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Dear customer,

Potential induced degradation (also called PID) means performance degradation in crystalline photovoltaic modules caused by so-called stray currents. This effect may result in power losses of up to 30 percent.

Together with PADCON we tested our different inverter power classes with the PADCON Float controller SI. This device protects and regenerates harmed PV-generators. The compatibility with the float controller SI was successfully tested with the following KACO new energy inverters:

- blueplanet 3.0 - 10.0 TL3
- blueplanet 15.0 & 20.0 TL3
- blueplanet 29.0 TL3
- blueplanet 50.0 TL3
- blueplanet 60.0 TL3

With these representative models approved by PADCON, the complete compatibility of KACO new energy's inverter technology in the power class between 12 and 60 kVA has been established.

Additional safety measures might become necessary when installing a PID regeneration system. Kindly refer to the corresponding manuals.

We hereby confirm that the devices listed above can be connected directly to PID regeneration systems from various manufacturers, taking into account the voltage limits described below.

The PID regeneration system prevents or compensates for the effects of "Potential Induced Degradation" (PID) within the field. This is realised by the application of a regeneration voltage to PE at the positive or negative pole of the PV generator during twilight or night hours.

Maximum regeneration voltage of the PID regeneration system $\leq \frac{V_{dc_max}}{2}$ to PE.

Example: KACO blueplanet 20.0 TL3:

V_{dc_max} corresponds to a no-load voltage as per Technical Data: 1000 V.

Set maximum permissible regeneration voltage of 500 V at the PID regeneration system to avoid damage to the inverter.



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