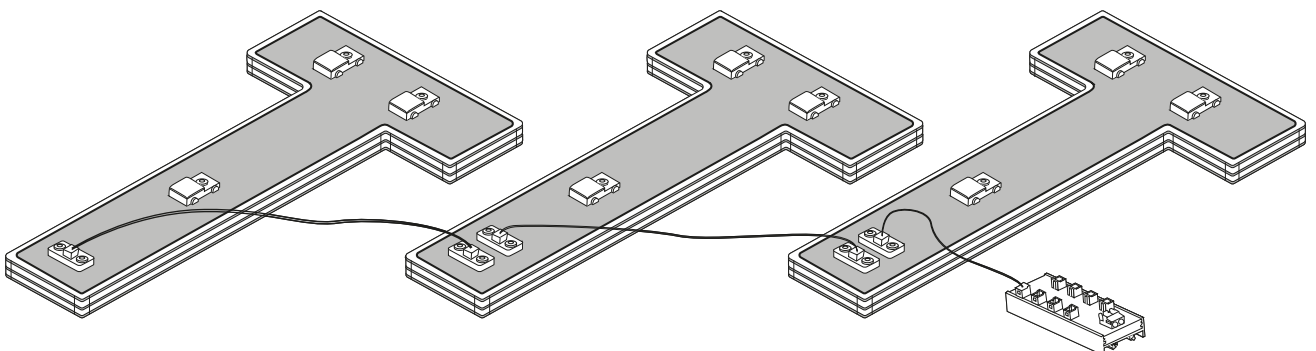
max. 100   each   output
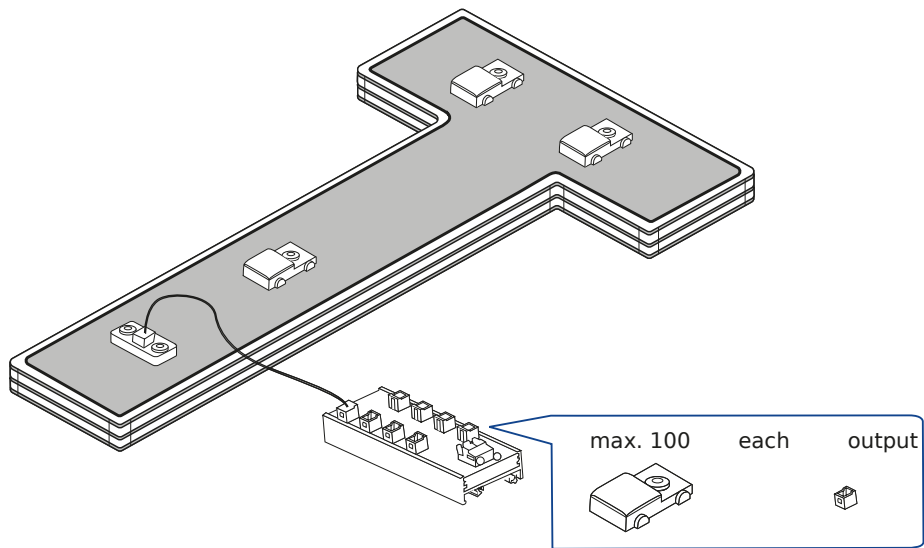
Step 8

It is possible to daisy-chain multiple PowerBoards

Variant #1:
Daisy-chaining multiple PowerBoards into one string is possible as long as the total number of LED modules is 100 or less.
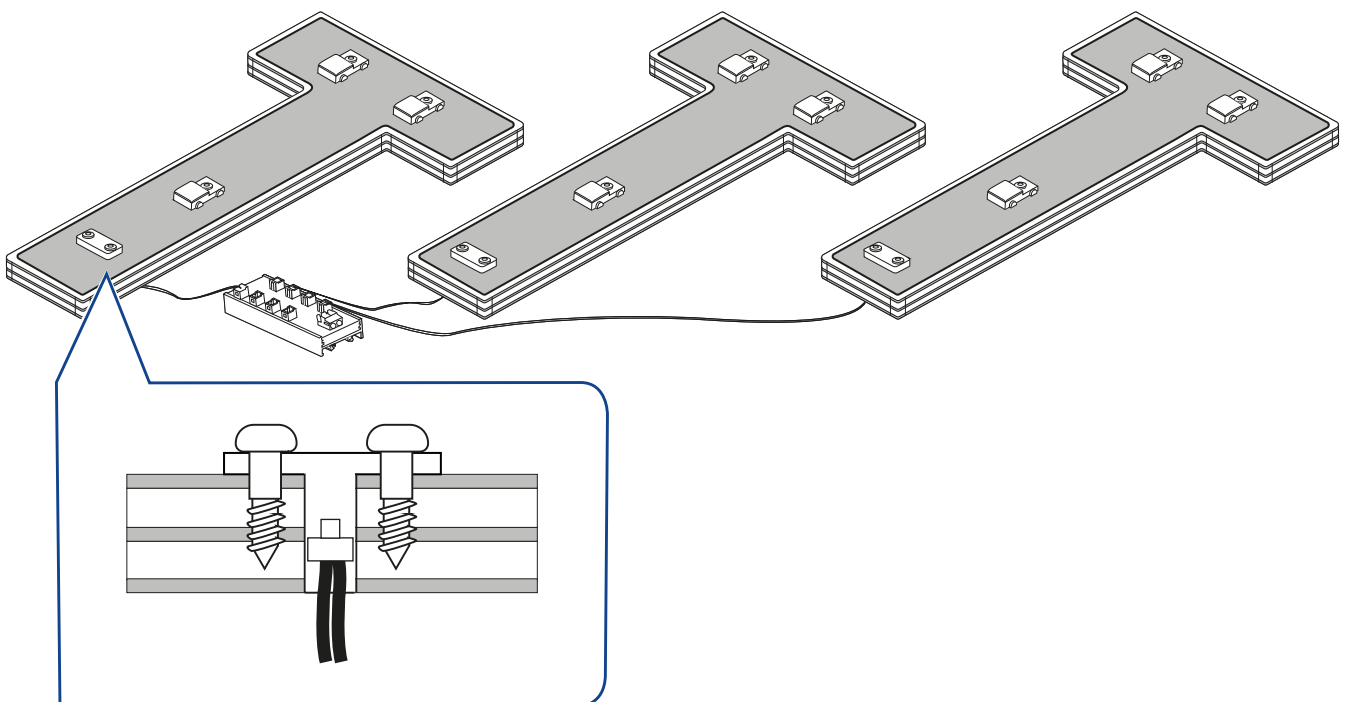
It is possible to connect individual PowerBoards with each other

