



We Make the Most Of Your Power



# SPECIALISED ENGINEERING SERVICES

[www.3phtechservices.com](http://www.3phtechservices.com)



## COMPANY PROFILE

TPTS is committed to be acknowledged as a solution provider for the widest range of services which includes electrical design, engineering services, commissioning and site services we also supply switchgear, control & automation systems of all leading brands with premium quality & support.

We continuously strive hard to achieve success with excellence and expertise in the electrical industry. Head-Quartered in Dubai, TPTS possesses a strong team of academically qualified and technically experienced engineering professionals .

### Specialised [Services](#) :

- ⦿ Power System Studies
- ⦿ Power Quality Analysis
- ⦿ Electrical Safety Audit
- ⦿ Electrical Distribution Audit
- ⦿ Energy Audit
- ⦿ Thermography
- ⦿ Industrial Automation
- ⦿ IIoT Solutions

### ***Engineering Services that We Provide . . . . .***

#### **01 Pre-Design Services**

- ⦿ Load Flow Analysis
- ⦿ Short Circuit Analysis
- ⦿ System Stability Studies
- ⦿ Optimal Power Flow Analysis

#### **02 Post-Design Services**

- ⦿ Protection Coordination
- ⦿ Transient Motor Starting Analysis
- ⦿ Harmonics Analysis
- ⦿ Arc Flash Analysis

#### **03 Pre-Commissioning Services**

- ⦿ Installation Supervision
- ⦿ Control Scheme Test
- ⦿ Protection Function Test
- ⦿ Circuit Breaker Analysis

#### **04 Post-Commissioning Services**

- ⦿ Certified Thermography
- ⦿ Field Harmonics
- ⦿ Electrical Safety Audit
- ⦿ Energy Audit

# SPECIALISED SERVICES

## POWER SYSTEM STUDY

Today's competitive electric power market puts a premium on reliability, efficiency and low cost. Our POWER Engineers provides essential analysis and planning services that help you meet those goals.

Facilities of all sizes from hospitals to corporate buildings to schools to industrial or commercial facilities, all rely on a steady, reliable, and well-maintained electrical power system.

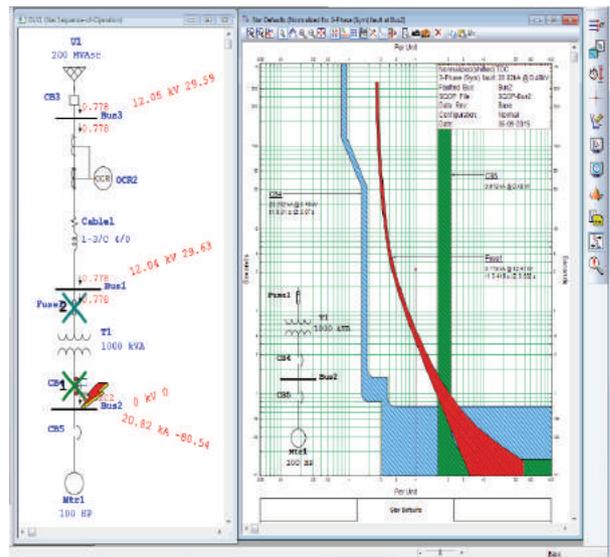
Even small electrical failures or faults can have devastating consequences including extensive and expensive downtime of company operations, damage of critical equipment or inventory in the event of a power outage as well as the expense of locating and repairing the damaged electrical equipment itself.

There are various points within an electrical power system where faults may occur. To increase your facility's reliability and protect your equipment, personnel, and business operations, you need to keep a well-maintained system.

Your standard electrical company may be able to perform the necessary maintenance follow-through, but it is important and optimal to have an electrical diagnostic study performed by a qualified specialist in order to instruct an electrical engineer on how to specifically maintain your system.

Power system studies consists of :

- Ⓞ Electrical Distribution Assessments
- Ⓞ Electrical Load Monitoring
- Ⓞ Short Circuit Analysis
- Ⓞ Time-Current Coordination
- Ⓞ Power Factor Correction
- Ⓞ Motor Starting Analysis
- Ⓞ Motor Torque/Acceleration Analysis
- Ⓞ Harmonic Analysis
- Ⓞ Transient Analysis
- Ⓞ Load Flow
- Ⓞ Grounding & Earthing Analysis
- Ⓞ Arc Flash Analysis
- Ⓞ Lightning Protection



## SERVICES WE PROVIDE



### POWER QUALITY ANALYSIS

Power quality is a measure of how well a system supports reliable operation of its loads. A power disturbance or event can involve voltage, current, harmonics, surges transients, or frequency fluctuations. Power disturbances can originate in consumer power systems, consumer loads, or at the utility.

