Practical

POWER SYSTEM HARMONICS, EARTHING & POWER QUALITY
- Problems and Solutions for Engineers & Technicians

YOU WILL LEARN HOW TO:

- Develop a sound working knowledge of earthing and harmonics
- Do a step-by-step site analysis on power quality and harmonics
- Gain practical knowledge on surge and transient protection
- Design electrical and electronic systems correctly by applying knowledge of harmonics and earthing principles
- Distinguish between harmonics and transients and how to minimise them
- Troubleshoot electrical and electronic systems for power quality and harmonic problems
- Isolate and rectify power quality and harmonic problems
- Network with your peers on solving these problems

WHO SHOULD ATTEND:

- Instrumentation and Control Engineers
- Consulting Engineers
- Electrical Engineers
- Project Engineers
- Maintenance Engineers
- Power System Protection and Control Engineers
- Building Service Designers
- Data Systems Planners and Managers
- Electrical and Instrumentation Technicians
The workshop starts with the definition of power quality, the various indicators of power quality and the problems that are commonly encountered. Each of these problems are discussed in detail, the reasons analysed and corrective measures to resolve these problems are discussed. The problem of surges is discussed in detail as supply surges can cause extensive damage to power and sensitive equipment and the principles of surge protection discussed in detail.

Another topic that is explained in detail is that of harmonics as the problem is becoming increasingly important in today’s systems with substantial non-linear loading. Discussions start from the first principles and the solutions discussed in an easy to understand manner. The importance of proper system planning in mitigating quality problems and the need for site studies in detecting and addressing power quality problems is also discussed in detail with example.

The material is covered by means of an interactive lecturing style, with plenty of practical examples and realistic case studies derived from real work performed in this area.

**PRE-REQUISITES**

Some working knowledge of basic electrical engineering principles is required, although there will be a basic revision of the fundamentals. Real-life experience with earthing and harmonics problems will enable the workshop to be placed in context. If you bring along your power quality and harmonic problems to the workshop it will be beneficial to solve them in a group setting.

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**ON-SITE TRAINING**

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✔ Customise the training to YOUR workplace.

✔ Have the training delivered when and where you need it.

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