



## **Danfoss Training Catalogue**

The training catalogue contains information on Danfoss Solar Inverters' training sessions and the conditions for participation

**We look forward to seeing you**



## **Preface**

At Danfoss Solar Inverters we are committed to offering world-class inverters to our customers, the quality of which is based on advanced technology and professional expertise. The service offers and work processes surrounding the core products are similarly important to us and these high-priority activities are a significant element of our business.

We are determined to support the general players of the PV industry, who must be able to navigate in a rapidly changing environment with new technologies and new attractive products creating higher system yield. In order to achieve market success we believe that it is of the utmost importance to be well informed and we therefore offer a range of seminars to enhance the participants' knowledge of our products and services.

Our goal is to endow the participants with an amplified understanding of the general technical and commercial aspects relating to our products, as well as provide an understanding of how to design optimal layouts. To further strengthen the technical understanding we offer a dedicated installation seminar which covers our entire product range.

We look forward to seeing you at our seminars.

Danfoss Solar Inverters A/S  
Gert Taul Petersen  
Director, Sales and Marketing



## **Training Concept**

The following pages in this training catalogue provide information on Danfoss Solar Inverters' training sessions and the conditions for participation. At our training facility located at Danfoss GmbH in Offenbach, Germany, Danfoss Solar Inverters' committed training team will provide you and other participants from the PV industry with important knowledge of our products and services. We offer four different seminars, which are briefly described on the following pages. The seminars are all of 1-day duration and are built on a combination of presentations, product demonstrations, discussions, and hands-on assignments.

### **Seminars**

- Introduction to Danfoss Solar Inverters' Products and Services and Market Trends Seminar
- Danfoss Solar Inverters Product Range Seminar
- PV System Configuration Seminar
- Installation Seminar
- Webinars

Please contact your Key Account Manager at Danfoss Solar Inverters or Sales Engineer Johannes Stumpf on ph. +45 74881300, e-mail: [solar-inverter@danfoss.com](mailto:solar-inverter@danfoss.com) for information on the next available seminar or visit our website for further information:

- [www.solar-inverters.danfoss.com](http://www.solar-inverters.danfoss.com)

### **Customer training sessions on request**

It might be of interest to you to receive training solely with participants from your company and/or with your customers. We arrange specific customer training sessions on request either at our training facility at Danfoss GmbH in Offenbach, Germany, at your company or at a third location. The seminars are available in German and English.



## Introduction to Danfoss Solar Inverters' Products and Services and Market Trends Seminar

The seminar is of interest to all, who wish to acquire an overview of Danfoss Solar Inverters and our products and services.

The seminar is split into two main parts. In the morning the seminar participants will be introduced to Danfoss Solar Inverters and the Danfoss Group and to our products and services. During the afternoon the seminar focuses on PV market trends. As we believe it is important to be well informed about market developments we have engaged interesting speakers representing the PV industry, who will present and discuss issues relating to market trends.

Speakers will be announced closer to the date of the seminar. Please see our website for further information.

### Content of the seminar:

- Introduction to Danfoss Solar Inverters and the Danfoss Group
- Overview of Danfoss Solar Inverters' product portfolio
- Overview of Danfoss Solar Inverters' service offers – service, customer support, training and marketing
- Information on product news
- Trends in the PV market

Seminar type	Target group	Prerequisites	Location	Time	Price
Open seminar	Sales, Application and product management, Technical service, Technical consultants, Investors, Installers	Basic PV knowledge	Danfoss Offenbach	9:30 am – 4.30 pm	50 EUR per participant
Closed seminar on request			Danfoss Offenbach	9:30 am – 4.30 pm	1000 EUR per group (max. 25 persons)
Closed seminar on request*			At your company or other location	To be discussed	500 EUR per group (max. 25 persons)

\* Only introduction to DSI products and services.



## Danfoss Solar Inverters Product Range Seminar

The product range seminar will elaborate on the product overview from the introduction seminar and will provide the participants with information on technical details and special features of Danfoss Solar Inverters' 3-phased and 1-phased inverters as well as our communication and monitoring products.

### Content of the seminar:

- Brief introduction to Danfoss Solar Inverters and the Danfoss Group
- 1-phased inverter products – technical details, special features and typical applications
- 3-phased inverter products – technical details, special features and typical applications
- Communication and monitoring products – technical details, special features and typical applications

Seminar type	Target group	Prerequisites	Location	Time	Price
Open seminar	Installers, Sales, Application and product management,	Basic PV knowledge	Danfoss Offenbach	9.30 am – 4.30 pm	50 EUR per participant
Closed seminar on request	Technical service,		Danfoss Offenbach	9.30 am – 4.30 pm	1000 EUR per group (max. 25 persons)
Closed seminar on request	Technical consultants		At your company or other location	To be discussed	1000 EUR per group (max. 25 persons)



## PV System Configuration Seminar

The PV system configuration seminar aims to make the participants able to identify which system layouts are the most profitable given various locations and conditions. In particular attention is paid to the identification of the optimum combination of modules and inverters as well as the layout of communication systems. The last part of the seminar focuses on how to design large system layouts that use our 3-phased string inverters.

