

Klae

KLAE PLT
(201904000711)

KLAE PLT COMPANY PROFILE

Training Provider, Investment and Asset Management Arm
KL Automation Engineering Group of Companies



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sales@klae-plt.com (general)



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Company Overview

KLAЕ PLT serves as the **Training Provider, Investment and Asset Management Arm** of the KLAЕ Group of Companies, supporting the Group's strategic growth through human capital development, resource optimization, and long-term value creation.

Established to complement the core industries served by the group, KLAЕ PLT focuses on delivering professional training programmes, managing strategic investments, and overseeing asset utilization to enhance operational efficiency and sustainability across the organization.

On the training front, KLAЕ PLT provides industry-relevant courses and certification programmes designed to upskill technicians, engineers and professionals in line with current standards and regulatory requirements. Leveraging the Group's technical expertise, the training emphasizes practical application, safety, and competency—particularly in specialized areas such as industrial automation, energy systems, and hazardous environments.

Supported by two dedicated training centres such as the **IECEX CoPC Training Centre**: a specialized hub equipped with "Ex" certified equipment and testing tools specifically curated for the Certification of Personnel Competence (CoPC) scheme. KLAЕ PLT integrates knowledge, infrastructure, and strategic management to deliver value across multiple dimensions. **KLAЕ Training Centre**: our multi-purpose technical facility designed for corporate seminars, hands-on technical workshops, and competency assessments.

KLAЕ PLT is the proud founder and host of the **Surge Protection Community**. This initiative serves as a technical bridge for engineers and technicians to discuss:

- Lightning protection and earthing systems.
- Transient overvoltage protection for sensitive electronic equipment.
- Best practices in industrial electrical resilience.

In addition, KLAЕ PLT plays a key role in investment planning and asset management, ensuring that the Group's resources—including facilities, equipment, and training infrastructure—are effectively managed to maximize performance and long-term returns.

With a commitment to quality, reliability, and continuous improvement, KLAЕ PLT positions itself as a central pillar within the KLAЕ Group, driving capability development while strengthening the Group's overall business ecosystem.

Vision and Mission

VISION

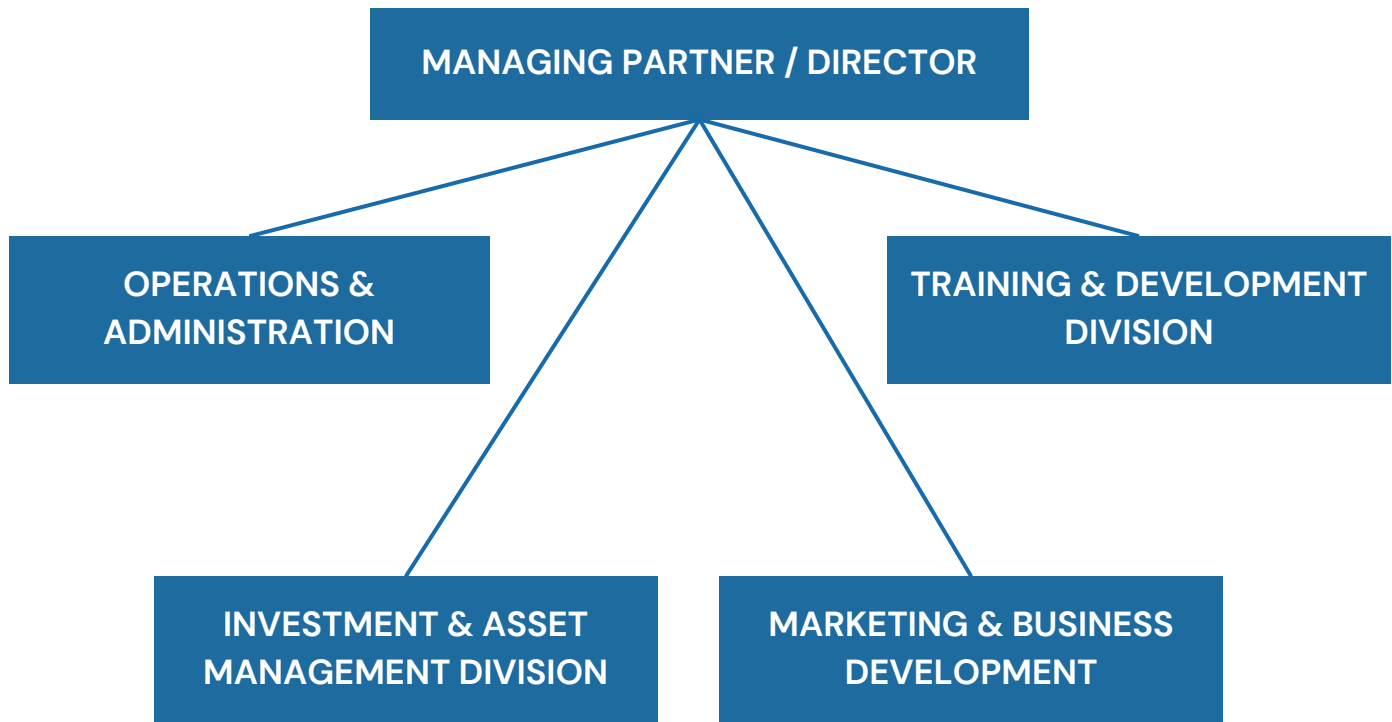
Globally accepted EX Competence Training provider
Investment and asset management arm for KLAЕ Group

