



# BASIC ELECTRICITY AND TROUBLESHOOTING

**INTRODUCTION**

This programme is specially designed for non-electrical staffs who work in environment that uses electrical power for production and manufacturing. Participants will be equipped with knowledge of power supply in a factory, identifying circuit breakers, relays, contractors, motors as well as practice on electrical safety.

**CONTENTS****General Requirement for Electrical Installation**

- Requirement 37 – Space for Main Switchboard and Equipment
- Requirement 38 – Notice
- Requirement 39 – Instruction Treatment for Electrical Shock
- Requirement 40 – Fire Fighting Equipment

**Basic Electricity**

- Generating of Electricity
- Basic Electrical Circuit
- Components of Electrical Circuit

**Electrical Supply System**

- Electrical Supply System in the Industry

**Circuit Breaker and Troubleshooting**

- Types of Circuit Breaker
- Use and Application
- Troubleshooting

**Relays, Contractors and Troubleshooting**

- Types of Relays
- Use and Application
- Troubleshooting

**Solenoid and Troubleshooting**

- Types of Solenoid
- Use and Application
- Troubleshooting

**Electrical Motors and Troubleshooting**

- Alternating Current Motors / Single and Three-phase AC Motor
- Motor Control
- Troubleshooting

**Basic Electrical Safety**

- Electrical Safety Working Procedures

**OBJECTIVES**

At the end of the programme, participants will understand:

- Basic electricity;
- Power supply;
- Circuit breakers, use and applications;
- Relays and contractors, use and applications;
- Motors, use and applications; and
- Troubleshooting.

**SBL Scheme  
100%  
Reimbursement**

**OCTOBER 6 – 7, 2014****(Monday-Tuesday)****FMM Eastern Branch Office****FACILITATOR**

**Tuan Haji Rozali Bin Ayed** is a training consultant with over 40 years of working experience in the electrical and mechanical engineering services. He began his career as an Electrical Apprentice and Chargeman in Malayan Tin Dredging Limited. Later on, he worked with Gula Perak Berhad (as Senior Chargeman), Jabatan Kerja Raya Malaysia (as Senior Chargeman, Senior Technician, Foremen and Assistant Engineer), Yakini-aga (M) Sdn Bhd (as Project Manager), Isometric Innovations Sdn Bhd (as Head of Electrical Department and Project Director), Powercool M & E Sdn Bhd (as Technical Manager) and Karo Engineering Services (as a Managing Partner).

With his vast experience in Electrical and Mechanical Engineering services, he was invited to be a Consultant / Lecturer / Trainer / Facilitator for several institutions and agencies such as IKRAM Latihan Sdn Bhd, FMM Institute, Universiti Sains Islam Malaysia, Putrajaya Corporations, Institut Teknologi Petroleum Petronas (INSTEP) and Community College of the Ministry of Higher Education Malaysia.

Tuan Haji Rozali is a Competent Personnel and has obtained Competency Certifications awarded by Energy Commission of Malaysia as Supervisor in Electrical Engineering, Chargeman B4 Restricted to 33KV Installation, Wireman PW4 with Three-Phase Testing and Endorsement. He is also appointed as External Verification Officer (EVO) for Skills Certificate of Malaysia (SKM) by Department of Skills Development Ministry of Human Resource Malaysia.

**WHO SHOULD ATTEND**

Electricians, electrical and maintenance supervisors, personnel from safety operations, maintenance and service staff that required an overview into the area of supervision, safety operation and maintenance of the electricity supply.

**This Course Can Be Conducted As  
An In-house/In-plant Course**

**THIS PROGRAMME IS OFFERED UNDER SMEs SKILLS  
UPGRADING PROGRAMME FOR ELIGIBLE SMEs**

**Enjoy 70% Skills Upgrading Grant for Training!**

**Fees: RM 285 (70% grant) / RM 950 (before grant) per participant**



# BASIC ELECTRICITY AND TROUBLESHOOTING

Date : **October 6 – 7, 2014**  
(Mon & Tue)  
Time : 8.45 am – 5.00pm  
Venue : FMM Eastern Branch,  
Sri Kuantan Square,  
Jln Teluk Sisek, Kuantan.  
Fees : **RM 750 (FMM Members) /**  
**RM 950 (others)/**  
**RM285 (Grant Eligible SMEs)**  
Medium of Instruction : English/ Malay  
**Closing Date : Sept 30, 2014**  
(Fees include course materials, lunch, re-  
freshments and Certificate of Attendance.)

### Registration:

Registration is on a first-come-first-served basis.

Completed registration form, that is faxed, mailed or e-mailed to FMM Institute, would be deemed as confirmed.

Upon sending the completed registration form, you are deemed to have read and accepted the terms and conditions.

### Payment:

All fees for public programmes include course materials, lunch, refreshments and Certificate of Attendance.

Training fees or cheques made in favour of the "FMM Institute" should be forwarded a week before the commencement of each programme.

### Cancellation:

Must be writing with reasons.

- 10 days before the programme – No payment charged.
- 5–9 days before the programme – 50% payment charged.
- < 5 days before the programme – Full payment charged.
- Participants who didn't turn up will be charged full payment.
- Replacement can be accepted at no additional cost.

### Disclaimer:

The FMM Institute reserves the right to change the facilitator, date and to cancel or reschedule the programme should unavoidable circumstances arise. All efforts will be taken to inform companies or participants of the changes.

## REGISTRATION FORM

Dear Sir / Madam,

Please register the following participant(s) for the above programme.  
(To be completed in BLOCK LETTER.)

1. Name: \_\_\_\_\_

Designation: \_\_\_\_\_

I/C No.: \_\_\_\_\_

2. Name: \_\_\_\_\_

Designation: \_\_\_\_\_

I/C No.: \_\_\_\_\_

(If space is insufficient, please attach a separate list.)

Submitted by:

Name : \_\_\_\_\_

Designation: \_\_\_\_\_

Company: \_\_\_\_\_

Address : \_\_\_\_\_

Tel No. : \_\_\_\_\_ Fax No. \_\_\_\_\_

E-mail : \_\_\_\_\_

PSMB Employer Code No: \_\_\_\_\_

FMM Membership No.: \_\_\_\_\_

Enclosed cheque / bank draft no. \_\_\_\_\_ for  
RM \_\_\_\_\_ being payment for \_\_\_\_\_ partici-  
pant(s) made in favour of the "FMM Institute".

Further Inquiries: En Khairul/Pn Hafizah (09-515 6858)

Fax: 09-515 6855

Email: khairul@fmm.org.my