

THE PROFILE

PAC
Power & Automation Control

POWER AND AUTOMATION CONTROL

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ABOUT PAC

Power & Automation Control is a company dedicated to bringing power to the commercial, industrial and domestic sectors since 1997. PAC combines extensive technical experience and the latest in electrical technology to provide utmost client satisfaction with the highest standards of comfort, health and safety.

The company is a one-stop solution provider for electrical needs of any caliber across a wide range of fields, from small scale restorations to off-plan large scale projects such as retail, parks, hotels, medical centers, corporate headquarters and industrial buildings. PAC integrates an A to Z process into every scheme that addresses design, price estimation, execution, commissioning, delivery and after sales support.

The client is the foundation of the company's work ethic. PAC has established a reputable position in the industry grounded in a continuous strive to top quality performance and, primarily, responsive customer relations.

With a team of engineers, project managers, technical professionals and estimators, PAC is committed to immediate, detailed and calculated execution of any operation it assumes.

The company's leverage lies in years of expensive experience as it does investing in development prospects. The team undergoes systematic training and seminars to remain up-to-date with the latest technologies along with local and international industry trends and practices.

Today, PAC serves as the electrical partner on copious projects in the MENA and Gulf regions from its headquarters and service centers in Beirut, Lebanon and Doha, Qatar.

1997 - OPEN -
- SINCE -

MISSION

PAC continues to build on years of industry experience and to adapt state-of-the-art comfort, health and safety benchmarks. It is a company driven by efficacy and virtue at the level of proximate tasks and foreseeable grand schemes. It challenges the limitations of the present and strives to achieve a more reliable, efficient and sustainable future. Furthermore, PAC has entered a partnership with ABB for low voltage systems since 1997, in addition to a partnership with ABB power protection SA for UPS systems.

CERTIFICATES & PARTNERSHIPS

- ISO 9001:2015
- ABB Authorized Panel Builder
- System pro E Power
- Main Distribution Boards up to 6300A
- ABB UPS Authorized Partner
- ABB Authorized Value Provider for Industrial Automation

