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THE ENERGETIC PEOPLE FOR SAVING ENERGY

COMPANY PROFILE

Introduction

Swan Enterprises is a leading equipment, panel & turnkey solution provider. We aim to resolve our precious client's requirements their issue by providing our expertise in various industries. Various electrical panels, products sales & services are done with manufacturing unit & office in pune Maharashtra.

The company is engage with manufacturing of wide range of HT/LT panel, power factor solution by different methods, harmonic study & solutions, Energy management solutions, Power & control panel, DG panel work, Earthling solution & etc. We are always working towards adopting to the changing technology & provide our clients with the best suitable solution.



30+ Years Experience

6000+

Control Panels Supplied

4000 + Power saving Panels Supplied

MISSION

BO Turnkey Projects

VISION

Be an excellent Electrical provider to create greater values to our customers and develop, produce innovative product services and solution that satisfy customer's needs.

Maintain positive growth of the company together with our valuable customers by offering best quality technology and services that earns their respects and loyalty



GOAL

Be an excellent Electrical provider to create greater values to our customers and develop, produce innovative product services and solution that satisfy customer's needs.

Our Presence

Our Clients



Motor Control Center

A Motor Control Center (MCC) is an assembly that controls several or all-electric motors centrally. There are multiple enclosed sections and a common power bus. Each section has a combination starter, which consists of a motor starter, fuses or circuit breakers, and a power disconnect. It is also possible to equip a motor control center with push buttons, indicator lights, variable-frequency drives, programmable logic controllers, and metering equipment.

Power Control Centre

A Power Control Centre (PCC) is a main power control panel that contains feeder breakers and supply breakers, monitoring devices, control devices, switching devices, protection devices, and instrumentation devices. Alternatively, it is called the Main Switchboard. This type of switch is mainly installed near power sources, so its fault level is high. In order to function properly, it must be able to satisfy fault levels for few second.

Main Lt Distribution Panels

A main LT distribution panel is a critical component of any electrical system. It is responsible for distributing power from the main source to various subpanels and circuits throughout a building or facility

it's important to choose a main LT distribution panel that is durable and easy to maintain.

Current Capacity – 100A – 4000A



: 415V/440V, 3 phase

: 50/60 Hz

APFC Panel

AUTOMATIC POWER FACTOR CORRECTION PANELS Features

- Voltage
- : 415V/440V/550V/690V
- Frequency : 50 Hz

Intelligent Power factor controller

- Switching device : Capacity Duty contactor
- Temperature : -5°C to ±45°C

Metal cabinet (Indoor/outdoor) power coated

- Income : MCCB/ACB
- Equipped with ventilation system

RTPFC





Features

- Voltage
- Frequency
- Intelligent Power factor correction
- Switching device : Thyristor (SCR)
- Temperature : -5°C to + 45°C
- Incomer MCCB/ACB
- Equipped with ventilation system

Application

• Unbalance welding load

Passive Harmonic Filter

Features

- Passive Harmonic Filters are used to control the flow of harmonic currents.
- They are built using a series of capacitors (capacitance) and reactors (inductance) forming an LC circuit in parallel with the power source.
- The passive harmonic filter absorbs the harmonic current to which it is tuned.



Energy mangement System

Power quality is the set of limits of electrical properties that allows electrical systems to function in their intended manner without significant loss of performance or life.

The subject of harmonics is a sub-set of Power Quality (PQ). Other power quality considerations include voltage variations (sags, swells, interruptions, transients (surges, lightning, switching events), and grounding.

The power quality analysis provides you with an opportunity to be aware of the quality of the Electrical Power being utilized by your facility.



Power Quality Includes

- RMS Voltages, Transient Voltages, Wave shape, Voltage Imbalance, flickers.
- Electrical System Design Errors.
- Electrical system Construction Errors.
- Grounding Errors.
- Harmonics.
- Load Interactions





Benefits of Electrical Thermography

Thermographic testing, also known as infrared inspection, is a contact-free predictive maintenance method used to detect connections defects, system overloads, deteriorated insulation, and other potential problems in electrical components. Infrared thermography is used to find areas of excess heat so that problems can be corrected before they lead to excess power usage, increased maintenance costs, service interruptions, catastrophic equipment failure, and/or equipment damage.





