

Triad Technical Supply

Automation & Control Solutions Division

P.O. Box 7401-Riyadh 11462

Kingdom of Saudi Arabia



Your Automation, Security Partner & Systems Integrator

www.tts-ksa.com

Chairman & CEO Message

On behalf of the Suliman A. Swayeh Group – “SAS Group” management team and all employees, we would like to extend our thanks and appreciation to our respected customers and for those who have effectively contributed to the continually dynamic growth and development of the group operations to face the challenges of the future.

The missions of SAS Group are continually exceeding our customer’s expectations as well as continually improve our capabilities in doing so. We welcome the opportunity to measure ourselves against rising expectations because we continue to increase the high expectations we set of ourselves.

We define sustainability through our values that give rise to our policies, our ethics and our corporate culture. Our values also constitute a formal commitment to conscientious citizenship. They commit our group and every employee to environmental stewardship, safe work environments, and socially responsible behavior in our workplaces and our communities, as well as in the products and services we provide to customers.

The diversity and involvement of our people is the foundation of our strength. We are committed to their fair and effective selection, development, motivation and recognition. We will provide employees with the tools, training and support to achieve excellence in customer satisfaction.

Our operations have gained a greater geographic spread through our network of branches located throughout the Kingdom of Saudi Arabia, Arab Gulf Countries. We appreciate your support of SAS Group and are confident that we have the people, the processes and the commitment to continue improve our selves and to actively participating in the economic growth and advancement of all Arab Gulf Countries through trade, industry, service, and management activities.

Engr. Suliman A.Swayeh
Chairman & CEO

• Automation & Control Solutions Division (ACSD)

Technology is our future that's why we have to focus on offering comprehensive technology solutions. We have to build a network of business partners with primarily solutions leaders in automation and control solutions. Automation Division involvements are more than just providing technology solutions; we strive for a long-term value and anticipate new innovation to bridge people and knowledge together. Automation Division is structured to meet all your measurement and control needs. The division is engaged in sales, installation, maintenance, testing and repair of systems, products and equipment manufactured by our suppliers and in training for the use and maintenance of such products and equipment.

The **Automation & Control Solutions Division (ACSD)** business group handling the following Business units: Automation & Control Systems & Solutions as well as Automation & Control Products. Under each of the above mentioned units the following business lines:

Automation & Control Systems & Solutions:

- Building Management Systems (BMS).
- Direct Digital Controls (DDC) for Heating, Ventilation and Air-Conditioning (HVAC).
- Energy Management Solutions.
- Lighting Control System.
- Home Control Systems.

Automation & Control Products:

- Air Quality (Carbon dioxide CO₂ duct and wall mount sensors for demand control ventilation application, gas monitoring station).

- Current Monitoring (Current status switches, analogue current transducers, current transformers).

- Humidity (Wall, duct, outside air, insertion and pendant sensors, moisture detectors).

- Lon/Data Acquisition (Lon works integration and data acquisition, modbus to Lon, analog/pulse to Modbus).

- Power monitoring (Network power meters and power transducers, single point meters, multi point network transducers).

- Pressure (Differential static pressure transducers, gauge pressure transducers).

- Temperature (Space, duct, outside, averaging, immersion, ceiling, recessed, remote probe, strap-on and VAV discharge air types).

- Relays and Power Sources (Relays, transformers and DC power supplies to power the projects).

• Life & Safety Systems & Solutions Division (LSSSD)

Fire Detection & Alarm Solutions as well as Industrial Safety Systems: We engineer and install advanced fire detection & alarm as well as industrial safety systems. Our System protects people and buildings for optimal security levels and helps building managers make better decisions. As supplier of intelligent building systems we provide economic and efficient solutions in fire alarm technology for superior demands. Our products make buildings safe, convenient and productive places for the people who use them - in hotels, public buildings and banks, as well as in large industrial plants and airports. We are a leader in the following lines of business:

Fire Systems – providing a full range of solutions—including integration and networking—to OEMs and distribution in commercial, industrial, education, retail, lodging, government, and health care.

Sensors and Devices – providing world-class gas, fire, and smoke detection to OEMs worldwide.

Home Medical Care – producing remote patient monitoring products that serve clinical partners, end users, and hospitals.