Authorized
value
provider



QUALITY CONTROL

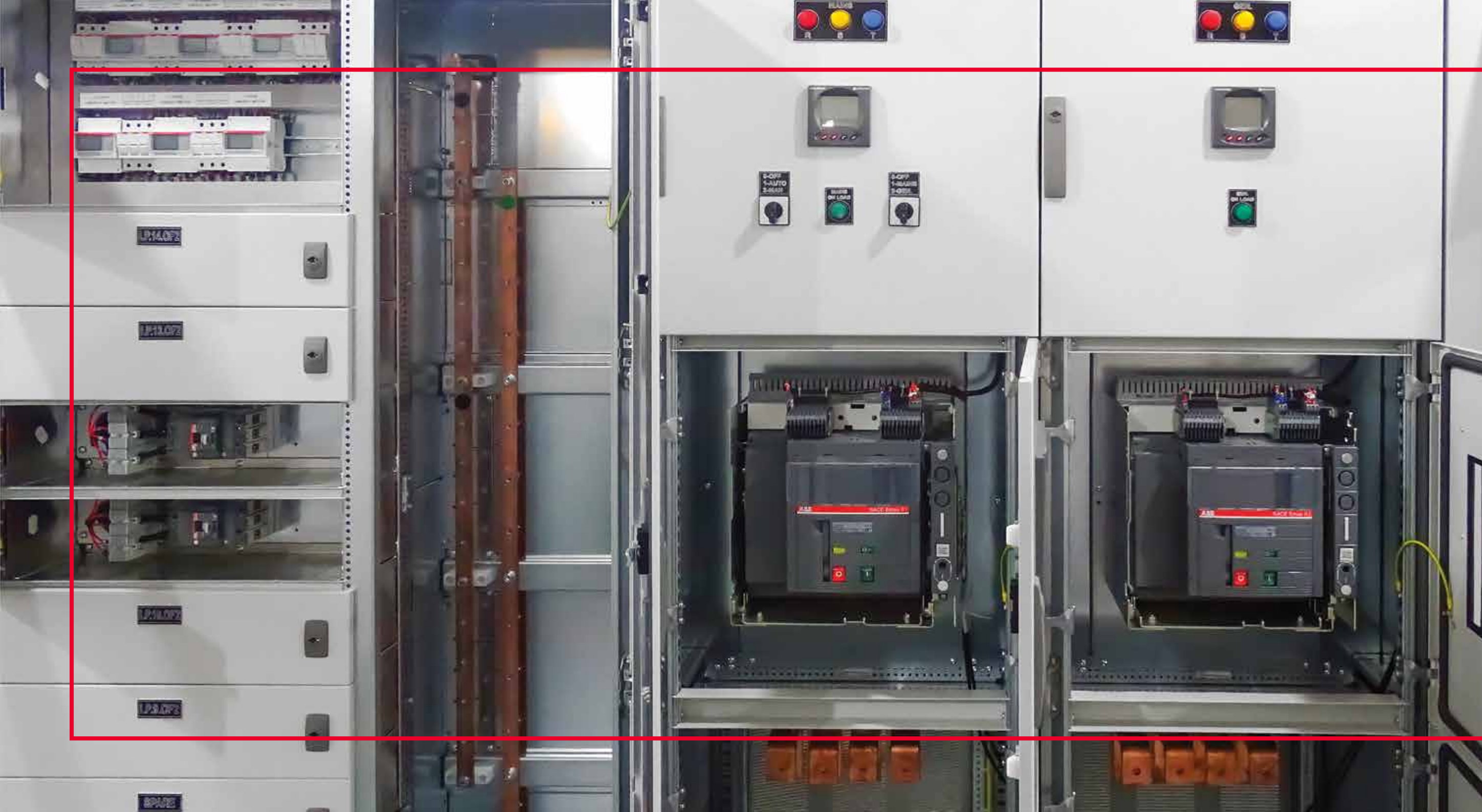
PAC abides by international standards and policies in all its operations. Its fully equipped panel board assembly workshop has been approved by ABB since 1997 and is authorized for design and assembly of low voltage switchboards. PAC has established and applied a quality management system according to DIN EN ISO9001:2015 for design and manufacturing of low voltage switchgear cabinet, industrial control, UPS and home automation systems. The panel board assembly workshop undergoes routine machinery tests to insure the highest standards of function and safety.

QUALITY POLICY

We, at PAC, aim to provide a high quality sustainable product through the provision of effective and high standard products/services, in accordance with ISO 9001:2015 Standards. We ensure that quality is integrated at all stages of the company's activities which are properly and adequately conveyed to our personnel by using a continuous improvement approach.

Also, we ascertain that we continue to meet the expectations and needs of our customers, as well as, the requirements of the Quality Management Systems, defined in the manual, together with all associated processes and procedures.

This quality policy is well understood, implemented and maintained throughout the organization. It is reviewed during PAC's management reviews for continuing suitability. And as a Managing Director I am fully committed to ensuring the implementation and continual improvement of this quality management system by providing all needed resources.



PRODUCTS

Low Voltage Panel Boards

PAC designs and assembles panel boards and power distribution systems to allow optimal flexibility of circuit arrangement and secure a balanced electrical load on each phase. In-house quality control ensures that the current-transmitting parts are damage free and operate at the highest standards.



Main Distribution Board (MDB)

Main distribution boards are designed with a modular concept that allows multiple combinations and customized construction possibilities, suitable for every application.



2

Synchronization Panel

Synchronization panels are fabricated by PAC engineers using premium quality electrical components to ensure increased reliability, expandability, flexibility, serviceability, and cost effectiveness. They resolve the cost problems and single-source issues that allow users to procure the benefits of parallel power generation.

3

Automatic Transfer Switch (ATS)

Automatic transfer switches bridge the gap between loss of utility and standby power. With top standards of reliability, robustness, versatility and compactness, all ATS are tested to ensure transfer of power from the utility to the generator and back again.





