

/ Perfect Welding / Solar Energy / Perfect Charging



ONE THING IS CERTAIN,  
**PV SYSTEMS ARE SAFE.**

# LET'S TALK ABOUT SAFETY

Studies conducted by respected institutions have proven that photovoltaic systems are extremely safe. Of all the PV systems considered in a study by the German testing body TÜV Rheinland, only 0.016% exhibit fire or heat damage. If you look at these 0.016% more closely, the main causes are external factors such as animal bites or lightning strikes, and installation errors. With proper installation, a large part of the fires on the DC side can be prevented in advance.



## MAKING SAFE TECHNOLOGY EVEN SAFER

Fronius devices have safety mechanisms exactly where they make sense:

### Certified DC disconnect

This ensures that the inverter is disconnected from the solar modules in the event of a problem.

### Safety features on board

Safety features such as high-quality DC terminals or a DC overvoltage protection\* are already integrated in the inverter integrated and are not exposed to weather effects on the roof.

### Professional training for installers

Fronius offers professional training to support the safe and standard-compliant installation of a PV system.

### Maximum quality in development and production

Every inverter is subjected to extensive safety tests at Fronius before delivery in order to meet the high quality standards.

### Automated insulation monitoring

Even before the inverter starts working, it performs an insulation check of the PV generator. The inverter's automatic fault current monitoring is constantly active. If an abnormality is detected, the device immediately switches off and notifies the PV system owner via the Solar web monitoring platform.



\*DC surge protection is integrated on board of the Fronius Tauro. For SnapINverter and GEN24, the surge protection is available as a kit for retrofitting

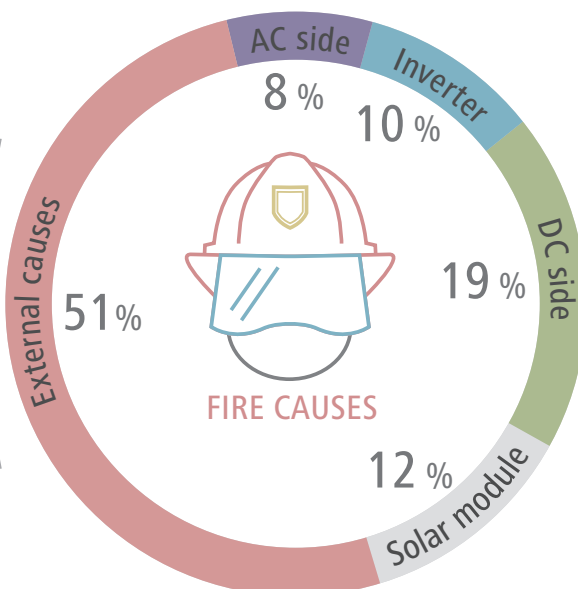
0.016 %  
fire or heat  
damage

# 99.9 %

## safety

PV systems do not pose any health, safety or environmental risk under normal operating conditions.

*Source: TÜV Rheinland, Energie & Umwelt GmbH Köln, 2015*

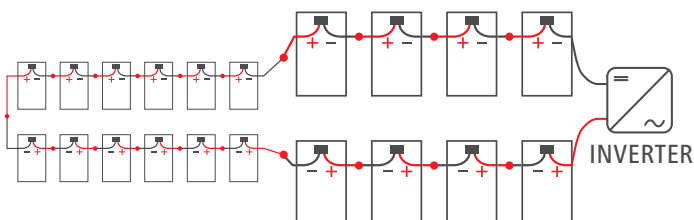


## BECAUSE LESS IS OFTEN MORE

The more complex a system, the higher the risk of a faulty installation.  
As a result, the risk of fire increases!

The Fronius string inverters bring together the high-tech power electronics centrally inside the device, allowing a streamlined system design and reducing the plug connections to a minimum.

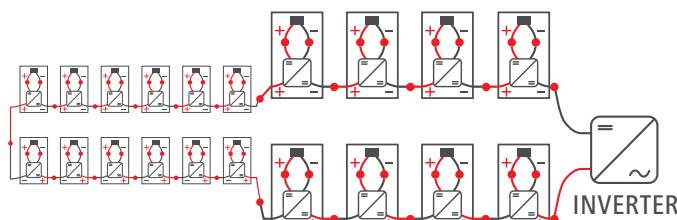
### SYSTEM WITH STRING INVERTER: 21 PLUG CONNECTIONS



● DC plug connection (connection points between male and female connectors)

Systems with DC optimisers sound promising, but triple the number of plug connections on the roof. If we look at a conventional 6 kWp PV system with 20 solar modules, 21 plug connections are needed on the string inverter system.

### SYSTEM WITH DC POWER OPTIMISERS: 61 PLUG CONNECTIONS



● DC plug connection (connection points between male and female connectors)

However, a system of the same size with a DC-optimised system requires 61 plug connections by comparison.

**The more contact points on the roof, the higher the risk of fire!**

# PROFESSIONAL TRAINING FOR EVEN GREATER SAFETY

With the Fronius Webinars, you can expand your knowledge from the comfort of your own home. Every day, Fronius trains electrical installers to ensure a competent and safe installation. After all, a good installer is the guardian angel of the PV system!

Why not join one of our exciting webinars? Our technicians are looking forward to welcoming you to one of our next sessions.

## HAVE YOU ALREADY HEARD ABOUT OUR NEW WEBINARS?

All the latest dates can be found on our website at:  
[www.fronius.com/pv-trainings/de](http://www.fronius.com/pv-trainings/de)

### Contact

If you have any questions, please do not hesitate to contact us:

Tel.: +43 7242 241-2980

E-Mail: [pv-training@fronius.com](mailto:pv-training@fronius.com)

[www.fronius.com/en/pv-trainings](http://www.fronius.com/en/pv-trainings)



### No time during the day?

Simply register for a webinar anyway and we'll send you the recording by e-mail.



“

*Professional installer training is the basis for a safe and standard-compliant installation!”*

*/ Bernhard Kossak,  
photovoltaic safety expert and member of  
the IEC standards committee*

/ Perfect Welding / Solar Energy / Perfect Charging

## THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 5,440 employees worldwide and 1,264 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

Further information about all Fronius products and our global sales partners and representatives can be found at [www.fronius.com](http://www.fronius.com)

Fronius India Private Limited  
Plot no BG-71/2/B,  
Pimpri Industrial Area,  
MIDC- Bhosari,  
Pune- 411026, India  
[pv-sales-india@fronius.com](mailto:pv-sales-india@fronius.com)  
[www.fronius.in](http://www.fronius.in)

Fronius Australia Pty Ltd.  
90-92 Lambeck Drive  
Tullamarine VIC 3043  
Australia  
[pv-sales-australia@fronius.com](mailto:pv-sales-australia@fronius.com)  
[www.fronius.com.au](http://www.fronius.com.au)

Fronius UK Limited  
Maidstone Road, Kingston  
Milton Keynes, MK10 0BD  
United Kingdom  
[pv-sales-uk@fronius.com](mailto:pv-sales-uk@fronius.com)  
[www.fronius.co.uk](http://www.fronius.co.uk)

Fronius International GmbH  
Froniusplatz 1  
4600 Wels  
Austria  
[pv-sales@fronius.com](mailto:pv-sales@fronius.com)  
[www.fronius.com](http://www.fronius.com)