Life Safety businesses design, manufacture, and market over 40 product families including:

- Conventional and intelligent fire alarm control panels
- Sensors and transmitters
- Toxic gas detection
- Power supplies
- Intelligent/Addressable Devices
- Conventional and intelligent fire alarm control panels
- Medical peripheral devices
- Telemonitoring
- Voice evacuation
- Fixed Controller Systems

All products are designed and manufactured to meet rigorous international approvals such as UL, FM, NFPA, EN54, LPC, and Lloyd's of London.

The markets for **Fire Detection & Alarm Systems**, products and Services applies to all the major Commercial and industries such as government, commercial and industrial buildings, airports, schools, universities, banks, hospitals, hotels, large residential complexes, palaces and shopping centers, Oil and Gas Production, Separation and Transmission, Oil Refining & Gas Processing, Petrochemical processing & Chemical Production, Power Generation, Water Treatment and Transmission, Cement Production & Mining, Loading / Shipping Terminals and Pipelines & Stabilizing Facilities.

• Security & Access Solutions Division (SASD)

As industry pioneers, Honeywell has developed many of the groundbreaking advances that have shaped today's residential and commercial security systems. We made systems easier to install and to use, developed the industry's most reliable supervised wireless products and the most flexible hybrid control panels on the market. We are also on the forefront of advancements in long range radio, Internet alarm communications and sensor technology-including the development of the world's best-selling glass break detectors.

As industry leaders, we've taken safety very seriously for the past years. That dedication has never wavered. We employ a talented team of engineers and continually raise the bar for the future.

Our products are built in world-class production facilities, and are subject to rigorous testing exceeding industry standards for quality and performance. Honeywell equipment complies with all ISO-9001 protocols, an internationally recognized standard that defines a quality assurance system.

Honeywell builds integrated security solutions that are specifically designed to meet the unique requirements of various users: Airport/Seaport, Gaming, Life Sciences, Government, Finance/Banking, Retail, Education, Transportation / Mobile, Corrections, Industrial, Utilities and Government Sales.

Designed to work together seamlessly, Honeywell Security products provide you with the technology you need to deliver sophisticated security solutions—from the simplest to the most challenging, we are a leader in the following lines of business:

- Security Systems (Industrial and commercial).
- Access Control Systems.
- CCTV Systems (Closed Circuit Television Systems).

• Airflow Control Systems & Solutions Division (ACSSD)

Phoenix Controls: is a recognized leader in the design and manufacture of precision airflow control systems, most notably variable air volume (VAV) controls for laboratory ventilation. Our systems ensure the environmental integrity of critical spaces, including research laboratories, vivariums, pharmaceutical process areas, and bio containment facilities by controlling pressurization, temperature, and humidity.

Founded in 1985, Phoenix Controls Corporation is a recognized leader in the design and manufacture of precision airflow control systems for use in critical room environments. Our customers include the leading pharmaceutical companies, universities, hospitals, government research facilities, and industrial corporations. We offer innovative, technologically sound airflow and pressurization control solutions that combine unparalleled safety and performance with value and energy savings.

You will find Phoenix Controls' systems operating worldwide in laboratories, vivariums, hospital isolation suites, pharmaceutical process areas, clean rooms, and bio containment facilities. The company was privately held until 1998 when it became a wholly owned subsidiary of Honeywell International, Inc. Phoenix Controls maintains its headquarters in Acton, Massachusetts and markets its systems through a worldwide network of independent distributors. The Phoenix Controls Corporation Quality Management System is registered to ISO 9001:2000.

Our Core Values: Of the values we collectively hold, we identify the following as "core" and use them to guide our behavior and decision making:

- 1 **Striving for Excellence:** We take pride in the high standards of quality we demand of ourselves and relentlessly pursue excellence in our work, products and service to customers.
- 2 **Acting with Integrity:** We act with honesty, fairness, and ethical behavior in everything we do and are accountable by taking ownership of our actions and meeting our commitments.
- 3 **Balancing Work and Family:** We respect the importance of personal commitments and support a responsible balance between work and personal obligations.
- 4 **Encouraging Creativity:** Creativity is the spark of invention and the cornerstone of our organization. Our inspiration comes from an environment that embraces learning, experimentation and innovative thinking.
- 5 **Working Together:** We recognize that the achievement of our common goals is a shared responsibility that begins with effective communication and mutual respect. Together, we strive to understand the ideas of others through active listening and an open mind.

