Welcome to KACO new energy

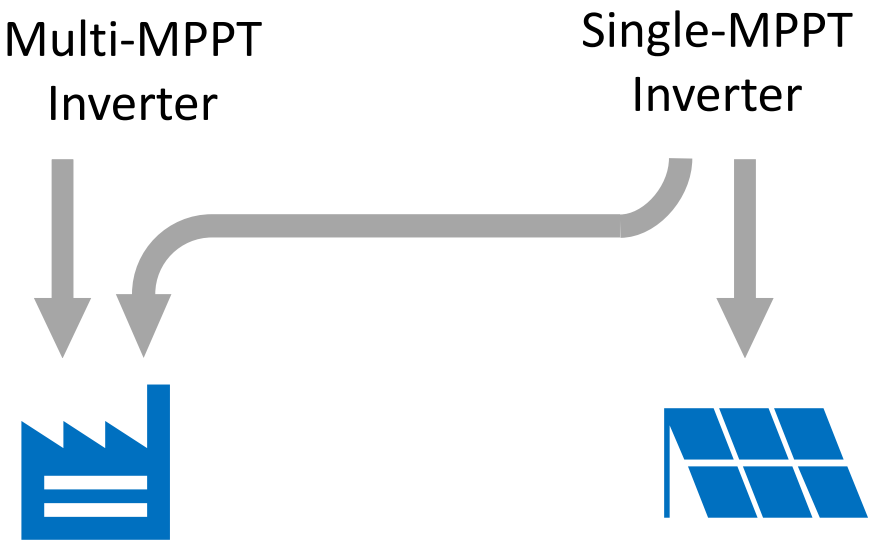
pv magazine Webinar
28. February 2022

KACO String Inverters

Strategy

Why should I use a single-MPPT inverter in my installation?

My inverter topology needs to match my intended application.



Commercial & Industrial PV
- Rooftop installations
- East / West installations
- Very inhomogeneous design layout

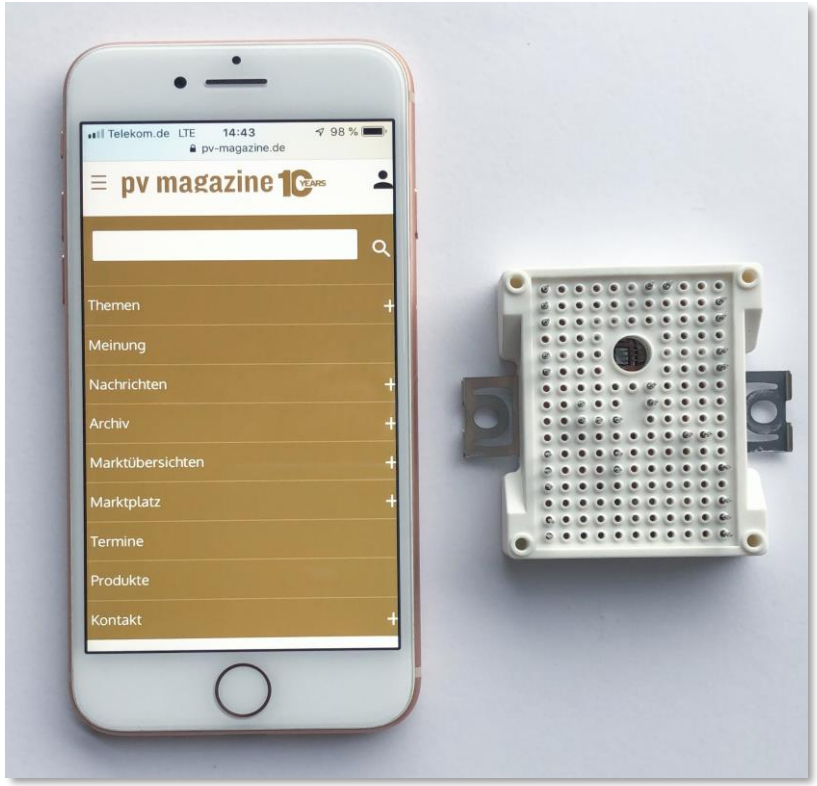
Utility-scale PV
- Ground-mounted
- Large rooftops
- High DC-/AC-ratios
- (Relatively) homogeneous design layout

