



bitlismenTM

Energy, Water and Wastewater
for Industry and Academia

- ✓ **Established in 2004**
- ✓ **Owns a small HPP of 2MW capacity**
- ✓ **Silver Alliance Partner of National Instruments**
- ✓ **Certified and experienced software, mechanical and system engineers**
- ✓ **Markets**
 - ✓ **CIS countries – Armenia, Russia**
 - ✓ **Middle East region - Saudi Arabia**
 - ✓ **South Asian region – India, Pakistan**
 - ✓ **East Asian region – Vietnam, Singapore**



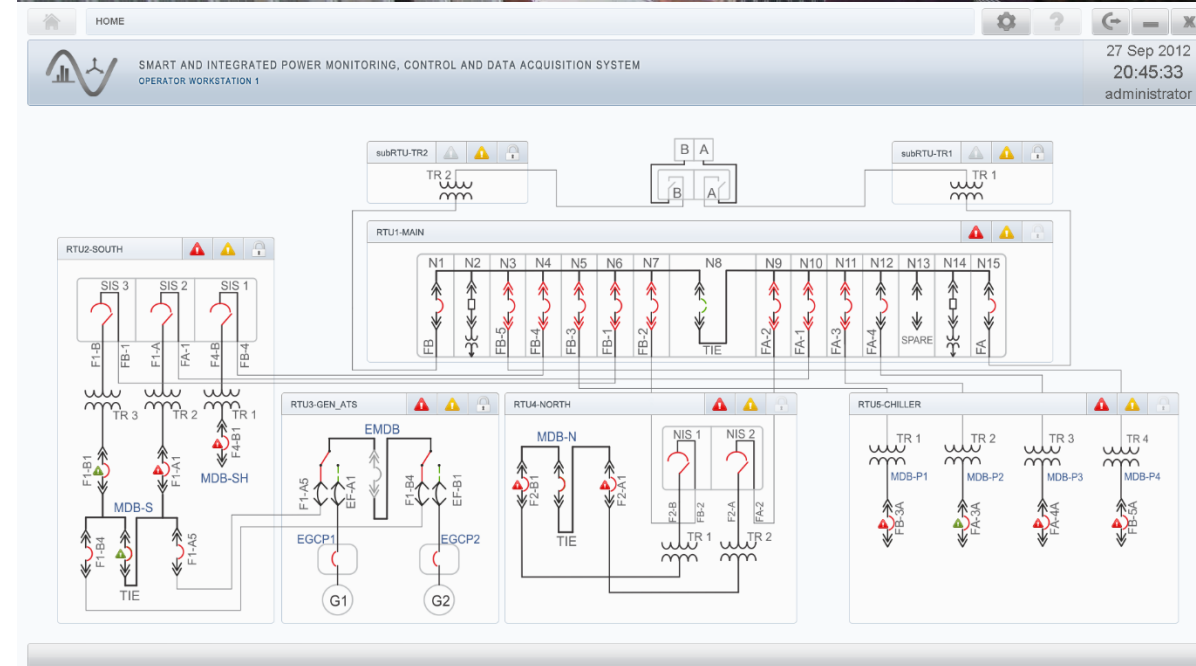
Substation Automation SCADA System

Location: Jubail, Kingdom of Saudi Arabia

End User: Royal Commission for Yanbu and Jubail

Number of substations: 5

Benefits: energy efficiency, reduced outages,
cost-effective maintenance, safety





Irrigation Automation SCADA System

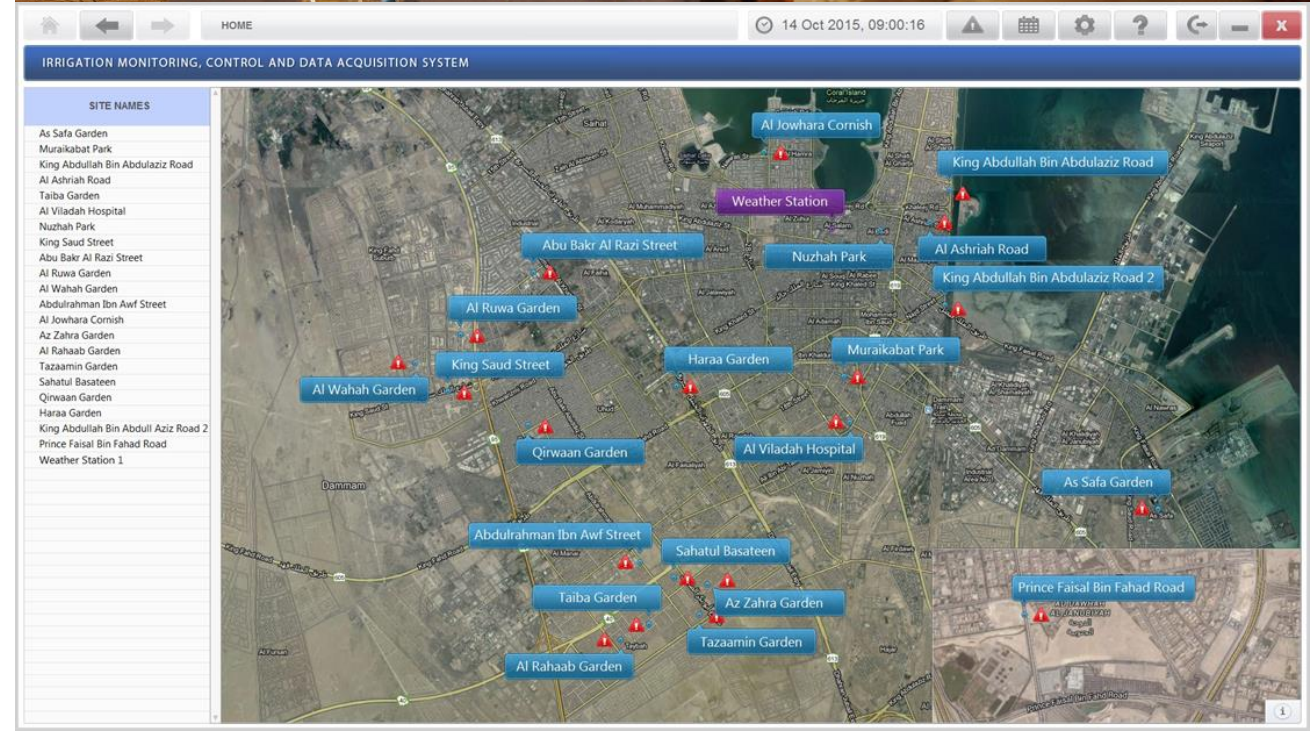
Location: Dammam, Kingdom of Saudi Arabia

End User: Municipality of Dammam

Number of gardens: 21

Number of weather stations: 2

Benefits: effective water consumption, on-time irrigation, automatic adjustment by weather stations, preventive and cost-effective maintenance





King Fahd International Airport
مطار الملك فهد الدولي

Dammam
الدمام

KING ABDULAZIZ SEAPORT
ميناء الملك عبدالعزيز

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Overview

- Using in university labs, vocational colleges and research institutions
- Creating HIL models of power microgrids
- Testing and calibration of various power metering devices, power quality analyzers, microprocessor based relay protection systems



