DIEHL
Controls

More sun to the grid.
Technology that brings out the best.
PLATINUM® Inverter,
Monitoring & Energy Management.

PLATINUM®
Brings more sun to the grid.

Delivering more solar power to the grid.
Welcome to PLATINUM®.

Dear PLATINUM® customers and partners,

the more turbulent the times, the more important it is to have consistent suppliers and reliable business partners. The catalogue you are now holding in your hands does more than simply inform you about our range of products. It is also a symbol of the on-going development and progression of the PLATINUM® brand. Six years ago, after a very short development time, we launched three models in our S series of inverters – a series that takes full advantage of our know-how in the field of household appliances. Thanks to the strong performance and excellent quality of the PLATINUM® range of devices, we have attracted and been able to impress more and more customers. The range now includes some 34 inverters, suitable monitoring equipment and innovative energy management solutions. There are two particular innovations I would like to highlight: the H inverter with its high-frequency transformer and the three-phase R3. I think you will be thoroughly impressed with both, as they deliver the utmost in efficiency and quality at competitive prices.

However, it is not just technically that we have continuously evolved. As a brand, PLATINUM® is now establishing itself more and more in the market. We have created a new visual identity both for our products and our marketing in order to position the PLATINUM® brand even more clearly and to make it even more attractive.

We are delighted to provide you with this catalogue and hope it will assist you in the selection of our products.

We wish you lots of success during these stormy times for the photovoltaics industry!

Klaus Frehner
CEO Photovoltaics

Left: Klaus Frehner, CEO Photovoltaics, right: Josef Fellner, CFO Photovoltaics

Over 100 years of precision and passion.
The Diehl Group.

From a blacksmith's shop to a global technology corporation: in 1902 Margarete and Heinrich Diehl founded a blacksmith's shop in Nuremberg and quickly made a name for themselves. What started out as a small business soon became an industrial enterprise before evolving into a global corporation. Today, the Diehl Group employs more than 13,500 employees.

At Diehl, precision has a long tradition. Careful attention to even the smallest technical detail along with a clear commitment to automated production and corporate growth are the main pillars of the modern-day Diehl philosophy. On top of this, there is one further impressive factor which guarantees the continuity of this philosophy: ever since it was originally founded, the company has been in uninterrupted family ownership.

Diehl is a financially and legally independent family enterprise. The company's lasting success is based on many years experience combined with a vast product range that covers various different branches of industry. It stands for exceptional quality and cutting edge technology, a commitment to carrying out market-focused research and development, along with continuous efforts to optimise processes. This is coupled with a passion to improve every single day.

Making energy efficiency the highest priority. Diehl Controls.

For over 40 years, Diehl Controls – a corporate division of the Diehl Group – has been developing, manufacturing and marketing electronic equipment for the domestic appliances sector. Today, this division includes the brands Diehl AKO®, PLATINUM® and Diehl Smart Home®. Whether for household appliances or photovoltaics – the main aim of all our products is to enable efficient use of energy.

To achieve this, Diehl Controls offers practical solutions that promote the sustainable use of resources, thereby making an active contribution to protecting the environment and preserving our living space. Motivated in addition by the location of our headquarters in the precious natural landscapes of the Allgäu and Lake Constance region, we systematically integrate these values in our processes, our production plants and our products.

Under the PLATINUM® brand, which was founded in 2004, the company develops, manufactures and markets solar inverters in the output class 2 – 22 kW, intelligent devices for the monitoring of photovoltaic systems and user-friendly energy management solutions. With production volumes in excess of 20,000 electronics units per day in Germany alone, outstanding inverter technology that meets the highest requirements in terms of performance and output is being manufactured in the city of Wangen im Allgäu.

With efficiency ratings of above 98%, PLATINUM® inverters are among the best of their kind. They deliver impressively high quality, power ratings, reliability and extremely low failure rates. In short: PLATINUM® products are the ultimate in terms of solid and reliable plant components. This is reflected by the fact that many of our PLATINUM® products are shipped with a 10-year manufacturer's warranty, which can be optionally extended to 20 years. Of course, all PLATINUM® inverters are CE-compliant and satisfy all the relevant standards.

To ensure that PLATINUM® products are used in the best possible way, we run regular training events for dealers, sales staff and installation engineers. In addition, PLATINUM® service experts also offer advice to customers on all issues relating to our products – either by telephone or directly on site.

Translating the highest efficiency demands into uncompromising quality. Our ‘one-piece-flow’ manufacturing process.

One-piece-flow and systematic quality assurance: A highly sophisticated manufacturing process is the basis for the outstanding quality of our PLATINUM® range. We work according to the principle whereby one employee manufactures one device. After all, if you follow a workpiece through all of the production steps to create ‘your own’ product, you identify with it – and, ultimately, you will handle it in a highly responsible and quality-conscious manner.

Alongside the factor of employee responsibility, we also employ systematic quality assurance processes to deliver PLATINUM® excellence. Including an automated testing system with comprehensive quality controls as an integrated part of the process as well as system monitoring for the entire production chain, this comprises SAP-based control and documentation of each individual step.

Another benefit of the one-piece-flow principle is our ability to produce production runs of just one part, which means that we can deliver customised variants. Lower numbers of variants reduce storage requirements and make our products even better value for money.

Maximises performance and gets everything across: our technology.
The PLATINUM® range of inverters.

High efficiency, comprehensive data information, ease of handling: alongside their superior quality, PLATINUM® inverters deliver everything that counts in the world of photovoltaics. With an efficiency of 98.4%, they are among the most efficient in the entire industry. They provide users with an extensive array of information. The display on the device shows up-to-the-minute current and voltage data for the AC and DC side, as well as the yield values for the day, week, month and year. All this is available 24 hours a day, with enough storage capacity for 30 years' worth of data via the integrated datalogger. Connection couldn't be easier thanks to our quick and easy installation and commissioning. The entire PLATINUM® range are multi-country devices, and can thus be configured as such.

The PLATINUM® product range includes string inverters in the output class from 2 to 22 kW. We also offer inverters with single and three-phase feed-in, with or without a transformer. With devices in the protection classes IP 65 and IP 66 and the PowerBlock system, the PLATINUM® range also covers outdoor applications. Whether for a single-family detached house, a commercial roof-mounted system or open-field installations – PLATINUM® offers the right device for every requirement.

Maximum reliability.
Even under difficult conditions.
The PLATINUM® S inverter.

Based on the circuit principle of ‘galvanic isolation’, PLATINUM® S inverters offer maximum levels of safety and reliability combined with a high degree of efficiency in the class of transformer inverters. Even under extreme or heavily fluctuating ambient conditions, these units are temperature-resistant and operate reliably. Installation is made quick and easy by the DC and AC connectors. All of the key operating data can be clearly read from the graphics display – even at night. The range contains eight models with a maximum output ranging from 2.1 to 4.6 kW. Two string inputs are provided for units with an output of 3.8 kW or higher.

Important note: In order to comply with legal requirements, this model is no longer approved for the German market.

- Low-frequency transformer: suitable for thin film modules
- RAC-MPP® technology for rapid MPP location
- Optimised data transfer and networking with other PLATINUM® inverters and monitoring devices via the PLATINUM® network EIA 485
- Convection cooling
- Extremely wide range of input voltages
- Integrated datalogger provides storage capacity for 30 years worth of operating data
- 10-year free manufacturer’s warranty

Intelligent power bundling for outdoor applications.
The PLATINUM® PowerBlock.

Specially developed for extreme outdoor weather conditions, the PLATINUM® PowerBlock system is a genuine alternative to central inverters. The compact, robust housing enables installation of up to six inverters, thereby offering optimum protection against rain, hail, sunshine etc.

