

DIEHL

AKO

PLATINUM INVERTERS



4601 S	3800 S
4600 S	3100 S
4301 S	2800 S
4300 S	2100 S

made in Germany

High-performance string inverters, galvanically isolated

PLATINUM INVERTERS



PLATINUM S – galvanically isolated

Extreme reliability also under difficult environment conditions.

Even under extreme or highly fluctuating environmental conditions, **PLATINUM S inverters** keep up their reliable and steady work regardless of temperature fluctuations – select from **8 models** that feature maximum efficiencies between 2.1 and 4.6 kW and all module types.

Thanks to the circuit principle of “galvanic isolation”, the **PLATINUM S inverters** meet the highest international safety standards.

With these appliances with a transformer, you can choose whether you want to ground the positive or the negative terminal on the DC side.

This makes the device especially suitable for the application with thin-film modules of any technology.

**RAC-MPP
RFID**

extended temperature range:
up to +45 °C

RAC-MPP
Rapid Adaption
Control
MPP-Tracking

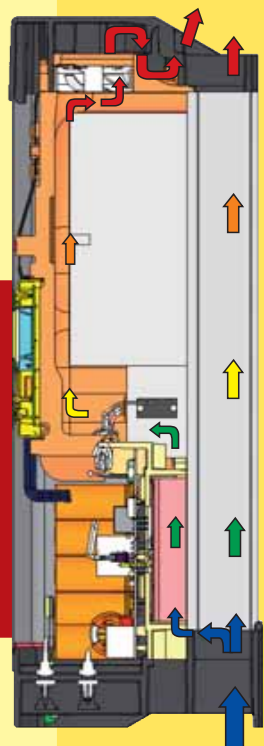


PLATINUM S – ultimate efficiency and extraordinary yields even under difficult environmental conditions:

- The **efficiency** of **PLATINUM inverters** is among the **highest** in the class of inverters with a transformer.
- A high efficiency alone, however, is not sufficient for the yield that can be obtained. The decisive factor is **how many kWh** the appliance can gain from your PV generator.
- And this is where we excel. **PLATINUM inverters** bring your yield home safely with **RAC-MPP**, the **Diehl AKO principle for extraordinary yields**, even under extremely fluctuating and dynamic irradiation conditions. The result is quick and efficient **top-class MPP tracking**.

*PLATINUM inverter S
Robust and reliable thanks
to self-organized cooling*

Resistant and reliable, even if things heat up:
This inverter still has thermic reserves when other devices have already failed in the midday heat. The robust device meets the industrial standard (protection type IP54) and withstands difficult conditions such as quick temperature changes, humidity or dust without any problems.



PLATINUM

I N V E R T E R S



Durable and powerful

Datalogger for life

Throughout its operating life of more than 30 years, the built-in datalogger saves your measured values, yield and performance data. The datalogger is the only one on the market that functions with the high precision of an electricity meter. Occurring events are recorded in a separate protocol memory.

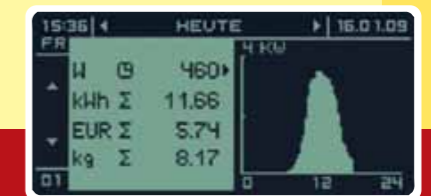
The gateway to the world – the PLATINUM network

With separately available PLATINUM communication devices, you can integrate the inverters in your plant monitoring. The EIA 485 interface connects the PLATINUM inverters and gives them access to the world of PLATINUM plant monitoring. The high-performance interface allows cable lengths of up to 1,000 m.



The **broad input voltage range** allows a wide range of configuration options.

- The **broad input voltage range** is exemplary within the class of transformer inverters and allows the application of single-crystalline, polycrystalline and thin-film modules.
- Starting from the power of model 3800 S, **two string inputs** are standard.
- Beside the broad input voltage range, the models 4301 and 4601 S offer the additional advantage of an **especially high DC input current** of 16 A.



The display – all data at a glance:

The large back-lit full graphic display graphically represents all important operating conditions and performance parameters of the datalogger in clearly arranged graphs and diagrams. Week and year review functions allow a quick on-site performance control at any time.



The PLATINUM S offers flexible connection options



No inverter allows a quicker start-up

- You can connect the device **in no time at all** with plug connectors without having to open it. On the DC side, you can choose between **two different connector systems**.



- Within the **PLATINUM network**, all settings are transferred from one inverter to the other thanks to the automatic **master programming**.

- Even in **large plants** with several hundred inverters, installing or replacing a device is **easy as pie**.

PLATINUM

INVERTERS



Top-class performance data

■ **A universal device for all countries**
Adapting the country settings on site is quick and easy and can be done by the installer without any additional tool. This will simplify the storage and ordering processes in your business with international clients considerably. Currently, 18 *** countries are supported.

■ **Monitoring function even by night**
Even after sunset, you can communicate with the PLATINUM inverter. Beside enabling access to the current measured

data and plant performance, it can also monitor unexpected plant behaviour day and night. In stand-by mode, the device consumes less than 2.5 W.



Technical data

(For tips on how to find your perfect model configuration, see the lower left corner of this spread.)