Interconnecting individual PowerBoards is no problem,
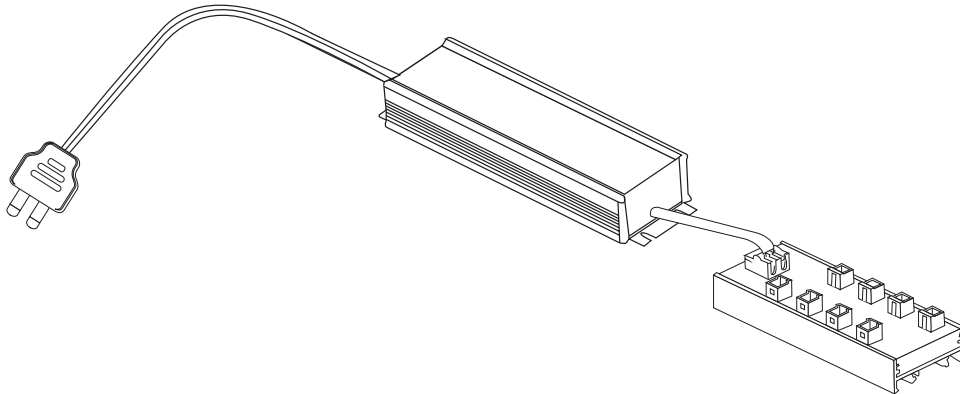as long as no more than 100 LEDs are attached to one string.
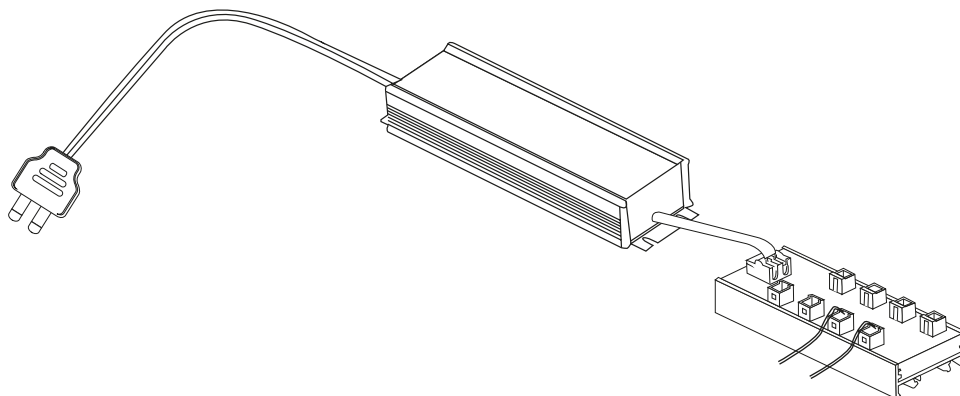
PowerIN:
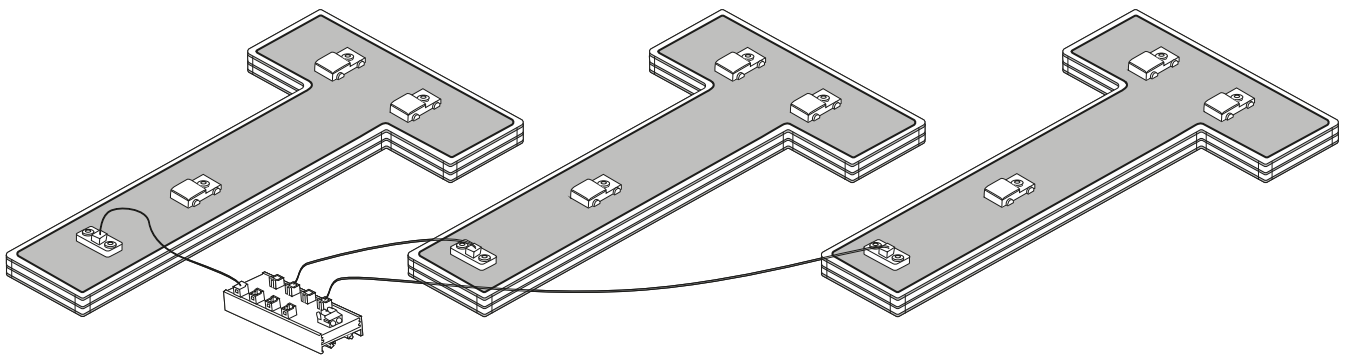
PowerEX:

