

**KEW-06** 

### **AUTO ELECTRICAL TEST BENCH - THREE PHASE**



#### AUTO ELECTRICAL TEST BENCH

### General Features

- The readings can be read through digital meters
- 5 HP, 3 Phase, 1440 RPM motor induction motor suitable for 50 Hz / 415 V AC Supply with variable frequency drive 5 hp for speed variation
- Alternator loading up to 170 A / 14 V & 110 A / 24 V
- Heavy duty transformer for starter testing with light run test
- Poly V / V groove for alternator checking
- Battery charging ammeter to read the battery current
- Heavy duty rugged frame for mounting alternator & starter
- Three phase 4 pole isolator switch
- All tripping MCB's available
- PCB / bat excitation available
- Accessories like bulbs / fuses / belts and cables for test of alternator / starter/ continuity / battery along with manual & calibration certificates to be provided
- Facility to check continuity test of excitation winding using 6 V DC Output
- Facility to check short circuit of starter / alternator- rotor using 40 / 80 V AC
- Dimensions: Length X Width X Height: 800mm X 850mm X 650mm (Approx.)
- Weight: 150 Kgs net (Approx.)
- Facility to charge battery (Not in the scope of supply) using appropriate cable harness.
- Components of Auto Electrical Test Bench:
- Volt Meter Digital, 0-30 V DC-1 No
- Ammeter Digital, 0-30 A-1 No







- Ammeter Digital, 0-200 A-1 no
- RPM Indicator Digital 0-5000rpm-1 no
- Motor 5HP(3.7KW), 50 Hz, 415 Volt AC-1 No
- VARIABLE FREQUENCY DRIVE 415V 3PH ,5HP-1 No
- Diode, 150 A, 400 V-4 No's
- Transformer, 12V / 200 A, 24 V / 150 A-1 No
- Transformer, 0-240 V Primary, 12-0-12 V Secondary-1 No
- Transformer, 0-240 V Primary, 0-6V-40V-80V Secondary-1 No
- Contactor, 25 A, 240V Coil-1 No
- Contactor, 9 A, 240V Coil-1 No's
- Timer, Aux 240 V-1 No •
- Toggle Switch, Double Pole Double Throw 6 A 240 V-4 No's
- Shunt 30 A, 75 Mv-1 No
- Toggle Switch, Single Pole Single Throw 6 A 240 V-1 No
- MCB Single Pole, 25 A 240 V, 50 Hz-2 No's
- Isolator Double Pole, 63 A 240 V, 50 Hz-1 No
- 40 A 4 Pole main switch isolator-1 No
- Rotary Switch, 15 A, 220 V-8 No's
- Fuse Holder-2 No's
- Push Button, Green-3 No's
- Normally Open Element, Green 240 V, 10 A-3 No's
- Normally Closed Element, Red 240 V, 10 A-1 No
- Indicator, 22.5 Mm R / Y / B-4 No's
- Reset Switch Pbs-1 No
- Shunt, 200 A 75 Mv-2 No's
- Terminals: BTI-100, 100 A Red & Black-2 No Each
- Terminals: BTI -30, 30 A Red & Black-1 No Each
- Terminals: BS-5 Red-9 No's
- Terminals: BS-5 Black-6 No's
- Terminals: BS-5 Yellow-1 No's
- LED Holder / Led: 10 Mm-4 No's
- Resister: 2.7 Ohm / 350 W-2 No
- Resister: 1.4 Ohm / 350 W-11 No's
- Solenoid Switch: 12 V DC-2 No's
- Fan: 240 v, 4" Cooling Fan-2 No's
- Relay: 12V DC, 250 Ohm, 10 A-1 No
- Single Phase Preventer: 415 V, 50 Hz-1 No
- Bridge: 35 A-1 No
- Mounting Bushes-4 No's
- Wires As Required
- Metal Chassis
- Mounting Vice (X-Y directional movement and V block-1 No with clamping arrangement)
- Pulley with Multispeed options 28 Bore-1 No
- Vacuum Kit With Tank-1 No
- PCBs: Power / Control-2 No's
- V Belt / Poly V Belt: A-52 / 6pk 1345-1 Each
- 6 SQ MM Terminal Block-1 No
- Hylams (Different sizes)-05 Sizes
- Front Plate-01 No
- RPM variation potentiometer 5k-1 no
- Auto transformer 0-220v 8amps with motor-1 no