MISSION

- To deliver high-quality, industry-driven training programs
- To develop competent and certified professionals
- To bridge the gap between theoretical knowledge and practical skills
- To support industries in achieving safety, compliance, and operational excellence
- To support investment and asset Management for KLAЕ Group



Organizational Structure



Founder & Director



TS. DR. KUAN TEIK HUA

Ph.D. (Eng.), MEng, B. Tech (Hons),
Dip. EE, Dip. Mktg, Evaluation Panel of TTAC
Principle Trainer /
Head of Company, KL Automation Group of Companies

Professional Qualitification:

Professional Technologist (PT18050181), IEM (94164),
BEM (T14044), PSMB Certified Trainer (TTT/18081),
Higher Education Teaching Permit
(PM/IPTS/2015/08/0927),
IECEx CoPC 001, 003, 004, 006, 007, 008

Academic:

Tutor / Lecturer – Wawasan Open University and Universiti Tunku Abdul Rahman
Supervisor – Master and Ph.D. program
International Journal Paper Reviewer: Advances in Science, Technology and Engineering
Systems Journal (ASTESJ)
Industry Research Advisor, International Collaborative Partner (ICP) of Universiti Tunku
Abdul Rahman Global_Research Network (UTAR GRN)

Ts. Dr. Kuan Teik Hua is a Professional Technologist and founder of the KLAЕ Group, with over 38 years of industry experience in explosion protection (Ex) technologies, intrinsic safety, and surge protection. Holding a Ph.D. in Engineering specializing in lightning and surge protection for hazardous areas, he has extensive regional exposure across Asia Pacific, the UK, and Germany. With a strong background in both industry and academia, he is a certified trainer (PSMB/HRDCorp) and actively serves as a tutor, lecturer, and supervisor at Wawasan Open University and Universiti Tunku Abdul Rahman. His expertise spans technical training, system design, and competency development, making him a key figure in delivering professional training programs, particularly in hazardous area safety and IECEx-related competencies.

Bussiness Development Executive / Trainers



ASSOC. PROF. TS. DR. CHEW KUEW WAI

Ph.D. (Physics), B.SC (Hons) (App. Physics)
Consultant / Trainer

Professional Qualitification:

CEng (IET, UK), Professional Technologist
(PT18050661),
MIPM (1244), SMIEEE (92180874), MIET (1100356465),
IECEX CoPC,
PSMB Certified Trainer (TTT/18832),
Higher Education Teaching Permit
(PM/IPTS/2018/10/70002)

Experience: Dr. Chew served as a lecturer at Multimedia University (2003–2008) and joined UTAR as an Assistant Professor (2008–2012), before being promoted to Associate Professor in 2013, a role he holds to date. With over 15 years of research experience in advanced materials, hybrid energy storage, and electric vehicle-related studies, he has secured more than 10 internal and 4 external grants, and supervised over 20 postgraduate students. His interests include hybrid energy storage, EV distance estimation, and power electronics, with current focus on lightning and surge protection for hazardous areas. He is a certified Huawei data center trainer, has completed over 100 consultancy projects across 20 countries, and is a Senior Member of IEEE and Chartered Engineer (CEng) with IET.

