

# An enterprise of an engineering marvel







# Karytron Electricals Pvt. Ltd. An ISO 9001:2008 Certified Company

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Karytron Electricals has been functioning as a Manufacturing unit of Electrical Panels since 1995 and is based at Bahadurgarh (Haryana). We are an ISO 9001-2008 Certified company managed by professionals. We have an expertise in Designing, Manufacturing of H.T./L.T. Electrical Panels, Bus Duct, Rising Main, AMF and Synchronizing Panels, APFC Panels, RTCC Panels, Marshalling Box, Relay and Control Panels Distribution Boards, Drives and PLC based panels etc.

The H.T, 11KV panels manufactured by us are approved type tested from CPRI up to 1250A., 31.5KA, breaking capacity for 1sec., similarly our L.T. panels are type tested up to 4000 Amp. having 100 KA breaking capacity for 1 sec.

We undertake, Electrical Projects up to 66KV level, designing of Electrical Sub Stations, Cable Sizing, Erection Testing and Commissioning of Power and Distribution Transformers, H.T /L.T Panels, Power and control cabling, substation and equipments earthing, cable trays, internal and external Lighting etc.

We also undertake Annual maintenance contracts and services for electrical substations, symtt. and asymtt. Fault level calculations, Relays testing and Coordination, Pre- Commissioning testing of Electrical substations, Transformer, C.T's, P.T's, Breakers, L.A. up to 66KV Level, Thermo scanning through infra red camera. Harmonic Analysis through Power Analyzer etc.





#### Our Vision

Optimum Customer Satisfaction and Electrical System Reliability.

# Our History

Since 1970 we are into testing and commissioning of electrical sub stations.

Since 1995 we are manufacturing various types of electrical panels

Since 2005 we have started executing turnkey electrical projects.

Since 2012 we are a system integrator for 11 KV VCB of M/s. G.E.



# A THE

### Our Objective

To provide the most Economical, Reliable, Eco-friendly & Latest state of art technology based Products and Services.

# Our Quality

Quality is a feature of paramount importance for us. Our products and Services confirm to all relevant standards to ensure quality, reliability, better efficiency, flawless performance and durability of the products.





#### Our Team

We have a qualified and experienced team of Engineers, Technicians and Skilled Workers who are capable and talented to handle the equipments and manufacture the superior class products.

# Certifications & Approvals

- ISO 9001-2008 Certified
- CPRI Type Tested Panels
- PFC NTPC CCIL HCL Pepsico
- CPWD BHEL HPCL HINCOL
- HUL UHVBNL NACIL









#### Infrastructure

We have complete in house facilities for Manufacturing of All Type H.T. / L.T. Electrical panels.

- Fabrication unit
- Paint shop with Pre Treatment plant (8 Tanks)
- Assembly & Wiring Unit
- Testing Unit
- Research & Development Unit
- Quality Control Unit

For services, we have in house facilities of all major testing equipments like Power and Harmonic analyzer, Infrared Thermo Camera, Primary Injection Test Set up to 3200A., Secondary Injection Test Set, D.C High Pot up to 60KV, Winding and Turn Ratio Tester for Power Transformer, Oil Dehydration and Filtration Plant, Contact Resistance, Circuit Breaker Close Trip Time Measurement Set, Megger, Earth Tester and other associated Meters/Equipments etc.



# Our Product Range



# L.T Panels for mains and distributions

To control and monitor the main supply at centralized location with protective switch gears. Similarly distribution boards are utilized for control of small power control provided near load center.



Motor Control Center (MCC) and Intelligent Motor Control Center (IMCC) which controls the motor operation at centralized location either locally or at remote for industrial operation with control and protection.

Smart 15 AUTO POWER FACTOR CORRECTION







APFC Panel improves the power factor and bad effects of Harmonics with De-tuned Reactors e.g 5.67%, 7% and 14%. This reduces the cost of billing including filter of Harmonics. There are various designs, tailor made to suit individual application. The Smart APFC Panel initiates alarm and indication in under & over compensation conditions.





