

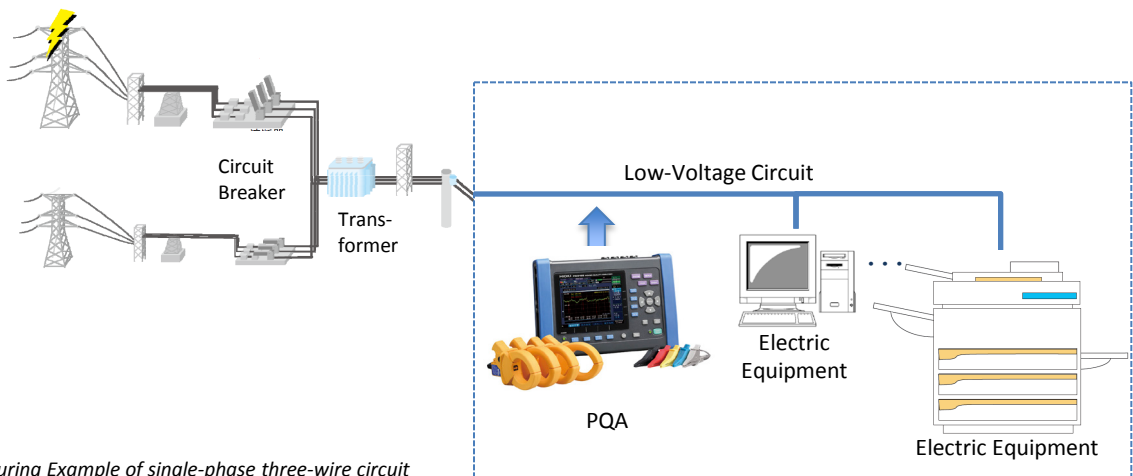
Power, Energy, Environment / Service, Maintenance

Measure Lightning-induced Voltage Dips in a Low-Voltage Circuit

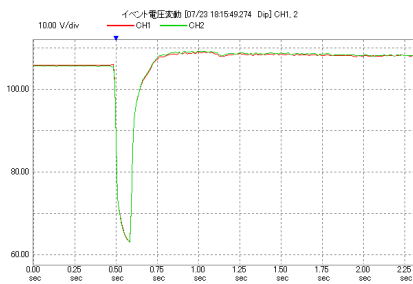
You can measure the effects of a voltage dip caused by lightning on the low-voltage circuit of a high-voltage system using the PQ3198 Power Quality Analyzer.

■ Highlights

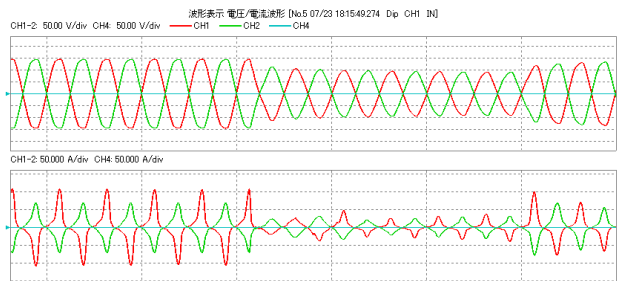
- There is no way to avoid a voltage dip caused by lightning hitting a high-voltage system. This also causes a voltage dip in the low-voltage circuit so utility users need to take measures.
- A dip event function of the PQ3198 Power Quality Analyzer is useful in detecting a voltage dip. The dip event function detects a voltage dip when the voltage RMS value falls below the threshold.
- When a dip event occurs, it records the changes in the RMS value during a period of 0.5 s before the event and during a period of 29.5 s after the event and the instantaneous waveforms during a period of 200 ms when the event occurs.



Measuring Example of single-phase three-wire circuit



Voltage changes in the RMS value



instantaneous waveform

■ The difference between PQ3198 and PQ3100

- PQ3198 records instantaneous waveforms of 200ms when occurring the voltage drop event and max. 1 sec after the event.
- PQ3100 records instantaneous waveforms of max. 1 sec before the voltage drop event, 200ms when occurring the voltage drop event, and max. 10 secs after the event.

Products Used

- Power Quality Analyzer PQ3198
- Power Quality Analyzer PQ3198-92 (kit including 600A sensor*4 and an application software)
- Power Quality Analyzer PQ3198-94 (kit including 6000A sensor*4 and an application software)
- Power Quality Analyzer PQ3100
- Power Quality Analyzer PQ3100-91 (kit including 600A sensor*2 and an application software)
- Power Quality Analyzer PQ3100-92 (kit including 600A sensor*4 and an application software)
- Power Quality Analyzer PQ3100-94 (kit including 6000A sensor*4 and an application software)

Information valid as of March 2019. Specifications are subject to change and revision without notice.