4

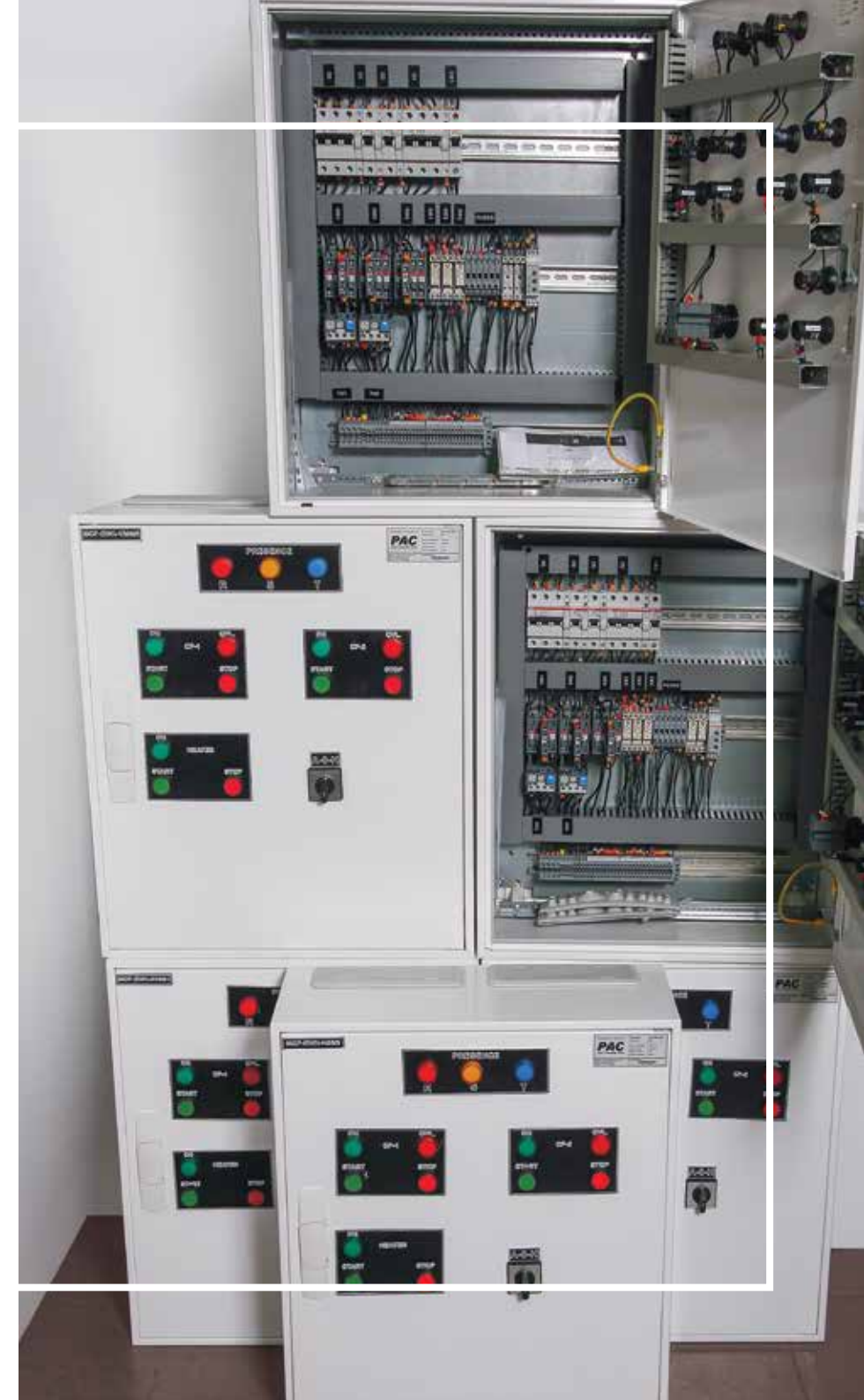
Motor Control Center (MCC)

Motor control centers provide high performance solutions for all your motor control needs. They are designed to meet any type of power need, providing clients with an advantage in a highly competitive environment.

5

Control Panel

Control panels including AC drives, soft starters among many more, are high quality products designed for all manufacturing and production environments.