Bussiness Development Executive / Trainers



ASSOC. PROF. IR. DR. WONG JIANHUI

Ph.D. (Eng.), MSc. Eng., BEng. (Hons),
Consultant / Trainer

Professional Qualitification:

Professional Engineer (28577), MBEM (P119741),
PSMB Accredited Trainer (TTT/18843),
Higher Education Teaching Permit
(PM/IPTS/03/2015/0562)

Experience: Assoc. Prof. Ir. Dr. Wong is trained by Eaton MTL (UK) in explosion-proof and surge protection techniques, and is actively involved in “Ex” installation, equipment selection, and conducting “Ex” protection courses. She is currently an Associate Professor at Universiti Tunku Abdul Rahman (UTAR), an HRDF-accredited trainer, a member of the Young Scientists Network (Academy of Sciences Malaysia), and an Associate Fellow of the ASEAN Academy of Engineering and Technology (AAET). She has extensive experience in training, teaching, and research as a principal investigator and co-researcher. She has edited a book, and published 3 book chapters, 29 high-impact journal papers, and 21 international conference papers. She is a key personnel in the patented UTAR microgrid project, and her research has received the MTSF STA Award, PECIPTA Gold Award, and UTAR Innovation Excellence Award.

Bussiness Development Executive / Trainers



ERNA MARLINA RAHIMI

Business Development Executive

Bachelor of Office Management Systems (Hons)
Certified Accounting Technician
Diploma in Business Studies

Experienced in sales, customer service, finance, accounting, and business operations, with a strong ability to build customer relationships and support business growth. Skilled in product consultation, sales support, financial reporting, account reconciliation, and administrative coordination.



ZAID BIN SHAHRUDIN

Senior Field Engineer | Co-Trainer

Bachelor of Electrical Engineering (Electronics)

Zaid Bin Shahrudin has approximately 14 years of engineering experience, including five years in utilities and nine years in the oil and gas industry. His experience covers industrial instrumentation, process automation, electrical systems, hazardous-area equipment, project coordination, installation, testing, commissioning, troubleshooting, and technical training.

His key technical areas include IECEx and Ex equipment, intrinsic safety, surge protection, earthing and grounding, HART, Foundation Fieldbus, Modbus temperature multiplexing, battery monitoring, and industrial automation. At KLAЕ PLT, he supports the development and delivery of practical technical training for engineers and technicians, with a strong focus on safety, competency, and industrial applications.

Accreditations & Recognitions

KLAЕ PLT is a recognized center of excellence, ensuring that our training programs translate into professional advancement for our participants. We provide a bridge for registered professionals to maintain their standing through certified competency development.

HRD CORP REGISTERED TRAINING PROVIDER



All courses conducted by KLAЕ PLT are **HRD Corp Claimable**. Employers registered with HRD Corp can utilize their levy to upskill their workforce through our programs (SBL-Khas Scheme), ensuring a cost-effective path.



ACADEMIC & PROFESSIONAL RECOGNITION

KLAE PLT is committed to advancing industry standards through rigorous research and knowledge sharing. Our technical team has contributed **internationally published technical papers** to the global engineering community.