1. Executive Summary

TTS is built on the assumption that the management of technology for automation, life safety and security business is like legal advice, accounting, graphic arts, and other bodies of knowledge, in that it is not inherently a do-it-yourself prospect. Smart business people who aren't building hobbyists need to find quality vendors of reliable hardware, software, service, and support. They need to use these quality vendors as they use their other professional service suppliers, as trusted allies. TTS seeks to fulfill these needs and become the leader in automation business technology for its region. TTS provides both solutions and services to make them useful to businesses. We are especially focused on providing integrated network systems and services. Our services include design, installation, training, and support. In order to accomplish our objectives, our key to success over the next three years is:

- Differentiate from box-pushing, price-oriented businesses by offering and delivering service and support.

The only way we can hope to differentiate well is to define the vision of the company to be an integrated technology ally to our clients. We need to offer a real alliance that includes such intangibles as confidence, reliability, and knowing that somebody will be there to answer questions and help at the important times. Our support services, with which we hope to capture market share will include such services as; training, upgrade offers, installation services, network configuration services, etc. TTS will seek to aggressively pursue new opportunities.

1.0 Our Vision:

- 1 Provide Kingdom of Saudi Arabia based Supply, Engineering and Services to the Industrial & Commercial Sectors.
- 2 Develop Kingdom of Saudi Arabia based cores of Technology for improving the productivity and environmental compliance of Kingdom industries.
- 3 Enhance the viability of Kingdom of Saudi Arabia installed systems, reduce life cycle costs and increase return on investment by enhanced support and technology transfer.
- 4 Grow through ownership and long term planning.

1.1 Objectives:

- Increasing Sales.
- Sell of service, support, and training.

1.2 Mission

Our Mission Continually exceeds our customer's expectations as well as continually improves our capabilities in doing so.

1.3 What We Value

- Integrity: Honesty and fairness are essential to the way we do business and how we interact with people. We are a company that keeps its promises. We do what we say we will do, and we will conduct ourselves in accordance with our code of ethics.

Customer Satisfaction:

❖ Customer satisfaction is the source of employee, supplier and community benefits. We will exceed customer expectations through continuous improvement in quality, service, productivity and time compression.

Our Employees:

❖ The diversity and involvement of our people is the foundation of our strength. We are committed to their fair and effective selection, development, motivation and recognition. We will provide employees with the tools, training and support to achieve excellence in customer satisfaction.

Improvement and Innovation:

❖ We seek improvement and innovation in every element of our business.

Social Responsibility:

❖ Actively recognize the central role we occupy in the structure of society, championing innovative partnerships, projects and ideas to improve the quality of life and the environment of a broad community -in the Kingdom.

1.4 Keys to success

- Differentiate from box-pushing, price-oriented businesses by offering and delivering service and support and charging for it.
- Increase our systems & services sales.

1.5 Growth Strategy:

Partnerships of all forms represent a central part of today's economy. The drive for efficiency and innovation as well as the ongoing acceleration of deregulation, global trade and technology advancement makes partnerships a necessary competitive advantage:

- 1 Allow organizations to reduce procurement costs, speed new products and services to market, and streamline supply and demand chains.
- 2 Help cut expenses by spreading the costs of building infrastructure among participants.
- 3 Represent the fastest means to spread influence across a network and therefore, build value and the foundation of TTS growth strategy.

Our growth strategy will continue to leverage strategic business partnerships to:

- 1 Expand TTS client base by developing or acquiring profitable partnerships in new markets.
- 2 Develop and implement client-focused, value-driven best-in-class solutions.
- 3 Provide funding for increased business activity.

1.6 What we do?

TTS offers a variety of services associated with our products and systems. These are segregated in the following categories.

Specification Services

Our engineers can review your existing installation, design requirements and prepare design specifications for Control and Instrumentation Solutions suitable to your application, budget and requirements.

Pre-Engineering

Pre-Engineering services will consist of:

- 1 As Building of existing drawings
- 2 Preparation of preliminary drawings
- 3 Bid Packages
- 4 Assistance in Evaluation of Bids , Bid Verification
- 5 Reports on compliance

Design

- 1 Detailed Specification of a proposed Solution
- 2 Detailed Design Preparation
- 3 Procurement Services
- 4 Design Verification

Manufacturing

- 1 Manufacturing of Panels as per Design Documents
- 2 Wiring of Terminations, Isolation and I/O cards
- 3 Preparation of systems, mounting of equipment
- 4 Power Distribution
- 5 Testing

Integration

- 1 Integration of Multiple Systems
- 2 Specification of Protocols and Communications