#### AMF cum Synchronizing Panel

Automatic mains Failure (AMF) is an auto changeover in the event of power failure from Mains supply to stand by generator and generator supply to Mains. Synchronizing panels meant for Manual and automatic synchronizing with one or more generators even with Main source. These are applicable for medium & low voltage generators, Peak saving operation, load management, standby operation, AMF operation Co-generation (CHP) etc.



#### PLC and SCADA Panel

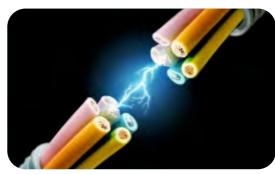
Programming logic controller (PLC) desire to a logic flow for the program using the input device to trigger output devices depending on the logic of the program, these panels are mainly used having configuration with A.C. drive to give continuous, control and efficient operation of electrical motors etc.

Supervisory Control and Data Acquisition (SCADA) systems are robust industrial control systems that allow multiple users to monitor and control an unlimited number of processes from multiple locations throughout your facility.











#### RTCC Panel

RTCC Panel is Remote Tap Changer Control Panel an auto/manual mode with voltage regulating relays, which is a Programmable device to regulate and control the output voltage of the transformer up to desired levels through OLTC unit fitted in the transformer. The desired voltage will be achieved accordingly by controlling the OLTC with respect to the tap position through RTCC system.





#### Control and Relay (C&R) Panel

A control & relay panel is designed to control the associated line, Transformer, Motors, Capacitor Banks, Bus Controller through outdoor/indoor switchgear of different voltage level in the substations. These panels apart from control, Monitors the Electrical Equipments such as Transformers, Generators Capacitors, Bus Bar, Motors and Circuit Breakers.

The control & Relay Panels are complete in themselves with all main and Auxiliary Protection Relays, Annunciation Relay, Fuses/MCB/ Switches, Wiring, Labels, Terminal Blocks, Earthing Terminals, Base Frame, Foundation Bolts, Illumination, Cable Glands etc.

#### Control Desk and MIMIC Panel

The use of our control panels for machines can protect machines from any hazard, with fault display screen & fault diagnostic system. We offer different types of Control Desk depending upon the space and functionality requirement. These are available in various sizes and designs with perfect finish based on the specifications as per requirement.

Mimic panel represents to electrical system for its view and control from one place. The mimic helps in identification of exact location the status of switchgears the power flow at a particular moment and easy for maintenance.







#### A.C Drive Panel

Due to drastic reduction in pricing and improvisation of reliability, Conventional starters- DOL or SD-Star Delta are being increasingly replaced by VFD i.e. Variable Frequency Drives . We provide solutions for motor control application by way of VFD Panels by using VFDs . VFDs of various types vector- non vector and of specific applications are used as per customer choice and their preference with view of earlier supplies and inventory.





#### Power Control Center (PCC ) Panels

These are efficiently used to distribute the power to different parts of the plant/building/industry/township and controls the whole power supply from one single place. These are capable enough to control various industrial operations with guaranteed performance. Their complete set up is available for our clients in well customized form as per their requirement.



#### Feeder Pillar

These panels are used in Distribution System of electrical power to various out going feeder with protection. The Feeder Pillars are extensively installed for industrial, township, housing societies, and lighting applications. Our Distribution Feeder Pillars are designed, engineered, and manufactured for 4-Way, 6-Way, 8-way as well as customized power distribution applications.



# Type Test Certification from CPRI, Bhopal

SI. No.	Equipment	Туре	Voltage	Tested for	Confiming to Standard	Test Report No.	Date	Remarks
1	Distribution Panel (LT Switch Board) 100KA for 1.0 sec. with intial peak of 200KA	PMCC	415V, 4000A	Verification of Temperature rise	IS8623(Part-I) 1993	2010/STL/615	10.09. 2010	Temp. rise test for Distribution Panel complies the requirement of Indian Stand.8623(Part-1)-1997
2	Distribution Panel (LT Switch Board) 100KA for 1.0 sec. with initial peak of 200KA	PMCC	415V, 4000A	verification of short circuit with stand strength	IS8623 (Part-I) 1993	2010/STL/615	12.05. 2010	Short circuit withstand test for Distribution Panel complies the requirement of Indian Standard 8623(Part-1)-1997
3	Control Panel	L.T. Panel	415V, 100A	Degree of Protection IP-5X	IEC60439-1 2004 & IEC60529- 2001	2010/STL/213	17.02. 2010	Withstood Dust Ingress Test
4	Control Panel	L.T. Panel	415V, 100A	Degree of Protection IP-5X	IEC60439-1 2004 & IEC60529- 2001	2010/STL/214	17.02.2010	Withstood Water Ingress Test