Efficient Power Electronics

KACO blueplanet 87.0 – 165 TL3

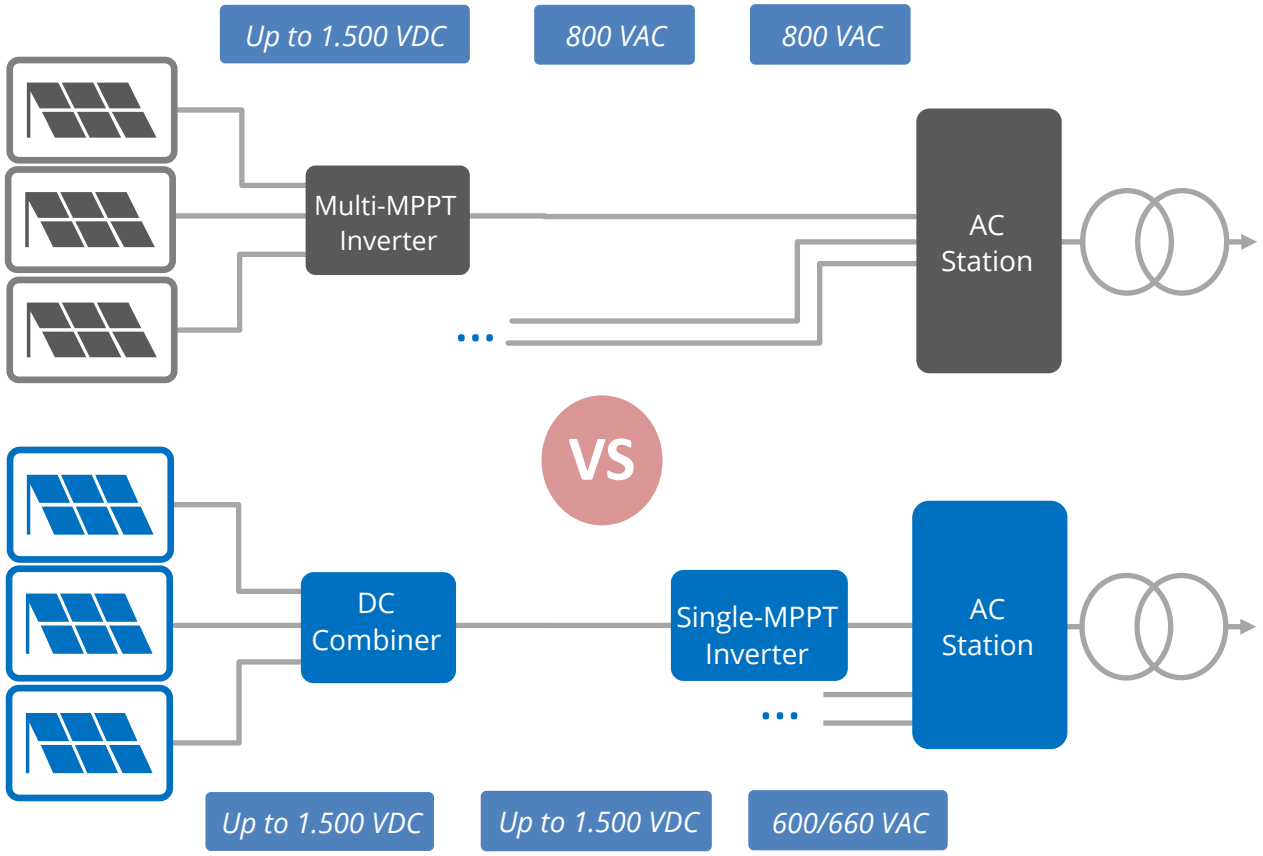
- Single-MPPT inverters do not have a DC/DC-booster
- blueplanet 87.0 – 165 TL3 series based on SiC-based MOSFETs
- Above advantages allow for a higher energy yield – for the entire day
- Any additional yield with multi-MPPT inverters has to be generated in short time period (e.g. heavy shading event)

