



Earth Neutral Bridge Board Installation

NEW AC EARTH NEUTRAL BRIDGE BOARD FOR RESIDENTIAL
APPLICATIONS WITH HYBRID AND OFF GRID APPLICATIONS
PART NUMBER: ACDB-ARENB-25A

- The new automatic earth/neutral bridge board connects the earth and neutral conductor with each other when the utility power is lost.
- The board is to be installed between the Hybrid or Back up inverter out and the back up output ACDB.
- Why do we need this board to be installed?....
 - A. To avoid elevated neutral voltages
 - B. To avoid earth ground loops
 - C. To ensure the Earth leakage unit in the back up ACDB functions correctly

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- Why do we need this board to be installed?....
- A. To avoid elevated neutral voltages
- 1. When the inverter is in Back up mode, regulation requires both Live and Neutral conductor be disconnected from the municipal grid
 2. When this happens, earth/Neutral links that exists on the municipal supply side is lost
 3. The result is an elevated neutral voltage when measured between the neutral conductor and the earth conductor on the inverter back up circuit
Measured value: approx. 120Vac
 4. Also referred to as a “floating Neutral”

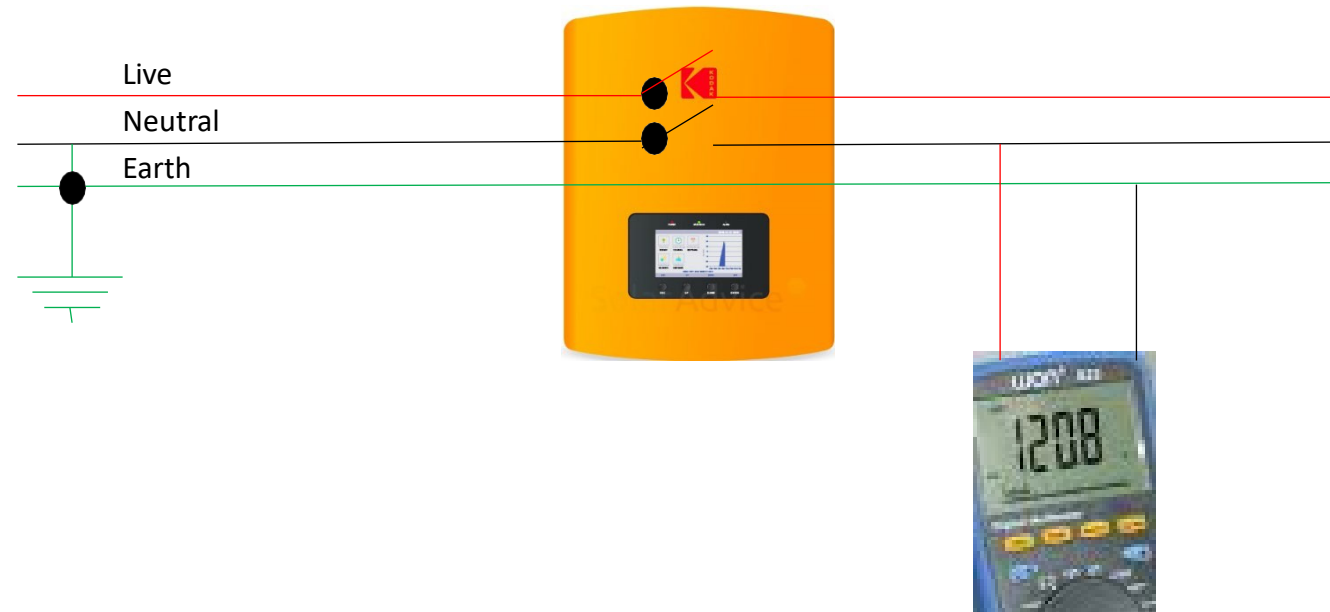
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NB: No common wiring may exist between input and output circuits