Step 9

Power Supply Unit: mount a connector to the power cord and fix the output cable to the SignTerminal or SignEfuse
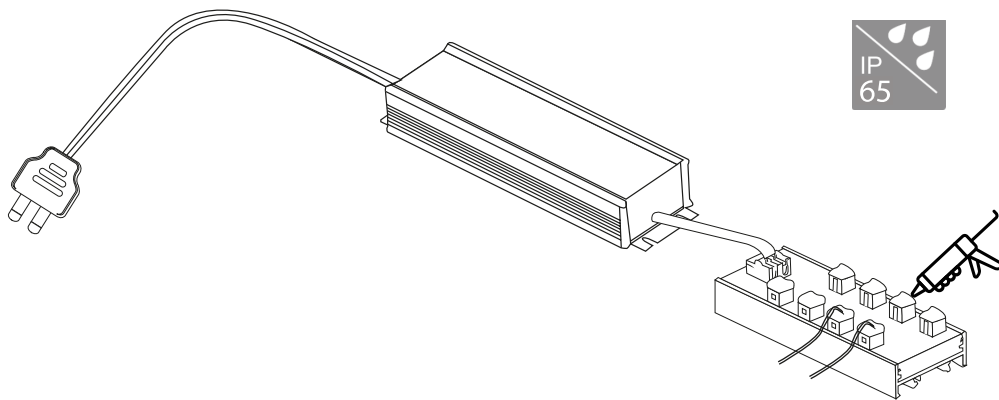
Step 10

Hook up Stogger cables between the PowerBoards and the SignTerminal or SignEfuse
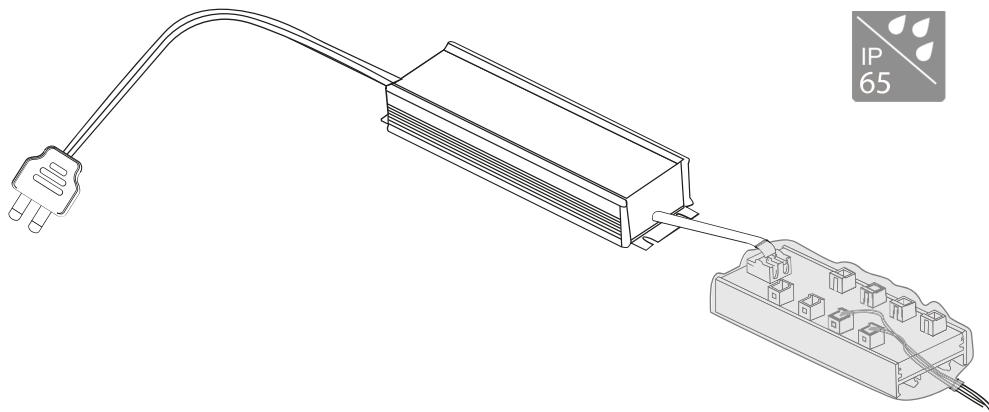
Step 11

Variant #1: Seal the connectors to prevent electrical short

For outdoor use, it is recommended to seal all electrical connectors using a protective sealant.

Variant #2: Place the SignTerminal or SignEfuse in an enclosure to prevent electrical short

For outdoor use, it is recommended to place the SignTerminal or SignEfuse in an enclosure. Note: make sure enough cooling is possible.
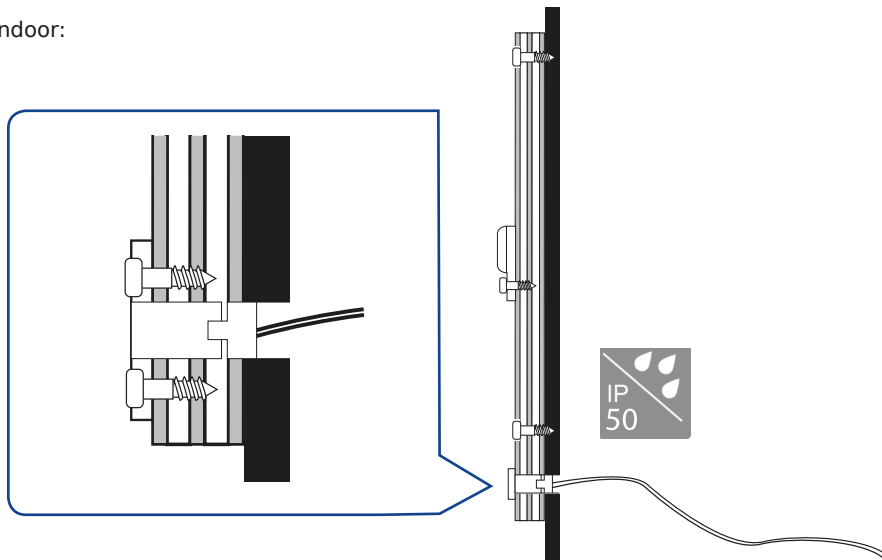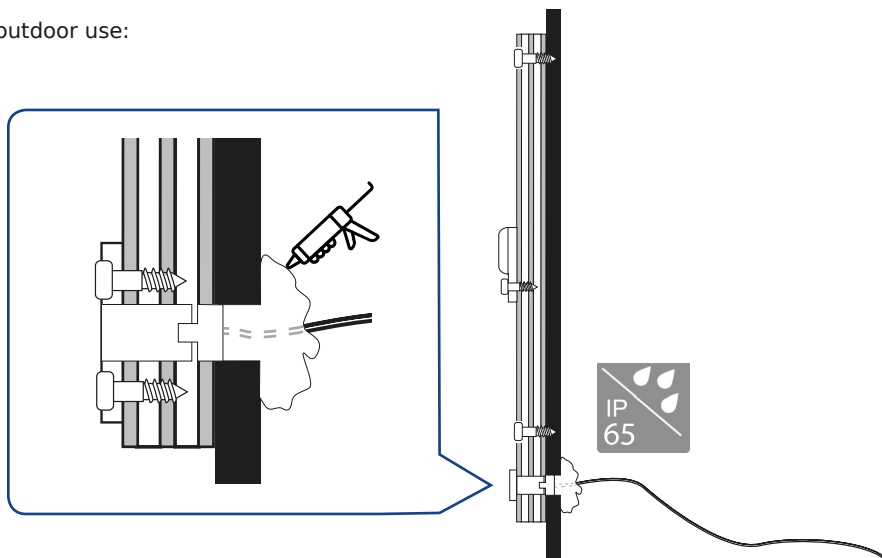
Notice!