In many cases the addition of such equipment to an existing building's electrical system can introduce these problems at the consumer level, affecting existing equipment. Poor building power factor due to large inductive loads such as motors, HVAC, and old lighting ballasts can result in significant increased energy costs. Electric utilities may charge penalties on poor power factor or high peak demands.

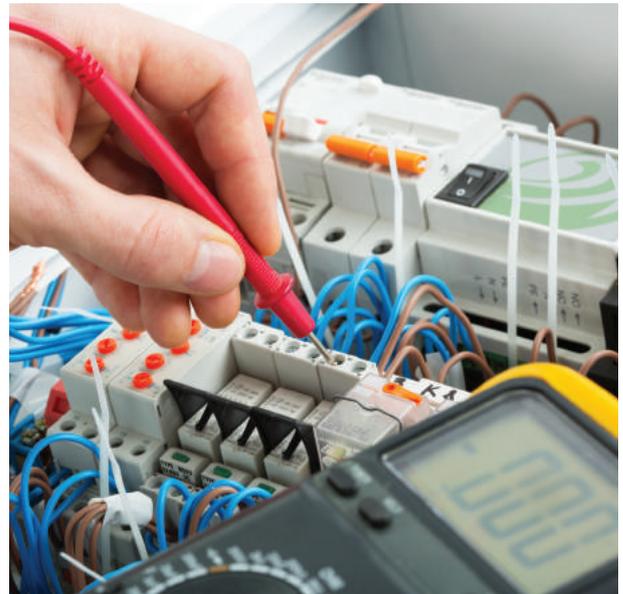


### ELECTRICAL SAFETY AUDIT

Electrical Safety Audit is examining the safety of electrical installations of any industrial, commercial or domestic. Electrical Safety Audit is performed by enquiry, inspection, testing and verification.

Electrical Safety Audits are conducted by our experienced qualified professionals who assist clients in reducing risk and help to ensure compliance with applicable Safety Standards and Regulations.

Electrical Safety Audits helps in identifying Electrical hazards to minimize the risk of accidents like fire due to short-circuiting. Areas of risk or vulnerability in electrical systems and installations can be identified and rectified.





## ELECTRICAL DISTRIBUTION AUDIT

The objective of electrical distribution audit is to determine the effectiveness of your facilities' safety and loss prevention measures.

It is an important tool for identifying deterioration of standards, areas of risks or vulnerability in a facility for determining necessary action to minimize them ensuring effective and meaningful safety efforts.

A comprehensive electrical safety audit provides a thorough review of the utility installations, identifies potential electrical risks, flaws in design system, maintenance system, etc. We undertake Power System Safety Audit & protocols to design, plan and execute the electrical safety audit program.



## ENERGY AUDIT

According to the definition in the ISO 50002 standard, an energy audit is a systematic analysis of energy use and energy consumption within a defined energy audit scope, in order to identify, quantify and report on the opportunities for improved energy performance.

Therefore, an energy audit is an energy assessment. This evaluation analyses energy flows in a building, process or system to reduce the amount of energy input into the system whilst maintaining or improving human comfort, health and safety.

Types of energy audit:

- ① Walk-Through Audit
- ② Energy diagnosis
- ③ Investment Grade Audit



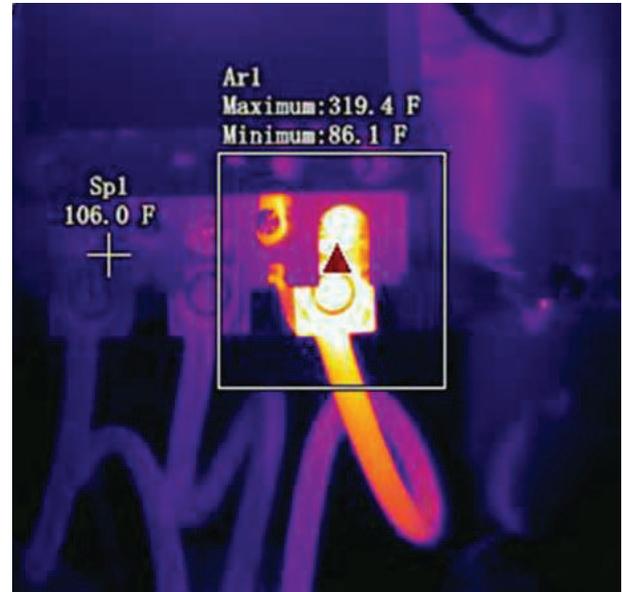
# SERVICES WE PROVIDE



## THERMOGRAPHY

Thermography is an objective image measuring method with which surface temperature can be determined without any contact. A thermal imaging camera records the intensity of radiation in the infrared part of the electromagnetic spectrum and converts it to an image.