NetSimulator simulates real high-voltage and high-current signals



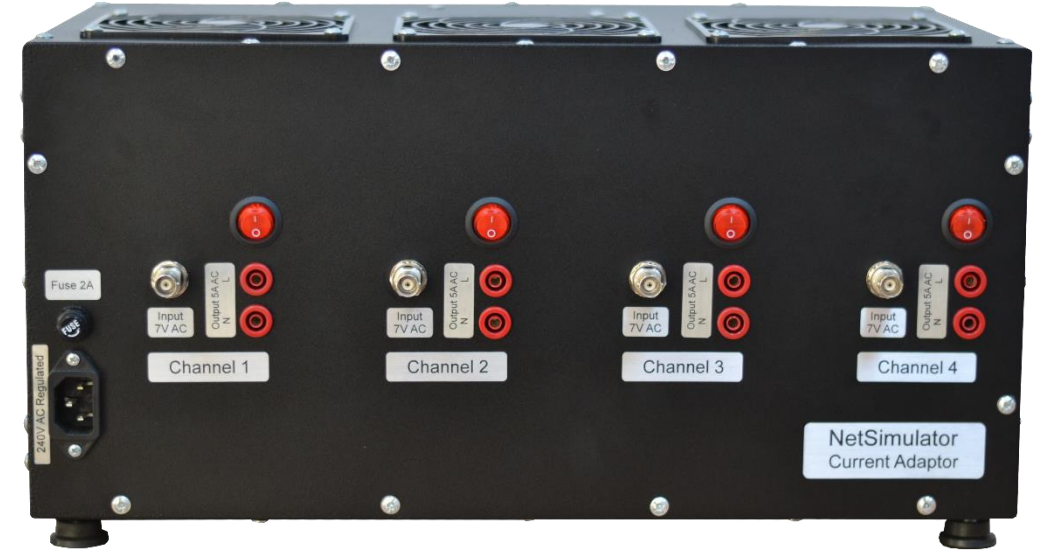
NetSimulator Voltage Adapter

- 3 Input channels (+/-10V)
- 3 Output channels (0-220V AC)
- Accuracy 1%
- Short-circuit protection
- Converts the input low voltage to high voltage signal
- Transparent conversion, the high voltage signal replicates the low voltage signal shape and spectral band (up to 64th order)

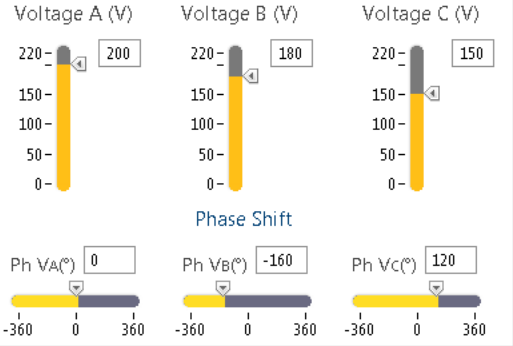


NetSimulator Current Adapter

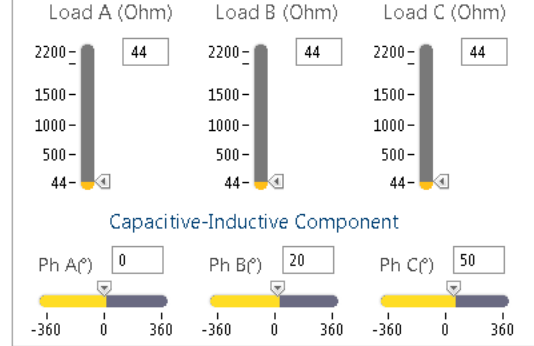
- 4 Input channels (+/-10V)
- 4 Output channels (0-5A AC)
- Accuracy 0.5%
- Converts the input low voltage to high current signal
- Transparent conversion, the high current signal replicates the low voltage signal shape and spectral band (up to 64th order)