Testing for a floating neutral or elevated neutral

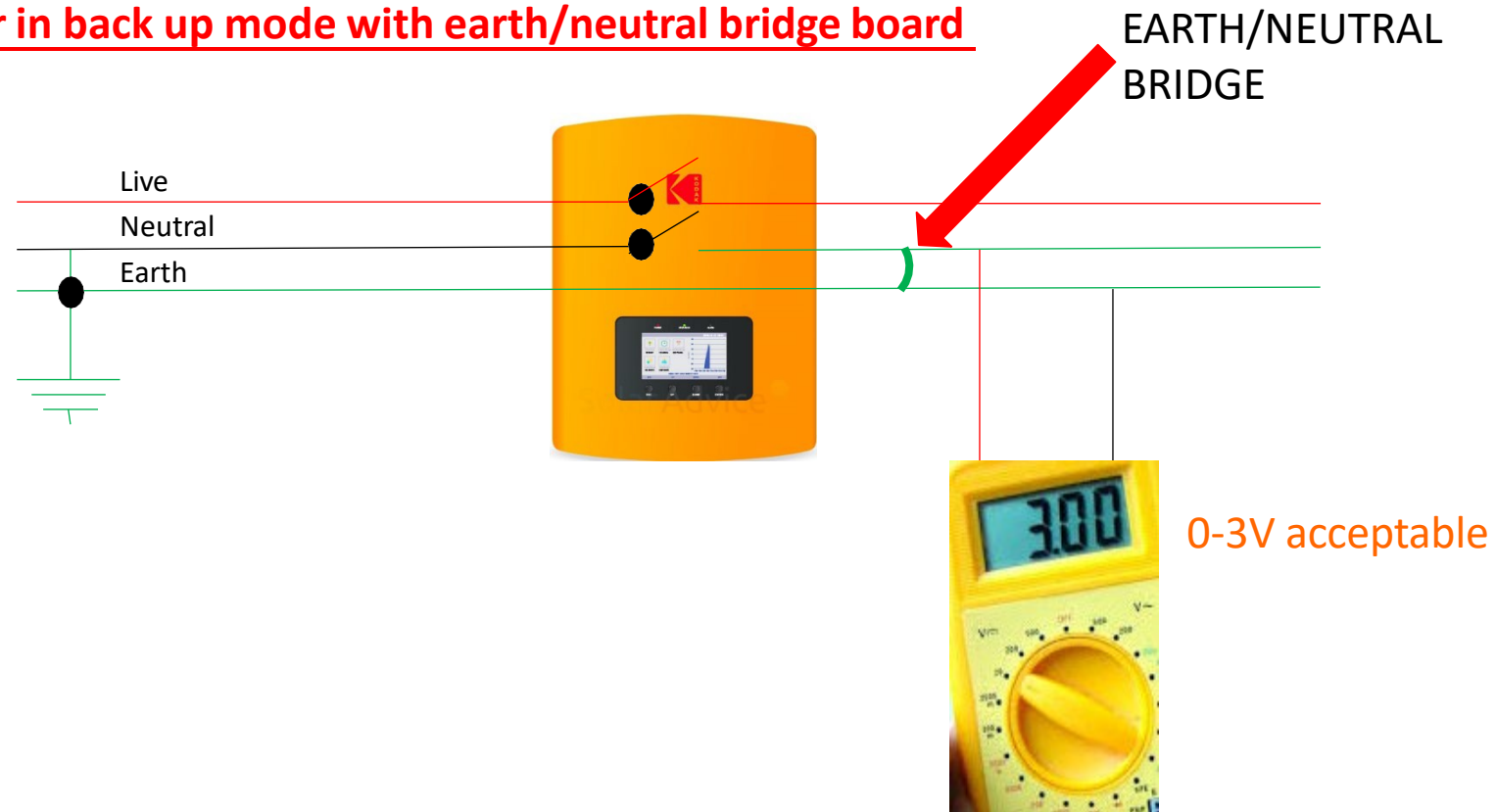
Inverter in back up mode without earth/neutral bridge board

