

## Specifications:

## Variable power supply panel X 4 nos. (5 banana sockets)

- 1 Pole MCB of 230V/2A.
- Fixed $+12 \mathrm{~V},-12 \mathrm{~V}, 500 \mathrm{~mA},+5 \mathrm{~V} / 300 \mathrm{mApower}$ supply.
- Power ON LED indicator


## Digital DC voltmeter \& ammeter panel ) X 14 nos.(10 Shrouded Banana)

- DC Voltmeter 0-50V.
- DC Ammeter 0-5A

DC transmission line panel x 1 nos. (54 Shrouded Banana)

- Simulated model for transmission line constructed using 12 numbers of $0.22 \mathrm{E} / 10 \mathrm{~W}$ resistors to construct $2 / 3$ wire Short, Medium and Long DC transmission lines.


## Input 3 phase DOL starter panel (6 Shrouded Banana)

- 4 Pole MCB of $415 \mathrm{~V} / 4 \mathrm{~A}$. RYB three color phase indicators.
- DOL 9 Atrip Contactor with $230 \mathrm{~V} / 50 \mathrm{~Hz} / 11 \mathrm{VACOIL}$.
- Bimetallic thermal O/Lrelay with range 1.4A-2.3A.


## Load panel X 1 no. ( 20 Shrouded Banana)

- Consists of 5 numbers of $25 \mathrm{E} / 20 \mathrm{~W}$ resistors \& $12 \mathrm{~V} / 2 \mathrm{~W}$ light

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- bulbs each to load transmission line at various nodes.



## Built In Power Supply

- DC Supply : $5 \mathrm{~V} / 1 \mathrm{~A} \& \pm 12 \mathrm{~V}, 1 \mathrm{~A} .0$ To 15 V DC (Variable), 100 mA (Isolated), 0 To 30 V DC (Variable), 100 mA (Isolated), High Volt DC 15V To 110V, 100mA
- AC Supply : 12-0-12V AC, 150 mA . Short Circuit Protected


## Built In Function Generator

- O/P Waveform : Sine, Triangle \& TTL O/Ps Output Frequency : 1 Hz To 1 mhz In 6 Ranges, With Amplitude \& Frequency Control Pots. O/P Voltage 20VP-P Max. (Sin/Trg)
- Modulation I/P : AM : - I/P Voltage + 5V (100\% Modulation) O/P - For OV (MIN), +5V (MAX.) - 5V (Phase Reversal Of O/P) FM : I/P Voltage $\pm 400 \mathrm{mV}$ ( $+50 \%$ Modulation)
- Clock Generator : 10 Mhz TTL Clock.
- Data Switches (10 No.) \& Bi-Colour Led Status Indicators $10 \times 2$ Nos, For High/Low Indication.
- Pulser Switches (2 Nos.) With Four Debounced Outputs - 2no.
- BNC To 2 Channel Banana Adapter - 2no
- Logic Probe To Detect High/Low Level Pulses Upto 1Mhz, With Bi-Colour Leds To Indicate Status.
- 2 / 4 Digit 7 Segment Display With BCD To 7 Segment Decoder.
- Onboard Dpms Provided With Mode/Range Selection.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.

- DC Volt: 2V/200V-1no.
- DC Current : 2mA/200mA-1no.
- DC Volts/Current: 20V/200mA - 1no
- Onboard Moving Iron Meters Provided For
- Accurrent : 1 Amp-1no.
- AC Voltage : 15V-1no.
- Onboard Speaker : 8 Ohms, 0.5 Watt (1no.)
- Onboard Pots : 1k-1no.,1m-1no.
- Mechanical Dimensions
- Master Unit : $460 \mathrm{~mm}(\mathrm{~W}), 160 \mathrm{~mm}(\mathrm{H}), 350 \mathrm{~mm}(\mathrm{D})$ Approx
- Panel : $215 \mathrm{~mm}(\mathrm{~W}), 165 \mathrm{~mm}(\mathrm{H}), 40 \mathrm{~mm}(\mathrm{D})$ Net Weight: 700 Gm Approx.
- Operating Voltage: 220/240VAC Switch Settable $\pm 10 \%, 50 \mathrm{hz} / 60 \mathrm{VA}$.
- Salient Features : Aesthetically Designed Injection Molded Electronic Desk (master Unit)
- Carrying Useful Experiment Resources Variable Power Supplies / Status / Pulsar / Function Generator, Dpms Etc. While The Central Slot Will Carry Replaceable Experiment Panel Secured In An Abs Molded Plastic Sturdy Enclosure, And Has Colorful Screw Less Overlay Showing Circuit \& Its Connection Tag Numbers For Easy Connectivity. Connection Through Sturdy 4mm Banana Sockets \& Patch Cords. Hands On Learning By Constructing Circuits Using Built In Power Board Panel As Well As Optionally Using Discrete Component Panel. Set Of Users Guide Provided With Each Unit. Order 10 Master Units \& Multiples Of 10 Or More Panels Set.



## DC, AC \& Wave Shaping Circuit Experiment Panel (Provided with 81 banana tags)

- DC: Resistance, current and voltage measurements, Loading of Potentiometer, Ohm's Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.
law, Power DC circuits, Series, parallel and mixed circuits, Kirchoff's law, Superposition theorem, Thevenin's \& Norton's theorems, Reciprocity, Compensation, Tellegen, Millman theorems \& Maximum Power transfer theorem, Voltage distribution of capacitors in series \& parallel, total capacitance of capacitors in series and parallel, charging and discharging of capacitor through resistance \& time constant, Wheatstone's Bridge, 2 Port Network Y, Z,h, ABCD Parameters \& Star Delta Network, T\& Pi attenuators.
- AC : AC Voltage \& Current Measurements - R-L series, R-C series, R-L-C series circuit (Series Resonance). R - Lparallel, RC parallel, R-L-C parallel(Parallel Resonance), Active, Reactive power \& power factor(Vector Diagram), average \& RMS Value measurement. Wave Shaping: Differentiator, Integrator, Clipping, Clamping, Passive filters LC / RC, LPF/ HPF
- Table (1220 (L) x $610(\mathrm{~W}), 760 \mathrm{H})$ Approx consisting of fine vineer top, MS tubular frame, 2 drawers with key lock, 1 PC keyboard drawer, writing pad drawer, 4 castor wheels etc.


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