Specifications

S Inverter	2100 S	2800 S	3100 S	3800 S
DC Input				
Max. PV power	2,300 Wp	3,200 Wp	3,450 Wp	4,200 Wp
Max. DC power (@ cos phi = 1)	2,100 W	2,800 W	3,100 W	3,800 W
MPPT voltage range	206 V ... 390 V	313 V ... 630 V	314 V ... 630 V	315 V ... 630 V
Max. input voltage	480 V	780 V	780 V	780 V
Max. MPPT input current	9.0 A	9.0 A	9.0 A	12.0 A
Number of string inputs	1	1	1	2
Number of MPP trackers	1			
DC disconnect	optional, device integrated			
Reverse polarity protection	yes			
DC short circuit current	13 A	13 A	13 A	17 A
Ground fault monitoring	isolation control (can be activated)			
AC Output				
Rated power (@ cos phi = 1)	1,750 W	2,400 W	2,550 W	3,300 W
Rated current	7.6 A	10.4 A	11.1 A	14.3 A
Max. apparent power	1,900 VA	2,600 VA	2,800 VA	3,600 VA
Max. AC current	8.3 A	11.3 A	12.2 A	15.7 A
Power feed starts at	13 W	14 W	14 W	18 W
Mains output voltage	230 V (+/-20 %)			
Feed in phases / connection phases	1 feed in phase / 1 or 3 connection phases			
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	n/a			
Standby consumption	< 2.5 W			
Mains frequency	50 Hz (+/-5 %)			
Short circuit resistance	yes			
Power factor (cos phi)	1			
Ground fault monitoring	-			
Interfaces				
DC connection	Multicontact MC4			
AC connection	Wieland RST 3i / 5i			
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals			
Alarm relay	max. 24 V_{AC} / 2 A, screw terminals			
Appliance data				
Maximum efficiency	94.7 %	95.3 %	95.3 %	95.6 %
European efficiency	93.7 %	94.4 %	94.4 %	94.6 %
Weight	30 kg	35 kg	35 kg	42 kg
Dimensions	H 720 x W 320 x D 250 mm			
Operating temperature	-20 °C ... +60 °C			
Storage temperature	-25 °C ... +80 °C			
Relative humidity (non-condensing)	0 % ... 95 %			
Altitude at rated power	2,000 m / 6,560 ft			
Protection degree (except digital interface)	IP 54 according to DIN EN 60529			
Protection class / overvoltage category	I / III			
Display	graphic LCD 170 x 76 pixels			
Data logger	storage capacity sufficient for 30 years operating time			
System topology	LF transformer, RAC-MPP® technology			
Cooling	convection cooling	fan		
Standards / grid codes	VDE 0126-1-1, C10/11, G83/1, G59/2, EN 50438, EN 50178, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663, AS 4777, AS 3100			
Warranty	10 years			
Type designation	**2100 S**	**2800 S**	**3100 S**	**3800 S**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).
Due to legal guidelines, this model is no longer approved for the German market.

Specifications

S Inverter	4300 S	4301 S	4600 S	4601 S
DC Input				
Max. PV power	4,800 Wp	4,800 Wp	5,100 Wp	5,100 Wp
Max. DC power (@ cos phi = 1)	4,300 W	4,300 W	4,600 W	4,600 W
MPPT voltage range	320 V ... 630 V	277 V ... 470 V	320 V ... 630 V	278 V ... 470 V
Max. input voltage	780 V	580 V	780 V	580 V
Max. MPPT input current	12.5 A	15.0 A	13.0 A	16.0 A
Number of string inputs	2	2	2	2
Number of MPP trackers	1			
DC disconnect	optional, device integrated			
Reverse polarity protection	yes			
DC short circuit current	18 A	21 A	18 A	22 A
Ground fault monitoring	isolation control (can be activated)			
AC Output				
Rated power (@ cos phi = 1)	3,680 W	3,680 W	3,800 W	3,800 W
Rated current	16.0 A	16.0 A	16.5 A	16.5 A
Max. apparent power	4,050 VA	4,050 VA	4,200 VA	4,200 VA
Max. AC current	17.6 A	17.6 A	18.3 A	18.3 A
Power feed starts at	18 W	17 W	18 W	17 W
Mains output voltage	230 V (+/-20 %)			
Feed in phases / connection phases	1 feed in phase / 1 or 3 connection phases			
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	n/a		460 mΩ	460 mΩ
Standby consumption	< 2.5 W			
Mains frequency	50 Hz (+/-5 %)			
Short circuit resistance	yes			
Power factor (cos phi)	1			
Ground fault monitoring	-			
Interfaces				
DC connection	Multicontact MC4			
AC connection	Wieland RST 3i / 5i			
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals			
Alarm relay	max. 24 V_{AC} / 2 A, screw terminals			
Appliance data				
Maximum efficiency	95.6 %	94.6 %	95.6 %	94.6 %
European efficiency	94.7 %	93.9 %	94.8 %	93.8 %
Weight	42 kg	43 kg	42 kg	43 kg
Dimensions	H 720 x W 320 x D 250 mm			
Operating temperature	-20 °C ... +60 °C			
Storage temperature	-25 °C ... +80 °C			
Relative humidity (non-condensing)	0 % ... 95 %			
Altitude at rated power	2,000 m / 6,560 ft			
Protection degree (except digital interface)	IP 54 according to DIN EN 60529			
Protection class / overvoltage category	I / III			
Display	graphic LCD 170 x 76 pixels			
Data logger	storage capacity sufficient for 30 years operating time			
System topology	LF transformer, RAC-MPP® technology			
Cooling	fan			
Standards / grid codes	VDE 0126-1-1, C10/11, G83/1, G59/2, EN 50438, EN 50178, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663, AS 4777, AS 3100			
Warranty	10 years			
Type designation	**4300 S**	**4301 S**	**4600 S**	**4601 S**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).
Due to legal guidelines, this model is no longer approved for the German market.

Setting the standard for isolated string inverters. The PLATINUM® H inverter.

The PLATINUM® H inverter offers safety, user-friendliness and the highest degree of efficiency in the isolated inverter market. Thanks to the low weight of these units and the fact that all settings can be adjusted directly on the inverter, installation is made a lot easier and requires no additional software tools. Excellent information is provided by the graphics display and the integrated web server, which allows the unit to be monitored from a PC in real-time. The PLATINUM® H series includes four models ranging from 2.1 to 4.6 kW and is suitable for all module types.

- Efficiency of up to 97.3 %
- Convection cooling
- Weight: 19 – 21 kg
- Integrated web server
- Graphics display
- 10-year free manufacturer's warranty

The new PLATINUM® H series satisfies the "Energy Management (§6 EEG)" market requirement specification and the "Low-voltage Directive VDE AR-N-4105".

Specifications

H Inverter	2100 H	3000 H	4000 H	4600 H
DC Input				
Max. PV power	2,350 Wp	3,450 Wp	4,450 Wp	5,150 Wp
Max. DC power (@ cos phi = 1)	2,100 W	3,000 W	4,000 W	4,600 W
MPPT voltage range	230 V ... 480 V			
Max. input voltage	600 V			
Max. MPPT input current	9.5 A	13.5 A	18.0 A	21.0 A
Number of string inputs	3			
Number of MPP trackers	1			
DC disconnect	optional, device integrated			
Reverse polarity protection	yes			
DC short circuit current	14.2 A	20.2 A	27 A	31.5 A
Ground fault monitoring	isolation control			
AC Output				
Rated power (@ cos phi = 1)	2,000 W	2,900 W	3,800 W	4,400 W
Rated current	9.0 A	13.0 A	17.0 A (16.0 A*)	20.0 A (16.0 A*)
Max. apparent power	2,000 VA	2,900 VA	3,800 VA	4,400 VA
Max. AC current	10.5 A	15.2 A	19.7 A	23.0 A
Power feed starts at	7 W			
Mains output voltage	230 V (+/-20 %)			
Feed in phases / connection phases	1 feed in phase / 1 connection phase			
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	n/a		446 mΩ	379 mΩ
Standby consumption	< 1 W			
Mains frequency	50 Hz (+/-10 %)			
Short circuit resistance	yes			
Power factor (cos phi)	0.9 ind. ... 0.9 cap.			
Ground fault monitoring	-			
Interfaces				
DC connection	Multicontact MC4			
AC connection	screw terminals			
Interfaces	Ethernet / CAN			
Alarm relay	-			
Appliance data				
Maximum efficiency	96.9 %	97.0 %	97.2 %	97.3 %
European efficiency	96.0 %	96.2 %	96.6 %	96.9 %
Weight	19 kg	19 kg	21 kg	21 kg
Dimensions	H 610 x W 353 x D 154 mm			
Operating temperature	-25 °C ... +65 °C			
Storage temperature	-30 °C ... +80 °C			
Relative humidity (non-condensing)	4 % ... 99 %			
Altitude at rated power	2,000 m / 6,560 ft			
Protection degree	IP 65 according to DIN EN 60529			
Protection class / overvoltage category	I / III			
Display	graphic color LCD, three LEDs for visual status indication			
Data logger	storage capacity sufficient for 20 years operating time / integrated webserver			
System topology	HF transformer with galvanic isolation			
Cooling	convection cooling			
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, CEI 0-21, C10/11, G83/1, EN 50438, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663, IEC 62109			
Warranty	10 years			
Type designation	**2100 H**	**3000 H**	**4000 H**	**4600 H**

*UK and Denmark: Adjustable current limit of 16 A.
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Delivering high performance without compromise: efficiency rates of up to 98 %. The single-phase PLATINUM® TL inverter.