Seal the backside of the PowerEX to prevent electric short

For outdoor use, it is recommended to seal the connectors using a protective sealant.

When used indoor:
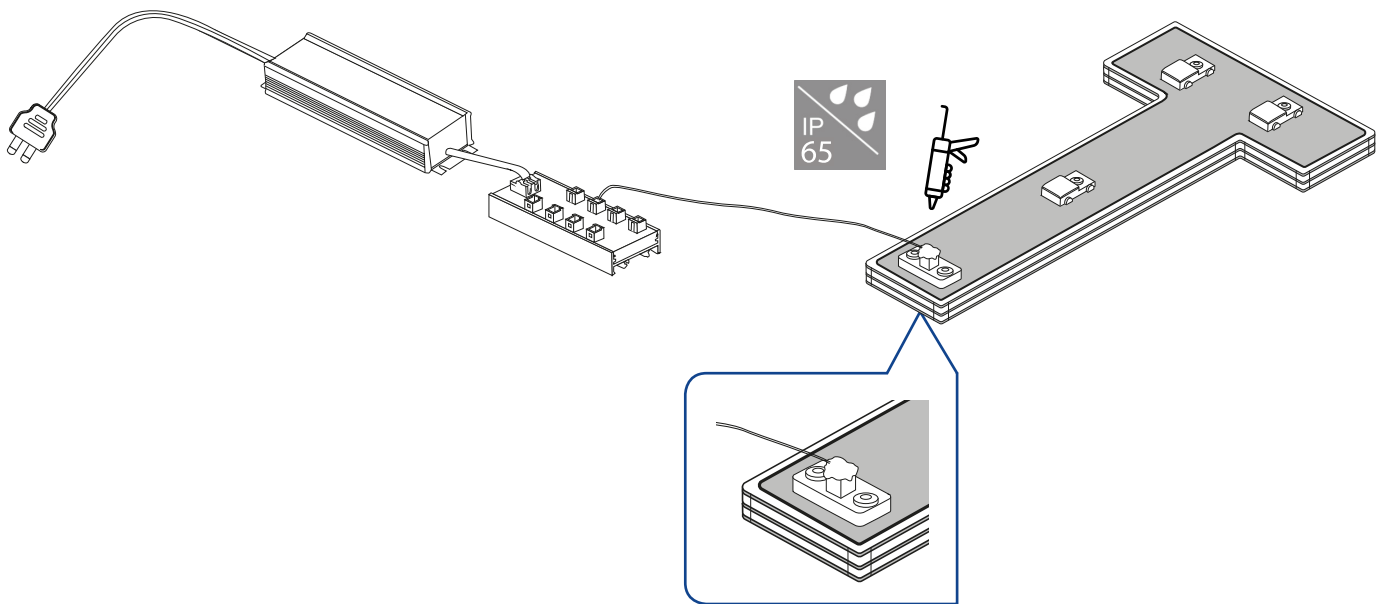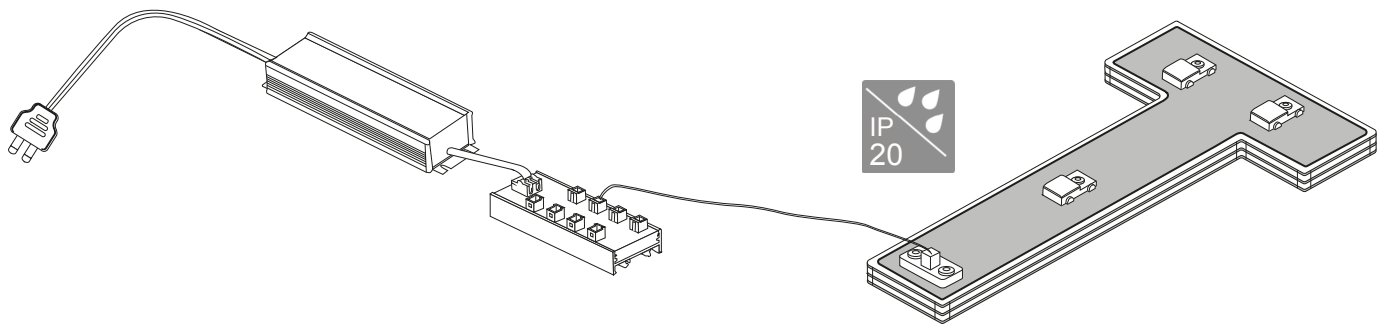
IP 50

Sealed - for outdoor use:

IP 65

Step 12

Connect everything

For indoor use, just hook up everything.