#### 11KV Switch Gear Panel

We are the System Integrator for 11 KV VCB's of M/S. G.E. (INDUSTRIAL SOLUTIONS), a globally admired company in the field of electrical energy industrial solutions. The offered 11KV Switchgear VCB Panel has salient features which edges over the other makes presently available in the market, like the normal current rating up to 1250 A with maximum short time current and breaking capacity of 26.3, 31.5 & 40KA for 3 sec. which corresponds to 500, 600 & 750MVA respectively, the opening and making timing is about 35ms. & 50ms, the better pole center clear distance of 170mm & 210mm, the mechanical endurance is also quite high and claim for high mechanical operation etc. etc. M/S. G.E. uses the new state of the art technology for their VCB's products and their characteristic and advantages are re-produced under, which keeps their product above other brands.

- Use of high-end 3D computer aided design(Pro-Engineer) and dynamic simulation optimal design (Pro-Mechanical)
- Reduced partial distribution and local overheating limited by optimizing electromagnetic field distribution
- World leading-edge miniature interrupter chamber applying axial rotating magnetic field vacuum interrupting principle, with the extremely stable breaking performance
- Perfect insulation material with higher creep age distance and electrical clearance greater than requirements of IEC standards and successful clearance of the condensation test which is applicable for operation under harsh environment









- With reliable grounding mode, which ensures earth continuity of breaker from service position to test position
- Operating mechanism is made of modular design with main sub-assemblies/components arranged in such a way that it will improve the reliability and stability of the breaker.
- The whole mechanism consists of three modules: energycharging module, closing module and tripping module. Each module can be assembled respectively and mounted on to the mechanism together with bolts.
- The energy-charging module is composed of two-level worm gear, super clutch and closing spring.
- Besides power operating energy-charging device, the manual operating device is provided. Auto-reclosing can be realized for all models of breakers.

Being System Integrator of M/S. G.E. (industrial solutions) we are manufacturing different types of H.V. Panels. We have "all in house' facilities like Fabrication, Paint shop (with 8 tank treatment facility), Assembly, wiring, quality control and testing. The other equipments like relay, C.T's, P.T's, power pack etc. are procured from reputed makes.





#### Type Test Certification from CPRI, Bhopal

SI. No.	Equipment	Туре	Voltage	Tested for	Confirm to Standard	Test Report No.	Date	Remarks
1	11KV, 1250 Amp., H.T. Panel (STC - 31.5KA r.m.s 1 Sec)	VCB Panel	11KV	Temperature Rise Test	IS3427 -1997	2011/ STL/932	20.12.2011	Temp. rise test for H.T. Panel without VCB complies the requirement of Indian Standard 3427-1997
2	11KV, 1250 Amp., VCB (31.5KA r.m.s 1 Sec, 78.75 KA peak)	VCB Panel	11KV	Short time withstand current & peak withstand current Test	IS3427 -1997	S2110990	14.12.2011	Short time withstand current test for H.T. Panel without VCB complies the requirement of Indian Standard 3427-1997







#### Services

#### Handling Projects

- Erection, Testing and commissioning of Substations up to 66KV level.
- Erection, Testing and commissioning of Power, Distribution Transformers and DG Sets.
- Laying and Termination of H.T., L.T , Power and control Cables (Underground/overhead)

- Installation of Cable Trays and race ways.
- Equipment Earthing & Lightning Arrestors.
- Supply, Installation, Testing and commissioning of Panels.
- Internal and external Lighting (Industrial, Office & Commercial)





#### Designing, Fault Level Calculations, Harmonics Study & Thermoscanning

Designing of HT/LT Electrical Substations, LT Distribution Systems on the basis of Symtt., Unsymtt. Fault level Calculation, Data Validation with Recommendation, Relay Setting, Observation from Audit point of view, Harmonic Analysis, Thermography to Detect Hot Spot for timely action to avoid damage of costly equipments.