### Content of the seminar:

- Brief introduction to Danfoss Solar Inverters and the Danfoss Group
- PV unit configuration - Module types and their constraints, MPPT area, power/ current/ temperature considerations, influence of location/ sub structure/ orientation
- Communication and monitoring configuration - Data location, communication ways, cabling methods
- Configuration of large installations with string inverters

Seminar type	Target group	Prerequisites	Location	Time	Price
Open seminar	Installers, Sales, Application and product management, Technical service, Technical consultants	Basic PV knowledge	Danfoss Offenbach	9.30 am – 4.30 pm	50 EUR per participant
Closed seminar on request			Danfoss Offenbach	9.30 am – 4.30 pm	1000 EUR per group (max. 25 persons)
Closed seminar on request			At your company or other location	To be discussed	1000 EUR per group (max. 25 persons)



## Installation Seminar

At the installation seminar the participants will learn to install Danfoss Solar Inverter products in standard applications and carry out basic troubleshooting. Furthermore, the participants will be introduced to Danfoss Solar Inverters' service organisation. The seminar is based on hands-on assignments in our training lab, where participants will work in small groups. It is a requirement that participants have a technical (electrical) background to be allowed to participate in the installation seminar.

### Content of the seminar:

- Installation of 3-phased and 1-phased inverters - mounting place, AC wiring, DC wiring and parallel/individual set-up, wiring check, initial start-up, installation check list, basic troubleshooting
- Installation of communication and monitoring products - mounting place, inverter interface, communication and sensor wiring, wiring check, initial start-up, setting up communication and options, installation check list, basic troubleshooting
- Information on service organisation - telephone support, exchange and field service and warranties

Seminar type	Target group	Prerequisites	Location	Time	Price
Open seminar	Technical service, Installers	Basic PV knowledge. Knowledge on Danfoss Solar Inverters' products. Electrical background / education	Danfoss Offenbach	8.30 am – 5.30 pm	50 EUR per participant
Closed seminar on request			Danfoss Offenbach	8.30 am – 5.30 pm	1000 EUR per group (max. 10 persons)



## **Webinars**

To complement the training sessions described in the previous pages, Danfoss Solar Inverters also offers on-line courses. Our live webinars are short courses of approximately 60 minutes' duration and focus among other things on:

- Basic information on PV applications
- Danfoss Solar Inverters - company and product overview
- Product updates and product news

These webinars are relevant to all who wish to obtain a brief introduction to PV applications, to Danfoss Solar Inverters and our products. It is also relevant to former participants of our other seminars, who wish to have a brush up on specific subjects. As the webinars are running live, it is possible to interact with the instructors during the course. The webinars are free of charge and participants will receive an e-mail with a link for the webinar subsequent to enrolment.

For the webinar schedules, please see our website for further information:

- [www.solar-inverters.danfoss.com](http://www.solar-inverters.danfoss.com)

Here you will also find the enrolment form for the webinars.

## Conditions and Practical Information

### Seminar enrolment

You must enrol for our seminars no later than 18 days before the chosen seminar. You can enrol for the seminars using the form at:

- [www.solar-inverters.danfoss.com](http://www.solar-inverters.danfoss.com)

Please return this form to us by e-mail: [solar-inverter.training@danfoss.com](mailto:solar-inverter.training@danfoss.com) or by fax +45 74881802.

Cancellations from participants must happen no later than 14 days before the start of the seminar either by e-mail, mail, fax or telephone.

Seminar registration is based on first come, first served principle. If fewer than 15 participants (8 participants for installation seminar) have registered for an open seminar, we reserve the right to cancel the seminar up to 14 days prior to the seminar. If so, we will inform you of other seminar dates, and your seminar fee will be refunded.

Participants will receive training confirmation, no later than 10 days before the beginning of the seminar.

### Seminar fee

The seminar fees are stated under the seminar descriptions. To participate in a seminar it is a precondition that the seminar fee has been paid. Payment is due no later than 14 days prior to commencement of the seminar. Compensation will under no circumstances be granted in the unfortunate event a seminar has to be cancelled; however, already paid seminar fees will be refunded.

### Travel and accommodation expenses

Travel and accommodation expenses are not included in the seminar fee and must be covered at participant's own expense. Lunch, refreshments and beverages during the seminar are included in the seminar fee.

### Hotel room reservation

Danfoss Solar Inverters can assist you by booking a hotel room. The cost for a hotel room is in the price range of 70-110 EUR per room. Please inform us if you need a hotel room. You will receive information on the reservation together with your seminar confirmation

### Alterations

Danfoss Solar Inverters reserve the right to make the following alterations:

- Changes in seminar content, to ensure the content is always up-to-date regarding product changes, etc.