Warranty

Multi-country

Datalogger

Outdoor IP 66

Shading

Single-phase

98.0 %
Efficiency

< 25 kW

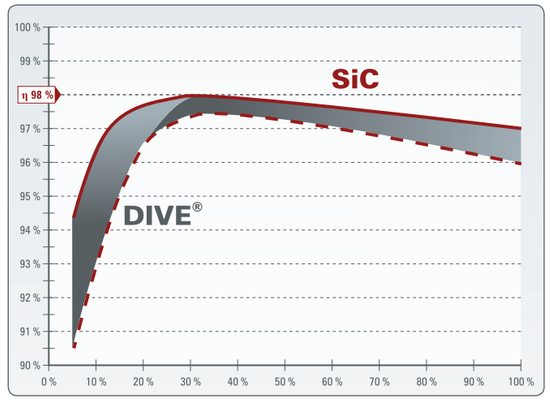
10 –100 kW

All PLATINUM® TL models are compliant with the “Energy Management (§6 EEG)” market requirement specification, the “Technical Guidelines for Power Generating Plants Connected to the Medium Voltage Grid” and the “Low-voltage Directive AR-N-4105”. This supersedes directive VDE 0126-1-1.

The increased efficiency specifically in the lower power output range resulting from the combination of state-of-the-art SiC components and the innovative DIVE® technology is the key factor that contributes to the peak efficiency of 98%. As it has been designed and built to meet the requirements of protection class IP 66, the TL series is exceptionally well suited to outdoor installation. One particular advantage in use is the ease with which these units can be connected up via the PLATINUM® network EIA 485. Thanks to the automatic master programming employed in this system, all of the device settings are transmitted to all connected inverters. All of the key operating data can be clearly read from the graphics display – even at night. The TL series covers seven single-phase models ranging from 3.4 to 7.2 kW.

- Efficiency of 98 %
- Integrated phase balancing function
- Integrated datalogger provides storage capacity for 30 years worth of operating data
- Exceptionally wide DC input voltage range
- DIVE® technology for increased efficiency in the lower power output range
- RAC-MPP® technology for rapid MPP location
- 10-year free manufacturer’s warranty

Maximised efficiency thanks to SiC and DIVE® technology.



SiC (silicon carbide semiconductor technology)
DIVE® (Dynamic Input Value Enhancement)

Intelligent power bundling for outdoor applications. The PLATINUM® PowerBlock.

Specially developed for extreme outdoor weather conditions, the PLATINUM® PowerBlock system is a genuine alternative to central inverters. The compact, robust housing enables installation of up to six inverters, thereby offering optimum protection against rain, hail, sunshine etc.

Specifications

TL Inverter	3801 TL	3800 TL	4300 TL	4800 TL
DC Input				
Max. PV power	4,000 Wp	4,300 Wp	4,900 Wp	5,400 Wp
Max. DC power (@ cos phi = 1)	3,480 W	3,800 W	4,300 W	4,800 W
MPPT voltage range	349 V ... 710 V	350 V ... 710 V	351 V ... 710 V	348 V ... 710 V
Max. input voltage	880 V			
Max. MPPT input current	10.5 A	11.5 A	13.0 A	14.5 A
Number of string inputs	2	2	2	2
Number of MPP trackers	1			
DC disconnect	optional, device integrated			
Reverse polarity protection	yes			
DC short circuit current	15 A	16 A	18 A	20 A
Ground fault monitoring	isolation control			
AC Output				
Rated power (@ cos phi = 1)	3,330 W	3,680 W	4,120 W	4,600 W
Rated current	14.5 A	16.0 A	17.9 A	20.0 A
Max. apparent power	3,330 VA	3,680 VA	4,120 VA	4,600 VA
Max. AC current	14.5 A	16.0 A	17.9 A	20.0 A
Power feed starts at	7 W	7 W	7 W	7 W
Mains output voltage	230 V (+/-20 %)			
Feed in phases / connection phases	1 feed in phase / 1 or 3 connection phases			
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	n/a		424 mΩ	379 mΩ
Standby consumption	< 2 W			
Mains frequency	50 Hz (+/- 5 %)			
Short circuit resistance	yes			
Power factor (cos phi)	0.7 ind. ... 0.7 cap.			
Ground fault monitoring	RCD			
Interfaces				
DC connection	Multicontact MC4			
AC connection	spring clamp connectors			
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals			
Alarm relay	max. 24 V_{AC} / 2 A, screw terminals			
Appliance data				
Maximum efficiency	97.7 %	97.7 %	97.7 %	97.7 %
European efficiency	97.4 %	97.4 %	97.4 %	97.4 %
Weight	27 kg	27 kg	27 kg	28 kg
Dimensions	H 720 x W 320 x D 250 mm			
Operating temperature	-20 °C ... +60 °C			
Storage temperature	-25 °C ... +80 °C			
Relative humidity (non-condensing)	0 % ... 95 %			
Altitude at rated power	2,000 m / 6,560 ft			
Protection degree (except digital interface)	IP 66 according to DIN EN 60529			
Protection class / overvoltage category	I / III			
Display	graphic LCD 170 x 76 pixels			
Data logger	storage capacity sufficient for 30 years operating time			
System topology	transformerless, DIVE®, RAC-MPP® technology			
Cooling	convection cooling			
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G83/1, G59/2, EN 50438, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663/661, IEC 62109, AS 4777, AS 3100			
Warranty	10 years			
Type designation	**3801 TLD**	**3800 TLD**	**4300 TLD**	**4800 TLD**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).

Specifications

TL Inverter	5300 TL	6300 TL	7200 TL
DC Input			
Max. PV power	6,000 Wp	7,100 Wp	8,000 Wp
Max. DC power (@ cos phi = 1)	5,300 W	6,300 W	7,200 W
MPPT voltage range	349 V ... 710 V	350 V ... 710 V	351 V ... 710 V
Max. input voltage	880 V		
Max. MPPT input current	16.0 A	18.5 A	21.0 A
Number of string inputs	2	3	3
Number of MPP trackers	1		
DC disconnect	optional, device integrated		
Reverse polarity protection	yes		
DC short circuit current	22 A	26 A	29 A
Ground fault monitoring	isolation control		
AC Output			
Rated power (@ cos phi = 1)	5,000 W	6,000 W	6,900 W
Rated current	21.7 A	26.1 A	30.0 A
Max. apparent power	5,000 VA	6,000 VA	6,900 VA
Max. AC current	21.7 A	26.1 A	30.0 A
Power feed starts at	7 W	8 W	8 W
Mains output voltage	230 V (+/-20 %)		
Feed in phases / connection phases	1 feed in phase / 1 or 3 connection phases		
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	349 mΩ	290 mΩ	253 mΩ
Standby consumption	< 2 W		
Mains frequency	50 Hz (+/- 5 %)		
Short circuit resistance	yes		
Power factor (cos phi)	0.7 ind. ... 0.7 cap.		
Ground fault monitoring	RCD		
Interfaces			
DC connection	Multicontact MC4		
AC connection	spring clamp connectors		
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals		
Alarm relay	max. 24 V_{AC} / 2 A, screw terminals		
Appliance data			
Maximum efficiency	97.7 %	98.0 %	98.0 %
European efficiency	97.4 %	97.5 %	97.5 %
Weight	28 kg	29 kg	29 kg
Dimensions	H 720 x W 320 x D 250 mm		
Operating temperature	-20 °C ... +60 °C		
Storage temperature	-25 °C ... +80 °C		
Relative humidity (non-condensing)	0 % ... 95 %		
Altitude at rated power	2,000 m / 6,560 ft		
Protection degree (except digital interface)	IP 66 according to DIN EN 60529		
Protection class / overvoltage category	I / III		
Display	graphic LCD 170 x 76 pixels		
Data logger	storage capacity sufficient for 30 years operating time		
System topology	transformerless, DIVE®, RAC-MPP® technology		
Cooling	fan		
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G83/1, G59/2, EN 50438, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663/661, IEC 62109, AS 4777, AS 3100		
Warranty	10 years		
Type designation	**5300 TLD**	**6300 TLD**	**7200 TLD**

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Delivering an impressive efficiency of 98 %.
The three-phase PLATINUM® TL inverter.