1

INTRINSIC SAFETY MADE EASY – Technical Paper Published by ICA 2006

Title: INTRINSIC SAFETY MADE EASY

By:
TH Kuan
KL Automation Engineering Sdn. Bhd.
ICA 2006
Date: 19.02.2006

2

Practical approach on surge protection device for Ex application

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Analysis of Lightning and Surge Protection for Float Ground System

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ACADEMIC & PROFESSIONAL RECOGNITION

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ASTESJ
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Surge Protection Device for Ex Application

Teik Hua Kuan¹, Kuew Wai Chew, Kein Huat Chua

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ABSTRACT

A modern process plant is controlled, operated and safeguarded by the sophisticated distributed control system or a programmable logic controller and an emergency shutdown system. This process plant's operation could be seriously affected by lightning, electrical switching, and power outage. Lightning propagation can travel kilometers away, which has the risk of disturbing the control system's operation. The process plant's control system could damage when it is subjected to surges induced by lightning, power outage, or heavy load switching. To protect equipment damage from these surges surge protection device is required. A number of the process plant uses flammable material for its production or during the manufacturing processes, explosive gas or vapor is released created an explosive atmosphere known as hazardous (Ex) area. Surge protection device mounted in the Ex area or used in the Ex control loop needs to be carefully selected to protect the equipment and at the same time, it does not become a source of ignition. This paper provides practical consideration and comprehensive detail in revealing the science and engineering behind Ex application on surge protection devices. The technical presentation is limited to equipment protection; structural protection against lightning will not be discussed here.

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Ex area
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PROCESS SAFETY
PROGRESS

ORIGINAL ARTICLE

Verification of intrinsic safety on instrumentation loop

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Abstract

Intrinsic safety is one of the explosion protection techniques implemented in an industry where a flammable substance is present. It is a technique that reduces the electrical energy level at the hazardous area below the ignition curve so that it is not sufficient to initiate an explosion. In addition to limiting the energy to the field, the energy stored in the circuit and thermal ignition due to hot surfaces in hazardous areas must also be considered. Intrinsically safe is the preferred explosion protection method for instrumentation and control signals as it allows live maintenance, the use of an uncertified simple apparatus, and is applicable to all Zones. All intrinsically safe circuits must carry out a safety assessment and verify their compliance with intrinsic safety before implementation to avoid explosion. The verification process could be complex for mixed circuits and non-simple intrinsically safe systems; moreover, there has been much confusion for many years until the 4th Edition of the installation standard, IEC 60079-14, provided a clearer picture. This paper carries out an intrinsic safety verification assessment on a mixed circuit involving surge protection devices according to IEC and NEC standards. It also highlights the common mistake made by system designers when verifying the safety parameters.

KEYWORDS
entity parameter, intrinsic safety, safety assessment, safety parameter, safety verification, surge protection device

ACADEMIC & PROFESSIONAL RECOGNITION

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Behavioral studies of surge protection components

Teik Hua Kuan, Kuew Wai Chew, Kein Huat Chua
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Article Info

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Keywords:

Gas discharge tube
Lightning protection
Metal oxide varistor
Surge avalanche diode
Surge protection component
Thyristor surge protection

ABSTRACT

In our daily life, almost all the items we used, being a computer, television, lift or vehicle we drive consist of some kind of electrical or electronics component inside. The operation of these devices could be severely affected by lightning activity or electrical switching events, as there are more than 2000 thunderstorms in progress at any time resulting in 100 lightning flashes to ground per second. In practice, any device using electricity will subject to surge damages induced from the lightning or switching of heavy load. Surge protection device (SPD) is added at the power distribution panel and critical process loop to prevent damage subsequently cause plant shutdown. There are many questions raised on the SPD. How can this small device protect the equipment from large energy release by the lightning? What is inside the device? How does it work? This paper provides comprehensive detail in revealing the science and engineering behind the SPD, its individual component characteristic and how does it work. The technical information presented is limited to surge protection on equipment; surge protection for building structure will not be discussed here.

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Intellectual Pustaka
Media Utama



Institute of Advanced Engineering and Science



CERTIFICATE

No.: 22127/IJPEDS/A/XII/2022

International Journal of Power Electronics and Drive Systems

is hereby awarding this certificate to

Teik Hua Kuan, Kuew Wai Chew, Kein Huat Chua

as Authors for paper entitled:

A novel overvoltage protection scheme for power electronics switching under differential surge conditions
in Vol. 13, No. 3, September 2022



