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# IDS<sup>®</sup> SOLO Station

High Power Inverter Station for  
PV Plants in Outdoor Container

500 kW to 1500 kW

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- High Efficiency: 98.5 % (Central Type)
- Maximum Yields and Enhanced Profits
- Compact and Light Weight
- Extended Temperature Range
- Elevations up to 3500m above Sea Level
- Suitable for Installation in Deserts

The IDS SOLO photovoltaic Inverter Station with liquid cooled inverters is used for medium voltage connected grid applications. The plug and play inverter station is designed to be used in rough environments. Multiple inverter stations can be connected in ring or star topology for very large power installations. To minimize power loss during the conversion process, the SOLO inverter's switching technology uses IGBTs. In order to optimize the total efficiency of the PV at locations where shading is an issue, SOLO Stations are available with up to twelve individual MPPT (maximum power point tracker) inputs.

A medium voltage transformer and a medium voltage switchgear is integrated in the SOLO Station. All completely installed and cabled in the factory to assure minimum work at site.

IDS technology is approved in many years of grid feed-in applications especially in regions with a weak grid.

All components and control algorithms have proven high efficiency and stability under demanding conditions. The SOLO inverters are delivered fully parameterized and ready for use.



Self Contained Solar Station  
Liquid cooled for optimized power density  
Built to stand the harshest environments  
With solutions for desert and highest altitude locations



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## Features:

- Maximum Power Generation due to high Efficiency
- Highest Power Density Worldwide
- Maximum Protection against Pollution and Humidity
- Direct feeding into the Medium Voltage Grid:  
All-In-One Solution with Medium Voltage Switchgear and Transformer for Grid Connection
- Less Service, less Maintenance and highly reliable due to advanced Monitoring and Control Strategies
- Integrated data logger collects all important operation data
- Maximum Power Point Tracking (MPPT), Version for up to 12 separated Fields available
- Designed for Extreme Environmental Conditions like Deserts
- Automatic start up and shut down

## Broad Number of Options for SOLO Stations

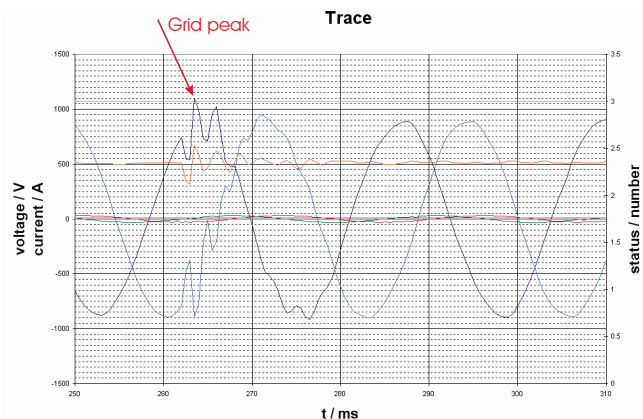
- Flood and Snow Protection: Foundation with increased height
- Extended Ambient Temperature Range on Request
- Unique on the Market: Extended Version for Installation Altitudes up to 3500m
- Communication interface: RS 485, Ethernet/TCP IP, GSM or line modem
- Remote Diagnostics (RDS) 24h/7d increases the Availability of the System
- Customer tailored Service and Maintenance Contract
- 4- and 10-step Power Limitation (Commands by Grid Operator)

## Remote Diagnostics, 24 Hours / 7 Days

The IDS SOLO High Power Converter Station is designed to work with as little maintenance as possible over the lifetime within the specified wide working range. Nevertheless, experience with the grid quality shows that extreme situations can occur. IDS offers a full service to guarantee the highest possible system availability. One does not have to worry about warning messages of the converter. IDS experts continuously monitor the system remotely and start adequate actions. Therefore, potential problems can even be diagnosed before a system actually fails.



RDS Team at Work



Example of a fault record with grid peaks

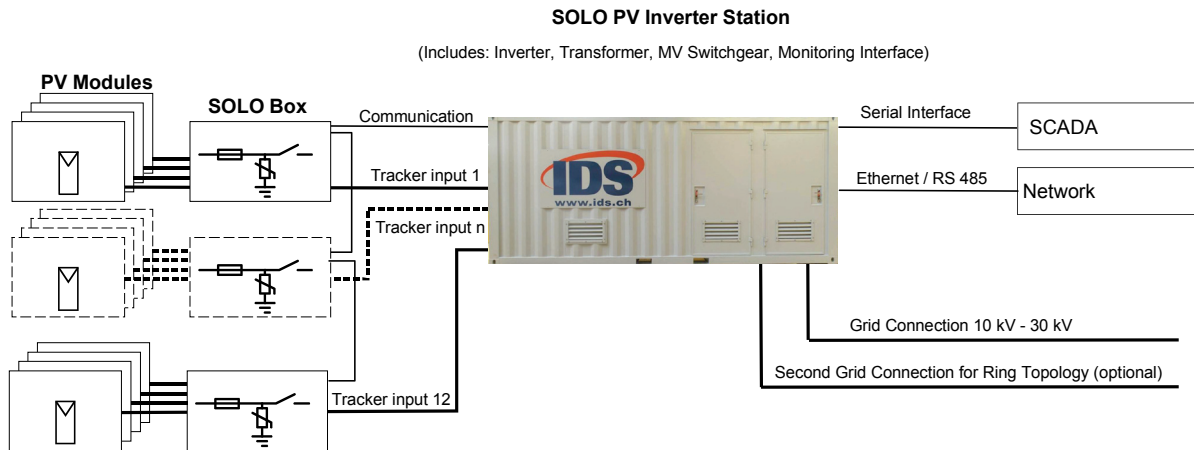
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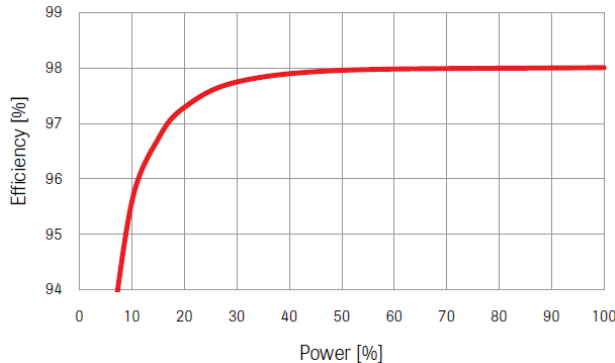
## Block Diagram