Warranty

Multi-country

3 MPP trackers

Graphics display

Outdoor IP 65

Three-phase

98.0 % Efficiency

10 –100 kW

> 100 kW

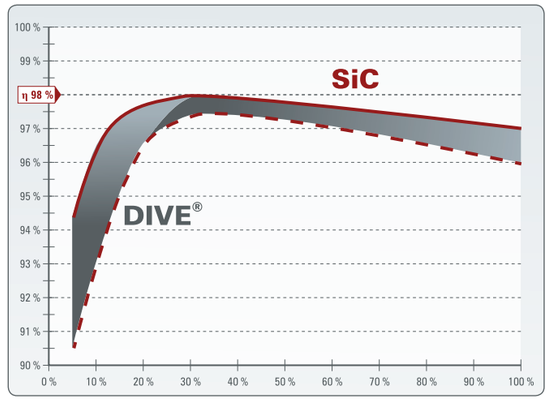
Shading

All PLATINUM® TL models are compliant with the “Energy Management (§6 EEG)” market requirement specification, the “Technical Guidelines for Power Generating Plants Connected to the Medium Voltage Grid” and the “Low-voltage Directive AR-N-4105”. This supersedes directive VDE 0126-1-1.

The sibling of the single-phase TL inverter impresses with the same peak efficiency of 98%. This is largely down to the increase in efficiency particularly in the lower output range achieved by using of state-of-the-art SiC components in conjunction with the innovative DIVE® technology. The TL series is designed and constructed to meet the requirements of protection class IP 65 and is therefore, suitable for outdoor applications. One main advantage for users is the ease with which the system can be set into operation via the PLATINUM® network EIA 485: the inputs that are programmed at an inverter are transmitted to all networked devices. All of the key operating data can be clearly read from the graphics display – even at night. The range includes five three-phase models ranging from 13 to 22 kW.

- Efficiency of 98 %
- 3 independent MPP trackers
- Integrated datalogger provides storage capacity for 30 years worth of operating data
- Exceptionally wide DC input voltage range
- DIVE® technology for increased efficiency in the lower power output range
- RAC-MPP® technology for rapid MPP location
- 10-year free manufacturer’s warranty

Maximised efficiency thanks to SiC and DIVE® technology.



SiC (silicon carbide semiconductor technology)
DIVE® (Dynamic Input Value Enhancement)

Intelligent power bundling for outdoor applications.
The PLATINUM® PowerBlock.

Specially developed for extreme outdoor weather conditions, the PLATINUM® PowerBlock system is a genuine alternative to central inverters. The compact and robust housing offers optimum protection against rain, hail, sunshine etc.

Specifications

TL Inverter	13000 TL	16000 TL	19000 TL
DC Input			
Max. PV power	14,700 Wp	18,000 Wp	21,300 Wp
Max. DC power (@ cos phi = 1)	12,900 W	15,900 W	18,900 W
MPPT voltage range	351 V ... 710 V	349 V ... 710 V	350 V ... 710 V
Max. input voltage	880 V		
Max. MPPT input current	3 x 13.0 A	3 x 16.0 A	3 x 18.5 A
Number of string inputs	6	6	9
Number of MPP trackers	3		
DC disconnect	optional, device integrated		
Reverse polarity protection	yes		
DC short circuit current	3 x 18 A	3 x 22 A	3 x 26 A
Ground fault monitoring	isolation control		
AC Output			
Rated power (@ cos phi = 1)	12,360 W	15,000 W	18,000 W
Rated current	17.9 A	21.7 A	26.1 A
Max. apparent power	12,360 VA	15,000 VA	18,000 VA
Max. AC current	17.9 A	21.7 A	26.1 A
Power feed starts at	21 W	21 W	24 W
Mains output voltage	3AC 230 V / 400 V + N (+/-20 %)		
Feed in phases / connection phases	3 feed in phases / 3 connection phases		
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	424 mΩ	349 mΩ	290 mΩ
Standby consumption	< 6 W		
Mains frequency	50 Hz (+/- 5 %)		
Short circuit resistance	yes		
Power factor (cos phi)	0.7 ind. ... 0.7 cap.		
Ground fault monitoring	RCD		
Interfaces			
DC connection	Multicontact MC4		
AC connection	spring clamp connectors		
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals		
Alarm relay	max. 24 V_{AC} / 2 A, screw terminals		
Appliance data			
Maximum efficiency	97.7 %	97.7 %	98.0 %
European efficiency	97.4 %	97.4 %	97.5 %
Weight	81 kg	84 kg	87 kg
Dimensions	H 743 x W 972 x D 262 mm		
Operating temperature	-20 °C ... +60 °C		
Storage temperature	-25 °C ... +80 °C		
Relative humidity (non-condensing)	0 % ... 95 %		
Altitude at rated power	2,000 m / 6,560 ft		
Protection degree (except digital interface)	IP 65 according to DIN EN 60529		
Protection class / overvoltage category	I / III		
Display	graphic LCD 170 x 76 pixels		
Data logger	storage capacity sufficient for 30 years operating time		
System topology	transformerless, DIVE®, RAC-MPP® technology		
Cooling	convection cooling	fan	
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G83/1, G59/2, EN 50438, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663/661, IEC 62109, AS 4777, AS 3100		
Warranty	10 years		
Type designation	**13000 TLD**	**16000 TLD**	**19000 TLD**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).

Specifications

TL Inverter	22001 TL	22000 TL
DC Input		
Max. PV power	23,000 Wp	24,000 Wp
Max. DC power (@ cos phi = 1)	20,800 W	21,600 W
MPPT voltage range	351 V ... 710 V	351 V ... 710 V
Max. input voltage	880 V	
Max. MPPT input current	3 x 20.2 A	3 x 21.0 A
Number of string inputs	9	9
Number of MPP trackers	3	
DC disconnect	optional, device integrated	
Reverse polarity protection	yes	
DC short circuit current	3 x 28 A	3 x 29 A
Ground fault monitoring	isolation control	
AC Output		
Rated power (@ cos phi = 1)	20,000 W	20,700 W
Rated current	29.0 A	30.0 A
Max. apparent power	20,000 VA	20,700 VA
Max. AC current	29.0 A	30.0 A
Power feed starts at	24 W	24 W
Mains output voltage	3AC 230 V / 400 V + N (+/-20 %)	
Feed in phases / connection phases	3 feed in phases / 3 connection phases	
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	261 mΩ	253 mΩ
Standby consumption	< 6 W	
Mains frequency	50 Hz (+/- 5 %)	
Short circuit resistance	yes	
Power factor (cos phi)	0.7 ind. ... 0.7 cap.	
Ground fault monitoring	RCD	
Interfaces		
DC connection	Multicontact MC4	
AC connection	spring clamp connectors	
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals	
Alarm relay	max. 24 V_{AC} / 2 A, screw terminals	
Appliance data		
Maximum efficiency	98.0 %	98.0 %
European efficiency	97.5 %	97.5 %
Weight	87 kg	87 kg
Dimensions	H 743 x W 972 x D 262 mm	
Operating temperature	-20 °C ... +60 °C	
Storage temperature	-25 °C ... +80 °C	
Relative humidity (non-condensing)	0 % ... 95 %	
Altitude at rated power	2,000 m / 6,560 ft	
Protection degree (except digital interface)	IP 65 according to DIN EN 60529	
Protection class / overvoltage category	I / III	
Display	graphic LCD 170 x 76 pixels	
Data logger	storage capacity sufficient for 30 years operating time	
System topology	transformerless, DIVE®, RAC-MPP® technology	
Cooling	fan	
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G83/1, G59/2, EN 50438, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663/661, IEC 62109, AS 4777, AS 3100	
Warranty	10 years	
Type designation	**22001 TLD**	**22000 TLD**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).

