



DAELIM BELEFIC

Solar Energy Transformer Solution

2022

01 GENERAL INTRODUCTION

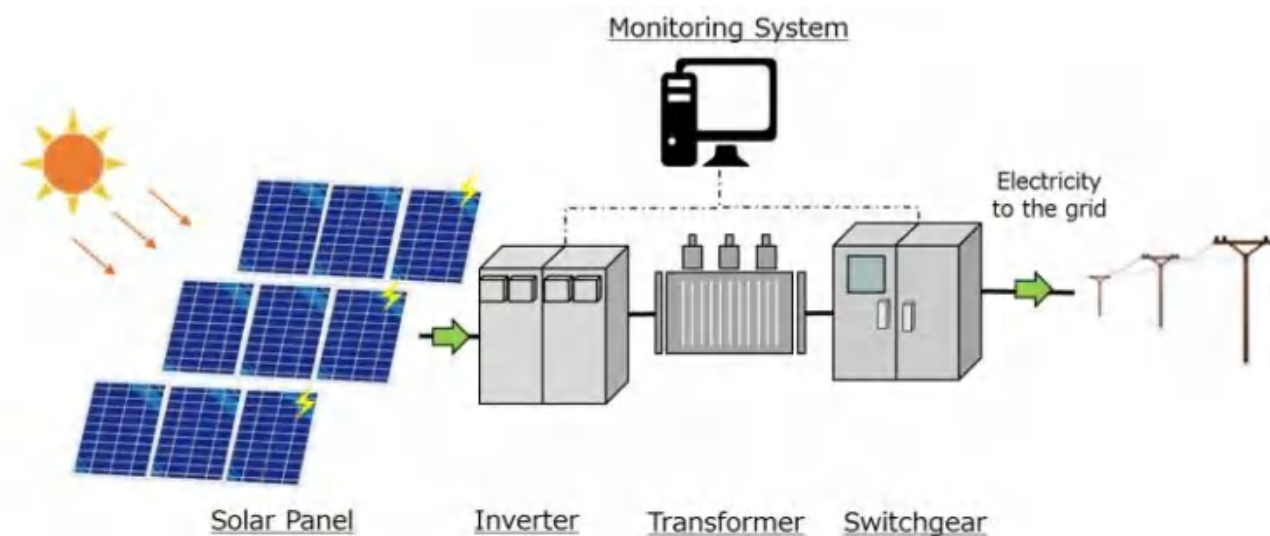




DAELIM Transformers for application in Distributed Photovoltaic (DPV) Power Generation Systems, aka, Solar Energy. In DPV Power Generation Systems electrical power is generated by converting solar radiation into direct current (DC) electricity using semiconductors that exhibit photovoltaic (PV) effect. Photovoltaic power generation employs solar panels comprising a string of photovoltaic modules (cells) containing a photovoltaic material, often made of silicon. The PV module can typically generate a combined dc voltage of up to 1100V (DC).

The generated DC voltage is then converted to a three-phase AC voltage using a three-phase inverter. The inverter is subsequently connected to a DPV system inverter transformer for distribution of alternating current (AC) energy.

From residential rooftops to commercial and industrial applications and utility-grade power plants, DAELIM's fit-for-purpose solar distribution transformers are specifically matched to different solar inverter sizes and their applications.





Core Features

1. FR3 dielectric fluid provides fire safety, equipment reliability and a projected lifespan well beyond that of a traditional mineral-oil transformer making it a key component in balance of system (BOS) distributed energy resources (DER) solutions
2. Custom optimized transformer designs for specific loading profiles, impedance requirements, and single or multiple inverter connections
3. Increased overload capability above nameplate without loss of insulation life
4. Fully complements solar/energy balance of system (BOS) solutions including DC and AC combiners, disconnects, fuses, breakers and AC recombiners, padmounted switchgear, pole-mounted reclosers, air switches, capacitors and a full offering of services



Transformer Selection Parameters:

1. Rated output kVA:

- *Based on inverter output ratings, load diagram, harmonic content, weather patterns and unusual service conditions*

2. Nominal Voltage:

- *Designed for Inverter Transformer to be compatible with Pulse voltage shape of inverters*

3. Winding connection diagram and vector group:

- *Inverter operation is not affected by vector group like Dy1, Dy5 or Dy11*
- *No Neutral required on Primary LV side*
- *Isolated neutral point on Secondary HV side transformer*

4. Electrostatic Shield (ES):

- *Recommended installation of ES between primary and secondary windings to minimize potential transfer of high frequency voltage disturbances (harmonics, pulses, surges) from primary to secondary*

- *Windings typically connected to inverter circuits are ungrounded*

DAELIM fully complies with C57.159 – 2016 IEEE Guide for application in DPV Power generation Systems.