## High Efficiency

Max. Yield and Enhanced Profits (+ 2 % compared to major competitors)

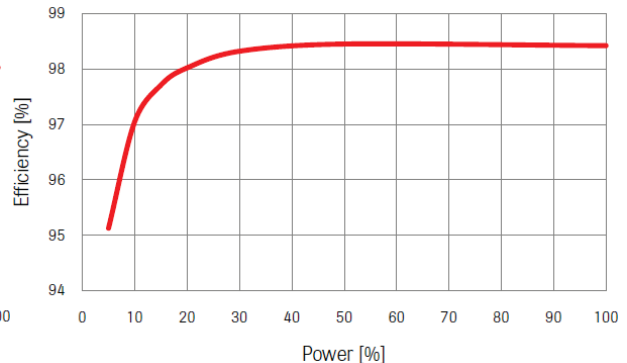
Efficiency of SOLO Station 1000-4 with 12 MPP Trackers



Euro eta: 97.7 %

(Efficiency values without transformer)

Efficiency of SOLO Station 1000-2 central type



Euro eta: 98.0 %

### Note:

Maximum Power Point Tracking (MPPT):

The individual Maximum Power Point Trackers (MPPT) consist of step-up inverters and permit optimized power tracking of separate PV-fields over a wide voltage range (50V ... 850V).

Inverters without individual trackers (no step-up-converters) find the maximum power point by adjusting the DC-voltage and current.

# IDS® SOLO PV Station



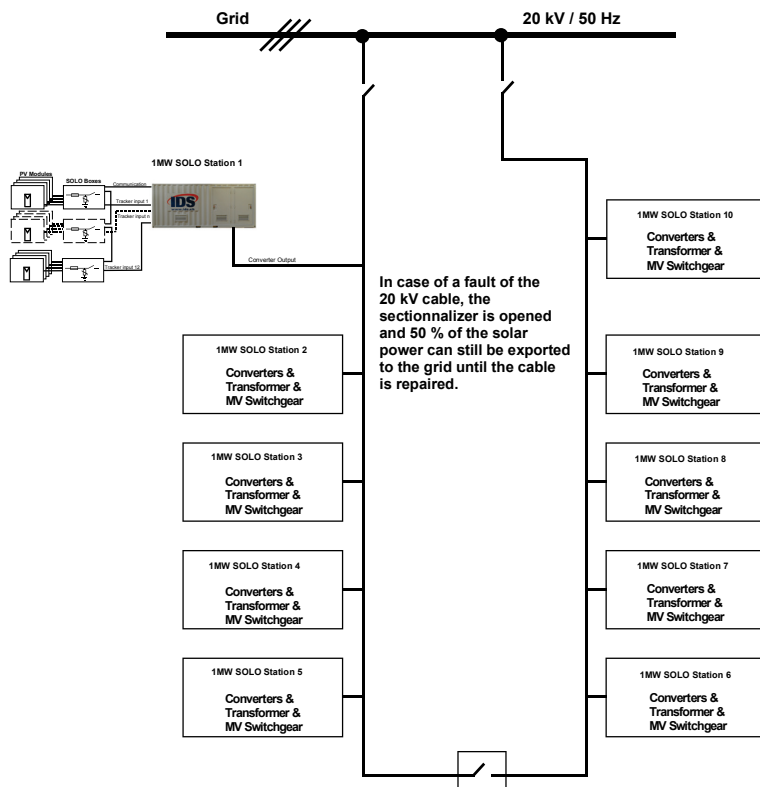
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## Main Data of SOLO Stations

SOLO Station	Nominal AC Power [kW]	Number of Inverters	Number of MPP Trackers	PV Input Voltage Range [V DC]	Grid Voltage [kV AC]	Dimensions L x W x H [m]	Weight [tons]
500-1	500	1	1	500 – 1100	10 – 30	6x2.2x2.6	7.4
750-3	750	3	9	50 – 800	10 – 30	7.6x2.2x2.6	8.3
1000-2	1000	2	2	500 – 1100	10 – 30	6x2.2x2.6	8.6
1000-4	1000	4	12	50 – 800	10 – 30	7.6x2.2x2.6	9.3
1500-3	1500	3	3	500 – 1100	10 – 30	7.6x2.2x2.6	12.1

**Diagram 10MW Solar Power Plant.**  
Example for Grid Connection: 50% redundancy with cable ring.



Subject to change, Mai 2011

## Ordering Information

For technical or commercial information please contact the IDS sales office

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