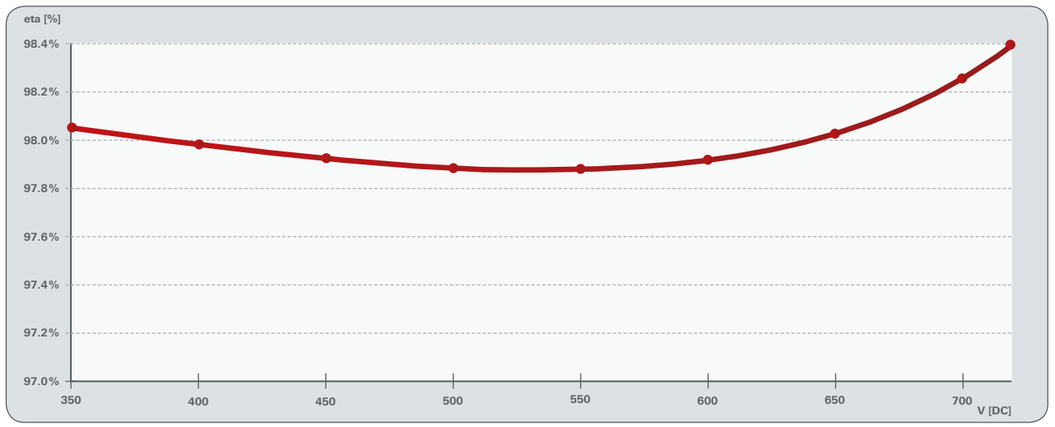
Pulls out a cool 98.4 %.
The PLATINUM® R3 inverter.

All PLATINUM® R3 models are compliant with the “Energy Management (§6 EEG)” market requirement specification, the “Technical Guidelines for Power Generating Plants Connected to the Medium Voltage Grid” and the “Low-voltage Directive AR-N-4105”. This supersedes directive VDE 0126-1-1.

The transformerless, three-phase high-performance R3 inverter is a logical extension of the PLATINUM® product family: smaller, more compact, more lightweight and more efficient. Thanks to the innovative DUAL-X® technology, it achieves a peak efficiency of 98.4% and thus offers an excellent yield. Factors that contribute to this exceptionally high efficiency include the purely convection-based cooling system and the excellent MPP tracking, while the low weight and automatic master programming via the PLATINUM® network EIA 485 help to make installation and commissioning incredibly easy. All of the key operating data can be clearly read off from the graphics display – even at night. The range contains five models from 7 to 16 kW.

- Efficiency of 98.4 %
- DIVE® technology for increased efficiency in the lower power output range
- RAC-MPP® technology for rapid MPP location
- Convection cooling
- Integrated datalogger provides storage capacity for 30 years worth of operating data
- 10-year free manufacturer’s warranty

Excellent yield values thanks to DUAL-X® technology.



High efficiency across the entire MPPT voltage range thanks to innovative DUAL-X® technology.
The advantage: exceptionally high yields with optimum design flexibility.

Specifications

R3 Inverter	7000 R3	9000 R3	11000 R3
DC Input			
Max. PV power	6,700 Wp	9,000 Wp	11,200 Wp
Max. DC power (@ cos phi = 1)	6,100 W	8,200 W	10,200 W
MPPT voltage range	350 V ... 720 V		
Max. input voltage	900 V		
Max. MPPT input current	2 x 10 A	2 x 13 A	2 x 16 A
Number of string inputs	1 + 1	2 + 2	2 + 2
Number of MPP trackers	1		
DC disconnect	yes		
Reverse polarity protection	yes		
DC short circuit current	14 A	18 A	22 A
Ground fault monitoring	isolation control		
AC Output			
Rated power (@ cos phi = 1)	6,000 W	8,000 W	10,000 W
Rated current	8.7 A	11.6 A	14.5 A
Max. apparent power	6,000 VA	8,000 VA	10,000 VA
Max. AC current	11.2 A	14.8 A	18.5 A
Power feed starts at	20 W		
Mains output voltage	3AC 230 V / 400 V + N (+/-20 %)		
Feed in phases / connection phases	3 feed in phases / 3 connection phases		
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	n/a		
Standby consumption	< 2 W		
Mains frequency	50 Hz (+/- 5 %)		
Short circuit resistance	yes		
Power factor (cos phi)	0.7 ind. ... 0.7 cap.		
Ground fault monitoring	RCD		
Interfaces			
DC connection	Multicontact MC4		
AC connection	spring clamp connectors		
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals		
Alarm relay	-		
Appliance data			
Maximum efficiency	98.4 %	98.4 %	98.4 %
European efficiency	97.7 %	97.8 %	97.9 %
Weight	45 kg		
Dimensions	H 626 x W 547 x D 290 mm		
Operating temperature	-20 °C ... +60 °C		
Storage temperature	-25 °C ... +80 °C		
Relative humidity (non-condensing)	0 % ... 95 %		
Altitude at rated power	2,000 m / 6,560 ft		
Protection degree	IP 66 according to DIN EN 60529		
Protection class / overvoltage category	I / III		
Display	graphic LCD 170 x 76 pixels		
Data logger	storage capacity sufficient for 30 years operating time		
System topology	transformerless, DIVE®, RAC-MPP® technology		
Cooling	convection cooling		
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G83/1, G59/2, EN 50438, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663/661, IEC 62109, AS 4777, AS 3100		
Warranty	10 years		
Type designation	**7000 R3-MDX**	**9000 R3-MDX**	**11000 R3-MDX**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).

Specifications

R3 Inverter	14000 R3	16000 R3
DC Input		
Max. PV power	14,600 Wp	16,900 Wp
Max. DC power (@ cos phi = 1)	13,300 W	15,350 W
MPPT voltage range	350 V ... 720 V	
Max. input voltage	900 V	
Max. MPPT input current	2 x 21 A	2 x 24 A
Number of string inputs	2 + 2	
Number of MPP trackers	1	
DC disconnect	yes	
Reverse polarity protection	yes	
DC short circuit current	29 A	33 A
Ground fault monitoring	isolation control	
AC Output		
Rated power (@ cos phi = 1)	13,000 W	15,000 W
Rated current	18.9 A	22.0 A
Max. apparent power	13,000 VA	15,000 VA
Max. AC current	22.0 A	22.0 A
Power feed starts at	20 W	
Mains output voltage	3AC 230 V / 400 V + N (+/-20 %)	
Feed in phases / connection phases	3 feed in phases / 3 connection phases	
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	402 mΩ	345 mΩ
Standby consumption	< 2 W	
Mains frequency	50 Hz (+/- 5 %)	
Short circuit resistance	yes	
Power factor (cos phi)	0.7 ind. ... 0.7 cap.	
Ground fault monitoring	RCD	
Interfaces		
DC connection	Multicontact MC4	
AC connection	spring clamp connectors	
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals	
Alarm relay	-	
Appliance data		
Maximum efficiency	98.4 %	98.4 %
European efficiency	98.0 %	98.0 %
Weight	45 kg	
Dimensions	H 626 x W 547 x D 290 mm	
Operating temperature	-20 °C ... +60 °C	
Storage temperature	-25 °C ... +80 °C	
Relative humidity (non-condensing)	0 % ... 95 %	
Altitude at rated power	2,000 m / 6,560 ft	
Protection degree	IP 66 according to DIN EN 60529	
Protection class / overvoltage category	I / III	
Display	graphic LCD 170 x 76 pixels	
Data logger	storage capacity sufficient for 30 years operating time	
System topology	transformerless, DIVE®, RAC-MPP® technology	
Cooling	convection cooling	
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G83/1, G59/2, EN 50438, ÖNORM E8001-4-712, UTE C15-712-1, RD 1663/661, IEC 62109, AS 4777, AS 3100	
Warranty	10 years	
Type designation	**14000 R3-MDX**	**16000 R3-MDX**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).

An outstanding top performer – three-phase from 11 to 20 kW. The PLATINUM® TL3 inverter.

