



AUTOMATION
www.aec-me.com





INTRODUCTION

AEC is a successful company in the field of systems integration and automation services, electrical project supplies based on engineering, manufacturing & support facilities in low voltage distribution system. AEC offers industrial automation solutions with wide range capabilities in control and automation engineering, custom motor control panel design and fabrication. The primary focus of the AEC industrial control and automation division are buildings, water and wastewater, utilities, power and oil & gas.

AEC can proudly state to be a market leader, an ISO 9001:2008 Lloyds certified company, with product certifications from ASTA and KEMA. All along the years, AEC's core ideology continued to be customer satisfaction. AEC's focus is to satisfy their customers through converting their needs into actual products and services allowing AEC to become a customer-oriented company.



Advanced Electro-Engineering Industries L.L.C.



الهندسة الكهربائية

Franchise Panel Builder

Products & Services

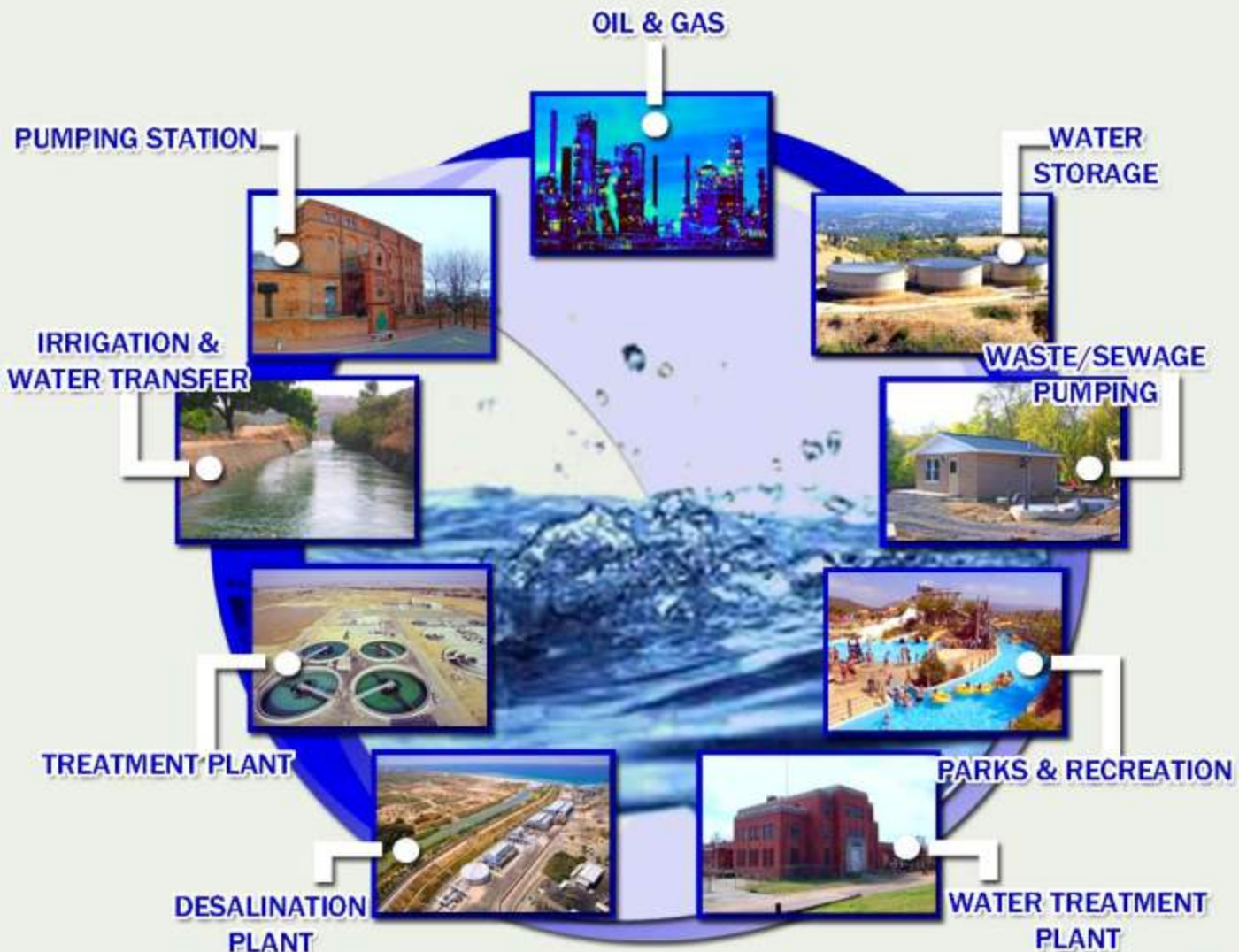
AEC is an agent stockiest and distributor of Eaton - Power Distribution Solutions, Delta - Automation and Control, Bisan Inc. - diversified solution products for industrial applications, Weidmueller - Electric Connection & Industrial Automation Products, Brady & Scafftag - Identification Solutions, SPC - Sorbent Materials and Delta - Wiring Accessories. AEC also offers system integration utilization solution from famous brands and components such as GE, Emerson, Mox & Allen Bradley.