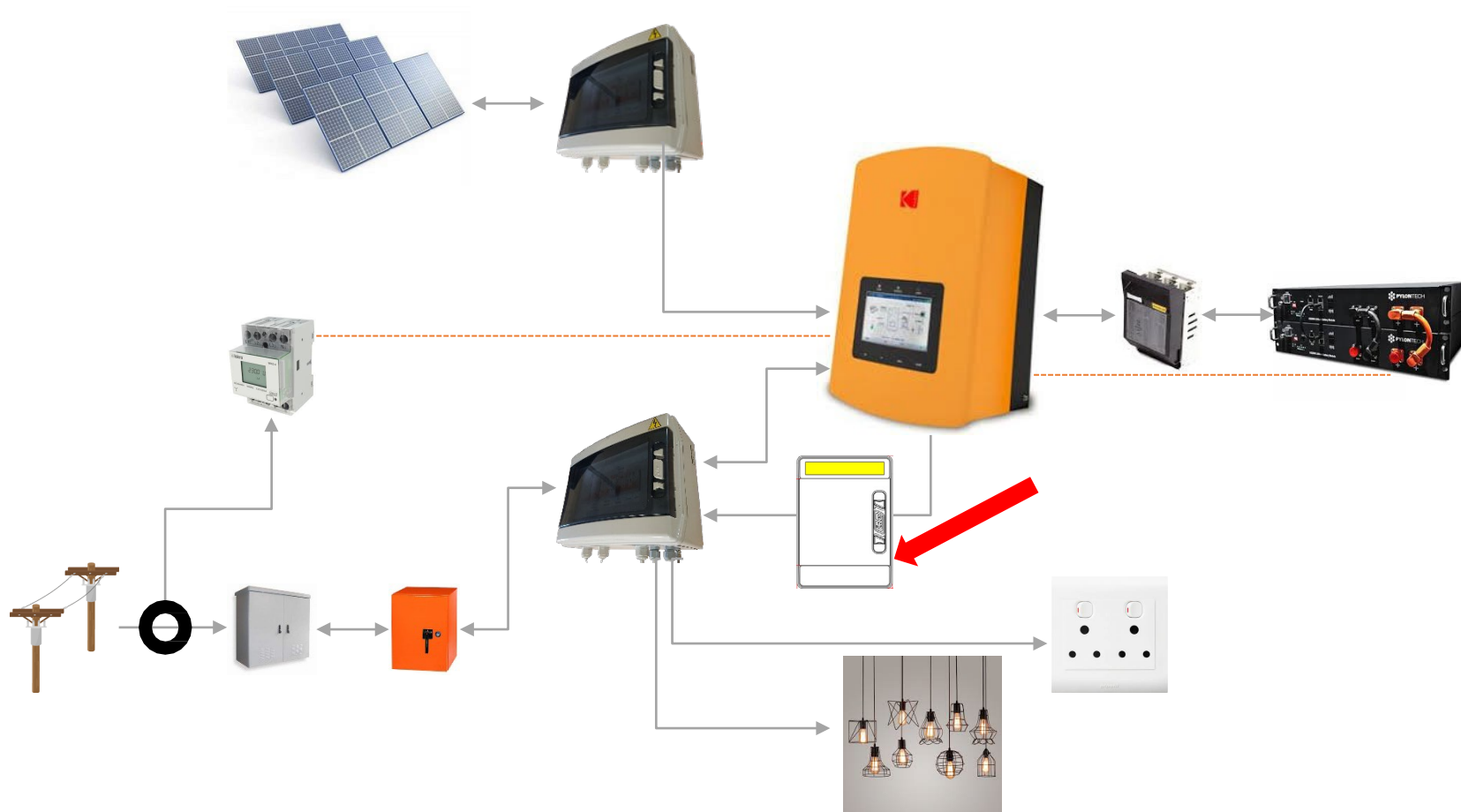


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Testing for a floating neutral or elevated neutral

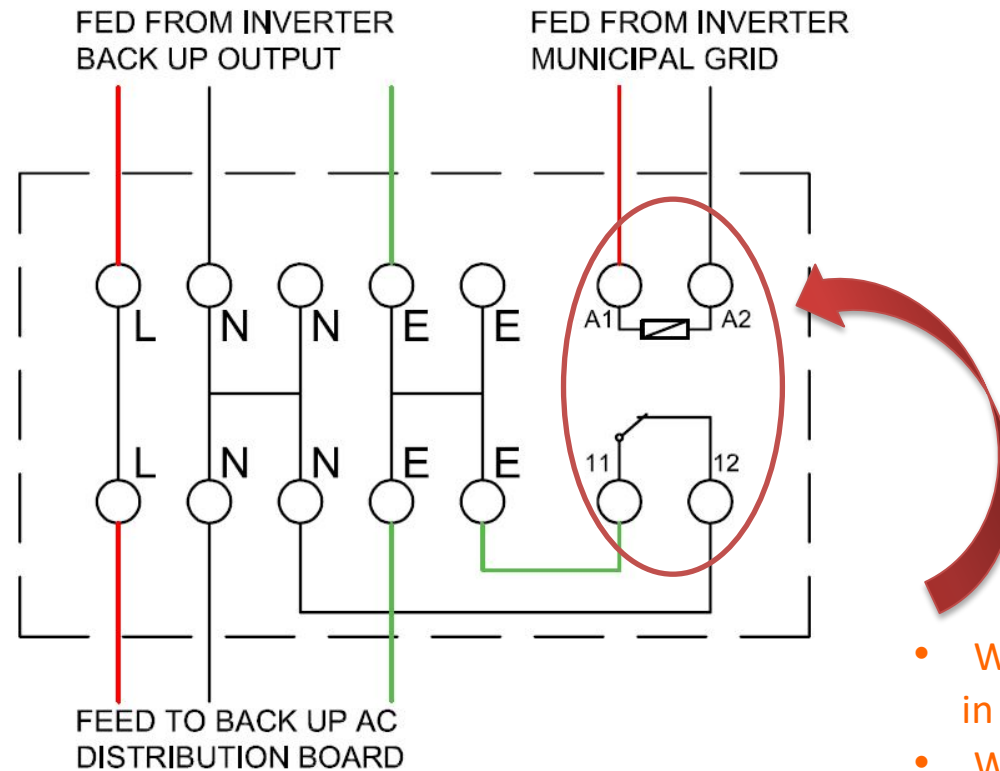
Inverter in back up mode with earth/neutral bridge board