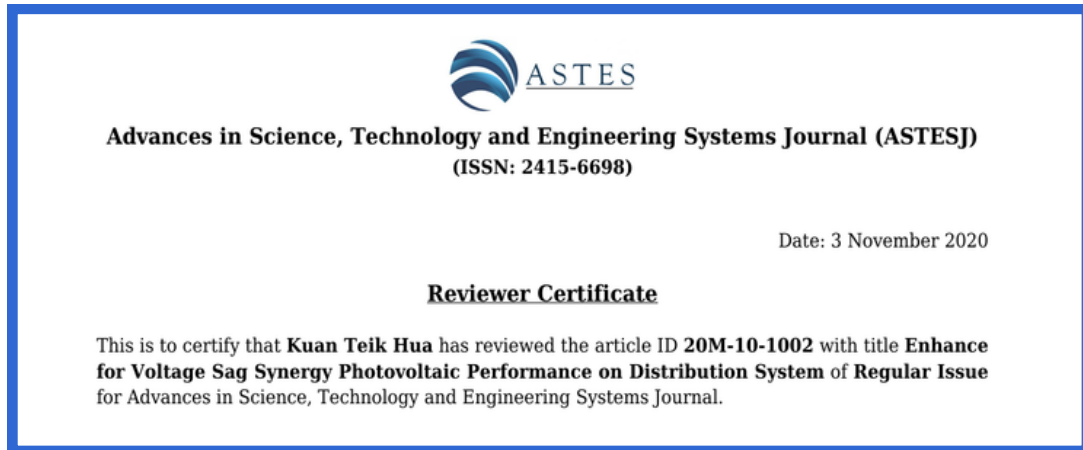
ISSN 2088-8694
<https://ijpeds.iaescore.com>

Yogyakarta, 05 August 2022

Tole Sutikno
Managing Director, Journals

ACADEMIC & PROFESSIONAL RECOGNITION

- KLAЕ PLT provides expert consultancy to the international scientific community. Our leadership serves as an **International Journal Reviewer** for the **Advances in Science, Technology and Engineering Systems Journal (ASTESJ)**.



International Academic Recognition

- IEEE ICECIE 2019 (International Conference on Electrical, Control and Instrumentation Engineering):
 - Dr. Kuan was awarded a Certificate of Participation and Presentation for contributing high-level research at this prestigious IEEE-sponsored conference. This certifies our mastery in the integration of electrical systems and control instrumentation



ACADEMIC & PROFESSIONAL RECOGNITION

- Dr. Kuan provides the strategic and technical direction for KLAE PLT's training modules. His expertise is validated by a unique combination of academic research and hands-on international certification.

Certified IECEx Personnel Competence (CoPC)

- Unit Ex 001 – Applied Basic Principles of Protection
- Unit Ex 003 – Installation of Ex-Protected Equipment
- Unit Ex 004 – Maintenance of Equipment in Explosive Atmospheres



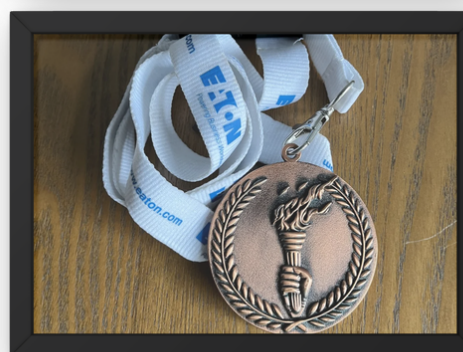

ASSESSMENT EVALUATION REPORT

Applicant Name	KUAN TEIK HUA
Applicant Employer Include Address with post code	KL AUTOMATION ENGINEERING SDN BHD
Related PCAR's	N/A
Related IECEx Certificates	N/A
Scope of Report	Initial / Supplementary / Reassessment
IECEx relevant standards	Installation IEC 60079-14 Inspection IEC 60079-17 Area Classification IEC 60079-10 Repair IEC 60079-19
Job Number	CTE0020240527-001
Issue Date	27/05/2024
Due Recertification Date	N/A
Certification Authority	Owen Strath Certification Manager
Issuing ExCB	CTE Australia Unit 1 / 44 Milsom Street Coorparoo, Qld 4151 Australia
RESULT	IECEx Unit Ex 001: PASS / FAILED IECEx Unit Ex 003: PASS / FAILED
RESULT	IECEx Unit Ex 004: PASS / FAILED

Corporate Milestones

Beyond the classroom, KLAЕ PLT is an active participant in the global engineering ecosystem. We pride ourselves on our record of excellence and our commitment to industry engagement.