Our Solutions

As a total solution provider, AEC offers all necessary services for customers:

- System Engineering
- Communication
- Diagnostics/Verification
- Safety
- Installation, Testing and Commissioning
- Support
- Integration to other systems and applications

Product Utilization





AEC Industrial Automation and Control is a fully integrated control platform covering a wide range of products

- PLC
- RTU
- HMI
- VFD

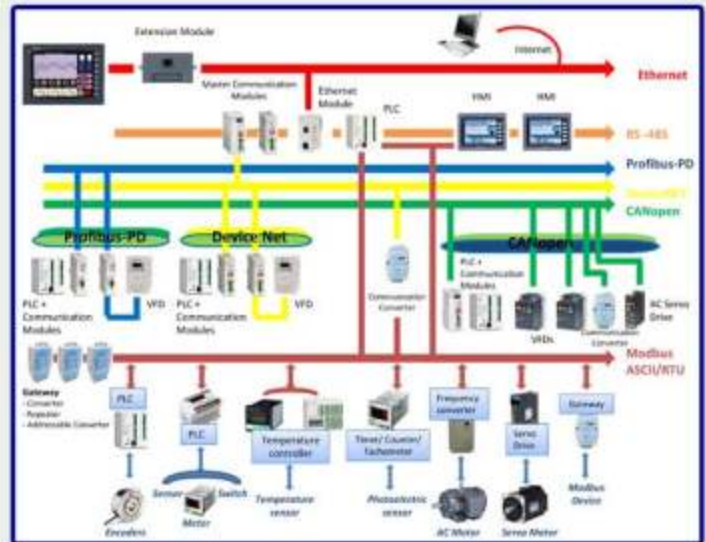
- CONTACTORS, STARTERS & PROTECTIVE RELAYS
- CONTROL PRODUCTS
 - TIMER/ COUNTER/ TACHOMETER
 - TEMPERATURE CONTROLLER

- TERMINAL BLOCKS
- POWER SUPPLY

- MOTOR CONTROL CENTER

AUTOMATION & CONTROL

Industrial Network



Automation Components

PROGRAMMABLE LOGIC CONTROLLERS (PLC)



PLC is the most important device in the control system that uses electronic operations and supports various communication protocols, connecting the AC motor drive, the HMI and the temperature controller through the industrial network.

It's easy storing procedures, handy extending principles, functions of sequential/ position control, timed counting and input/output control are widely applied to the field of industrial automation control.

REMOTE TERMINAL UNIT (RTU)



RTU - the microprocessor controlled device designed for use in SCADA telemetry and remote data monitoring applications that is suitable for a wide variety of applications: water industry, pumping stations, building automation, oil and gas distribution, electricity transmission and electricity distribution.

Automation Components

HUMAN MACHINE INTERFACE (HMI)



HMI - the medium for information exchange and mutual communication between electromechanical systems and the user. It allows the user to complete settings through touchable images or keys on the user friendly window.

VARIABLE FREQUENCY DRIVES (VFD)



VFD systems are designed to handle peak loads that have a safety factor. This often leads to energy inefficiency in systems that operate for extended periods at reduced load.

With modern power electronics and advanced microprocessor technology, the actual VFDs are able to efficiently control motor speed, improve machine automation and save energy.

CONTACTOR STARTERS & PROTECTIVE RELAYS



Soft starters are a simple and economic method of controlling AC motors for fixed-speed applications.

