

## Confirmation of compatibility with Type A RCD (Residual Current protective Device)

**Manufacturer's name and address** KACO new energy GmbH  
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**Product description** Photovoltaic feed-in inverter

<b>Type designation</b>	blueplanet 3.0 TL1 M1 - INT	Powador 36.0 TL3 - XL - INT - SPD 1+2
	blueplanet 3.0 TL1 - INT	Powador 36.0 TL3 - XL - F - INT
	blueplanet 3.5 TL1 - INT	Powador 36.0 TL3 - XL - F - INT - SPD 1+2
	blueplanet 3.7 TL1 - INT	Powador 39.0 TL3 - M1
	blueplanet 4.0 TL1 - INT	Powador 39.0 TL3 - M - INT
	blueplanet 4.6 TL1 - INT	Powador 39.0 TL3 - XL - INT
	blueplanet 5.0 TL1 - INT	Powador 39.0 TL3 - XL - INT - SPD 1+2
	blueplanet 5.0 TL3 - INT	Powador 39.0 TL3 - XL - F - INT
	blueplanet 6.5 TL3 - INT	Powador 39.0 TL3 - XL - F - INT - SPD 1+2
	blueplanet 7.5 TL3 - INT	Powador 40.0 TL3 - M - INT
	blueplanet 8.6 TL3 - INT	Powador 40.0 TL3 - XL - INT
	blueplanet 9.0 TL3 - INT	Powador 40.0 TL3 - XL - INT - SPD 1+2
	blueplanet 10.0 TL3 - INT	Powador 40.0 TL3 - XL - F - INT
	blueplanet 20.0 TL3 - INT	Powador 40.0 TL3 - XL - F - INT - SPD 1+2
	blueplanet 50.0 TL3 - BASIC - INT	Powador 60.0 TL3 - M - INT
	blueplanet 50.0 TL3 - M - INT	Powador 60.0 TL3 - XL - INT
	blueplanet 50.0 TL3 - XL - INT	Powador 60.0 TL3 - XL - INT - SPD 1+2
	blueplanet 50.0 TL3 - XL - FR	Powador 60.0 TL3 - XL - F - INT
	Powador 6.0 TL3 - INT - A	Powador 60.0 TL3 - XL - F - INT - SPD 1+2
	Powador 7.8 TL3 - INT - A	Powador 48.0 TL3 - M - INT - Park
	Powador 9.0 TL3 - INT - A	Powador 48.0 TL3 - XL - INT - Park
	Powador 10.0 TL3 - INT - A	Powador 48.0 TL3 - XL - INT - SPD 1+2
	Powador 10.0 TL3 - INT	Powador 48.0 TL3 - XL - F - INT - Park
	Powador 12.0 TL3 - INT	Powador 48.0 TL3 - XL - F - SPD 1+2 - Park
	Powador 14.0 TL3 - INT	Powador 72.0 TL3 - M - INT - Park
	Powador 18.0 TL3 - INT	Powador 72.0 TL3 - XL - INT - Park
	Powador 20.0 TL3 - INT	Powador 72.0 TL3 - XL - INT - SPD 1+2
	Powador 30.0 TL3 - M - INT	Powador 72.0 TL3 - XL - F - INT - Park
	Powador 30.0 TL3 - XL - INT	Powador 72.0 TL3 - XL - F - SPD 1+2 - Park
	Powador 30.0 TL3 - XL - INT - SPD 1+2	Powador 16.0 TR3
	Powador 30.0 TL3 - XL - F - INT	Powador 18.0 TR3
	Powador 30.0 TL3 - XL - F - INT - SPD 1+2	Powador 7700
	Powador 33.0 TL3 - M - INT	Powador 7900
	Powador 33.0 TL3 - XL - INT	Powador 8600
	Powador 33.0 TL3 - XL - INT - SPD 1+2	Powador 9600
	Powador 33.0 TL3 - XL - F - INT	Powador 2002
	Powador 33.0 TL3 - XL - F - INT - SPD 1+2	Powador 3002
	Powador 36.0 TL3 - M1	Powador 4202
	Powador 36.0 TL3 - M - INT	Powador 5002
	Powador 36.0 TL3 - XL - INT	Powador 6002

The inverters of the above mentioned series cannot feed in DC residual currents under normal and error conditions. Therefore, only **Type A** RCDs are suitable for use in systems with inverters of the above mentioned series in accordance with IEC DIN EN 62109-1, chapter 7.3.8.

Operational leakage currents form when using transformerless inverters on a PV generator. These leakage currents are subject to strong fluctuations and depend on the generator design with respect to parasitic capacitances to earth and the current weather conditions.

We therefore recommend an RCD with a tripping current of 100 mA or more. If it is required to use an RCD with a tripping current of 30 mA for operator protection, the generator installation must have low capacitive connection to earth, otherwise spurious tripping may occur sporadically or under particular weather conditions.

This recommendation does not relieve the operator from having a legal or standard-compliant system installation.

Our previous experience with RCDs of different manufacturers shows that the tripping characteristics of individual RCDs can vary greatly.

Based on our system tests, we can confirm that the following manufacturers and their RCDs are compatible with our above mentioned inverters. However, KACO cannot give any guarantee on the tripping characteristics of the mentioned RCDs and does not assume liability for any damages caused.

The following were tested successfully:

**ABB F204 Series A**  
**Siemens 5SM3 series**  
**Siemens 5SV3 series**  
**EATON PXF A series**

Unauthorised modifications to the supplied units and/or any use of the units that is contrary to their intended use render this Declaration of Conformity null and void.

Subject to technical changes.

Neckarsulm, 15/11/2016  
KACO new energy GmbH

  
i.v.

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