

DISTANCE LEARNING

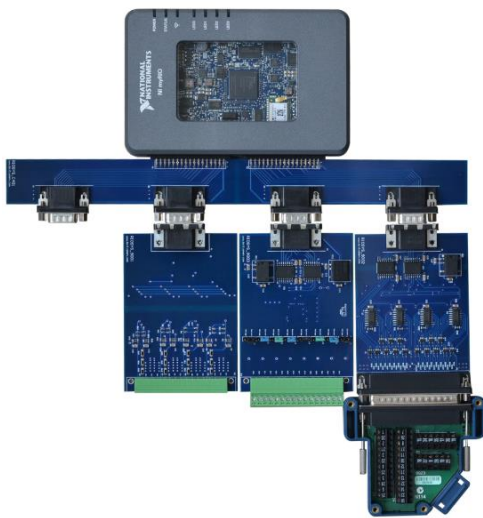
The Industry 4.0 and the technological development brought new tools and enablers for Distance Learning as well.

World is changing dramatically and bringing new challenges. The COVID19 is one of them which might reform the Educational system from its roots.

Having Distance Learning feature for the Academic Trainers is already a must. So, the educational trainers should be transformed from a physical once to the distance once.

Bitlismen's Per Students approach and iLab platform comes to fulfill this need. It's an ecosystem of hardware and software solutions which together transforms Power Labs Ecosystem product family trainers to the distance once. The Per Student approach brings hardware to the Student's hands to implement hands on activities and iLab brings student's virtually near to the big scale trainers to implement the experiments in real big scale hardware.

Per Student | POWER QUALITY ANALYZER



Overview

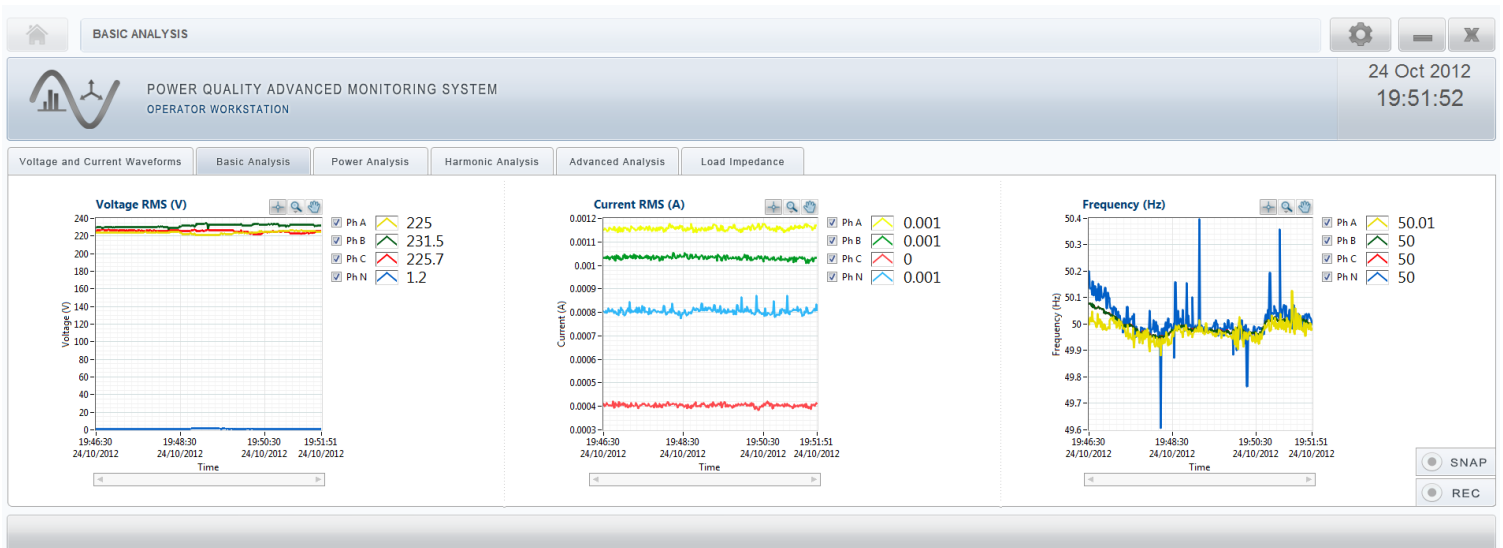
The trainer is based on NI myRIO platform and is aimed for hands-on studies. It allows to implement IEC based power measurement and quality analyses.

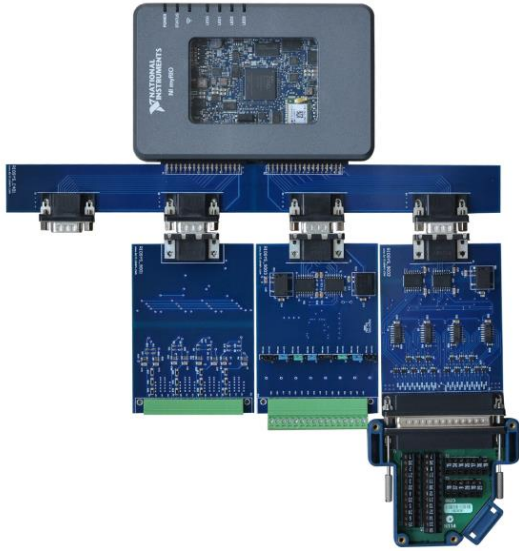
The analyzer is open source, which allow to modify the algorithms inside or to add new analyses. Benefiting from the built-in FPGA and real-time controller, the system allows to make the analyses precisely and have real-time monitoring on the software including the voltage and current oscillograms, which allows to investigate transient effects in the power network. Each student will have his hands-on trainer for an individual work.

Features

- ✓ Voltage and current waveforms/oscillograms
- ✓ Voltage and current RMS
- ✓ Frequency
- ✓ THD%
- ✓ Harmonics and Interharmonics (up to 64th order)
- ✓ Active, Reactive and Apparent Power
- ✓ Power factor
- ✓ Vector diagram
- ✓ Short time flicker
- ✓ Unbalances
- ✓ Load impedance
- ✓ Voltage sags, swells and interruption

Software Screenshots





Overview

The trainer is based on NI myRIO platform and is aimed for hands-on studies. It includes combination of different types of protection algorithms. This trainer allows to concentrate on different protection circuits and algorithms that are used in different points of real power network. It allows to investigate the logic behind every protection as well as adding new types of custom algorithms using graphical programming language LabVIEW. Each student will have his hands-on trainer for an individual work.

Topics covered

- ✓ Three Phase Undercurrent Protection
- ✓ Three Phase Overcurrent Protection
- ✓ Earth-Fault Overcurrent Protection
- ✓ Voltage Controlled Overcurrent Protection
- ✓ Phase Overvoltage Protection
- ✓ Phase Undervoltage Protection
- ✓ Residual Overvoltage Protection
- ✓ Over/Under Frequency Protection
- ✓ Directional Power Protection

Microprocessor Relay Protection Trainer Software Screenshots