Fraunhofer ISE study



Virtual Central Design

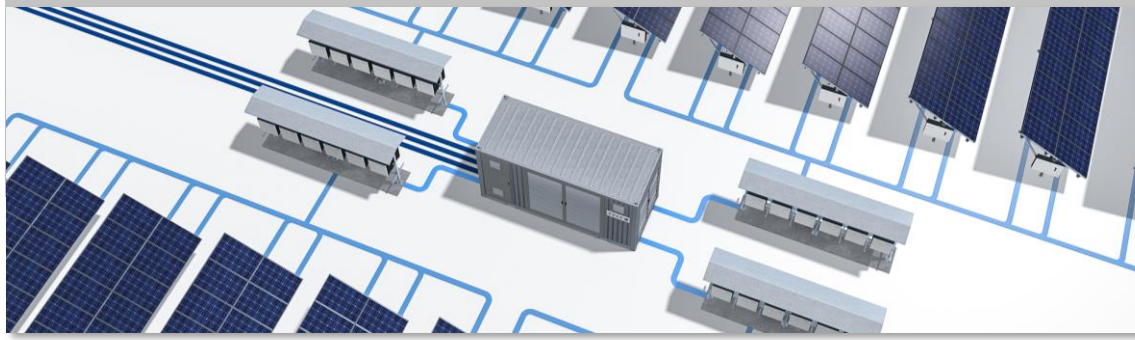
KACO blueplanet 87.0 – 165 TL3



Virtual Central Design

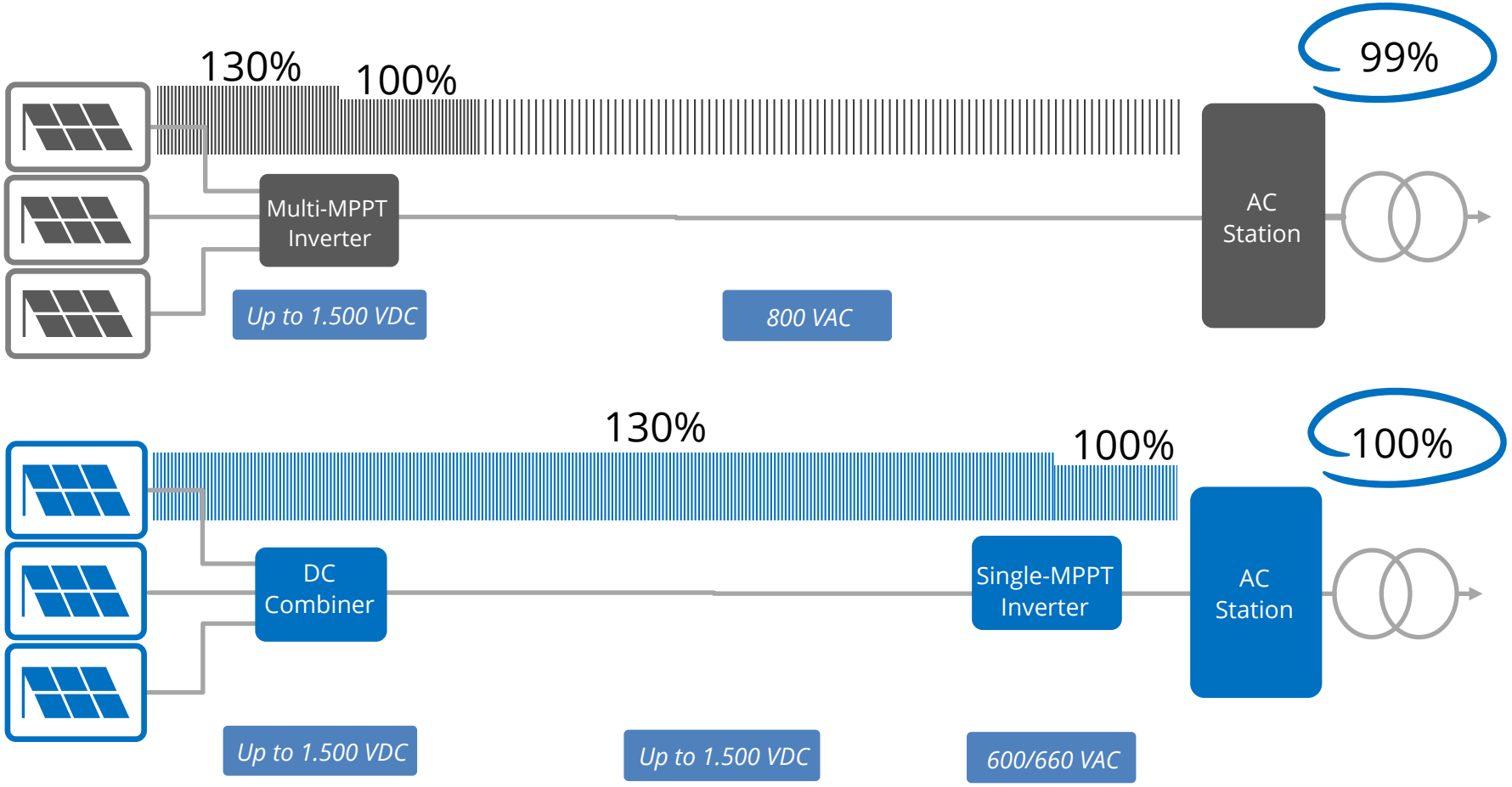
CAPEX Savings **8..10%**

- ‚Shift' cable losses onto DC-side
- Higher energy yield
- Cheaper installation
- Easier maintenance