#### Pre-commissioning of 66/33/11 KV Sub-Station

Leveraging on our team of experts, we have developed our expertise in pre commissioning of 66/33/11 KV sub-stations. We are offering our services regarding complete pre commissioning of sub-stations.



#### Pre-commissioning Testing of H.T. Panels

We also perform various pre-commissioning testing of H.T. Panels in accordance to relevant standards. We remain in constant touch with our clients to get feed back for the product, services and it's updation.



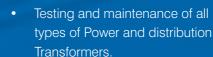


#### Testing and Maintenance (on site)













• Testing and maintenance of

earthing.

- Dehydration and filtration of Transformer Oil
- Pre-commissioning Testing up to 66KV substation onwards from L.T equipments.

We also undertake Annual Maintenance contracts of Electrical substations for operation and







# Our Prestigious Clients

- 1 Advance Hydau Tech Pvt. Ltd.
- 2 Ahluwalia Contracts India Ltd.
- 3 Air India
- 4 Akshardham Temple, Delhi.
- 5 Allied Strips Ltd.
- 6 Alstrong Enterprises (P) Ltd.
- 7 Ambience Hotel & Resort Ltd.
- 8 Anjani Casting Pvt. Ltd.
- 9 Asian Color Coated.
- 10 Associated Container Terminals Ltd.
- 11 Harman Baba Pvt. Ltd.
- 12 Balaji Action Buildwell
- 13 Bennet Coleman and Co. Ltd.
- 14 Bharat Petroleum Corporation Ltd.
- 15 Brij Footcare Pvt. Ltd.
- 16 Caporo Power Ltd.
- 17 Cement Manufacturing Company Ltd.
- 18 Central Pubic Works Department.
- 19 Continental Devices India.
- 20 Dayal Sharma Picture Pvt. Ltd.
- 21 Degremont Ltd.
- 22 Delhi Heart & Lung Institute.
- 23 Escorts Ltd.
- 24 Gateway Rail Freight Ltd.
- 25 Gee Emm Spin Fab Ltd.
- 26 Gupta Threads Ltd.
- 27 H.R Policoats Pvt. Ltd.
- 28 HCL Infosystems Ltd.
- 29 Hindutan Unilever Ltd.
- 30 Hindutan Petroleum Corporation Ltd.
- 31 HNG & Industies.
- 32 HT Media Ltd.
- 33 Inland Container Depot
- 34 Indo Gulf Fertilizers
- 35 Indraprastha Apollo Medical Corp Ltd.

- 36 Jet Airways Airport India Ltd.
- 37 Jindal Mecon Briks Pvt. Ltd.
- 38 Kauzer Technologies & Systems Pvt. Ltd.
- 39 Kwality Tharead Pvt. Ltd.
- 40 Larsen & Turbo Ltd.
- 41 Mahindra & Mahindra Ltd.
- 42 Masu Brakes Ltd.
- 43 MGS Hospital
- 44 Microtek International
- 45 Modflex India Pvt. Ltd.
- 46 Nelco Ltd.
- 47 NTPC Ltd.
- 48 Nuclear Power Corporation
- 49 Pan India Food Pvt Ltd.
- 50 Parkesh Candle Works
- 51 Patiala Cotspin Ltd.
- 52 PDM Group of Institutions.
- 53 Pepsico India Holdings Pvt. Ltd.
- 54 Poly Plex
- 55 Power Finance Corporation Ltd.
- 56 Rampur Distillery
- 57 Relaxo Footwears Pvt. Ltd.
- 58 Reckitt Benckiser India Ltd.
- 59 Rockwell Hoist & Cranc Pvt. Ltd.
- 60 Rohit Steel Ltd.
- 61 Royal Norwegian Embassy.
- 62 Sangam Cinema
- 63 Shyam Telecom.
- 64 Super Freeze India Ltd.
- 65 Taj Place Hotel.
- 66 The Tivoli Garden Resort.
- 67 Universal Precision Screws(LPS)
- 68 V Mart Retail Ltd.
- 69 Vijay Electricals Ltd.
- 70 Wipro Ltd.

