

Why choose HOSOLA?

High-quality and high-performance Inverter

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Contents

Part 1 Inverter Outside (Installation and Case)

Part 2 Inverter Inside (Key Component)

Part 3 WIFI monitor.

Part 1 Inverter Outside (Installation and Case)

DC connector select ,Easy Important?

(**MC4** (Production in **china**) **OR** Phoenix (Production in Germany))

Phoenix Advantage:

- 1.Installers easy to install DC connector .
2. Low internal impedance.
3. convenient production.



Do we have the ability to ensure the inverter will not rust 10 years?

(Hosola Casing: Stainless Steel SUS304 (Never rust)

Godwo Casing: Using aluminum, production problems.

Omnk Casing: Galvanized steel refers to a layer of zinc plated steel)

Salt Mist Cyclic (96 hours salt mist test is equal to the outdoor life of 10 years)

After Salt Mist test, the inverter work without any problems



Part 2 Inverter Inside (Key Component)

Component	Brand	Producing Area	Description
Electrolytic capacitors	NCC (Japan)	Japan	1000uF/315V/105/5000 hours (Core)
Output Current Sensor	VAC (Germany)	Germany	25A 4646-X400
Input Current Sensor	LEM(Germany)	Germany	Detect input current for MPPT
Inductor Core(core)	Arnold (America)	America	Input and output current filter
	Magnetics (America)	America	Input and output current filter
Lightning protection device	EPCOS (Germany)	China	Surge absorbed
IGBT	IR (America)	America	Power switch component
Relay	Fujitsu (Japan)	America	Circuit breaker from grid network
Power chip	Infineon (Germany)	Germany	SPS control Chip
Control chip	Renesas (Japan)	Japan	CPU
Input terminal block	Phoenix (Germany)	Germany	Photovoltaic connector

Inverter is the core material Capacitance.

1. Service life calculation of Capacitor.

$$\Delta T_x = (I_{RMS} / I_{rms})^2 * \Delta T_o$$

$$L_x = L_o \times 2^{\frac{T_x - T_o}{10}} \times 2^{\frac{5 - \Delta T_x}{5}}$$

2. Service life of Hosola & other inverter Capacitor.

$$L_x = 5000 \times 2^{\frac{105 - 82}{10}} \times 2^{\frac{5 - 6.005}{5}} = 21440$$



$$L_x = 3000 \times 2^{\frac{105 - 82}{10}} \times 2^{\frac{5 - 7.87}{5}} = 9919$$



Hosola Capacitor life 21440 hours
Up **11** years

Other Capacitor life 9919 hours
only 5 years

References below:

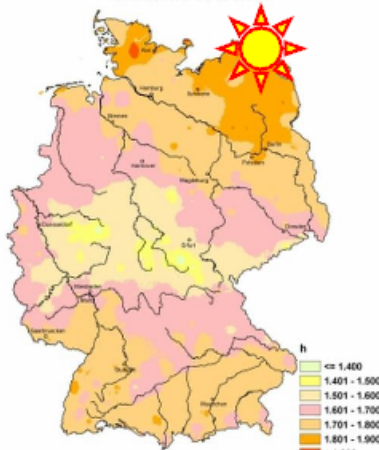
(ASIG: Inverter performance Testing agency)



A Member of the VDE Group

Basis of lifetime evaluation

Sonnenscheindauer Jahr 2009
Sunshine Year 2009



© Deutscher Wetterdienst (DWD)
Diese Karte wurde am 02.03.2010 mit den Daten aller Stationen aus den Messreihen des DWD erstellt.
This chart was produced on March 02, 2010 using data of all stations of the network of DWD.

Source: DWD

Country	sunshine duration 2009 in hours				
	Spring	Summer	Autumn	Winter	Year 2009
Hamburg	640,0	674,3	288,1	135,6	1737,3
Bremen	623,4	674,1	289,3	140,5	1715,7
Berlin	633,1	694,6	341,0	130,1	1792,9
Schleswig-Holstein	652,4	698,0	297,9	132,7	1781,3
Niedersachsen	600,6	359,9	279,9	147,0	1678,5
Nordrhein-Westfalen	523,4	632,1	274,2	185,0	1595,9
Rheinland-Pfalz	510,1	666,6	287,7	187,2	1636,0
Saarland	514,0	709,2	307,7	200,1	1705,1
Baden-Württemberg	501,1	682,4	340,9	209,5	1728,7
Hessen	513,6	617,1	262,1	181,7	1557,0
Bayern	525,3	641,7	333,9	206,0	1684,5
Mecklenburg-Vorpommern	669,8	709,7	311,6	122,7	1817,1
Brandenburg	633,5	687,4	332,6	126,8	1780,4
Sachsen-Anhalt	596,3	660,1	309,2	139,2	1706,0
Sachsen	554,9	609,5	319,1	157,7	1640,7
Thüringen	520,4	595,7	271,1	162,5	1545,2
Germany	560,9	655,9	306,6	170,1	1683,0

Source: DWD

The lifetime evaluation is basing on the represented data from the German weather service (DWD). The operation period of the inverter was calculated for the worst case, with the maximum duration of sunshine in Germany in the year 2009. This value is highlighted red on the table above. Based on this sunshine duration per year, the following operating times were calculated.

- working period of 5 years are ~10000hours*
- working period of 10 years are ~20000hours*
- working period of 15 years are ~30000hours*
- working period of 20 years are ~40000hours*

* For other countries the lifetime has to be evaluated with separate data of sunshine duration. The calculated values are respectively for Germany.

The sunshine duration is defined as a period of time in which the solar radiation on the vertical direction of the sunshine behaviour a minimum of 120W/m² radiation intensity.

Part 3 WIFI monitor (Real-time monitoring Inverter)

Monitoring system allows us to become more efficient.

Hosola SolarMAN Online Monitoring System



- Internet based remote management system.
- Real time monitoring and historical data recording.
- Rich communicative display.
- Customized alert service.
- Periodical report on system operation condition.

Easy 3-minute Monitoring System Setup.

Get your laptop ready ➡ Connect & setup inverter WiFi module
➡ SolarMAN online account registration ➡ Start monitoring now