- **KACO service advantages**



Virtual Central Design

KACO blueplanet 87.0 – 165 TL3



[Whitepaper]

Service Advantages

KACO blueplanet 87.0 – 165 TL3

Virtual Central Design Service Advantages

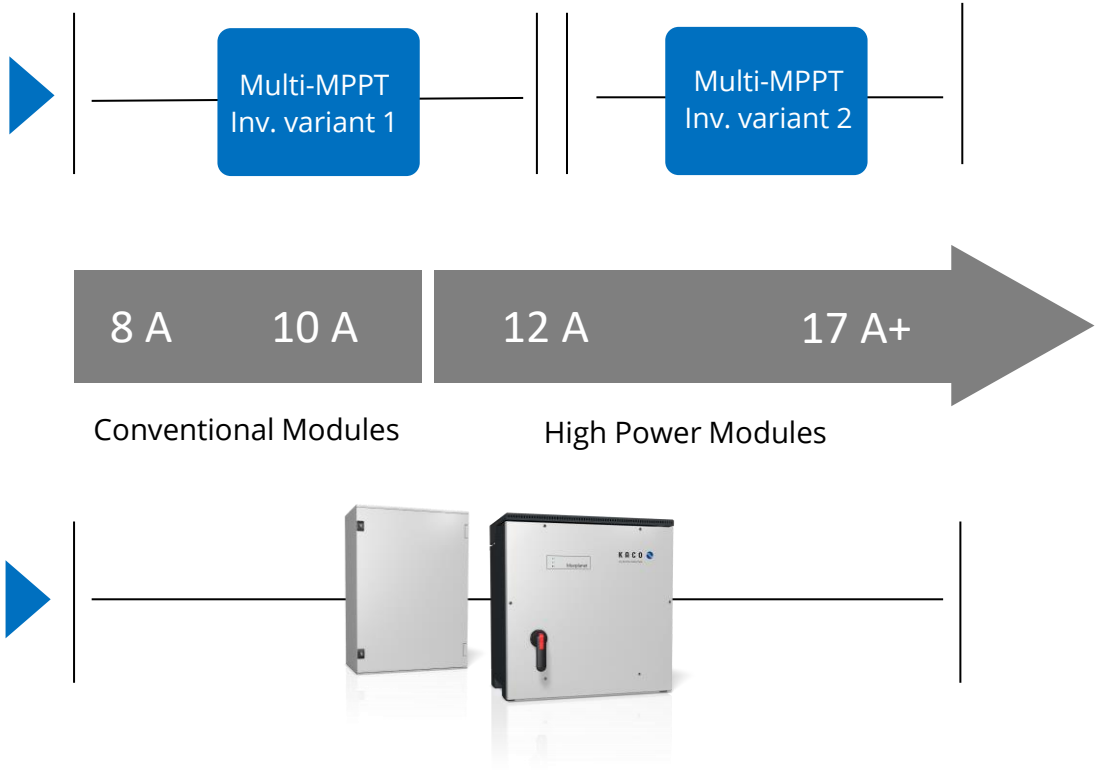
- 24/7 service support
- Swap inverter concept
- Spare parts
- Commissioning support

