

# Maintenance Specification for QFire – DC Disconnection Device for PV Systems

*Valid from: Version BIG, March 2023*

## Testing and Ensuring the Disconnection Function

An annual functional test of the disconnection device must be carried out. This is done by switching off the system at the final actuation point in the chain. For example, if an external key switch is installed on the control box, the shutdown must be performed using this switch.

After operating the switch, verify that the DC strings between the disconnection box and the inverter are de-energised. If the connection between the switch box and the inverter is implemented as a continuous, uninterrupted cable, the shutdown can also be verified directly at the inverter. In this case, the inverter's DC input must show <10 VDC on all poles.

However, we recommend switching off the inverter using its DC disconnect switch and disconnecting the strings in order to use a suitable measuring device to confirm the absence of voltage on all strings.

## Testing the Surge Protective Device (SPD) Installed in the QFire

If a Q3-PV1500 SPD or any SPD with a wired remote signalling contact is installed, it is sufficient to check either the status LED on a Q3 ENERGIE control box (green = OK, red = not OK) or to test the fully wired remote signalling contact for continuity.

If no remote signalling contact is installed or integrated into the system, the SPD must be visually inspected for proper functionality. The manufacturer's instructions for the SPD must be observed. For switch boxes with a transparent cover, opening the enclosure is generally not required for this inspection.

## General Notes

- Maintenance and inspection work may only be performed by qualified electricians who have obtained appropriate knowledge of the system (e.g., through training).
- If a defect is suspected, the system must be taken out of operation, and the return of the affected component for repair must be requested via the Q3 website.
- Unauthorised repairs or repair attempts will void all functional and product warranties.
- Any approval for on-site repairs by a Q3-authorised electrician will be issued in writing (email is sufficient) by Q3 ENERGIE GmbH & Co. KG.