

Annex A
Fail-safe Tests

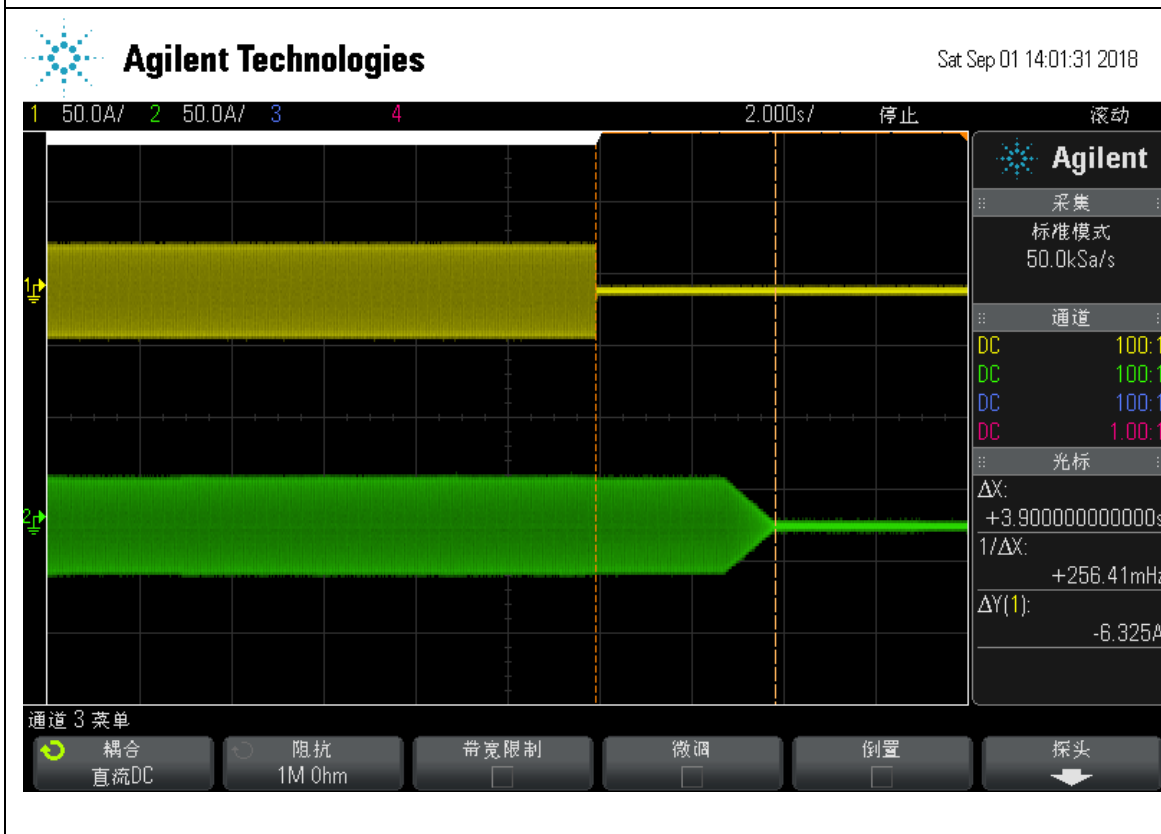
A1. Under normal operating conditions, Inverter response time is less than 5s

Test Procedure	Set user value to 0W
Expected response	The power feed into grid should be reduced to 0W
Pass/fail criteria	Response time within 5s

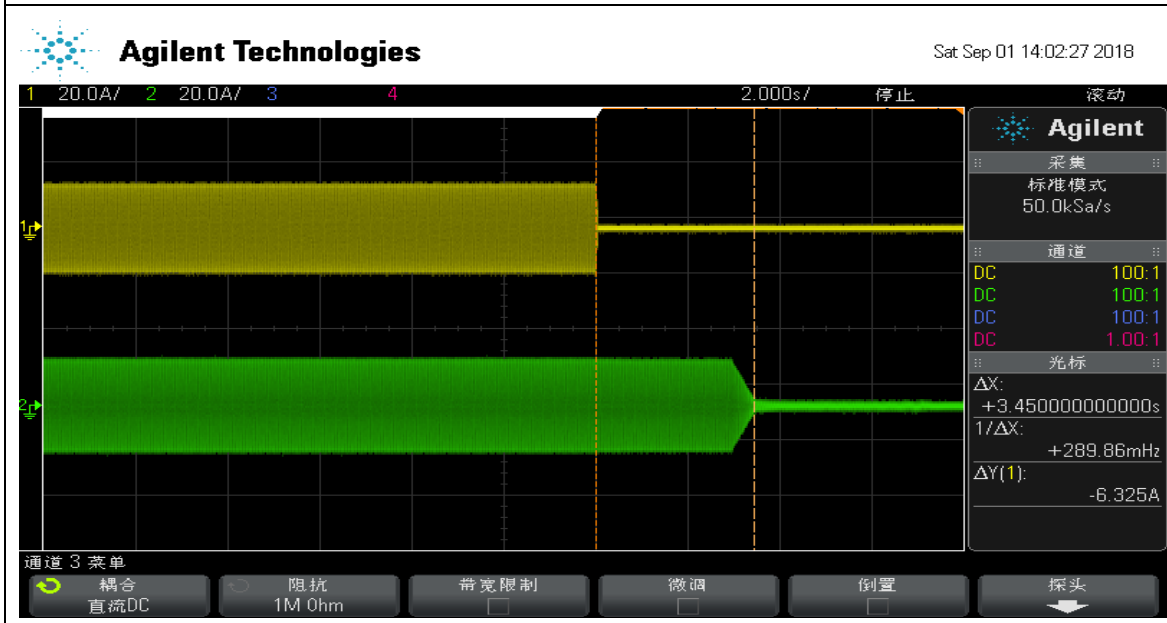
Test procedure:

1. The machine is connected to the battery and the mains, and the load is connected in parallel to the mains.
2. Set the working mode of the machine to self use mode.
3. After the machine is running normally, the load values are set to 100%, 50% and 10% of the maximum output power respectively.
4. Turn off the load switch and switch from 100%, 50%, and 10% power to 0, respectively, to record the time required for the power to drop to zero.

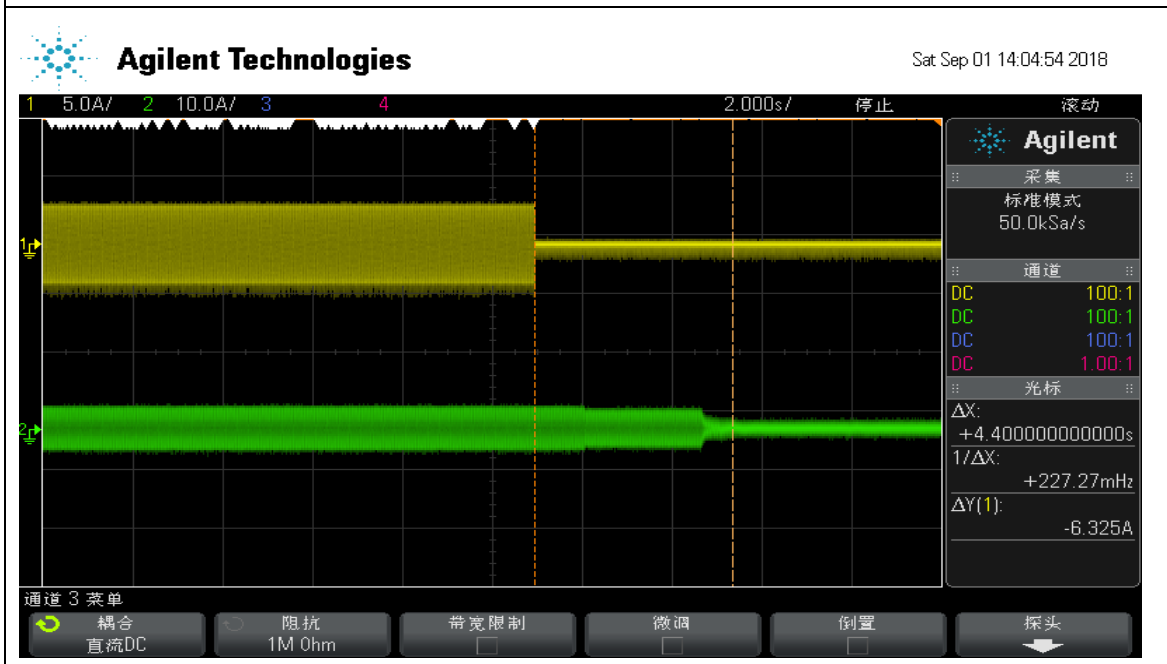
- Test: Set user value to 0W
- Scope: The yellow line is the load current, green shows current at output of AC current
- Reaction time: 3.9s
- Pass/fail: **PASS**
- Power:100%→0



- Test: Set user value to 0W
- Scope: The yellow line is the load current, green shows current at output of AC current
- Reaction time: 3.45s
- Pass/fail: **PASS**
- Power:50%→0



- Test: Set user value to 0W
- Scope: The yellow line is the load current, green shows current at output of AC current
- Reaction time: 4.4s
- Pass/fail: **PASS**
- Power:10%→0



A2. Unplug communications cable between Inverter and Meter

Test Procedure	Unplug communications cable between Inverter and Meter
Expected response	System turns off
Pass/fail criteria	System fails safe in less than 5s

- Test: Unplug communications cable between Inverter and Meter
- Scope: Yellow trace is RS485 communications from the Meter , green shows current at output of AC current
- Reaction time: 4.5s
- Pass/fail: **PASS**

