Designed to Empower Engineers

BE1-FLEX: Off Frequency

Is Your Protection Relay Built for the Grid of Today—or the Grid of Yesterday?

Power systems are changing fast. As distributed generation sources proliferate, frequency is more likely to vary significantly—and this is already seen regularly at large load sites as they switch to backup generation sources during load transfer.

Deviations of 25% or more—consider 75 Hz on a 60 Hz nominal system — are possible.

The Problem with Traditional Relays

Most protective relays are built with a narrow frequency performance bandwidth. Analog and digital filtering, along with components like CTs, are typically designed for 50 or 60 Hz.

When your system drifts outside that narrow window, measurements become inaccurate, filtering eventually rejects the signal, and digital relays cannot calculate — or they become unpredictable.

In short: The moment your system needs protection the most, traditional relays may not be able to deliver.

The BE1-FLEX Was Designed for Variations

The BE1-FLEX was designed and built to handle off-frequency conditions better than relays are traditionally designed. It supports nominal systems from 25 to 100 Hz and provides specified performance from 10 to 125 Hz — making it prepared for the system frequency variations not historically seen.

That means your protection stays reliable through load transfers, backup generator switch overs, and whatever the modern grid throws at it — **without simply tripping offline.**



- Nominal systems from 25–100Hz
- Specified performance from 10–125Hz
- Prepared for system frequency variations we have not historically seen

Why This Matters

As off-frequency conditions become more "normal" operation, there is greater need to be able to reliably control the system through the event instead of simply tripping offline. The BE1-FLEX gives your engineers that control.

Designed to keep you in control, not just protected