#### Voltmeter

- Display Type Red LED Super Bright Display
- Maximum Display 1999 Counts I Resolution 1 Count
- Polarity Indication " " is indicated for Negative Input
- Over Range Indication "1" or "-1"
- Red Antiglare
- Faceplate with Annunciators
- Case / Housing DIN Black ABS, Dimension as per DIN (48 x96)
- Mounting Clamps Sturdy, Molded ABS with suitable Hardware
- Connectors Terminal Block
- Brass Terminals I Display Stability Within ± 2 Digits
- 199.9 V voltage measurement range

#### **Ammeter**

- Display Type Red LED Super Bright Display
- Maximum Display 1999 Counts I Resolution 1 Count
- Polarity Indication " " is indicated for Negative Input
- Over Range Indication "1" or "-1"
- Faceplate Red Antiglare
- Faceplate with Annunciators
- Case Terminals
- Case / Housing DIN Black ABS, Dimension as per DIN (48 x 96)
- Mounting Clamps Sturdy, Molded ABS with suitable Hardware
- Connectors Terminal Block: Thermoplastic (UL 94V-0) with Tin Plated
- Brass Terminals I Display Stability Within ± 2 Digits
- 0-1000 Amps current measurement range

#### **RPM** meter

- Display Type Red LED Super Bright Display
- Maximum Display 1999 Counts I Resolution 1 Count
- Polarity Indication " " is indicated for Negative Input
- Over Range Indication "1" or "-1"
- Faceplate Red Antiglare
- Faceplate with Annunciators
- Case Terminals
- Case / Housing DIN Black ABS, Dimension as per DIN (48 x 96)
- Mounting Clamps Sturdy, Molded ABS with suitable Hardware
- Connectors Terminal Block: Thermoplastic (UL 94V-0) with Tin Plated
- Brass Terminals I Display Stability Within ± 2 Digits
- 0-5000 rpm measurement range

#### **Motor**

- TEFC Class F Insulation foot mounted induction motor
- AC Supply Voltage 415 V+ / -10%, 50 Hz+ / -5% class F insulation
- 4 pole motor with foot mounting 1440 RPM max
- Frame Size: 100 S 4pole

## **VARIABLE SPEED DRIVE**

- LCD Display Type
- PROGRAMMABLE
- 5 HP KW 415V 50HZ
- OUTPUT variation from 0-415v









- Speed setting through potentiometer
- 0-5000 rpm settable range

## **RPM Potentiometer**

- 5k ten turns
- Fine rpm adjustments
- Panel mounting type
- With knob for rotation
- 0-5000 rpm settable range

#### **Auto transformer**

- Copper wound foot mounted with CRNO core
- 220v 8amps capacity
- Fitted with motor and gears
- Motor rating 3kg-cm torque
- 0-220v variation with arm rotating
- Push button motor operation

## **Diodes with Aluminum Heat Sink**

- Maximum Average forward current: 150 A
- Maximum Peak forward voltage drop: 1.4 V

## **Step Down Transformer**

- · Copper wound foot mounted with CRNO core
- Step down type of winding
- 2.8KVA rating
- AC Supply Voltage: 240 V +/-10%, 50Hz +/-5%, Class F Insulation
- Ambient Max Temperature of 120°C
- Output Voltage:15 V +/- 10%
- Output Current: 150 A max @ 15 V