For outdoor use, it is recommended to seal off all connectors using a protective sealant.

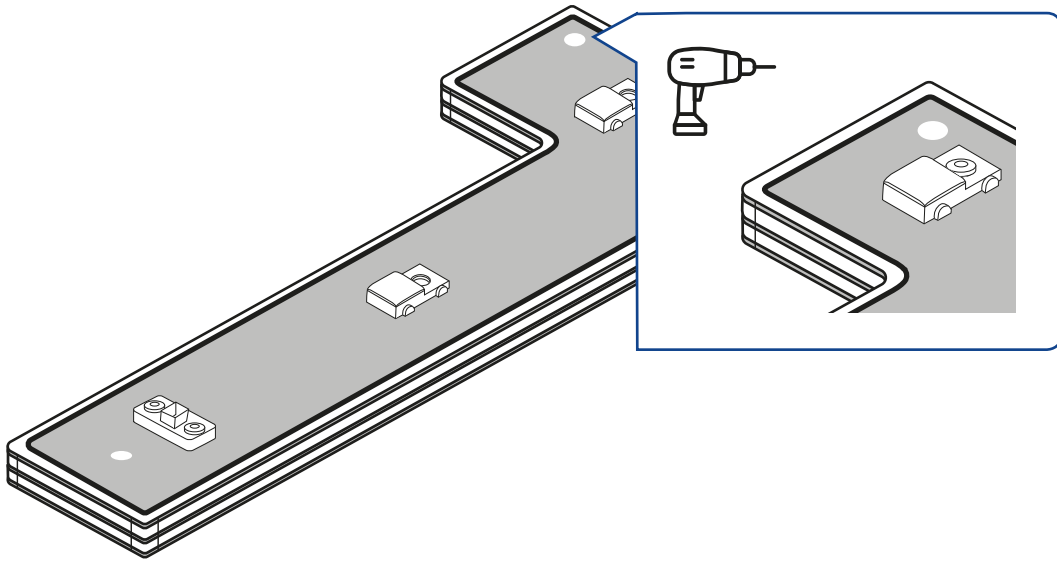⚠ Notice! Remove main power when (dis)connecting any component.

Electrical insulation of PowerBoard

Multiple electrical circuits can be made by seperating the top layer. This allows for easy and low cost realization of specific solutions, for example animated lighting.
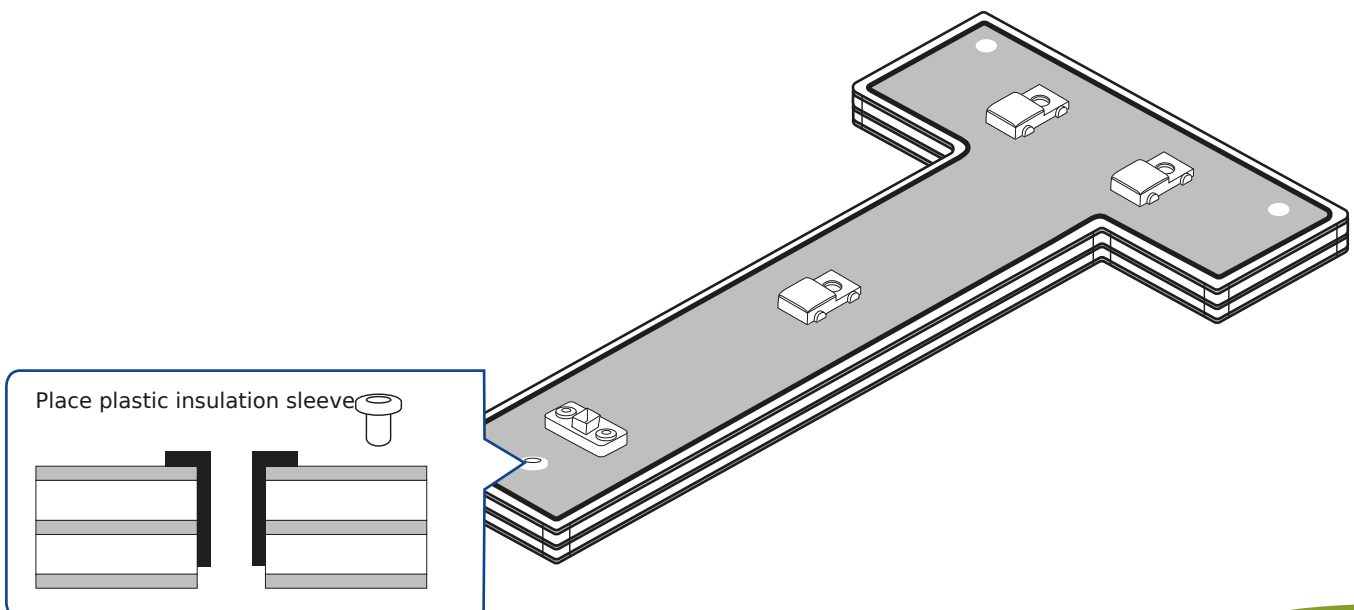