6

Power Factor Correction

Power factor correction panels are developed to reduce system losses, release system capacity, provide voltage support, reduce utility bills and correct power factor.

7

Lighting Panels

Lighting control panels offer the convenience of scheduled control combined with the flexibility to suit any application. They can be specifically designed to maximize energy saving from the lighting system, meet building codes, or comply with green building and energy conservation guidelines.





ASSEMBLY & COPPER WORK

HIGHEST LEVEL OF QUALITY

Assembly and copper work solutions are developed with the highest levels of quality, safety, and reliability at PAC workshops. The top quality switchboards are made at PAC's assembly workshop with ABB panel builders that comply with international standards. The copper work guarantees supreme quality and finishing with a certificate of compliance, under PAC quality control standards. Copper bars go through a consistent and elaborate process of cutting, punching and bending before being used in the switchgear cabinet. PAC achieves quality products with the help of a dedicated team of professionals and engineers as well as top-notch certified machinery.

TURNKEY PROJECTS

PAC's Electrical Services and Systems Turnkey Solutions is capable of managing a construction project from start to finish, reconditioning or upgrading equipment or modernizing your power system, offering design, supply and installation services.

- Micro grid design, engineering and installed systems
- Alternative power generation design, engineering and grid integration
- Design and installation of energy management and monitoring systems
- Installation services including nationwide subcontracting capability of all trades with on-site supervision
- Short/long term maintenance contracts
- Supply of the complete range of products (UPS, LV & MV switchgear, cable management systems, LV & MV transformers, etc.)

DESIGN **SUPPLY**
IGN **PLY**



MEDIUM VOLTAGE SWITCHGEARS & TRANSFORMERS

PAC is a medium voltage switchgear solution provider with services that include supply, installation, testing and commissioning of MV switchgears. The switchgears are distinctive for their high functionality and high operational safety they provide. They are constantly tested in independent laboratories to ensure their reliability and durability.

An optimal solution in primary and secondary power distribution, they are broadly used in the energy sector, both on the power generation and distribution side, connection points and power points.

In addition, they are used as the secondary distribution for the MV / LV medium voltage transformer stations, and industrial or large individual consumers' networks.





**HIGH
FUNCTIONALITY
HIGH OPERATIONAL
SAFETY**



UNINTERRUPTIBLE POWER SUPPLY

PAC offers a unique line of UPSs, power conditioning, and power switching products that are designed to solve power quality issues for commercial and industrial applications.

From computer rooms to large data centers and complete industrial plant protection, PAC has the UPS or voltage conditioning technology for every need, including: Single-phase UPS, three-phase UPS, industrial UPS and medium voltage UPS.

PAC, also, provides a full range of modular UPSs power protection products as well as stand-alone solutions. In modular system, each UPS module contains all the hardware and software required for full UPS system operation. Modules share no common components where each module is a fully functional UPS.



INDUSTRIAL AUTOMATION & CONTROL

PAC has developed a wide range of automation and control solutions for industrial use that increase productivity and efficiency. It is a sustainable solution that deploys programmable logic controllers, stand-alone modules and control systems in industrial areas like manufacturing, quality control and material sorting. It is the next phase of industrialization which improves productivity, quality, accuracy and safety by eliminating the factor of human error at lower costs that offer a sustainable return on investment. PAC engineers adapt the following automation and control systems according to the need of the application of any scope of building and industrial plant.



1

Programmable Logic Controller (PLC) and SCADA Systems:

PLC offers individual solutions for each application using PLCs. This enables an operator at any time to have an overview of a profitable production and intervene manually if necessary. A wide range of communication protocols make these control panels the ideal solution for monitoring and remote control. While SCADA ensures effective operation of the most critical and costly distribution, transmission, and generation assets.

2

Distributed Control Systems (DCS):

Distributed Control Systems (DCS) delivers the highest levels of performance and flexibility combined with availability standards that meet the most demanding requirements. DCS solutions are configured to address the data throughput and system response times as defined by the system requirements. They include full graphic display and a user friendly interface with full traceability of all operator actions, comprehensive reporting and user-defined sequence operation. They provide direct plant monitoring or integrate with existing metering or controllers responsible for plant interface. Plus, scalable systems from a single operator console to full control room wall projection systems with multiple servers and multiple operator consoles. Complete redundancy can be provided through separate networks to redundant servers with RAID backup. secure remote access is available for management access, configuration and maintenance data.