AWARDS



Core Training Programs

KLAЕ PLT provides specialized competency tracks designed to meet international standards and local professional requirements.

IECEx COPC (CERTIFICATION OF PERSONNEL COMPETENCE)

This program is an internationally recognized benchmark for personnel working in hazardous areas. Our training aligns with the **IEC 60079** series to prepare candidates for assessment across all major units of competence:

The IECEx Scheme for Certification of Personnel Competence (CoPC) provides an independent, international evaluation of the knowledge and skills required for individuals working in explosive atmospheres. Whether they are internal employees of process companies or external service providers, this certification ensures a standardized level of safety and technical proficiency.

Unit	Description
Ex 000	Basic knowledge and awareness to enter a site that includes a classified hazardous area.
Ex 001	Application of basic principles of protection in explosive atmospheres.
Ex 002	Performance of classification of hazardous areas.
Ex 003	Installation of explosion-protected equipment and wiring systems.
Ex 004	Maintenance of equipment in explosive atmospheres.
Ex 005	Overhaul and repair of explosion-protected equipment.
Ex 006	Testing of electrical installations in or associated with explosive atmospheres.
Ex 007	Performance of visual and close inspection of electrical installations.
Ex 008	Performance of detailed inspection of electrical installations.
Ex 009	Design of electrical installations in or associated with explosive atmospheres.
Ex 010	Performance of audit inspection of electrical installations.
Ex 011	Basic knowledge of the safety of hydrogen systems.

Core Training Programs

SOLAR PANEL TRAINING: INTERMEDIATE PVSYST DESIGN

This is a high-level technical module focused on mastering PVsyst, the industry-standard software for the study, sizing, and data analysis of complete PV systems. While basic courses focus on simple rooftop layouts, KLAЕ PLT's Design course focuses on the "real-world" complexities of utility-scale and industrial solar engineering.

- **Target Audience:** Designers with basic PVsyst experience and a fundamental understanding of grid-connected PV systems.
- **Course Objectives:** To elevate design accuracy and optimize energy yield for complex environments.

While KLAЕ PLT is a premier center for IECEx and Solar Design, we offer a diverse range of technical programs designed to meet the evolving needs of the modern industrial landscape. Our additional training offerings focus on safety, efficiency, and advanced engineering practices.



Why Choose KLAЕ PLT

1. **Industry-Experienced Trainers** with real field exposure.
2. **International Standard Training** aligned with IEC and IECEx requirements
3. **Hands-On Practical Learning Approach**
4. **Strong Industry Network** across multiple sectors
5. **Proven Track Record** in competency development
6. **10+ Years** of combined engineering field experience.



Activities

At KLAE PLT, our technical precision is powered by a culture of appreciation and unity. We believe that a cohesive team is the foundation of high-quality service delivery. Our group tagline: "One Heart, One Team, One Dream" philosophy is reflected in our regular corporate social activities:



Facilities



Training Room



Meeting Room



Webinar Room



Discussion Room



Cafeteria



Demo Room



Staging Area



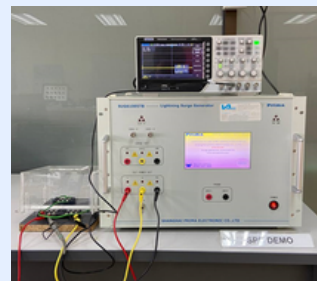
Inventory Room



Games Available



Test Equipment



Surge Generator



Prayer Room



Testing & Commissioning



Product Demo Sets



Server Room



Network Switch



Reach Us Out

TRAINING PROVIDER, INVESTMENT AND ASSET MANAGEMENT ARM,
KL AUTOMATION ENGINEERING GROUP OF COMPANIES



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47160 PUCHONG, SELANGOR, MALAYSIA.



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