⚠ Keep the width above 1,5 mm
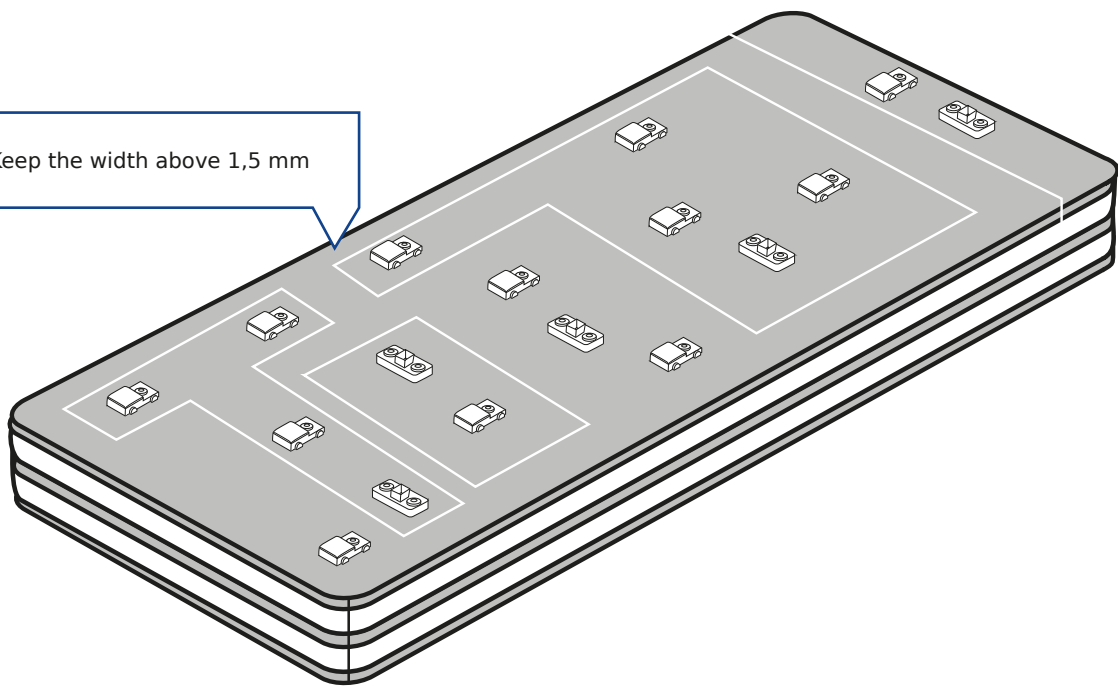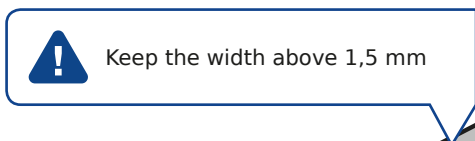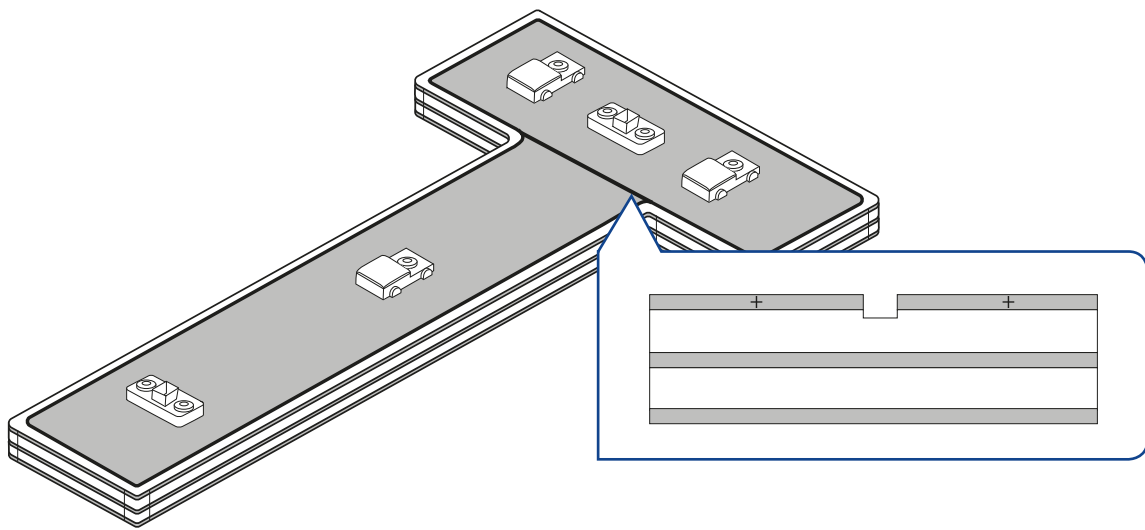
Step 13