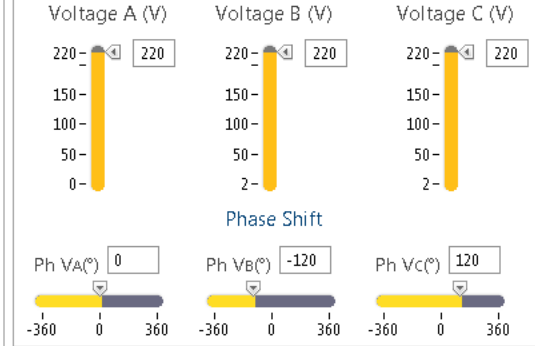
Voltage 1



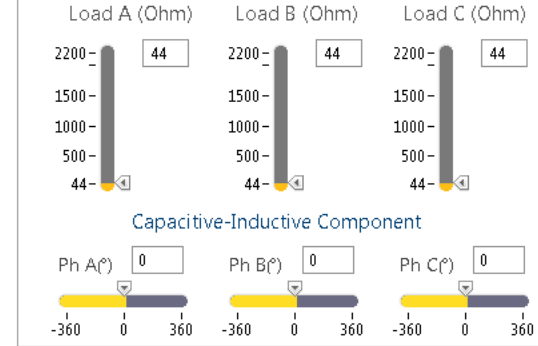
Load 1



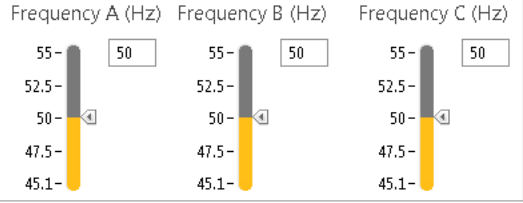
Voltage 2



Load 2

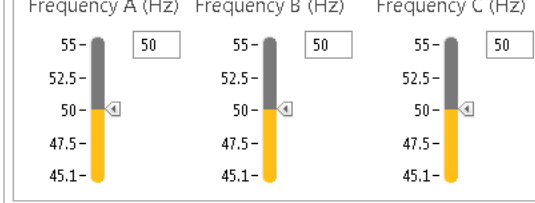


Frequency 1



Harmonics 1
Reset
CT Ratio 1
A:(5:5), B:(5:5), C:(5:5), N:(15:5)