3

Data Center Infrastructure Management (DCIM):

DCIM systems provide coordinated controls to securely automate and manage workflow and physical infrastructure, for continuously optimizing data center operations to the highest levels of performance. It offers industrial-grade tools that manage a flexible network of power, cooling and IT, delivering data services faster, in the most reliable, efficient and sustainable way possible. It provides the visibility, decision support and automation technologies on an open platform supporting secure, bi-directional communications with mechanical, electrical and IT systems. Data is routed through the system in real-time to application modules that enable the optimal management of cost, capacity and control.

4

Enterprise Connectivity Solution (ECS):

ECS is specifically used to connect real-time systems with transaction-based applications. It is developed to meet the demand for integrating plant data, shop-floor applications and business information systems in real time. It uses standard technologies and in particular supports OPC and ISA-95.

ECS enables building of a common model based workflow that spans business applications, plant automation and people, bridging the Vertical Integration Gap and increasing productivity. It, also, allows:

- **ERP Integration:** provides it to plant connectivity for maintenance management, production planning, automated recipe handling.
- **Plant Integration:** integrates plant floor data for condition-based maintenance, quality and performance data for OEE and consolidated production reports across plants.
- **Control System Integration:** connects all automation systems and most 3rd party controllers and devices via OPC.
- **Operator Workplace Integration:** connects people and automation in a coherent structure.
- **Tracking & Tracing Integration:** connects order and material data together for complete tracking and tracing (bar code/RFID).
- **E-documentation Integration:** provides documentation, drawings, BOM etc.

5

Manufacturing Execution System (MES):

MES provides standardized workflows to operators to ensure the highest possible production quality and regulatory compliance. It offers standard application library suites for common functions in the pharmaceutical, consumer packaged goods, and automotive industries.

It creates the ideal conditions for high-quality and efficient manufacturing, increased reliability, and full global product traceability. It is a strategic advantage that improves profitability, reduces waste, and ensures compliance with regulations while reducing costs.





HOME AUTOMATION SYSTEMS

KNX is the base technology for PAC home automation solutions which is accepted as the world's first open standard for the control of all types of intelligent buildings - industrial, commercial or residential. It allows all devices to communicate with one another via a single bus cable which is installed alongside the normal power lines. With the ABB i-bus® KNX system, the buildings are easier to manage and control, resulting in increased flexibility, security, economic efficiency and convenience as well as adapts to individual needs in working or living environments.

It ranges from lighting and shutter control to heating, ventilation, security, energy management, and many more.

PAC transforms the conventional home installation into a modern smart home-automated experience. Lights, curtains, HVAC, pools, security, audio video systems and more obey orders automatically and promptly through PAC's comprehensive programmable installation technology.

PAC provides state-of-the-art EIB/KNX systems with an advanced reliable system to control, regulate, measure, switch, and monitor all the electrical systems in residences, buildings or establishments.



RENEWABLE ENERGY

Renewable energy is an eco-conscious and cost effective solution at the front-line of PAC's services, providing design, products and installation services for residential, commercial and industrial applications. PAC ensures low-risk, low-cost solutions as new projects, technologies, and concepts are consistently tested.

PAC provides access to specialists across disciplines as diverse as advanced computational modeling, offshore structures, and plant decommissioning. It customizes solutions according to the needs of every client. Throughout the process, PAC considers asset lifecycle, calculates and manages risks, adheres to international safety standards and provides contracting flexibility.

Photovoltaic (PV) :

PV produces electricity directly with a technology that is robust, simple, modular, and consistently decreasing in price as production capacity around the world increases. Technologies include flat-plate silicon modules, thin film modules and Concentrating PV (CPV), among other types in the process of development. All of which, PAC services through site selection, conceptual and detailed designs, output estimating, project delivery management, and operational support.



LOW-RISK
LOW-COST



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