Drill mounting holes

Step 14

Place plastic insulation sleeve
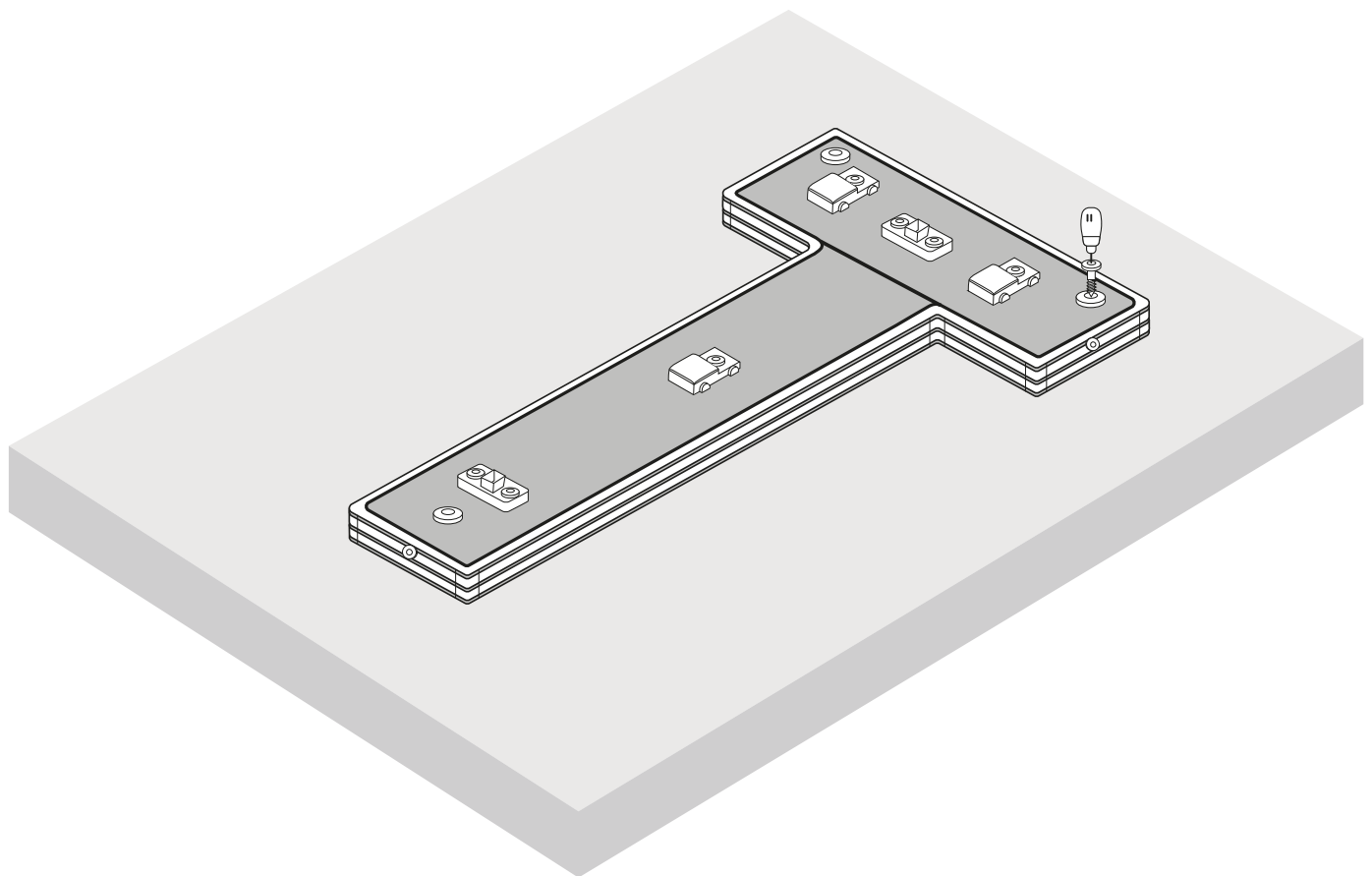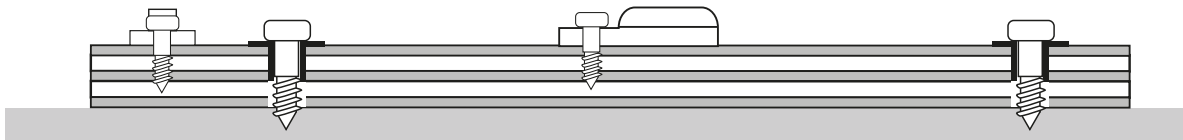
To prevent electrical short, use non-conductive screws or use plastic insulation sleeves when mounting the PowerBoard.
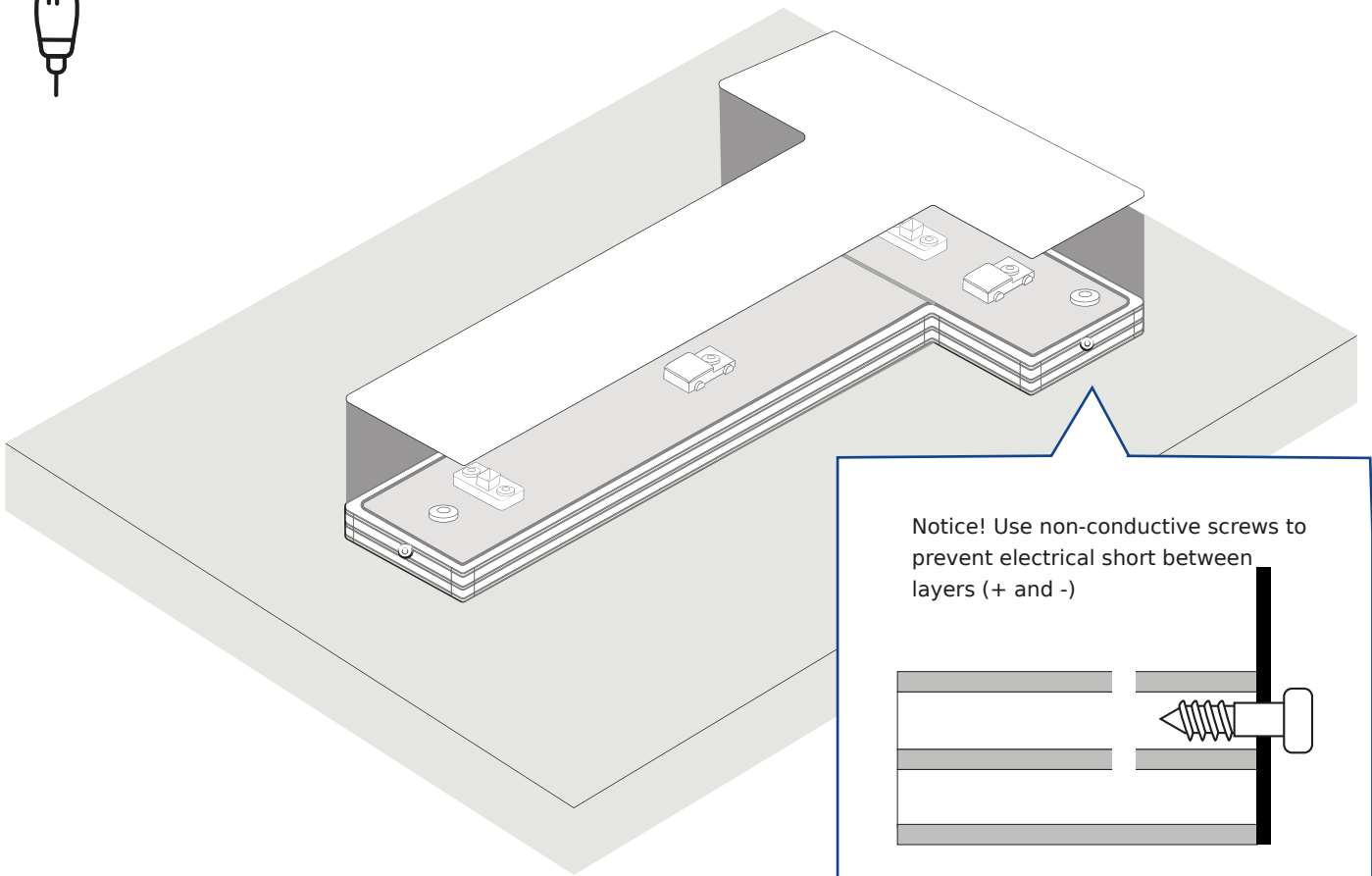