Thanks to the highly efficient circuit topology across a wide input voltage range, the PLATINUM® TL3 inverter can deliver efficiency of up to 98.2 %. The three-phase feed-in eliminates the risk of unbalance between phase loads. The PLATINUM® network and standardised connections ensure that networking of the multi-country-device could not be easier. As all programming is performed via the PLATINUM® network EIA 485, all of the adjustments made to device settings are automatically transmitted to all connected inverters. All of the key operating data can be clearly read from the graphics display – even at night. The range contains four models from 11 to 20 kW.

- Efficiency up to 98.2 %
- Integrated datalogger provides storage capacity for 30 years worth of operating data
- Convection cooling
- Weight: 40 kg
- Protection class IP 65

All PLATINUM® TL3 models are compliant with the “Energy Management (§6 EEG)” market requirement specification, the “Technical Guidelines for Power Generating Plants Connected to the Medium Voltage Grid” and the “Low-voltage Directive AR-N-4105”. This supersedes directive VDE 0126-1-1.

Specifications

TL3 Inverter	11000 TL3	13000 TL3	17000 TL3	20000 TL3
DC Input				
Max. PV power	11,000 Wp	13,600 Wp	18,100 Wp	21,200 Wp
Max. DC power (@ cos phi = 1)	10,300 W	12,800 W	16,900 W	19,650 W
MPPT voltage range	380 V ... 850 V	420 V ... 850 V	445 V ... 850 V	480 V ... 850 V
Max. input voltage	1000 V			
Max. MPPT input current	29.0 A	30.0 A	38.5 A	41.0 A
Number of string inputs	4		6	
Number of MPP trackers	1			
DC disconnect	integrated in the device			
Reverse polarity protection	yes			
DC short circuit current	50 A			
Ground fault monitoring	isolation control			
AC Output				
Rated power (@ cos phi = 1)	10,000 W	12,400 W	16,500 W	19,200 W
Rated current	14.5 A	18.0 A	23.9 A	27.8 A
Max. apparent power	10,000 VA	12,400 VA	16,500 VA	19,200 VA
Max. AC current	18.0 A	18.0 A	29.0 A	29.0 A
Power feed starts at	20 W			
Mains output voltage	3AC 400 V + N (+/-20 %)			
Feed in phases / connection phases	3 feed in phases / 3 connection phases			
Max. permitted grid impedance |Zmax| (EN 61000-3-11)	n/a	422 mΩ	318 mΩ	273 mΩ
Standby consumption	< 2.5 W			
Mains frequency	50 Hz / 60 Hz (+/-5 %)			
Short circuit resistance	yes			
Power factor (cos phi)	0.9 ind. ... 0.9 cap.			
Ground fault monitoring	RCD			
Interfaces				
DC connection	Multicontact MC4			
AC connection	Phoenix plug connector (supplied)			
Interfaces	PLATINUM® network EIA 485, 2 x RJ45 and screw terminals			
Alarm relay	max. 24 V_{AC} / 2 A, screw terminals			
Appliance data				
Maximum efficiency	98.0 %	98.0 %	98.2 %	98.2 %
European efficiency	97.4 %	97.5 %	97.8 %	97.8 %
Weight	39 kg	39 kg	40 kg	40 kg
Dimensions	H 626 x W 543 x D 281 mm			
Operating temperature	-25 °C ... +55 °C			
Storage temperature	-20 °C ... +70 °C			
Relative humidity (non-condensing)	0 % ... 93 %			
Altitude at rated power	2,000 m / 6,560 ft			
Protection degree (except digital interface)	IP 65 according to DIN EN 60529			
Protection class / overvoltage category	I / III			
Display	graphic LCD 170 x 76 pixels			
Data logger	storage capacity sufficient for 30 years operating time			
System topology	transformerless, 3-phase high-performance topology			
Cooling	convection cooling			
Standards / grid codes	VDE 0126-1-1, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G59/2, EN 50438, ÖNORM E8001-4-712, UTE C 15-712-1, RD 1663/661, IEC 62109, AS 4777.			
Warranty	5 years			
Type designation	**11000 TL3**	**13000 TL3**	**17000 TL3**	**20000 TL3**

Subject to alterations. More than 45 countries are currently supported. An up-to-date type designation list can be found in the download area on our website under Certificates/Overview (as at May 2012).

Delivering the best yield across Europe. The PLATINUM® range of inverters. Reference systems.

PLATINUM® inverters are in use across the whole of Europe, from the UK to Greece. Customers particularly value the outstanding performance, exceptional quality and ease of installation and commissioning of the multi-country devices. This list of international references once again highlights the significance of inverter technology in terms of the efficiency of photovoltaic systems and therefore, for the long-term success of solar energy.

Revello, Piemont, Italy.
Eco-electricity and happy hens.

Care for the environment is reflected in two important projects in Revello, south of Turin: the open-field photovoltaic system built in 2011, which delivers a total output of 1,231 kWp, and an environmentally-friendly free-range livestock/poultry farm. PLATINUM® supplied 174 inverters (model: 7200 TL) for around 7,000 modules.

Equipment:
- 174 Diehl 7200 TL inverters
- 7,038 modules, each delivering 175 Wp

Impressive performance both in the north and south. The PLATINUM® range of inverters. Reference systems.

Piscina, Turin region, Italy.
Increased yield with multi-MPP tracking.

In the case of this plant near Turin, which was constructed in 2011, the problem of curved roofs with modules aligned in different directions was overcome by using string inverters and separate MPP-tracking for each row of modules. The yield of the plant was maximised with the aid of multi-MPP tracking and was increased across the board by 10 – 15% compared to the original forecasts. The total output of the plant is 269 kWp.

Equipment:
- 24 Diehl 7200 TL inverters
- 6 Diehl 6300 TL inverters
- 12 Diehl 4800 TL inverters
- 426 modules, each delivering 180 Wp
- 678 modules, each delivering 285 Wp

Podnanos, Vipava, Slovenia.
Decentralised solution with PLATINUM® string inverters.

With a power output of 950 kWp, the plant in Podnanos is one of the largest photovoltaic installations in Slovenia. In this plant, a decentralised solution is implemented solely with PLATINUM® string inverters. These deliver a higher yield than centralised inverters and suffer fewer failures. With the aid of the 135 MPP trackers of the 44 PLATINUM® 22000 TL inverters, it is possible to compensate for terrain-related differences in angle between he modules via multi-MPP tracking and thus to significantly increase the yield.

Equipment:
- 44 Diehl 22000 TL inverters
- 3,168 modules, each delivering 300 Wp

Euaggelismos Messinias, Peloponnese, Greece.
200 kWp with 30 PLATINUM® inverters.

These two photovoltaic parks in Euaggelismos Messinias in Greece each deliver an output of 2 x 100 kWp from a surface area of 10,000 m². The plant has been designed to run for 20 years and was constructed over a period of two months. Last year, the feed-in power was 2,150 kWh per kWp. There were two reasons why PLATINUM® inverters were chosen for this project: high quality and excellent value for money.

Equipment:
- 11 Diehl 7200 TL inverters per park
- 4 Diehl 4300 TL inverters per park
- 20 single-axis solar trackers
- 454 modules, each delivering 220 Wp

Littlehampton, West Sussex, south England.
The biggest rooftop solar power plant in the British Isles.

Britain's largest rooftop solar power plant with a total area of 6,355 m² and an output of 883 kWp was planned and installed in just three months in 2011. The electricity produced here is to be used in a self-sustaining system in order to reduce the energy costs of its operating company. In addition, this also helps to save 390 tons of CO_2 emissions every year. The plant can supply electricity to 200 households per year.

Equipment:
- 40 Diehl 22000 TL inverters
- 3,800 modules, each delivering 230 Wp

Warin, Mecklenburg-West Pomerania, Germany.
Flexible deployment of 115 PLATINUM® inverters on a total of ten roofs.

This installation, which is distributed over many roofs, presented a special challenge: thanks to the wide performance spectrum of the units in the PLATINUM® range, it was possible to equip eight large halls, one smaller hall and one office building – each with an apex roof pitched at 14° – with the best models to deliver the optimum power output. A total of 115 transformerless PLATINUM® inverters deliver high yield values, while four PLATINUM® WebMaster units are used for comprehensive monitoring. Constructed in 2010, the solar plant delivers an output of 904 kWp.

