



	AIR CIRCUIT BREAKER
	MOULDED CASE CIRCUIT BREAKER
	MINITURE CIRCUIT BREAKER
	LOAD MANAGER
	EARTH
	CURRENT TRANSFORMER
	ISOLATOR
	MOTOR PROTECTION CIRCUIT BREAKER
	INDICATION LAMPS
	SC - SPRING CHANGED
	SP - SERVICE POSITION
	TP - TEST POSITION
	CSH - CONTROL SUPPLY HEALTHY
	LTPB - LAMP TEST PUSH BUTTON
	TCPB - TRIP COIL PUSH BUTTON
	ETPB - EMERGENCY TRIP PUSH BUTTON
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	AUTOMATIC POWER FACTOR CORRECTION RELAY
	EARTH FAULT RELAY
	MULTI FUNCTION METER
	ELECTRICAL MEC. INTERLOCK
	MACHINE OR TRANSFORMER THERMAL RELAY
	NEUTRAL GROUND OVER-CURRENT RELAY
	FREQUENCY RELAY
	OVER-VOLTAGE RELAY
	AC TIME OVER-CURRENT RELAY
	TIME DELAY GROUND FAULT RELAY
	VOLTMETER
	VOLTMETER SELECTOR SWITCH
	AMMETER SELECTOR SWITCH
	AMMETER
	FUSE
	MARSHALLING BOX
	SURGE ARRESTER
	CAPACITOR BANK
	ANNUNCIATOR

- NOTES:**
- ALL SWITCHGEARS SHALL BE PROVIDED WITH TNC SWITCHES.
  - ALL SURGE ARRESTER SHALL BE WITH SURGE COUNTER.
  - ALL MCCBS SHALL BE CURRENT LIMITING TYPE.
  - THE ON / OFF AND TRIP POSITION OF MCCB SHALL BE CLEARLY INDICATED, OPERATING HANDLE FOR OPERATING MCCBS WITH THE DOOR CLOSED SHALL BE PROVIDED.
  - ALL INDICATING LAMPS SHALL BE MULTICHIP LED TYPE.
  - ALL BUS COUPLERS SHOULD BE WITH ON (RED) & OFF (GREEN) INDICATION LAMPS.
  - MULTI FUNCTION METER & ENERGY METER SHALL BE PROVIDED WITH (BUT NOT LIMITED TO) FOLLOWING METRINGS FEATURES: CURRENT, VOLTAGE, ENERGY (KWH), MD (KW/KVA).
  - ALL VERTICAL & HORIZONTAL BUSBARS SHALL BE WITH MENTIONED RATING THROUGHOUT.
  - MPCB SHALL BE USED INSTEAD OF FUSE WHILE FEEDING CONTROL SUPPLY VOLTAGE I.E. 230V AC DIRECTLY DERIVED FROM AC BUS.
  - ALL MCCB FEEDERS ON ALL PANELS SHALL BE PROVIDED WITH ON/OFF/TRIP INDICATING LAMPS THROUGH AUXILIARY CONTACTS.
  - ALL MCC PANELS - RELAY SETTING & CONTROLS SHALL SUIT TO MOTOR CAPACITY AS PER TYPE 2 CO-ORDINATION.
  - MULTI FUNCTION METER (MFM) SHALL BE CLASS-1 AND SHALL BE PROVIDED WITH RS485 PORT & MOD BUS COMMUNICATION PROTOCOL.
  - METAL ENGRAVED CAUTION BOARD'S SHALL BE RIVETTED ON COVERS FOR BUSBAR CHAMBERS.
  - NEUTRAL IS REQUIRED FOR ALL PANELS AS SHOWN. SIZE OF NEUTRAL SHALL BE 50% OF PHASE FOR ALL PANELS EXCEPT UPS PANELS. FOR UPS PANELS NEUTRAL SHALL BE 200% OF PHASE.
  - FOR SPARE FEEDERS MFM / EM IS NOT REQUIRED. HOWEVER, SPACE PROVISION SHALL BE MADE FOR MFM / EM.
  - ALL SIGNALS MONITORING SHALL BE SOFT SIGNALS RS485 PORT.
  - THE CONTRACTOR AND PANEL VENDOR IS RESPONSIBLE FOR RELAY/RELEASE COORDINATION, OVERCURRENT/EARTH FAULT/SHORT CIRCUIT CURRENT SETTINGS AT VARIOUS LEVELS AND AT EACH PANEL/DG, TO ACHIEVE PROPER FAULT DISCRIMINATION. RELAY SETTINGS AT EACH VOLTAGE LEVEL SHALL BE SUITABLY SELECTED, COORDINATED AND SET AT SITE BY ELECTRICAL CONTRACTOR TO ACHIEVE PROPER DISCRIMINATION.

- NOTES**
- ALL DIMENSIONS SHALL BE CHECKED AND CO-RELATED WITH THE STRUCTURAL DRAWINGS AND ANY AMBIGUITY SHALL BE IMMEDIATELY BROUGHT TO THE NOTICE OF THE ARCHITECT BEFORE COMMENCEMENT OF THE WORK.
  - ALL DIMENSIONS ARE IN CENTIMETERS UNLESS AND OTHERWISE SPECIFIED.
  - ALL LEVELS ARE FINISHED LEVELS.
  - ALL MARGINS, CLEARANCES ETC. REQUIRED AS PER BYE-LAWS SHOULD BE CHECKED AND PROVIDED BY THE CONTRACTOR AND ANY DISCREPANCIES FOUND SHOULD BE IMMEDIATELY BROUGHT TO THE NOTICE OF ARCHITECT BEFORE COMMENCEMENT OF WORK.
  - FOR DETAILS OF ALL CUTOUTS IN SLABS AND BEAMS REFER SERVICES CONSULTANTS DRAWINGS.
  - FOR STAIRCASE DETAILS REFER DRAWING. NO. 5.1
  - FOR TOILET DETAILS REFER DRAWING. NO. 6.1
  - FOR DOOR DETAILS REFER DRWG NO. 8.1
  - FOR WINDOW DETAILS REFER DRWG NO. 9.1
  - FOR KITCHEN - PANTRY DETAILS REFER DRWG NO. 10.1
  - FOR MISCELLANEOUS DETAILS REFER DRAWING NO. 29.1
  - FOR VERANDAH DETAILS REFER DRAWING NO. 31.1

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Project

**Nalanda University, Rajgir, Bihar**

Title  
**SINGLE LINE DIAGRAM - ELECTRICAL**

Dealt : AD	Drawing No.
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Date : 2016.08.05	Approved.

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# 1 SINGLE LINE DIAGRAM - ELECTRICAL

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