



TripleLynx Inverter Range

Three phase – 10, 12.5 and 15 kW

Intelligent Inverter Solutions

- . **Unique versatility**
- . **Optimum energy output**
- . **Integrated communication**
- . **Safe and easy to install and service**

Our range of 3-phase inverters covers 10, 12.5 and 15 kW and comes in an IP54 cabinet weighing only 30 kg. Easy to service, dedicated to commercial applications and developed for broad operation specifications, the TripleLynx is the most versatile inverter available on the market.



The PV system configurator helps users to design and dimension solar energy systems.



All Danfoss inverters can run in 16 different countries and are configured on site.

The integrated electromechanical DC switch ensures maximum security during servicing.

Unique versatility

- **All-in-one – broad operation specifications**

The inverter has three-string input, a large operation range and three-phase output making it incredibly versatile. The wide-ranging operation specifications mean that an extensive range of modules with different specifications and many different string configurations can be connected to the inverter. Voc: 1000 V max., 250-800 V Mpp range, 3x12 A DC current. And even though TripleLynx is transformerless, it also handles thin film modules.

- **Three DC string input**

Due to the three-string input, module mismatch losses and losses from partial shading are greatly reduced; if one string is not functioning optimally, the remaining two strings will continue production unaffected.

- **One inverter for 16 countries**

All Danfoss inverters can run in 16 different countries and are configured on site. Just select the country at initial set-up and the inverter will configure itself to comply with regulations.

- **High MPP tracker efficiency**

Three individual MPP trackers ensure the system always runs at optimum power output regardless of size differences and PV module placement. The accuracy of the MPP trackers has been tested at the Arsenal Research Institute in Vienna as well as in an ISORRIP test, in which representative sample data from a year's irradiation was used to calculate the efficiency. At static irradiation the MPP tracker efficiency is 99.9% (MPP European Efficiency). And at dynamic irradiation the MPP tracker efficiency is 99.4%.

- **Ride Through**

All Danfoss inverters have a built-in algorithm called Ride Through. This algorithm ensures the inverter stays on grid even during severe grid disturbances. The inverters will only disconnect when AC grid limits set by the authorities are exceeded.

- **Derating function**

The derating function protects the inverter from excessive power levels, current and temperature. Should the inverter come across conditions of increased grid voltage, increased current levels or ambient temperatures that are too high, it will limit the output accordingly without disconnecting from the grid.

- **Early start-up and late stop of daily production**

Danfoss Solar Inverters use a combination of two MPP tracking methods, designed solely to work with both high and low irradiation levels, which ensures power production even with limited sun.

Optimum energy output

- **Integrated communication board**

The inverter features an integrated communication board which means easy installation of monitoring equipment without having to connect external boxes. Sensors can be connected directly to the inverter. They can measure temperature, irradiation and S0 input. Data is logged by the internal data logger and used to calculate yield and daily production, and the large data capacity ensures that there is not usually any need for external equipment.

Integrated communication



Safe and easy to install and service

- **RS485 communication and integrated modem**

The inverter communicates interchangeably on the RS485 network and is fully compatible with the RS485 accessories software. In order to send information directly to external data receivers, modems are integrated on the communication board, making remote monitoring easy.

- **Alarm**

An integrated visual alarm shows if a permanent error occurs. An external alarm can be connected to indicate if there are problems with the system by sounding an alarm or flashing a light.

- **3-phase grid connection**

Only one inverter is required to obtain perfectly symmetrical 3-phase grid feed-in. A 3-phased inverter means that 3-phased output is ensured at all times and that utility rules are upheld regardless of string variations on the input side.

- **15 kW equals 30 kg**

With a weight of around only 30 kg, the inverter can be wall-mounted and is easy to install. The inverter is so compact that it comes in a regular cardboard box.

- **Integrated DC switch**

For the protection of the installation engineer and service personnel, all inverters have an integrated DC switch to enable PV power to be disconnected safely. Simply switching off the DC switch is enough to disconnect DC power from the solar modules to the inverter.

- **Integrated cable lock**

The integrated cable lock ensures cables cannot be disconnected under load. Only after having switched off the DC switch cable disconnection is possible.

