

Oil-immersed transformers for photovoltaic systems

Minera PV

> Transformers for grid-connected photovoltaic systems

For four consecutive decades Schneider Electric range transformers is a synonym of quality, technological expertise and advancement. Superior in quality, they are based on the latest international standards and specifications. Schneider Electric assures to deliver Minera PV under quality guarantee and in the strict respect of the delivery deadline.



Recently Schneider Electric developed three-winding transformers specially designed for grid connected photovoltaic systems. These transformers are designed according to any single customer requirement regarding voltage, power, low losses, sound level, climate and many more. Special attention is always paid to people and environmental safety issues.

In large PV installations multiple inverters, paralleled to the PV arrays are directly connected to one or more medium-voltage utility transformers.

Schneider Electric's offer of three-winding transformers is an important cost-reduction effort without compromising any of the transformer functions.

The transformer's primary voltage is at the Low Voltage side and the secondary at the Medium Voltage side. The input voltages usually take values 270, 315 or 375 V and the Medium Voltage varies according to the feeding network voltage (i.e. 11, 20, 30 kV).

Present solar inverter power requires transformer rated power of 500 kVA, 1000 kVA or 1250 kVA.

> The guarantee of a top level transformer

The Minera PV transformers for photovoltaic systems are designed to meet the following requirements:

- EN 50464-1
- EN 60076-1 to 10

All our production sites of Minera PV transformers are ISO 9001 and/or ISO 14001 certified.



> Efficient and cost effective transformers, designed to satisfy your needs

Minera PV transformers are the ideal solution for photovoltaic systems. The technology used along with the appropriate sizing of the core, the framework and the high quality materials used result to the most suitable product in terms of quality, reliability, efficiency and cost effectiveness.

Three-Winding Transformer features:

- Galvanic isolation between the solar inverter and the feeding network
- Voltage step-up from the inverter output to the MV feeding network
- Wound magnetic core for :
 - standard or low losses
 - minimum sound levels and low inrush current
- High mechanical strength LV windings comprise of two windings made of aluminium or copper both connected in wye (Y) with or without neutral point (i.e. Dy11y11 or Dyn11yn11)
- Natural or air-forced cooling system
- Robust and oil tight mechanical construction with customized overall dimensions
- Insulating liquid may be mineral or vegetable oil
- High quality surface protection
- Protection and monitoring with devices that offer oil level indication, gas detection, pressure and temperature control.

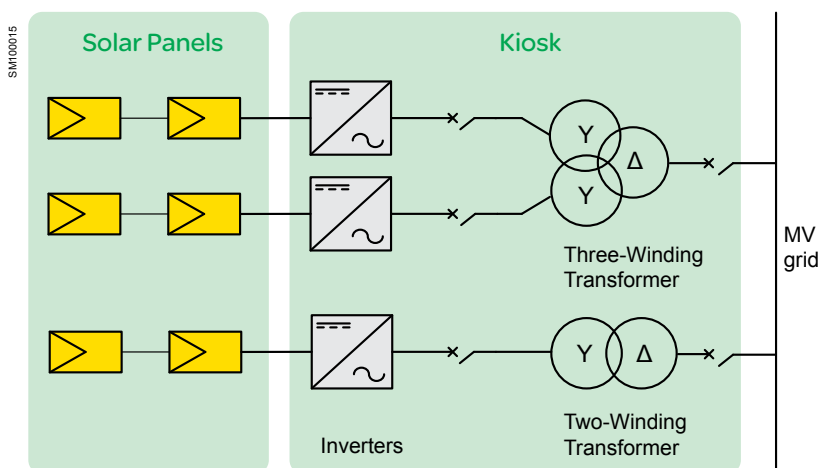


Transformer in PV box

Minera PV Transformers for photovoltaic systems

- Three-Winding
- Oil-immersed
- Voltages up to 36 kV
- Three phase 500, 1000, 1250 kVA *
- Standard or low losses
- Indoor or outdoor
- Sealed or conservator type

* other power ratings available upon customer's request



Typical diagram for Photovoltaic systems

> Always by your side

The Minera PV transformers for photovoltaic systems are designed and produced by experienced people who are at any time ready to provide solutions to any need that may occur.

The entire support mechanism behind Schneider Electric transformers has been well structured and tested effectively over the years and is able to provide direct and effective support.

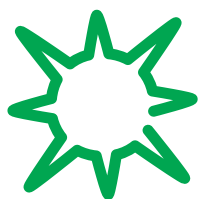
Environmental friendly

Built on the know-how of Schneider Electric

Accurate tests improves continuously quality

For any questions regarding Schneider Electric transformers, you may find detailed information visiting our website at:

www.schneider-electric.com



Make the most of your energySM

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As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

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