Place plastic insulation sleeve

Step 15

Place the fixing screw in the insulation sleeve and mount the PowerBoard.

Step 16

Notice! Use non-conductive screws to prevent electrical short between layers (+ and -)

Notice!

When mounting the PowerBoard in the channel letterbox make sure to prevent electrical shorts.
This risk applies when fixing the PowerBoard using conductive screws.
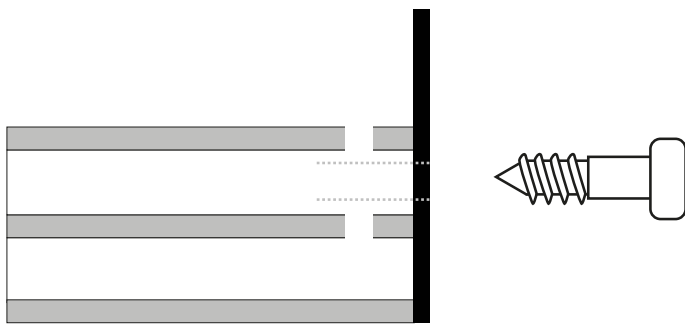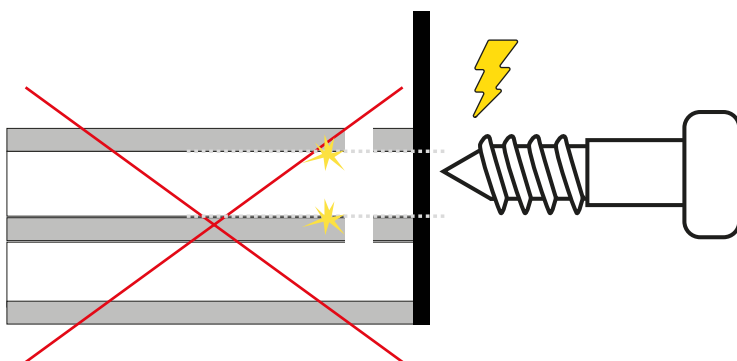
Step1
Drill hole

Step2
Fix screw
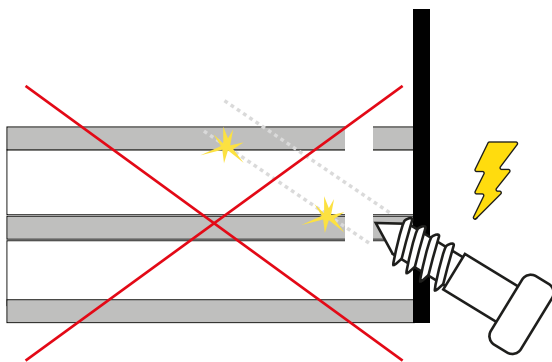
Notice!
Do not make electrical short

Notice!
Do not make electrical short

Questions?
Do not hesitate to contact us.
Thank you for choosing Stogger!