LAYER ELECTRONICS s.r.l.

Since 1967

Quality and Reliability

made in Italy

Member of CISQ Federation

CERTIFIED MANAGEMENT SYSTEM

ISO 9001

Drepanum: a blast of wind

- Compatibility with any wind generator
- Wide wind MPPT input voltage range even modifiable on request
- High reliability
- Insulation transformer in low frequency for all the range from 1.5 to 110 kW
- Power factor > 0.99 in each operating condition (value certified by UL lab)
- Only produces a small amount of harmonic distortion for mains (THD < 2% in accordance with the standard IEEE 929)
- IGBT Technology with a high commutation frequency

The **DREPANUM** wind inverters are the **latest generation** of grid connected **inverters**, fed by a **wind generator**.

Unlike the other grid connected wind inverters on the market, our Drepanum inverters **don't** result from **solar inverters** and are the only ones that implement an **automatic wind MPPT** (Maximum Power Point Tracking) algorithm, that allows to supply always the **maximum power** available from the generator under each wind speed. All the other inverters, instead, supply power to load in accordance with a predetermined power vs. frequency table, that doesn't keep in mind of changeable conditions of the wind.

Moreover, since LAYER wind generators can produce a higher power than the nominal one, our inverters are **oversized** to be able to supply higher power without any problem.

Drepanum wind inverters can be **customized** for **any** horizontal or vertical-axle wind **generator**.

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Technical Data DREPANUM series 1-Ph

MODEL	TP-1	TP-2	TP-4	TP-6
Power - kW	1.5	2.5	4	6
Input				
MPPT voltage range	55 ÷ 100 V (or on request)	96 ÷ 180 V (or on request)	192 ÷ 360 V (or on request)	
Max input current	32 A	21 A	17 A	25 A
Number of MPPT	1			
Output				
Wave-form	SINE WAVE			
Harmonic distortion	< 2%			
Phases	1-Ph			
Voltage	220 / 230 / 240 V ± 20% (100 / 110 / 115 / 120 / 127 V on request)			
Frequency	50 / 60 Hz ± 1%			
Current	6.5 A	10.9 A	17.4 A	26 A
Short-circuit current	10 A	16 A	26 A	39 A
Stand-by consumption	< 10 W		< 20 W	
Power factor	> 0.99			
Efficiency	> 94%			
Earth fault detection	Yes			
Protections				
DC side	> 330 V		> 600 V	
Earth fault detection	> 30 mA			
Mains voltage	220 / 230 / 240 V ± 20% (100 / 110 / 115 / 120 / 127 V on request)			
Mains frequency	50 / 60 ± 0.5 Hz			
Against input overvoltages	Yes			
Signals				
Led	On, Stand-by, Fault			
Display	Standard			
External communication	RS232 - RS485 - SNMP - CAN (Optional)			
DC Connection	MC4			
Environmental				
Temperature	-10°C ÷ 50°C			
Non-condensing humidity	0% ÷ 95%			
Noise (at 1 m)	< 50 dBA			
Cooling	Forced			
Protection rating	IP20			
Dimensions				
W x D x H - mm	480 x 270 x 580		480 x 320 x 650	
Weight - kg	44	47	58	69
CE Marking	2014/30/EU; 2014/35/EU			
Compliance with the standards	Low Voltage Directive 2014/35/EU; EN 50178:1997; EMC Directive 2014/30/EU; EN 61000-6-2:2005; EN 61000-6-3:2007; EN 61000-3-2:2006; EN 61000-3-11:2000; EN 61000-3-12:2005; CEI 11-20:2000 + V1:2004; Guide for the Connections to the "Enel Distribuzione" Grid ed. 1.1 (12/2009)			

Technical Data DREPANUM series 3-Ph

MODEL	TP-12	TP-20	TP-30	TP-50	TP-75	TP-110
Power - kW	12.5	20	30	50	75	110
Input						
MPPT voltage range	192 ÷ 360 V (or on request)	288 ÷ 540 V (or on request)	On request			
Max input current	42 A	55 A	On request			
Number of MPPT	1					
Output						
Wave-form	SINE WAVE					
Harmonic distortion	< 2%					
Phases	3-Ph + N					
Voltage	380 / 400 / 415 V ± 20% (200 / 208 / 220 / 440 / 480 V on request)					
Frequency	50 / 60 Hz ± 1%					
Current	18 A	29 A	43 A	72 A	108 A	159 A
Short-circuit current	27 A	44 A	65 A	108 A	162 A	239 A
Stand-by consumption	< 40 W					
Power factor	> 0.99					
Efficiency	> 94%					
Earth fault detection	Yes					
Protections						
DC side	> 600 V	> 700 V	On request			
Earth fault detection	> 30 mA					
Mains voltage	380 / 400 / 415 V ± 20% (200 / 208 / 220 / 440 / 480 V on request)					
Mains frequency	50 / 60 ± 0.5 Hz					
Against input overvoltages	Yes					
Signals						
Led	On, Stand-by, Fault					
Display	Standard					
External communication	RS232 - RS485 - SNMP - CAN (Optional)					
DC Connection	Terminal block					
Environmental						
Temperature	-10°C ÷ 50°C					
Non-condensing humidity	0% ÷ 95%					
Noise (at 1 m)	< 50 dBA					
Cooling	Forced					
Protection rating	IP20					
Dimensions						
W x D x H - mm	800 x 600 x 1300			800 x 800 x 1300	800 x 800 x 1700	1200 x 1100 x 1900
Weight - kg	170	190	220	270	570	720
CE Marking	2014/30/EU; 2014/35/EU					
Compliance with the standards	Low Voltage Directive 2014/35/EU; EN 50178:1997; EMC Directive 2014/30/EU; EN 61000-6-2:2005; EN 61000-6-3:2007; EN 61000-3-2:2006; EN 61000-3-11:2000; EN 61000-3-12:2005; CEI 11-20:2000 + V1:2004					

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