In general, there are two reasons to use a soft starter: the power distribution network may not be able to handle the inrush current of the motor and/or the load cannot handle the high starting torque.



Contactor - an electrically controlled switch used for switching a power circuit that covers many applications: control of electric motors, lighting, heating, capacitor banks and other electrical loads.

Electronic coil controller allows contactors to reduce power consumption and generate less heat, resulting in lower cooling requirements.

Automation Components

TIMER/COUNTER/TACHOMETER



CTA Timer/Counter/Tachometer is able to receive external input signals and calculate the times of events, frequency and driving speed. CTA can be applied to batch counting, total counting, length measurement, position control accurate timing, rotation speed and so on.

TEMPERATURE CONTROLLER



The measurement device used on temperature control. Thermocouple-type and resistor-type temperature controllers measure temperature electronically, obtaining the temperature change from the sensor and sending the measured data to the electronic processor.

TERMINAL BLOCKS



Terminal Blocks are designed to simplify wiring, reduce required cabinet space, increase functionality and expand wire routing and signal distribution capabilities.

The terminal blocks provide a flexible solution for routing and distributing signals by combining all the necessary functionality into a single solution.

POWER Supply

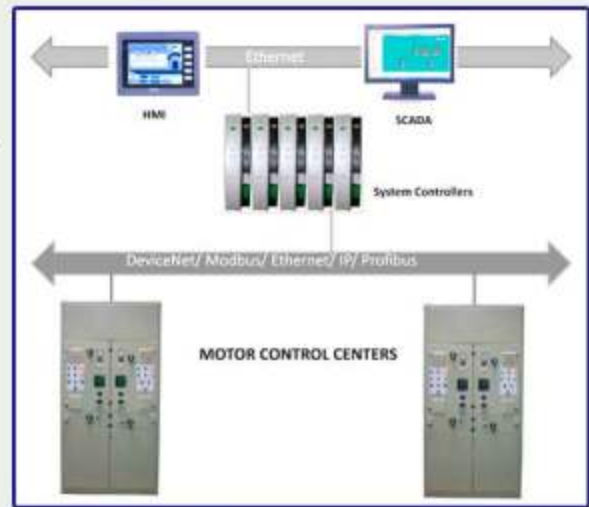


In the automatic production process, the Power Supply is the basic component which requires high stability and safety protection functions.

AEC Motor Control Centers

AEC Automation are not limited to one type of controller performing their system control, for this reason our MCC's are designed to be integrated with many manufacturers of AC Motor Drives (VFD), Programmable Logic Controllers (PLC) or Human Machine Interface (HMI) or Supervisory Control and Data (SCADA).

AEC's MCC communication solutions include Ethernet, RS-485, Modbus (RTU), Profibus, DeviceNet.



MCC Communications

Available with communications to fit new and existing applications, AEC's motor control centers are custom-made assemblies of conveniently grouped control equipment primarily used for control of motors and power distribution.

Technical Data of AEC MCC's

Rated Current:	250A, 400A, 630A, 800A, 1600A, 2500A, 2600A, 3200A, 4000A
Rated Service Voltage:	400V/415V
Rated Frequency:	50Hz
Short Circuit:	35kA/1sec - 250A & 400A 50kA/1sec - 630A & 800A 50kA/3sec-1600A, 2500A & 2600A 65kA/3sec-3200A & 4000A
Certification:	ASTA/KEMA
Main Busbar:	250A, 400A, 630A, 800A, 1600A, 2500A, 2600A, 3200A, 4000A tin copper
Neutral:	100% and 200%
Standards:	IEC 60439-1 IEC 61439-1 & 2
Degree of Protection:	IP42 and IP54
Form of Construction:	Form 2b to Form 4 Type 7
Construction	Fixed / Plug-in / Draw - out
Standard Finish:	Epoxy Powder Paint
Color:	RAL 7032-Gray or BS4800 - Blue



Local Approvals

- | | | |
|---------|-----------|--------------------------------|
| - ADDC | - QDC | - ADCP |
| - ADWEA | - ADNOC | - TDIC |
| - ADSSC | - TAKREER | - DAMAC |
| - DEWA | - GASCO | - NAKHEEL |
| - SEWA | - ESNAAD | - DEPARTMENT OF MILITARY WORKS |
| - ADAC | - ADGAS | |



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