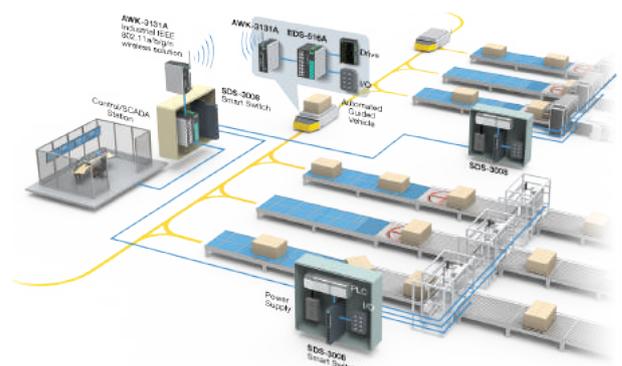
The infrared scanner used in thermography receives the emissions which are not visible to the human eye, and converts it to visible thermal images. Human eyes are detectors designed to detect electromagnetic radiations in the visible light spectrum. All other spectrum of radiations are invisible to human eye.



## INDUSTRIAL AUTOMATION

Today's highly increasing competitiveness over the industry demands high quality and most consistent products with a competitive price. To address this challenge number of industries considering various new product designs and integrated manufacturing techniques in parallel with the use of automated devices.

One of the remarkable and influential moves for getting the solutions of above mentioned challenge is the industrial automation. Industrial automation helps to increase the product quality, reliability and production rate while reducing production and design cost by adopting new, innovative and integrated technologies and services.

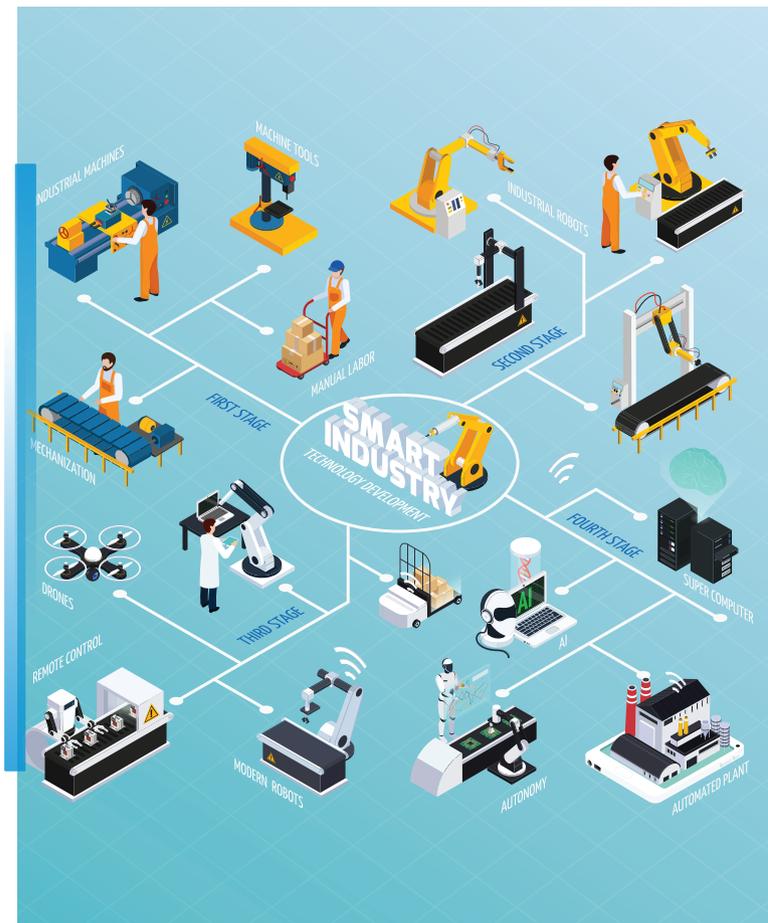




## IIoT SOLUTIONS

Humans are striving hard to bring more comfort to their lives. There has been constant research and advancements in providing a greater level of ease to our lifestyle. In contemporary times, the innovation has reached to a level where machines have started replacing humans. Internet of Things (IIoT) has a major role in making this possible. All sectors from home to industries, automation through IIoT devices are making remarkable changes in daily processes.

Undoubtedly, every smart entrepreneur has the vision to automate the processes of their office to match with the latest technological innovations. If you consider the other side of the coin then it is not easy to automate industrial processes



## APPLICATIONS OF IIoT IN INDUSTRIAL AUTOMATION

**01** HVAC Systems

**02** Process Plant Automation

**03** Special Purpose Machine

**04** Water Treatment Plants

**05** Condition Based Maintenance Systems

**06** Energy Management System

**07** Building Management System

**08** Lighting Control System



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## Get in touch

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