### Safety instructions

The seminar participants are obligated to follow the safety instructions provided by the instructors, as well as abide by the emergency procedure of the training lab when participating in practical seminars.

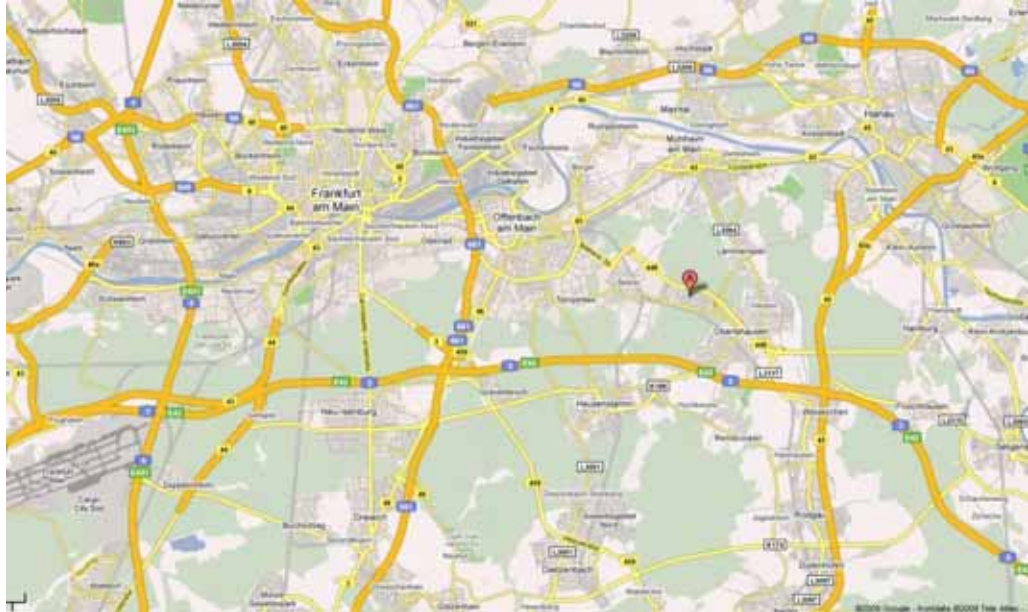
Participants in the installation seminar are required to have a technical (electrical) background to be allowed to participate.

For further information, please contact  
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Fax: +45 74881802  
Website: www.solar-inverters.danfoss.com

## Itinerary

### *Directions of how to find Danfoss GmbH*

*Carl-Legien-Straße 8  
63073 Offenbach / Main*



## Danfoss Solar Inverters - Training Sessions

Date	Seminar ID	Seminar	Language	Location
13.07.2009	20090713	Introduction to Danfoss Solar Inverters' products and services/ Market trends seminar	German	Danfoss Offenbach
14.07.2009	20090714	Danfoss Solar Inverters product range seminar	German	Danfoss Offenbach
15.07.2009	20090715	PV system configuration seminar	German	Danfoss Offenbach
31.08.2009	20090831	Introduction to Danfoss Solar Inverters' products and services/ Market trends seminar	German	Danfoss Offenbach
01.09.2009	20090901	Danfoss Solar Inverters product range seminar	German	Danfoss Offenbach
02.09.2009	20090902	PV system configuration seminar	German	Danfoss Offenbach
03.09.2009	20090903	Installation seminar	German	Danfoss Offenbach
04.09.2009	20090904	Installation seminar	German	Danfoss Offenbach
28.09.2009	20090928	Introduction to Danfoss Solar Inverters' products and services/ Market trends seminar	German	Danfoss Offenbach
29.09.2009	20090929	Danfoss Solar Inverters product range seminar	German	Danfoss Offenbach
30.09.2009	20090930	PV system configuration seminar	German	Danfoss Offenbach
01.10.2009	20091001	Installation seminar	German	Danfoss Offenbach
02.10.2009	20091002	Installation seminar	German	Danfoss Offenbach
12.10.2009	20091012	Introduction to Danfoss Solar Inverters' products and services/ Market trends seminar	German	Danfoss Offenbach
13.10.2009	20091013	Danfoss Solar Inverters product range seminar	German	Danfoss Offenbach
14.10.2009	20091014	PV system configuration seminar	German	Danfoss Offenbach
15.10.2009	20091015	Installation seminar	German	Danfoss Offenbach
16.10.2009	20091016	Installation seminar	German	Danfoss Offenbach
On request*	-	Introduction to Danfoss Solar Inverters' products and services/ Market trends seminar	German/English	At your company or other location
On request*	-	Danfoss Solar Inverters product range seminar	German/English	At your company or other location
On request*	-	PV system configuration seminar	German/English	At your company or other location

\*Closed seminar

### Enrolment

The enrolment for our open seminar is possible via our website: [www.solar-inverters.danfoss.com](http://www.solar-inverters.danfoss.com)  
If your company wish to book a closed seminar, please call your contact person at Danfoss Solar Inverters or Johannes Stumpf +45 74881300.



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