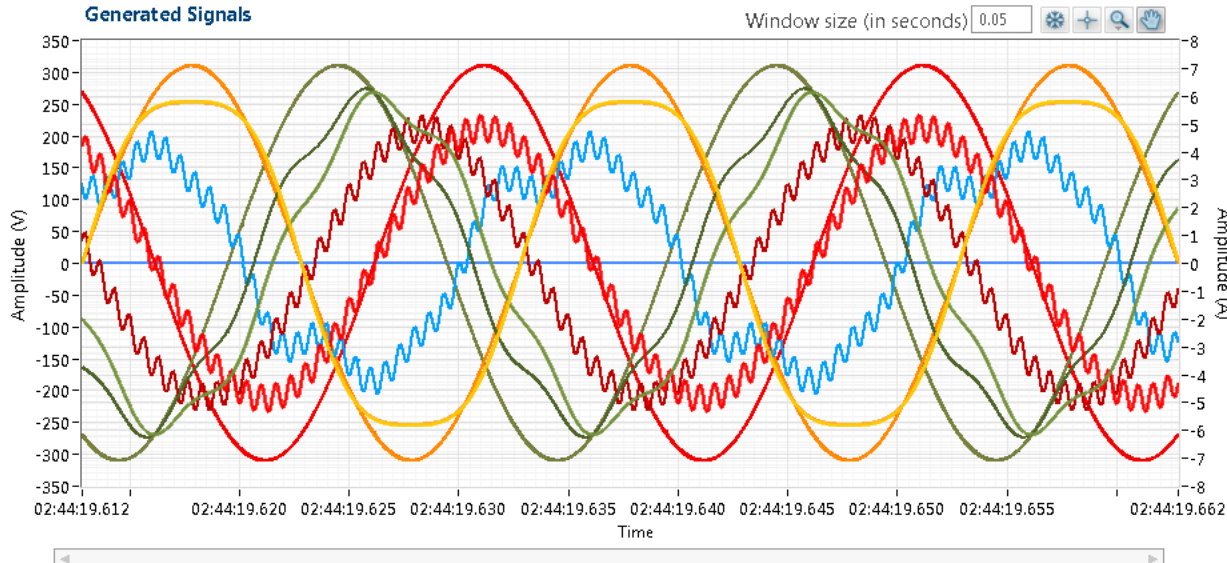
Frequency 2



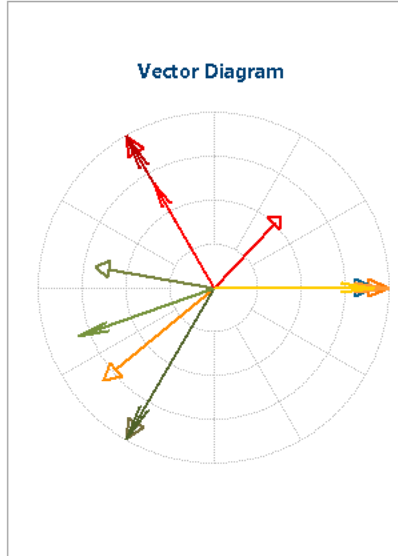
Harmonics 2
Reset
CT Ratio 2
A:(5:5), B:(5:5), C:(5:5), N:(15:5)