## **Contactor / Overload Relays**

- Contactor application: Motor control
- Poles description:3P
- Pole contact composition:3 NO
- Control Circuit Type: AC 50 Hz
- Control Circuit Voltage: 240 V AC 50 Hz
- Auxiliary contact composition:1 NO + 1 NC

### **Timer**

- ON Delay
- Dual supply voltage
- LED status indicator: Power ON, Relay ON
- DIN Rail / Back panel mount
- Finger safe terminals
- Supply Voltage 240V AC
- Power Consumption 6VA max

### **Toggle Switch**

- Power Switch conforms to safety standards for electrical equipment
- Compact with a good space factor
- Item Standard Rating 6 A
- Terminal Types









#### MCB

Rated current: 25 ANumber of poles: 1P

Rated operational AC Voltage: 240 V

Frequency: 50 HzNumber of modules: 1

## **Rotary Switch**

• DC switching: 5-40 A

Rear termination

Mountings: Standard Front Panel

 Resistance loads application and Switching of resistive loads, including moderate overloads

Rated Operational Voltage: Max V DC 250

#### **Fuse Holder with Fuse**

Contact Finish: Silver PlatedHousing Material: Phenolic

• Terminals: Copper

Mounting Type: Panel Mounting
Figs Link Size (mm): 6.3 X 33

Fuse Link Size (mm): 6.3 X 32Panel Thickness Max (mm): 3

Current Rating: 10 A 240 V AC

# **Push Button / Indicator with Element Switches**

• Operating positions: All positions

Contact: Block

Contact Operation: Slow Break NO or NC

#### 200 A / mV DC Shunt

Operating Temperature: -10 °C to 55 °C

 Maximum load: The load should not exceed 0.1% of the nominal current rating for specified accuracy.

## **Terminals - Push Button / Indicator with Element Switches**

Mounting Arrangement: Panel Mounting

Rating: 100 A / 60 A / 30 A 240 V AC

Contact Material: Brass Nickel Plated

• Insulation Material: Phenolic (Bakelite)

Color: Red / Black

#### **LED Holder with LED**

Metal holder of housing 10mm LED

• Supply voltage: 240V MAX

• Dimensions (L X D): 15 X 14 mm

Peak Forward Current: 120 mA

Continuous Forward Current: 30 mA

#### **Resistors**

- Power Rating full power dissipation at 70°C to 350°C
- Temperature Range -55°C to 350°C
- Voltage Rating / Limiting Voltage / Max working Voltage V = P X R
- Voltage Proof / Dielectric Withstanding Voltage







### **Cooling Fan**

Operating Voltage: 240 V (185 – 245 VAC)

Insulation: Class B

### **DC Relay**

Contact resistance: 50 mΩ max
Operate Time: 25 ms max

• Release Time: 25 ms max

### Wires

Resistance as per: IS 8130

• Tensile strength / annealing as per: IS 8130

Wrapping as per: IS 8130Diameter as per: IS 8130

#### Chassis

- Complete fabricated structure with laser cutting and Turret punching
- Angles and CRCA sheets
- Powder coated
- Heavy duty mounting flats at the corners for base mounting bush

#### **Standard Accessories**

- Accessories / Attachment Required for Auto Electrical Test bench
- Alternator cable
- Starter cable
- Battery cable
- Continuity Test cable 1 no
- Belts 2 sizes
- Bulbs / Fuses 1 each
- Operation Manual: 01 Nos.
- Maintenance Chart / Schedule: 01 Nos.

#### Other Features

Safety requirements: Emergency stop button

### **Space Requirement for Installation**

Floor arrangement in mm: 1000 mm X 1000 mm (Approx.)

## Foundation / Installation Specification

 Mechanical and electrical and civil Installation and commissioning, loading and unloading will be done by bidder at site.

# **Electric Supply Specification**

Mains Supply:415 V AC, 3 Phase, 50 Hz AC Power supply



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