



Innovons pour la sécurité électrique

**INSTALLATIONS DE PRODUCTION
PHOTOVOLTAÏQUE (IPPV)
DANS LE RÉSIDENTIEL
EN France**

Marc Maslowski

Second session

Expectations of members on the new fields of electricity Photovoltaic Production Installations in residential

Technical Standards:

- Safety requirements included in C15-100 standard:
 - specific requirements for special installations or places, Solar power installations (C15-712 standard)
- C15-712 standard: PV installations connected to the network, without batteries. It includes technical requirements of DC and AC parts of the installation and describes the type of electrical products which should be implemented.

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Expectations of members on the new fields of electricity Photovoltaic Production Installations in residential development of PV installations



Second session

Expectations of members on the new fields of electricity Photovoltaic Production Installations in residential

Requirements for electrical contractors:

- Mandatory qualification
 - Qualifelec, Qualit'ENR, Qualibat

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Expectations of members on the new fields of electricity Photovoltaic Production Installations in residential

Technical requirements concerning cables:

- Adapted to DC current
- Voltage rating > max. voltage
- temperature rating
- isolation

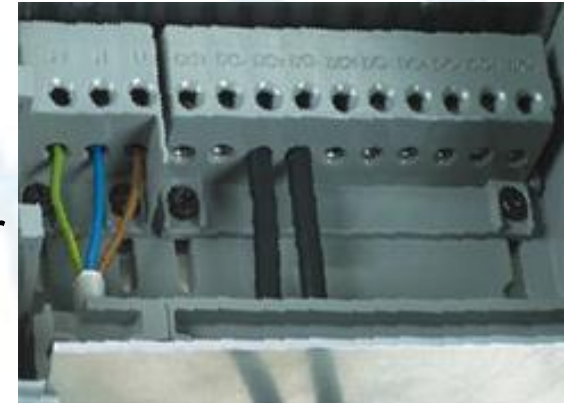
- requirements included in specific standards IEC 60332 and 60228

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Expectations of members on the new fields of electricity Photovoltaic Production Installations in residential

Main non-conforming items

- Connection of protective conductor from inverter
- Lack of equipotential bonding conductor



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Expectations of members on the new fields of electricity Photovoltaic Production Installations in residential

Main non-conforming items

- Overcurrent protection concerning DC cables
- Overcurrent protection concerning inverter circuit
- Direct contacts with live parts
- Emergency switch

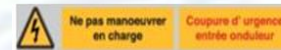


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Expectations of members on the new fields of electricity Photovoltaic Production Installations in residential

Main non-conforming items

- Implementation of specific information



- Conformity of decoupling system according VDE 0126-1-1

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2017 Statistics

- According insurance companies
 - 28400 claims
 - costs: 300 millions €
- According survey on claims
 - 70 % concerned sealing problems
 - 30% concerned electrical installations

Second session

Orientation 2 – Help from Fisuel members, best practices and local contacts

Photovoltaic Installations in residential premises in France

Point of vigilance



- Cohabitation between new technology, green energy and safety of the users
- Installation and connection of energy production of the installation shall not reduce the level of electrical safety of the house.
- Necessity of checking the conditions of the consumption electrical installation

Second session

Orientation 2 – Help from Fisuel members, best practices and local contacts

Photovoltaic Installations in residential premises in France