Start Generation
Stop Generation

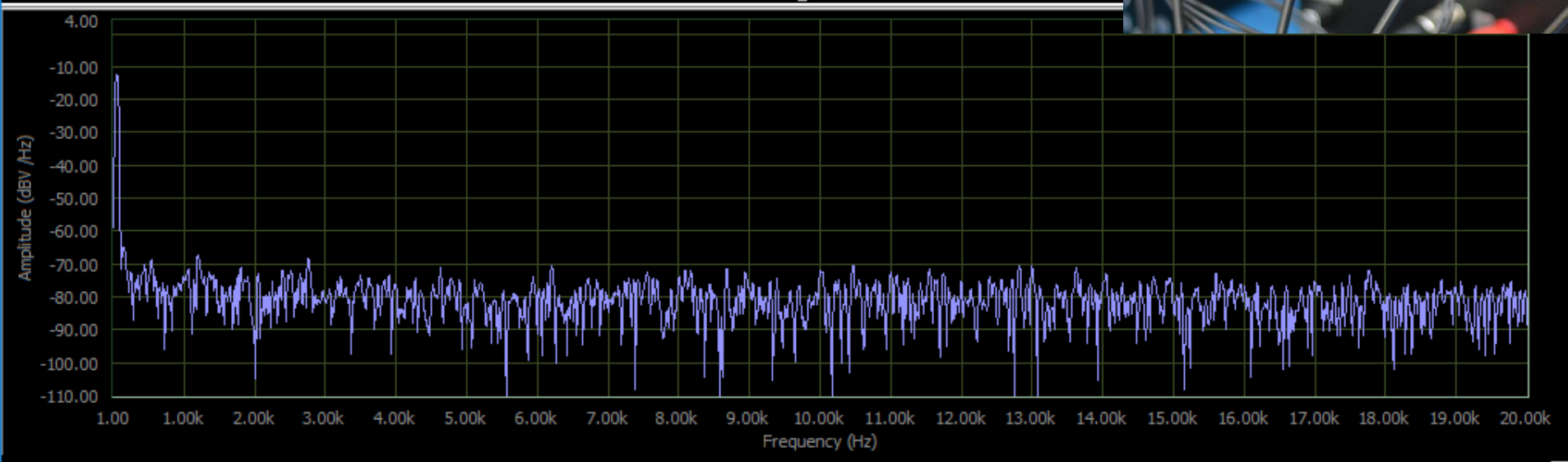
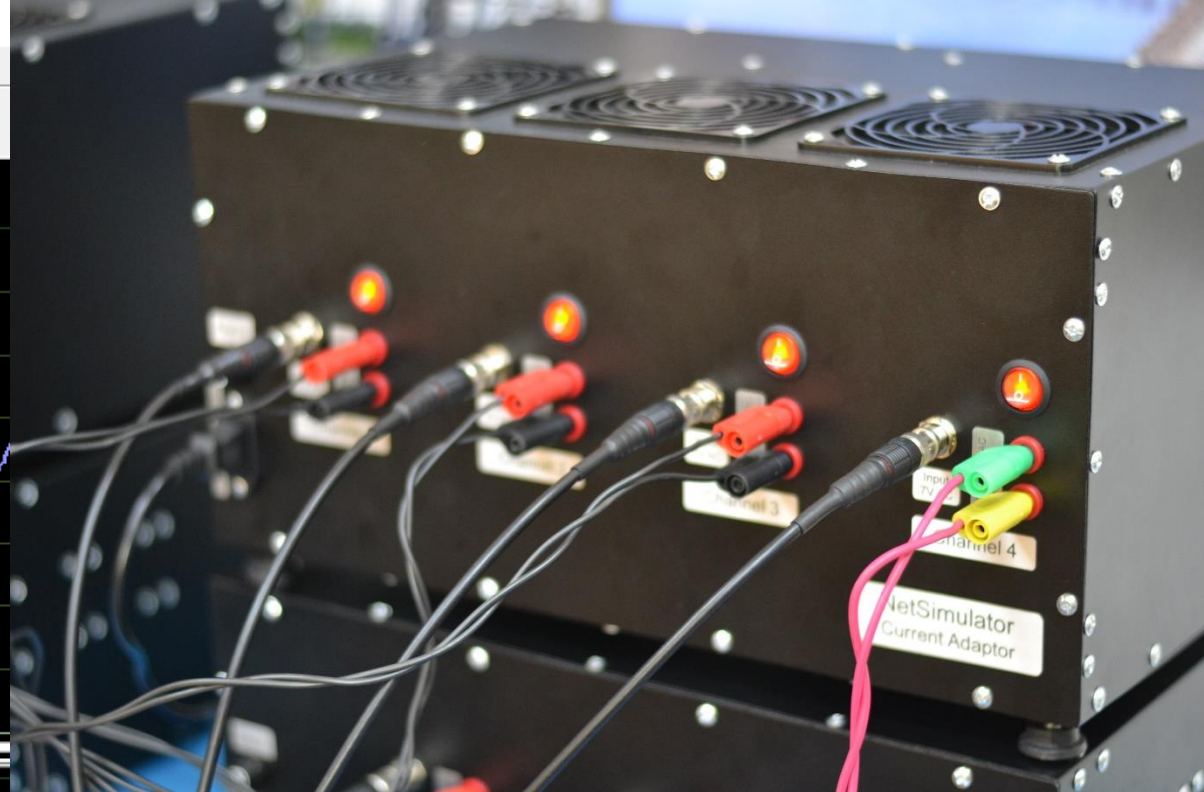
