



TLX Inverter Series

Three phase transformerless inverter series from 6-15 kW

The TLX series includes TLX, TLX+, TLX Pro and TLX Pro+



35 kg

The weight of 6-15 kW

Ensuring easy and troublefree installation of high performance inverters

The high performance transformerless three-phase TLX inverter series, with efficiency of 98 % deliver maximum energy in all conditions.

Flexibility

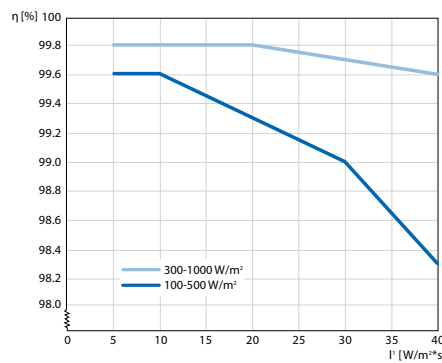
Integrating 1000 V_{DC} input range, 250-800 V MPP range and multiple DC inputs with each their own individually regulated MPP tracker, allows for more modules in a series and longer strings, while providing greater flexibility in the PV setup.

Simplicity

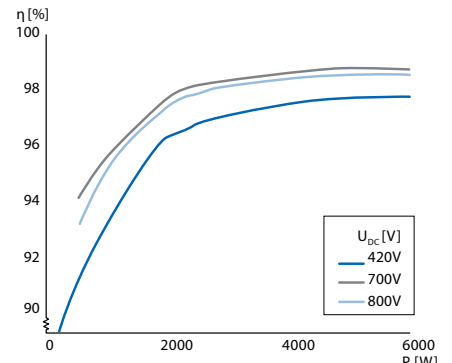
The TLX Pro series includes master inverter technology capable of controlling up to 100 inverters from a single inverter. Likewise, the integrated webserver, allows you to control, monitor and adjust your PV system from any online device.

1.6 Billion hours of Experience

The TLX series has been installed all over the world in both residential 6 kW systems to over 100 MW utility plants.



MPP efficiency



Efficiency TLX Series 15k

- η98 %
- 1000 V_{DC}
- 250-800 V_{MPP}
- 3x230 V_{AC}
- 6-15 kW
- PV Sweep
- Compact dimensions
- 12 pcs per pallet place
- 35 days integrated data storage
- 35 kg
- Full built-in monitoring
- 2-3 independant MPP trackers
- SMS via GSM option
- Replication of setting to 100 inverters
- Multiple languages and grid-codes
- ConnectSmart compliant



For additional technical data and functional descriptions please refer to the reference manual found on www.danfoss.com/solar

Unit	Parameter	TLX series				
AC						
S	Rated apparent power	6.0 kVA	8.0 kVA	10 kVA	10.5 kVA	15 kVA
P _{ac,r}	Rated active power ¹⁾	6.0 kW	8.0 kW	10 kW	12.5 kW	15 kW
	Reactive power range	0-3.6 kVAr	0-4.8 kVAr	0-6.0 kVAr	0-7.5 kVAr	0-9.0 kVAr
V _{ac,r}	Rated grid voltage (range)	3P + N + PE – 230 V / 400 V (± 20 %)				
	Nominal current AC	3 × 8.7 A	3 × 11.6 A	3 × 14.5 A	3 × 18.1 A	3 × 21.7 A
I _{ac,max}	Max. current AC	3 × 9.0 A	3 × 11.9 A	3 × 14.9 A	3 × 18.7 A	3 × 22.4 A
	AC current distortion (THD %)	< 4 %		< 5 %		
cosphi _{ac,r}	Power factor – unregulated	> 0.99 at 100 % load and 0.95 at 20 % load				
	Power factor – regulated	0.8 over-excited – 0.8 under-excited (TLX+ and TLX Pro+)				
	“Connecting” power loss	10 W				
	Night-time power loss (off grid)	< 5 W				
f _r	Rated grid frequency (range)	50 Hz ± 5 Hz				
DC						
P _{mpp,max}	Maximum PV input power per MPPT	8.0 kW				
ΣP _{mpp,max}	Max./nom. converted PV input power, total	6.2 kW	8.25 kW	10.3 kW	12.9 kW	15.5 kW
V _{dcr}	Nominal voltage DC	700 V				
V _{mpp,min} V _{mpp,max}	MPP voltage-nominal power ²⁾	260 - 800 V	345-800 V	430-800 V	358-800 V	430-800 V
	MPP tracker	2 (2 × MC4)			3 (3 × MC4)	
V _{dcm,max}	Max. DC voltage	1000 V				
V _{d,start}	Turn on voltage	250 V				
V _{d,min}	Turn off voltage	250 V				
I _{d,max}	Max. current DC	2 × 12 A			3 × 12 A	
	Max. short circuit current DC at STC	2 × 12 A			3 × 12 A	
	Min. on grid power	20 W				
Efficiency						
	Max. efficiency	97.8 %	97.9 %		98 %	
	Euro efficiency at V _{dcr}	96.5 %	97.0 %	97.0 %	97.3 %	97.4 %
	MPP efficiency, static	99.9 %				
Enclosure						
	Dimensions (H, W, D)	700 × 525 × 250 mm				
	Weight	35 kg				
	Acoustic noise level	max. 56 db(A)				
	Operation temperature range	-25..60 °C (45..60 °C – degrading at high loads)				
	Storage temperature	-25..60 °C				
	Relative humidity	95 % (non-condensing)				
Ancillary Services						
	Active power	Fixed, set point curves, remotely controlled, Fault Ride Through				
	Reactive power	Constant, set point curves, remotely controlled, Fault Ride Through (TLX+ and TLX Pro+)				
Safety						
	Approvals and certificates	CE, VDE0126-1-1, RD1565/2010, TOR/D4, TOR/D2, G59/2-1, G83/1-1 (only 6-10k), PPC, AS4777, S14777, EN 50438, C10/11, PPDS, IEC 61727, UTE NF C15-712-1, NF C 15-100, VDE-AR-N 4105 (only '+' variants), RD 1699, CEI 0-21, BDEW/2008-2011				
	Electrical Safety	IEC 62109-1/IEC 62109-2 (Class I, grounded – communication part Class II, PELV)				
	Functional safety	Voltage and frequency monitoring, islanding detection, residual current monitoring				

¹⁾ At rated grid voltage (V_{ac,r}), Cos(phi) = 1

²⁾ At symmetric input configuration. At asymmetrical input configuration. At unequal input voltages V_{mpp,min} can be as low as 250 V.

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