

PV Fact Sheet

01 | Terminal lugs for switch-disconnector

This fact sheet focuses on photovoltaic installations in solar parks worldwide. One essential part of such an installation is the PV combiner box. These boxes are used to combine several strings and to protect against overvoltage and feature many more functions.

Could you connect a terminal lug with a bigger hole for the connection on the switch-disconnector than the hole on the switch-disconnector?

The switch-disconnector it's the core of the combiner box, its main function is to protect the electrical network against failures that may come from the power supply. That's why it is important to know how to connect the power supply cables properly and follow the instructions of the user manual, to guarantee that the switch-disconnector works normally. Weidmüller combiner boxes' uses two different brands of switch-disconnector SOCOMEC and TELERGON:



Image 1. Reference of a SOCOMEC switch-disconnector



Image 2. Reference of a TELERGON switch-disconnector

To connect the terminal lugs from the power supply cables it will be needed a combination of different elements such as screws, washers, and nuts, those are normally supplied with the combiner box. For the size of the recommended terminal lugs, in SOCOMEC switch-disconnectors M10 terminal lugs are recommended, while in TELERGON switch-disconnectors M12 terminal lugs are recommended.

It is possible to connect a terminal lug with a bigger hole than the switch-disconnectors has, and it works with any brand that Weidmüller uses in its combiner boxes. For this it's important to remember the composition of the elements that will be needed for its properly connection: 1 screw, 2 washer and 1 nut.

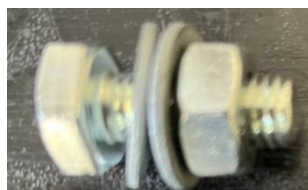


Image 3. Reference composition of the screw, nut and washers.

PV Fact Sheet

01 | Terminal lugs for switch-disconnector

The final connection will be as shown in the next image:

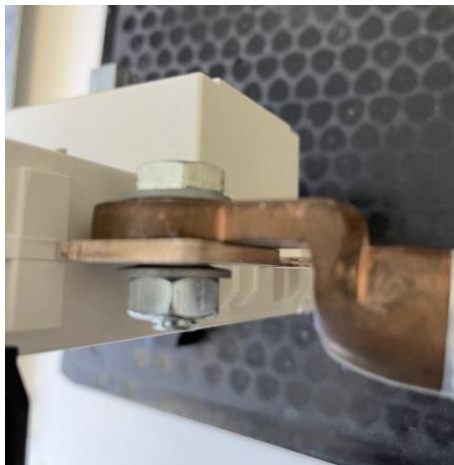


Image 4. Example of a properly done connection

Finally, another topic that it's important know is apply the correct torque to this connection. The correct tightening torque for this connection it depends by the brand of the switch-disconnector:

- SOCOMEC: The tightening torque can be between 20 – 26 N/m.
- Telergon: The tightening torque can be between 17,1 – 19,8 N/m.