Transmission Line is the key learning concept for Electrical Engineers. Nvis 7063 Transmission Line Training System is exclusively designed to deliver the learning aspects of the electrical transmission line. Digital display is provided for easy measurement of Voltage, Current, Power, Power Factor, etc. These parameters help students to learn the characteristics of transmission line and calculations of the ABCD, H, Z parameters.

Students can perform various experiments like short, medium and long transmission line and their behavior. Also one of the important experiment which can be performed with this training system is Ferranti Effect.

Features

- 240 x 128 Graphical LCD Display

- RISC Microcontroller based design for measurement

- Simultaneous display of sending and receiving parameters

- Highly sensitive to change in reading for better controlling

- High Resolution ADC for accurate measurement

- Inbuilt Single Phase Variac to regulate supply

- Equipped with fixed R, L and C Load

- Facility to configure Short, Medium and Long Transmission Line using multiple value of R, L and C

- Designed by considering all the safety standards

- Diagrammatic representation for the ease of connections

- Online product tutorial

Scope of Learning

- To study Short Circuit, Medium, Long Transmission Line

- Determine the ABCD, H, Z and Image parameters of Short Transmission Line

- Determine the ABCD, H, Z and Image parameters of Medium Transmission Line

  - For T network

  - For p network

- Determine the ABCD, H, Z and Image parameters for Long Transmission Line

- Measure the receiving end voltage of each line under no load or lightly load condition to understand Ferranti effect

- Understand the performance of transmission line under different loads

Technical Specifications

Mains Supply	: 230V ±10%, 50Hz
Single Phase Variac	
Input	: 230V
Output	: 0-270V
Current	: 0-2A
Display Measurement	
Voltage	: $\geq$25V
Current	: $\geq$0.2A
Active Power	: $\geq$20W$\leq$2000W
Reactive Power	: $\geq$20VAR$\leq$2000VAR
Apparent Power	: $\geq$20VA$\leq$2000VA
Loads	
Resistor	: 700O/ 100W
Inductor	: 800mH/ 0.5A
Capacitor	: 12.5µF/ 450V
Dimension (mm)	: W 830 x D 355 x H 630
Weight	: 52kg (approximate)

240 x 128 Graphical LCD Display Screen

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   Transmission Line Training
   System Measurement Section
Sending End       Receiving End
Vs: 100V,         Vs:  100V,
Is:0.50A,         Ir:0.40A
Ps  :50W,         Pr : 40W
Qs :0VAR,         Qr :0VAR
Ss :50VA,         Sr :40VA
Pfs:0.99,         Pfr:0.99
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