Service Portfolio

EUPD RESEARCH
TOP BRAND PV
INVERTERS
EUROPE
2021

One-fits-all for High Power Modules

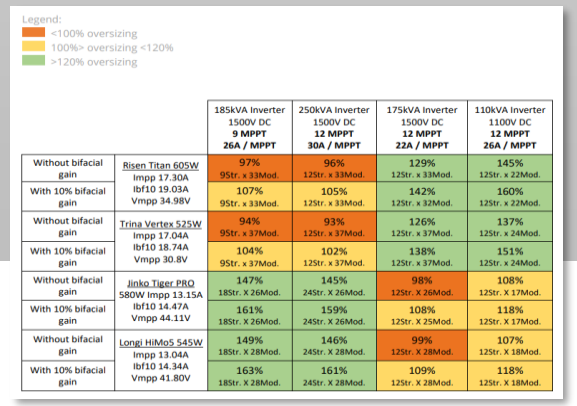
KACO blueplanet 87.0 – 165 TL3



One-fits-all DC-design

- More flexibility in the DC design layout
- KACO single-MPPT inverters can be designed with all conventional modules as well as all high power modules
- Security in unsecure times
- Reduction of inverter variants

Whitepaper


Legend:
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		185kVA Inverter 1500V DC 9 MPPT 26A / MPPT	250kVA Inverter 1500V DC 12 MPPT 30A / MPPT	175kVA Inverter 1500V DC 12 MPPT 22A / MPPT	110kVA Inverter 1100V DC 12 MPPT 26A / MPPT
Without bifacial gain	Risen Titan 605W Impp 17.30A Ibf10 19.03A Vmpp 34.98V	97% 9Str. x 33Mod.	96% 12Str. x 33Mod.	129% 12Str. x 33Mod.	145% 12Str. x 22Mod.
With 10% bifacial gain		107% 9Str. x 33Mod.	105% 12Str. x 33Mod.	142% 12Str. x 32Mod.	160% 12Str. x 22Mod.
Without bifacial gain	Trina Vertex 525W Impp 17.04A Ibf10 18.74A Vmpp 30.8V	94% 9Str. x 37Mod.	93% 12Str. x 37Mod.	126% 12Str. x 37Mod.	137% 12Str. x 24Mod.
With 10% bifacial gain		104% 9Str. x 37Mod.	102% 12Str. x 37Mod.	138% 12Str. x 37Mod.	151% 12Str. x 24Mod.
Without bifacial gain	Jinko Tiger PRO 580W Impp 13.15A Ibf10 14.47A Vmpp 44.11V	147% 18Str. X 26Mod.	145% 24Str. X 26Mod.	98% 12Str. X 26Mod.	108% 12Str. X 17Mod.
With 10% bifacial gain		161% 18Str. X 26Mod.	159% 24Str. X 26Mod.	108% 12Str. X 25Mod.	118% 12Str. X 17Mod.
Without bifacial gain	Longi HiMo5 545W Impp 13.04A Ibf10 14.34A Vmpp 41.80V	149% 18Str. X 28Mod.	146% 24Str. X 28Mod.	99% 12Str. X 28Mod.	107% 12Str. X 18Mod.
With 10% bifacial gain		163% 18Str. X 28Mod.	161% 24Str. X 28Mod.	109% 12Str. X 28Mod.	118% 12Str. X 18Mod.

References

KACO blueplanet 87.0 – 165 TL3

Vinterbro, Norway

blueplanet 92.0 TL3
2 MW / 22 Inv.

North Carolina, USA

blueplanet 150 TL3
5.3 MW / 35 Inv.

Izmir, Turkey

blueplanet 125 TL3
11 MW / 88 Inv.

Ronak Shah
Head of Offers & Applications

Boban Vujovic
Product Lifecycle Manager

Thank you for your attention.

KACO new energy GmbH
A Siemens Company

Werner-von-Siemens-Allee 1
D-74172 Neckarsulm
sales@kaco-newenergy.de
kaco-newenergy.com

Brand Perception
Independent Installer Survey

Source: EUPD Research