Input characteristics	2100 S	2800 S	3100 S	3800 S	4300 S	4301 S	4600 S	4601 S
Max. PV power	2,300 Wp	3,200 Wp	3,450 Wp	4,200 Wp	4,800 Wp	4,800 Wp	5,100 Wp	5,100 Wp
Max. DC power	2,100 W	2,800 W	3,100 W	3,800 W	4,300 W	4,300 W	4,600 W	4,600 W
PV voltage range MPPT	206 V–390 V	313 V–630 V	314 V–630 V	315 V–630 V	320 V–630 V	277 V–470 V	320 V–630 V	278 V–470 V
Max. DC voltage	480 V	780 V	780 V	780 V	780 V	580 V	780 V	580 V
Max. input current	9.0 A	9.0 A	9.0 A	12.0 A	12.5 A	15.0 A	13.0 A	16.0 A
Number of string inputs	1	1	1	2	2	2	2	2
Number of MPP trackers	1							
DC section switch device	optional DC disconnecter, integrated in the device							
Reverse voltage protection	yes							
Ground fault detection	isolation control							
Output characteristics								
Nominal AC power	1,750 W	2,400 W	2,550 W	3,300 W	3,680 W	3,680 W	3,800 W	3,800 W
Nominal AC current	7.6 A	10.4 A	11.1 A	14.3 A	16.0 A	16.0 A	16.5 A	16.5 A
Max. AC power	1,900 W	2,600 W	2,800 W	3,600 W	4,050 W	4,050 W	4,200 W	4,200 W
Max. AC current	8.3 A	11.3 A	12.2 A	15.7 A	17.6 A	17.6 A	18.3 A	18.3 A
Power feed starts at	13 W	14 W	14 W	18 W	18 W	17 W	18 W	17 W
Mains output voltage range	230 V (+/-20 %) single phase							
Internal consumption at night	less than 2.5 W							
Mains frequency	47.5 Hz–52.5 Hz							
Short-circuit proof	yes							
Interfaces								
DC input	DC plug connector, Multicontact MC3, MC4, Tyco							
AC output	Wieland RST 3i/5i							
PLATINUM network	EIA 485, 2 x RJ 45 Western Modular additional plug connector with terminal screws							
Service interface	EIA 232, 9 pole SubD female socket							
Potential-free relay contact	1 Normally-open (NO) contact, max. 24 V _{AC} /2 A, plug connector with terminal screws							
Device data								
Max. conversion efficiency	94.7 %	95.3 %	95.3 %	95.6 %	95.6 %	94.6 %	95.6 %	94.6 %
European conversion efficiency	93.7 %	94.4 %	94.4 %	94.6 %	94.7 %	93.5 %	94.8 %	93.6 %
Weight	30 kg	35 kg	35 kg	42 kg	42 kg	43 kg	42 kg	43 kg
Dimensions	L 720 x W 320 x H 250 mm							
Ambient temperature specification	-20 °C to +60 °C							
Max. temperature at nominal power output	+45 °C							
Storage temperature	-20 °C to +80 °C							
Protection type (excluding digital interface)	IP 54 (DIN EN 60529)							
Display	full graphic LCD 170 x 76 pixels							
Datalogger integrated	memory capacity sufficient for 30 years of operation							
Circuit concept	LF-transformer with galvanic isolation, RAC-MPP technology, ENS according to VDE 0126-1-1							

Selection of model configurations

Exemplary: **3800 S-ENS1-MC3-DCT-UNIC**

Basic model	Grid Control	DC plug	DC disconnecter with/without	Country code
2100 S	ENS1 *	MC3	DCT	UNIC ***
2800 S		MC4		
3100 S	ENS3 **	Tyco	---	
3800 S				
4300 S				
4301 S				
4600 S				
4601 S				

Select one feature from every column; the combination of all features will define the product.

* **ENS1:**
The automatic network monitoring functions exclusively on the phase the inverter is feeding on.

** **ENS3:**
In this model, the network monitoring functions simultaneously on all three phases. As in the ENS1 model, the inverter feeds only on one phase.

*** **The following 20 countries can be set:**
Australia, Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK, External ENS



Diehl AKO

is an internationally leading electronics company which specializes in the development and production of industrial control and regulating systems.

As the market leader, every year we manufacture more than 2 million frequency inverters for power drive systems alone.

Innovation & quality

Diehl AKO sets standards for the development of **innovative concepts** for electronic systems and appliances by established know-how, the selection of component parts and the latest technologies of excellent production and test engineering. From the electronics to the complete appliance, the manufacturing process of our products is certified according to

the **Quality and environment standards ISO 9001-2000 and ISO 14000**. All **PLATINUM inverters** are rated „**Made in Germany**“. Owing to our **PLATINUM inverters'** excellent industrial quality, we offer not only the standard 5-year guarantee, but also an optional warranty extension to 20 years.



Environmental protection

*Environmental protection has top priority for **Diehl AKO**. In order to live up to this standard, **Diehl AKO** continually improves manufacturing processes and optimizes the use of resource-friendly materials.*

*The products are manufactured in compliance with the new RoHS standard and the environment standard DIN EN 14001. **PLATINUM inverters** were the first appliances on the market to be produced using **lead-free** technology.*



PLATINUM plant monitoring –

much more than just access to your data.



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