Reduced Risk Factors



Lifetime of equipment extended



Safer Work Environment



It is concontact type Technique. **Save Money**



Normal Business Hours maintained

Active Harmonic Filter

Typical Applications

- AHFs have many low and high voltage potential applications where their use offers many benefits.
- Equipment using variable speed drives (VSD).
- Arcing devices: Electric arc furnaces (EAF), discharge-type lighting (fluorescent, sodium vapor and mercury vapor) and arc welders.
- Switch mode power supplies: Computers, TVs, battery chargers, LED lighting, PLCs, etc.
- UPS systems.
- Solar inverters and wind turbine generators.
- Modulated phase controllers, cycloconverters and thyristor-controlled AC voltage regulators.



Comparison With Conventional Solutions

	Passive Harmonic Filters	Active Harmonic Filters
Response time	 Contactor-based solutions take at least 30s to 40s to mitigate the problem and thyristor-based solutions 20ms to 30ms 	 Real-time mitigation of power quality problems as the overall response time is less than 100μs
Output	 Depends on step sizes, cannot match load demand in real time Depends on grid voltage as capacitor units & reactors are used Steps inject extra capacitive reactive power in the system 	 Instantaneous, continuous, stepless and seamless Grid voltage fluctuation has no influence on the output No injection of extra capacitive reactive power
Harmonic filtering	 One filter needed for eliminating each single harmonic order Characteristics affected by network impedance and unbalance 	 2nd to the 50th order simultaneously (odd and even) Unaffected by network impedance or unbalance
Power factor correction	 Capacitor banks needed for inductive loads and reactor banks for capacitive loads. Problems in systems with mixed loads Not possible to guarantee unity power factor as they have steps, system will be having continuous over and undercompensation. 	 Corrects simultaneously from -1 to +1 power factor of lagging (inductive) and leading (capacitive) loads Guaranteed unity power factor at all times without any over or undercompensation (ctapless output)
Unbalance	Do not correct load unbalance	Can correct by selecting the amount of load balancing
Design & sizing	 Extensive harmonic studies needed to size the proper solution Usually oversized to better adjust to changing load demands Need to be designed taking into account system harmonics 	 Not required extensive studies as it is adjustable Mitigation capacity can be exactly what load demands Unaffected by harmonic distortion in the system
Resonance	 Custom-built for specific load and network conditions Parallel or series resonance can amplify currents in the system 	 Can adapt to load and network conditions & changes No risk of harmonic resonance with the network
Transients	Caused by the switching of capacitor units or shunt reactors	 Not created (no switching of passive components)
Overloading	Possible due to slow response and/or variation of loads	Not possible as current limited to max. RMS current
Footprint & installation	Medium to large footprint, especially if several harmonic orders Not simple installation, especially if loads upgraded frequently	Small footprint and simple installation as modules are compact in size. Existing switchgear can be used
Expansion	 Limited and depends on load conditions and network topology 	 Simple (and not dependant) by adding modules
Maintenance & lifetime	 Using components that need extensive maintenance like fuses, circuit breakers, contactors, reactors and capacitor units Switching, transients and resonance reduce lifetime 	 Simple maintenance and service life up to 15 years as there is no electro-mechanical switching and no risk of transients or resonance

Turnkey Industrial Projects

We specialize in turnkey electrical projects & undertake all type of electrical contracts in manufacturing & other industries, commercial complex, banks, IT parks, shopping mall, multiplex, education institute, hotels, etc.

Main Features of Our Services :

- Complete design, engineering and planning
- Procurement, project management
- Erection/Construction/Commissioni ng/Testing
- Electrical Liaising work
- HT-LT cables & Termination
- Transformer work

- Electrical panel system
- Earthling system
- Preparation & design, drawing work
- Industrial lighting system
- Other Industrial electrical work
- Total compressing & testing
- Maintenance work
- Handing over to Customer/Training



Industrial lightning

To remain strong in industry, you must scrutinise costs across every process. Lighting can account for up to 80% of a industry's energy bill, so it must be as efficient and cost-effective as possible. Longer-lasting and energy-efficient LED lighting can have an enormous impact on your bottom line, reducing operational costs through reduced downtime and lower energy consumption, keeping your employees safer on the work floor and improving productivity. Additionally, you can ensure that your building is IoT-enabled by using our connected luminaires in combination with Interact Industry allowing you to harness the power of smart technology.



Reduce costs

- Achieve lower total cost of ownership with long-lasting LED luminaires
- Reduce energy consumption costs
- Optimise lighting design with a diverse choice of flux and beam packages



Enhance health and safety

- Comply with national and international safety standards
- · Create a safe work environment by ensuring a well-lit work floor
- **Promote employee wellbeing** with high-quality LED lighting



Improve sustainability

- Lower carbon footprint by reducing energy consumption
- Minimise environmental impact with improved efficiency and less waste
- Adhere to national and international energy and environmental regulations





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