02 PAD MOUNTED TRANSFORMER





Phases: Three

Frequency: 50 Hz, 60Hz

Standard: IEEE, CSA

Tank Type: Padmount

Base rating: 750 kVA through 10,000 KVA

High Voltage (HV): 2.5 kV through 35 kV

Low Voltage (LV): 208Y/120 to 25,000 V

Windings: Copper, Aluminum

*Solar-pads available in various configurations to accommodate typical inverter connections and performances





03

SUBSTATION TRANSFORMER



Phases: Three

Frequency: 50 Hz, 60Hz

Standard: IEEE, CSA

Base rating: 750 kVA through 10,000 KVA

High Voltage (HV): 2.5 kV through 35 kV

Low Voltage (LV): 208Y/120 to 25,000 V

Windings: Copper, Aluminum

*Solar-pads available in various configurations
to accommodate typical inverter
connections and performances









Advantage:

- 1.Experience in supplying multiple projects in the American Countries such as U.S. and Canada
- 2.Qualified with UL, cUL,CSA certificate, SGS test report,etc.
- 3.Complete after-sales service and installation teams in Canada, USA, etc.
- 4.Strong design ability for hgh efficiency, special ambient, low sound level,50 hz and 60 hz ,k-factor rating, etc
- 5.6-7 weeks production time



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ABOUT DAELIM



DAELIM

Features:

1 . The supplier is a manufacturer?

DAELIM: We are a professional IEC, ANSI/ IEEE, CSA and AS standard transformer manufacturers. We accept any third party to audit factory.



6 . They have experience in my country?

DAELIM: We are exported more than 30 countries around the world. And we are happy share our project case for our customer reference.

2 . They can provide faster delivery time than our previously supplier?

DAELIM: For normal transformers, our standard production time is 4-6 weeks, for customized transformer, our fastest production time is 6-8 weeks.



3 . They can meet the T&D or products requirements?

DAELIM: We have a professional tech and production team. Our team can do transformer customized design and production as per customer requests.

4 . They can meet our countries standard?

DAELIM: Our engineering team consists of many experienced experts. They are very professional and familiar with international standards.

5 . How about their transformers price?

DAELIM: Because our factory located in the transformer base in China, we have well raw material supply chain. So we can always provide the competitive price to our customers.

DAELIM SOLUTIONS:

Understanding our customer needs allows us to make critical must-be-made decisions directly related to their needs.

1. Fast submit the drawing

In order not to affect the delivery time, DAELIM engineer team delivered the drawings in batches . 60 % of the drawings were delivered within two weeks and production was arranged in time . The remaining drawings were successfully delivered in the remaining two weeks.

2. Make a good production plan

DAELIM's management pay much attention to the needs of customers, and has communicated with the production team and our supplier team for many times. The workers worked overtime to ensure the delivery of the customer requests.

3. 100% meet the standard requirements

Our team of engineers studied the CSA Standard carefully. Because they are based on IEEE standard, DAELIM designed and produced them according to it. For the existing technical problems or difference, our team has carried out hundreds of e-mail and telephone communication with customers.

DAELIM Introduction



1. **R&D Capabilities:**

They have strong R&D team and they have more than 20 years of transformer design experience and are familiar with lots of international transformer standards, such as IEC, IEEE/ ANSI, CSA, etc. The technical team of DAELIM are experts, electrical engineers, CAD first-class draftsmen, etc. They also use the latest technology, machines and other modern facilities to produce transformers, but meanwhile DAELIM transformers are made of qualified standard materials which meets the standards of world-renowned suppliers through international procurement as well.

1. **Quality Control:**

Quality is one of the core values of DAELIM. FAT, Type and third party inspection tests are provided for quality and they tend to provide the best to its clients that's why they strictly implement the ISO 9001 quality management system.

2. **Company Certifications:**

ISO 9001:2008 CSA certification CESI certification CNAS certification SGS certification

1. **Company Certifications:**

The Daelim team is full of experts and professionals, this helps them to solve the customers' problems quickly. All the DAELIM team has systematic training and is committed to continuous improvement by the quality guidelines and practices. Their dedicated customer service, product innovation, engineering excellence and strong social & environmental responsibility sense have made them to become a valued & trusted power solutions partner for the global electric industry.



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Thank you

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