

KEE-05 POWER TRANSMISSION LINE TRAINER



KEE-05 Power Transmission Line Trainer is a rugged training system for the Electrical laboratories mounted on Aluminum profile rack with sturdy table top flat panel. Each panel has ABS molded plastic sturdy enclosure with 4mm shrouded connectors showing circuit diagram & its connection tag numbers for easy understanding and connections. The product helps you to get fully acquainted with the basic concepts and functioning of a Power Transmission Line Trainer.

Specifications

- Trainer control panel is provided in 40X40mm Aluminum profile rack with sturdy table top flat panel.
- It has 6 no's of ABS plastic panel mounted on the aluminum rack with mimic diagram of components
- All input & output are terminated in 4mm shrouded connector and 4mm banana cable is provided for experiments.
- 3 phase DOL starter 4pole MCB, contractor & relay panel (1 No)
 - 4 pole MCB of 415 V/4A .
 - DOL 9A Contactor with 230V / 50 Hz / 11VA COIL .
 - Bimetallic thermal O/L relay with range 1.4A - 2.3A
 - R-Y-B Input display Indicators.
 - Manual start / stop with local trip contact
- 3 phase multifunction meter panel (2 Nos)
 - Bidirectional Multifunction
 - 3 Phase $\frac{3}{4}$ wire, 415V, CT Input 5A
 - LCD/LED display, Aux supply 230V, 45-65 Hz, 5W
 - V, A, Hz, Pf, KVA, KW, KWH
 - Modbus RTU RS485 connections
- FWD/REV Switch panel (1 No)
 - FWD/REV, 3 pole 3 way switch, 6A/440V.
- Transmission Line Compensation panel (2 Nos)

- 7 numbers of capacitors for compensation are 2, 4, 6, 8, 10 & 15 μ F.
- 3 Pole 7 way Cam switch for selection
- Table top RLC load Panel (1 No)
 - 7 way Switch selectable 3 no of 1KW Resistive load of value (225 Ω , 200 Ω , 175 Ω , 150 Ω , 112 Ω , 100 Ω),
 - 7 way Switch selectable 3 no of 440V Capacitive load of value (50 μ F, 30 μ F, 20 μ F, 15 μ F, 5 μ F, 2 μ F)
 - 7 way of Switch selectable 3 no of 1A Inductive load of value (1.5H, 1.2H, 0.9H, 0.75H, 0.6H, 0.3H)
- Table top Simulated Transmission Line (2 Nos)
 - Long range Transmission line
 - Medium range 250Km Transmission line Pie & T model.
- 3 phase table top Dimmer (1 No)
 - 3 phase dimmer input 415V, 50Hz
 - Output 0-450V/ 6A

Accessories:

- Set of Shrouded Cables
- Set of Manuals with Experiments.
- Demo CD showing Experiments

Optional Accessories:

- Working Table (KWT-01)....1 No
- Multimeter ... 1 No
- Tool Kit... 1 No

Experiment List

1. Study working of bi-directional 3 AC measurement panel, observing flow of real & reactive power & Modbus communication with PC.
2. Study of Ferranti effect.
3. Study of determination of transmission line constant (ABCD) by experimental measurement using 2-port method as well as by knowing component values and its verification.
4. Study of Load test calculation of regulation, efficiency of transmission line by Laboratory measurement method.
5. Study working with power circle diagram & to find steady state power limit of transmission line.
6. Study of No Load Test & VAR compensation.
7. Study of per unit representation.
8. Study of symmetrical & unsymmetrical faults in transmission line, LG fault with & without Petersen coil.
9. Study prediction of power flow in transmission Line (2 bus) by Numerical method (Newton Raphson / Gauss-Seidel Method)

Note : Specifications & Photos can be altered without notice in our constant efforts for improvement.