



Application Guide

Three Phase String Inverters AC Wiring Methods

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The technical information and cross references of this document are subjected to a continuous further development and therefore the right to any changes as may be technically or legally required is reserved.

For further questions:

Chint Power Systems America Co.

700 International Parkway, Suite 102

Richardson, Tx 75081

Tel: 855-584-7168

Mail: AmericaSales@chintpower.com

In normal applications, CPS three phase string inverters (CPS14kW, CPS20kW, CPS23kW, CPS28kW) should use Copper wires for DC and AC connections. The terminals on the inverters are rated only for use with copper wires. The connection to the terminals in the wiring box of the inverter is recommended to be made through a pre-insulated ferrule. The accessory kit that comes with the inverters includes these ferrules.

Detailed and specific information can be found in the manual of each product.

In some applications though, aluminum wire may need to be connected on the AC side. For those applications, you have two options –

1. **Use a copper clad aluminum wire.** This is required as the terminals on the AC side are copper with tin plating. If you land an Aluminum wire directly on these terminals it can form a non-conducting alloy over time. It may also result in corrosion which is not covered under product warranty.
2. You can also **use a pre-insulated ferrule that is rated for Al wire to copper terminal connections.** Some of the acceptable types of ferrules are listed below –

Ferrule type 1 – Panduit Corp. ferrule C-TMFSD72-6-A41667

Ferrule type 2 – Tyco electronics ferrule_966292

Please keep in mind though that these special ferrules needed for Aluminum wire connections are not included in the accessory kit that comes with the inverter. The installer is responsible for procuring the right type and size of ferrule for such applications.

The acceptable wire gauges for each terminal are listed in the product specific manuals. Please refer to the electrical installation section in the product manual.