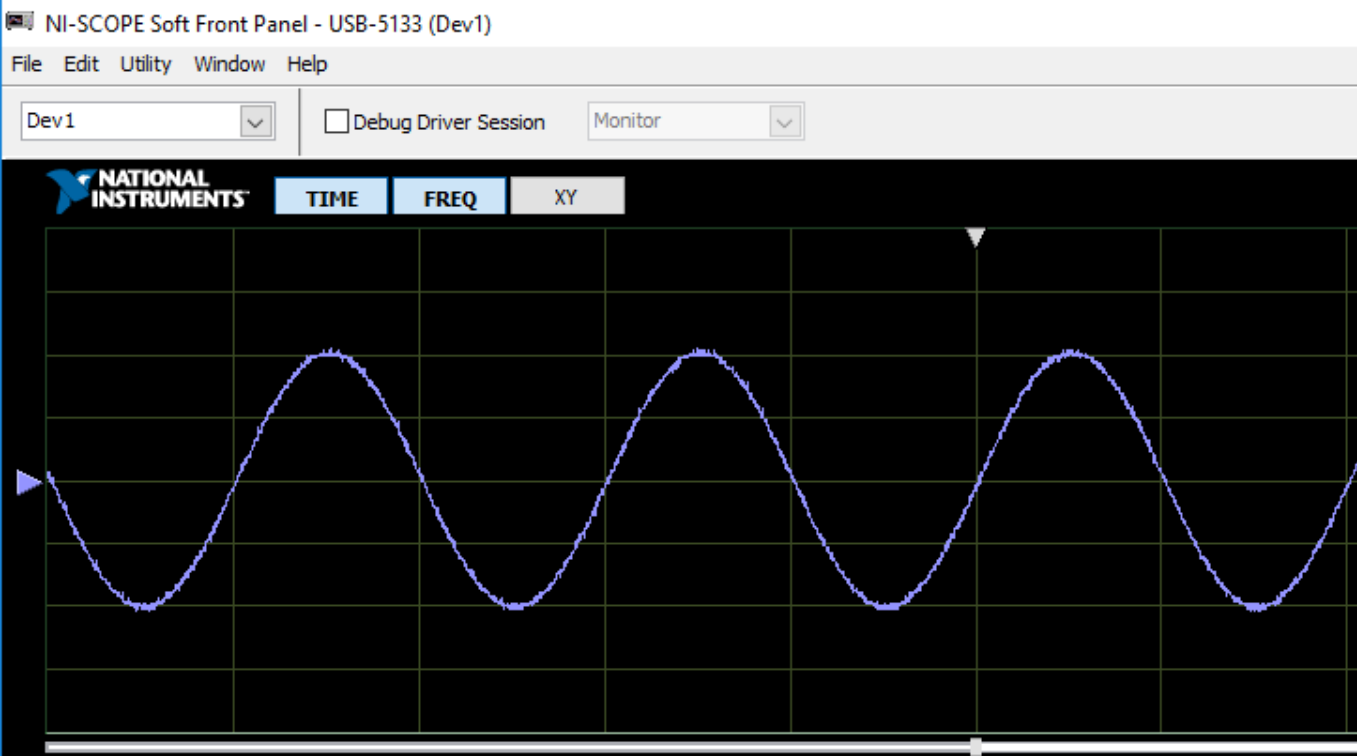
Settings
Nominal Frequency: 50
Measurement Unit: RMS