Equipment:
- 104 Diehl 7200 TL inverters
- 1 Diehl 6300 TL inverter
- 1 Diehl 4800 TL inverter
- 3 Diehl 4300 TL inverters
- 4,880 modules, each delivering 185 Wp

Delivering uninterrupted monitoring.
On-site and in mobile applications.
The PLATINUM® monitoring system.

The PLATINUM® monitoring system offers a range of professional solutions for every size of plant. It enables around-the-clock monitoring of a photovoltaic plant and provides detailed data and measurements for function, power output and efficiency. Examples of parameters that can be visualised via a PC include the current power output, daily/monthly/annual yield and configuration data.

Analysing performance and profitability.
The PLATINUM® WebMaster Pro.

In commercial photovoltaic systems, analysis of the technical performance and power output is an important part of plant monitoring, as this provides vital information about profitability and commercial success. After all, the key here is to recover the high investment costs and operating costs. Thanks to the scalability of PLATINUM® WebMaster Pro, it can be used to monitor plants with up to 1,000 PLATINUM® inverters.

- PLATINUM® network EIA 485
- Supports plants with up to 1,000 inverters
- Automatic messaging to PC or mobile phone in the event of a fault
- Access via web browser; no additional PC software required

Specifications	
Dimensions	W 180 x H 170 x D 35 mm
Housing	Polycarbonate, indoor and cabinet
Type of installation	Stand, wall mounting , top hat rail
Protection degree	IP 20
Operating temperature	-20 °C … +75 °C
Interfaces	
PLATINUM® network EIA 485	RJ45 and screw terminals
Ethernet	10/100 MBit/s, RJ45
Electrical data	
Operation voltage	230 V

Subject to alterations (as at May 2012).

Expansion for the PLATINUM® WebMaster Pro. The PLATINUM® IOBox.

In order to comply with legal requirements and technical directives, plant operators are required to provide feed-in management solutions.
With its large number of inputs, the PLATINUM® IOBox offers numerous options for connection to the telecontrol engineering systems of the grid operator. In addition, these inputs are also suitable for connecting various sensors. With the aid of the integrated network interface, PLATINUM® IOBox can be easily connected to the local grid at the plant.

- 10 digital inputs
- 6 analogue inputs/ switchable measuring range
- 10 potential-free relay outputs
- Ethernet interface
- PLATINUM® network EIA 485

Specifications	
Dimensions	W 86 x H 60 x D 157 mm
Housing	Polycarbonate, indoor and cabinet with top hat rail
Protection degree	IP 20
Operating temperature	0 °C … +50 °C
Interfaces	
PLATINUM® network EIA 485	2 x RJ45 and screw terminals
Digital Inputs	10 digital inputs (5mA at 24V, Low: 0 – 4V, High 15 – 30V), screw terminals
Analog inputs	6 analog inputs, switchable measuring range: 0 – 10V (11kΩ), 0-600mV (1MΩ), 0 – 150mV (1MΩ), 0 – 20mA (390Ω), screw terminals
Digital outputs	10 isolated relay contacts, max. 2 A, max. 30 VDC, screw terminals
Ethernet	10/100 MBit/s, RJ45
Electrical data	
Operating voltage	24 VDC
Power consumption	approx. 160 mA at 24 VDC

Subject to alterations (as at May 2012).

Enables PC evaluation on small systems. PLATINUM® PV-Monitor.

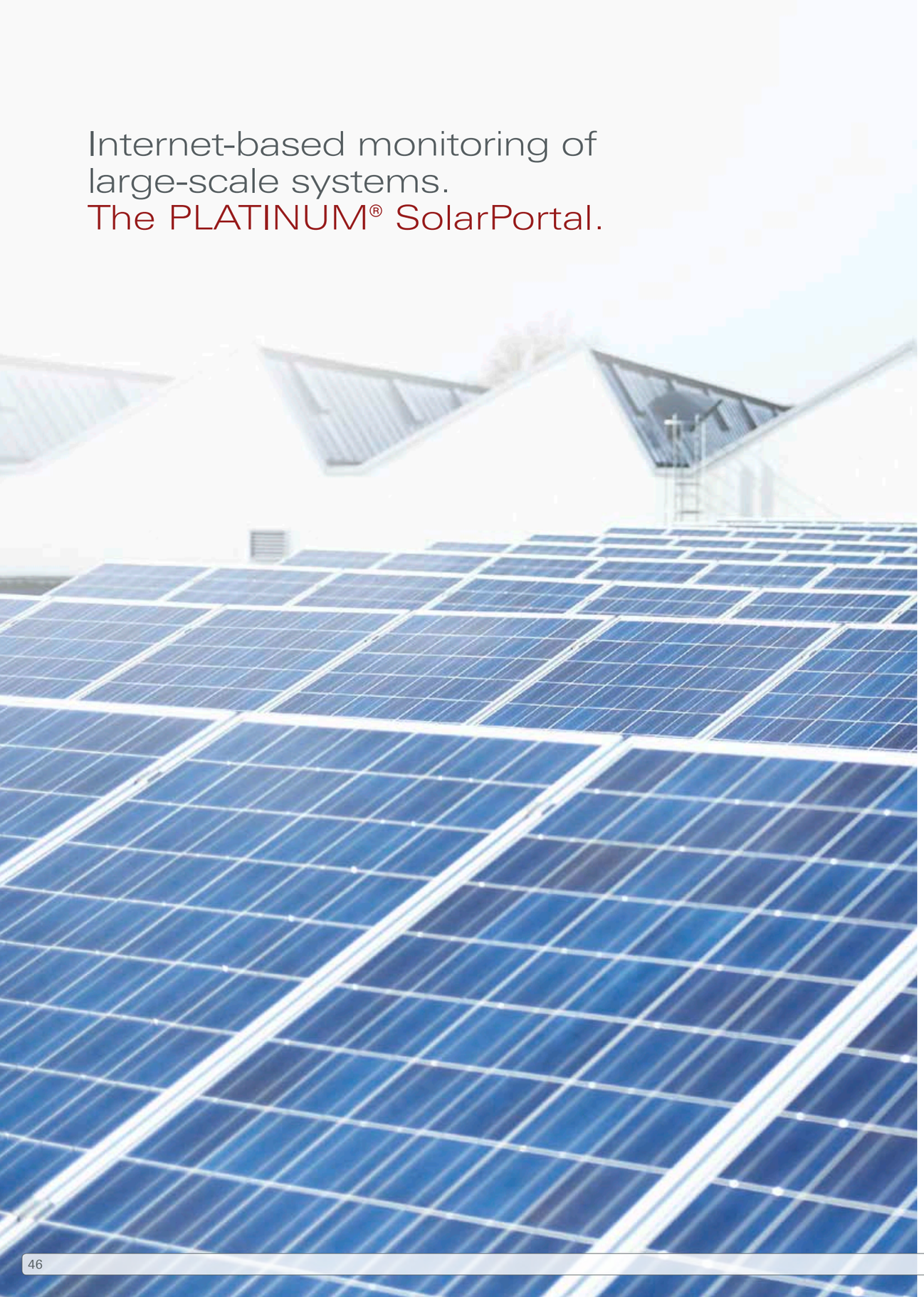
The PV-Monitor software is a PC-based tool which offers a user-friendly evaluation of all key data particularly for smaller photovoltaic systems up to 25 kW. It displays measurements for different time periods as clear, easy to read graphics and provides diagrams for the power output or yield of individual inverters or the entire plant.

- Easy connection between PC and inverter
- Suitable for all plants with PLATINUM® inverters with a manufacturing date from January 2007 onwards
- Cost-effective solution for smaller photovoltaic systems
- Practical export function into Excel, XML and text format

Specifications	
Dimensions	W 92 x H 22 x D 25 mm
Operating temperature	0 °C … +40 °C
PLATINUM® network EIA 485	RJ45
USB	USB plug type A
System requirements	Operating system Windows 2000, XP, Vista or 7, .NET Framework 2.0 RAM > 64 MB Available disk space > 50 MB Interface USB 1.1 or higher

Subject to alterations (as at May 2012).

Internet-based monitoring of large-scale systems.
The PLATINUM® SolarPortal.



In the case of large-scale systems, it is particularly important to safeguard the yield generated by the system. User-friendly monitoring and yield analysis systems are a prerequisite for this.