- **Integrated isolation monitoring**

Due to the integrated isolation monitoring the inverter and panels are safe at all times.

- **Separate connection area**

The separate connection area makes installation easy and fast.

- **Service tool**

The software-based Service tool makes servicing extremely easy, allowing technicians to configure and monitor PV inverters and PV inverter networks, as well as updating software via an RS485 standard communication bus.



	TLX 10 k	TLX 12.5 k	TLX 15 k
Specification:			
Nominal power DC	10300 W	12900 W	15500 W
Max PV power	12000 W	15000 W	18000 W
Nominal power AC	10000 W	12500 W	15000 W
Max AC power	10000 W	12500 W	15000 W
Max efficiency	98 %	98 %	98 %
Euro efficiency	>97 %	>97 %	>97 %
Power factor	>0.97 at 20 % load	>0.97 at 20 % load	>0.97 at 20 % load
Turn on power	20 W	20 W	20 W
Turn off power	15 W	15 W	15 W
Standby consumption	10 W	10 W	10 W
Night consumption	1 W	1 W	1 W
Voltages:			
Nominal voltage DC	700 V	700 V	700 V
MMP voltage	250-800 V	250-800 V	250-800 V
MAX DC voltage	1000 V	1000 V	1000 V
Turn off voltage DC	245 V	245 V	245 V
AC Voltage range	3x400±15% V	3x400±15% V	3x400±15% V
Grid frequency	50 ± 5 Hz	50 ± 5 Hz	50 ± 5 Hz
Currents:			
Nominal current DC	2x12 (24) A	3x10 (30) A	3x12 (36) A
Max current DC	2x15 (30) A	3x12.5 (37.5) A	3x15 (45) A
Nominal current AC	14.7 A	18.3 A	22 A
Max current AC	14.7 A	18.3 A	22 A
Distortion (THD%)	< 5 %	< 5 %	< 5 %
Other:			
Dimensions (L,W,H)	700x525x250 mm	700x525x250 mm	700x525x250 mm
Weight	30 kg	30 kg	30 kg
Acoustic Noise level	50 dB(A)	50 dB(A)	50 dB(A)
Operation temperature range	-25..60 °C	-25..60 °C	-25..60 °C
MPP efficiency	99.9 %	99.9 %	99.9 %
Overload operation	Change of operating point	Change of operating point	Change of operating point
Grid surveillance	Three phase monitoring	Three phase monitoring	Three phase monitoring
Mounting recommendation	Wall bracket	Wall bracket	Wall bracket
IP	IP 54	IP 54	IP 54
Isolation monitoring	included	included	included
Standard:			
Serial Communication	RS485	RS485	RS485
Potential free contact	x 2	x 2	x 2
Sensor input	x 2 (temperature, irradiation)	x 2 (temperature, irradiation)	x 2 (temperature, irradiation)
Energy meter	S0 input	S0 input	S0 input
Options:			
Modem	GSM	GSM	GSM
Modem	PSTN	PSTN	PSTN
Datalogger	Weblogger	Weblogger	Weblogger
Normative references:			
Directive LVD	73 / 23 / EC	73 / 23 / EC	73 / 23 / EC
Directive EMC	2004 / 108 / EC	2004 / 108 / EC	2004 / 108 / EC
Safety	EN 50178	EN 50178	EN 50178
EMC immunity	EN 61000-6-1	EN 61000-6-1	EN 61000-6-1
	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
EMC emission	EN 61000-6-3	EN 61000-6-3	EN 61000-6-3
	EN 61000-6-4	EN 61000-6-4	EN 61000-6-4
Utility interference	EN 61000-3-2 / -3	EN 61000-3-12 / -11	EN 61000-3-12 / -11
Functional safety, anti-islanding	DIN VDE 0126-1-1	DIN VDE 0126-1-1	DIN VDE 0126-1-1
CE	Yes	Yes	Yes
Utility characteristics	IEC 61727	IEC 61727	IEC 61727
	EN 50160	EN 50160	EN 50160
Italy	DK5940	DK5940	DK5940
Spain	RD1663	RD1663	RD1663

Danfoss Solar Inverters

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