- Va1
- Vb1
- Vc1
- Ia1
- Ib1
- Ic1
- In1
- Va2
- Vb2
- Vc2
- Ia2
- Ib2
- Ic2
- In2



		RMS	Angle
<input checked="" type="checkbox"/> Voltage 1	<input checked="" type="checkbox"/> Ph A	200	0
	<input checked="" type="checkbox"/> Ph B	180	-159.9
	<input checked="" type="checkbox"/> Ph C	150	120.1
<input checked="" type="checkbox"/> Current 1	<input checked="" type="checkbox"/> Ph A	4.5	0
	<input checked="" type="checkbox"/> Ph B	4.1	-139.9
	<input checked="" type="checkbox"/> Ph C	3.4	170.1
	<input checked="" type="checkbox"/> Ph N	2.8	46.5
<input checked="" type="checkbox"/> Voltage 2	<input checked="" type="checkbox"/> Ph A	220	0
	<input checked="" type="checkbox"/> Ph B	220	-120
	<input checked="" type="checkbox"/> Ph C	220	120
<input checked="" type="checkbox"/> Current 2	<input checked="" type="checkbox"/> Ph A	5	0
	<input checked="" type="checkbox"/> Ph B	5	-120
	<input checked="" type="checkbox"/> Ph C	5	120
	<input checked="" type="checkbox"/> Ph N	0	-9.1



Trigger Settings

Type: Edge Mode: Norm Coupling: DC

Source: ch 1 Slope: [Slope icon]

Level: 0

Delay (sec): 0 Show Trigger

Ch1 1.0V/Div 1MΩ 0V

Trigger Edge ch 1 0V

Timebase 100 kS/s 10.0 ms/Div Record Length: 10000

Rack-Mount Form Factor



Thank you

Visit our booth to learn more