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WIRING DIAGRAM OF EARTH NEUTRAL BRIDGE BOARD

WIRING DIAGRAM

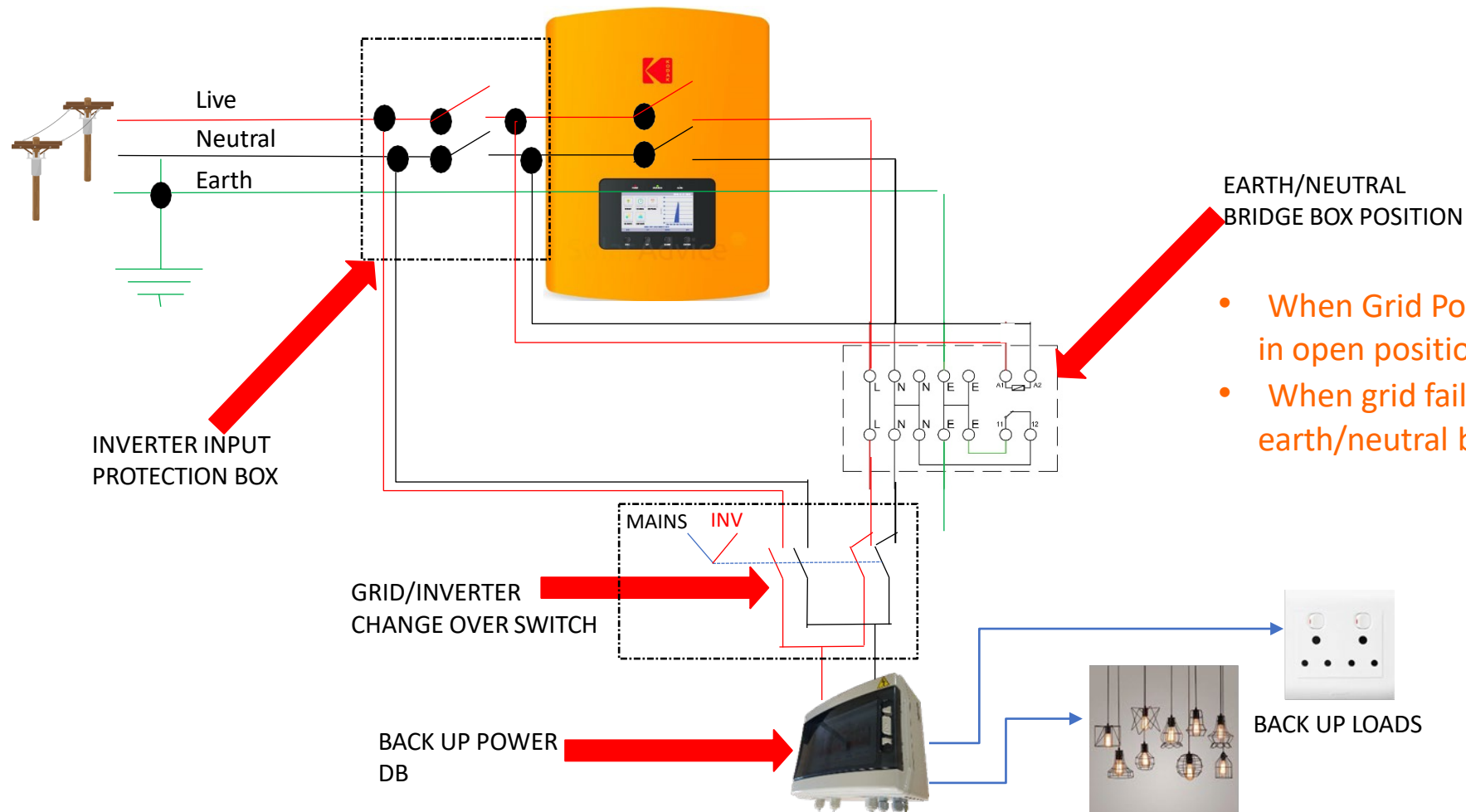


- When Grid Power is available relay is in open position
- When grid fails-relay closes and provides earth/neutral bridge

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WIRING DIAGRAM- Inverter Output Power Selected- Grid Power OFF



EARTH/NEUTRAL
BRIDGE BOX POSITION

- When Grid Power is available relay is in open position
- When grid fails-relay closes and provides earth/neutral bridge

Thanks for Watching