PLATINUM® SolarPortal enables professional remote monitoring via the Internet. Via PLATINUM® WebMaster Pro, all of the relevant plant data is transmitted to the SolarPortal server, where the data is then stored and processed. This then highlights any faults and long-term yield fluctuations.

- Global access
- Integrated user administration enables customer-specific alarm management
- Early fault detection optimises profitability
- Performance monitoring via calculation of target values and actual values from weather data
- For individual plants, virtual plants and plant parks
- Displays the power output for different time periods, as well as temperature, voltage, current etc.
- E-mail dispatch
- Data backup, user administration, individual E-mail configuration, data download to PC
- Technical and commercial reports, generation of individual reports
- Also available as a smartphone app

Making power output transparent, controlling consumption. Intelligent energy management with Diehl SmartHome.

In addition to monitoring of the power output of photovoltaic systems, responsible energy usage also requires intelligent control of how the energy is used. In the form of the innovative SmartHome concept, PLATINUM® offers a highly developed system for user-friendly energy management. This concept combines the elements of photovoltaics, storage and energy management with the aim of increasing self-sufficiency and cost-effectiveness in terms of electric power consumption.

Diehl SmartHome helps to lower electric power consumption, increase safety and comfort and control energy consumption. Via the various control panels or via remote access, it is for example possible to turn down the heating when the window is open, centrally switch devices on or off, or close the shutters when it gets dark.

In addition, the storage options provided via the optional PLATINUM® battery offer greater flexibility in terms of the times at which the electricity generated by the system can be used. This means that power is available when it is needed – and not just when the sun is shining. As a result, the amount of generated energy that can be used internally – which is a much more profitable solution to feeding the electricity into the grid – can be cleverly increased.

Analyses energy values, optimises consumption. PLATINUM® WebMaster Home.

PLATINUM® WebMaster Home represents the first step into the world of Diehl SmartHome. It measures all of the key data for the photovoltaic system, provides information about output and generates alarms in the event of a fault. Thanks to the integrated wireless standards EnOcean® and Z-Wave®, PLATINUM® WebMaster Home supports an almost unlimited number of components. Functions can be added or upgraded at any time via the Diehl SmartHome Shop.

- Monitoring of up to 5 PLATINUM® inverters via the PLATINUM® network EIA 485
- Detailed measurement of output and consumption
- Intelligent closed-loop control for the 70% limit according to EEG 2012
- Integrated interface to the PLATINUM® battery
- Monitoring and closed-loop control for up to 5 storage systems
- Representation and controlling of room scenarios
- Recording and representation of individual consumption profiles for connected devices
- Suitable for upgrading with standard commercially available EnOcean® and Z-Wave® components (up to 400 units)
- Smart Grid interfaces as standard
- Optional remote reading of current meters

Specifications	
Dimensions	W 180 x H 170 x D 35 mm
Housing	Polycarbonate, indoor and cabinet
Type of installation	Stand, wall mounting, top hat rail
Protection degree	IP 20
Operating temperature	0 °C … +50 °C
PLATINUM® network EIA 485	RJ45 and screw terminals
Ethernet	10/100 MBit/s, RJ45
Radio interfaces	Z-Wave® and EnOcean®
Operating voltage	230 V

Subject to alterations (as at May 2012).

Delivers excellent values for environmental management as well. Production, packaging and return of PLATINUM® products.

For any company that develops technology promoting the sustainable use of resources, responsible practices are an essential part of the corporate culture. We carry the corresponding certification and ensure compliance of the PLATINUM® brand with all relevant environmental directives.

The Photovoltaics division has an environmental management system and is certified according to ISO 14001.

PLATINUM® is compliant with all important environmental directives:

RoHS directive:
Our products comply with the RoHS directive. This means that they do not contain hazardous substances such as lead or mercury.

Regulation on packaging:
To ensure that the packaging we use for our products can also be disposed of in an environmentally friendly manner and recycled, we take part in the dual waste disposal system and comply with the requirements of the regulation on packaging.

Return of end-of-life electrical and electronic equipment:
To ensure that returned products are disposed of in an environmentally friendly manner, we are registered in accordance with the Waste Electrical and Electronic Equipment Directive (WEEE) under the registration number DE 46602949.

Always happy to help with advice and support. PLATINUM® sales, service and training courses.

Whether for the planning of photovoltaic systems, designing of plant monitoring systems or commissioning of PLATINUM® products – our experts are on hand and happy to help with advice and support.

All of our products are developed and manufactured with great care. If, despite our best efforts, you still have a problem with one of our products, the relevant PLATINUM® service department will be happy to offer fast and competent help.

Sales

International
PLATINUM® Distribution Centre
Diehl AKO Stiftung & Co. KG
Pfannerstraße 75
88239 Wangen im Allgäu, Germany
Tel: +49 7522 73-700
Fax: +49 7522 73-710
platinum@diehl-controls.com

Italy
Diehl Controls Photovoltaics Italy Srl
Via Lancia 8/A, 39100 Bolzano, Italy
Tel: +39 0471-910 344
Fax: +39 0471-506 915
platinum.italia@diehl-controls.com

France
AXUN SAS
5. Av. Boula De Mareuil
06600 Antibes, France
Tel: +33 492 96 96 94
Fax: +33 489 73 20 86
infos@axun-solar.com

United Kingdom
PV Energy Solutions Ltd.
The Shieling, Ings Lane
Betchford Lincolnshire LN9 6LP, United Kingdom
Mobile: +44 780 231 46 30
Tel: +44 150 753 40 01
pjlynskey@pvenergysolutions.co.uk

Greece
Platina Energy Ltd.
21km Penia Markopoulo Ave.
19400 Koropi Attika, Greece
Tel: +30 210 667 49 89
Fax: +30 210 667 13 71
akakar@platina.gr

Service

International
PLATINUM® Service Centre
Diehl AKO Stiftung & Co. KG
Pfannerstraße 75
88239 Wangen im Allgäu, Germany
Tel: +49 7522 73-777
Fax: +49 7522 73-737
service.platinum@diehl-controls.com

Italy
PLATINUM® Service Italy
Via Lancia 8/A, 39100 Bozen, Italy
Tel: +39 0471-910 344
Fax: +39 0471-506 915
it.service.platinum@diehl-controls.com

Greece
IN MAINT S.A.
Building D
21 st km Peania – Markopoulo Ave.
19400 Koropi
Athens
Greece
Tel: +30 210 667 49 89
Fax: +30 210 667 48 80
gr.service.platinum@diehl-controls.com

Training

We offer training courses and training events for our products at regular intervals. For more information please visit:
http://www.diehl.com/platinum-training

Alternatively, why not come and see us at one of our upcoming global trade fair appearances? We look forward to seeing you there! For more detailed information regarding dates etc. please visit:
http://www.diehl.com/platinum-eventcalendar

Imprint

Diehl AKO Stiftung & Co. KG

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Dr.-Ing. E.h. Thomas Diehl (President and CEO), Dipl.-Wirtsch.-Ing. Wolfgang Weggen (Executive Vice President), Dipl.-Kfm. Claus Günther, Dipl.-Ing. (FH) Dieter Neugebauer, Dipl.-Volkswirt Rainer Ott, Dr.-Ing. Heiner Otten, Dipl.-Betriebsw. (FH) Johannes Sappa, Dr.-Ing. Martin Sommer, Dipl.-Ing. (FH) Rainer von Borstel

Corporate Division Board of Diehl AKO Stiftung & Co. KG:

Dipl.-Ing. (FH) Dieter Neugebauer (President), Dr. rer. pol. Christoph Weigand

Pfannerstraße 75
88239 Wangen im Allgäu, Germany
Tel. +49 7522 73-0
Fax: +49 7522 73-250
E-Mail: info.dc@diehl-controls.com

Headquarters: Wangen i.A.
Registration court: Ulm HRA 620609
Sales tax identification number: DE 147358665
USt.-IdNr.: DE 147358665

Diehl AKO Stiftung & Co. KG
Pfannerstraße 75
88239 Wangen im Allgäu, Germany
Tel: +49 7522 73-700
Fax: +49 7522 73-710
platinum@diehl-controls.com
www.diehl.com/photovoltaics

CataloguePLATINUM_EN1205_758078_AC