Upgrade – Modification

- 1 We can provide Upgrade / Modification services for existing systems
- 2 Hot Change out
- 3 Re-programming
- 4 Re-configuration
- 5 Expansion of Control Systems
- 6 Modification to meet Process Changes
- 7 Re-tuning

Installation

- 1 Installation services for Control Systems
- 2 Field Wiring
- 3 Termination
- 4 Demobilization of equipment
- 5 Mobilization of new equipment
- 6 Loop Checking
- 7 Testing

Support and Maintenance

- 1 Planned Maintenance
- 2 Preventive Maintenance
- 3 Spares Management Programs

Training

- 1 For all systems provided and supported by SAS we provide
- 2 In house training
- 3 Onsite training
- 4 Maintenance manuals

Auditing

- 1 Pre and Post Audit of Control Systems
- 2 Financial Evaluation of Installations
- 3 Assessment of Upgrade / Modification / Replacement Costs Techno economic analysis

Our Clients:

- 1 Educational Centers, Universities, institutes & schools,
- 2 Health Care Centers,
- 3 Trade and business Headquarters,
- 4 Technical colleges and universities,

- 5 Military Sector,
- 6 Industrial Sector,
- 7 Telecommunications companies,
- 8 Transportation companies.
- 9 Hotels Sector.
- 10 Residential Towers.
- 11 Power Generation, Water Treatment and Transmission
- 12 Cement Production & Mining
- 13 Loading / Shipping Terminals as well as Pipelines & Stabilizing Facilities

We Represent:

Honeywell

ALERTON®



Main Projects

N0	Project Name	Value SAR	Starting Date	Completion Date	Project's Contents	Client/Consultant/PM
1	King Abdullah University of Science & Technology - Jeddah	66M	2007	2011	Integrated Building Automation System	King Abdullah University of Science & Technology / Saudi Aramco
2	Princess Nora Bint Abdul Rahman University	40M	2009	2014	Building Automation System	Princess Nora Bint Abdul Rahman University / DAR AL Handasah
3	Region(B) Headquarters , Special Security Forces	1M	2013	2014	Building Automation System	Ministry Of Interior/Khateeb & Alamy Consultancy
4	Ministry Of Water And Electricity- Dams Monitoring System	34M	2013	-----	Automated and Monitoring system	Ministry Of Water And Electricity
5	STC Damman Data center(Phases I & II)	1.9M	2013	-----	Building Automation System	Saudi Telecom/STC
6	STC Riyadh Headquarter(Central Monitoring System)	3.7M	2014	-----	Automated and Monitoring system	Saudi Telecom/STC
7	Ras Tanura Integrated Project SADARA Package (A,B,C,D)	3.9M	2014	-----	Automated and Monitoring system	SADARA
8	National Guard Command and Staff College	1.2M	2015	-----	Automated and Monitoring System	National Guard

Projects' list

N0	Project Name	Location	Contractor	Client	Year
1	Al- Rajhi Bank VIP Building	Riyadh	SWC	Al- Rajhi Bank	2004
2	Ministry of Civil Services	Riyadh	STARCO	Ministry of Civil Services	2004
3	Car Auction	Riyadh	SWC	-----	2004
4	Faransi Bank - Ghadeer Branch	Riyadh	ZAPISCO	Faransi Bank	2004
5	Telecommunication Shelters	Riyadh	Qutub	National Guard	2004
6	Majdoui & Hyundai Complex	Dammam	SWC	Majdoie	2004
7	Twin Tower (Carawan Plaza)	Khobar	SAS	Majdoie	2004
8	AL Fozan HQ	Khobar	SAS	FOZAN	2005
9	Jizan Technical College - Royal Tent	Jizan	A.Sayyed Grp.	GOTEVT	2005
10	King Khaled Int. Airport	Riyadh	SWC	MODA - Civil Aviation	2005
11	Al-Mutawa'a Tower	Riyadh	Masharef Al-Khaleej Co.	Al- Mutawa'a	2005
12	Charity Dome Building	Riyadh	SAS	Qussie Int.	2005
13	Grand Mall	Riyadh	Meqren Grp.	Meqren Grp.	2006
14	Mashareq Tower	Riyadh	ZAPISCO	AL-Zamil	2006
15	Baha Girls College	Baha	MAK Est.	Girls College	2006
16	KALA ACC-Building - Jeddah Airport	Jeddah	SWC	MODA - Civil Aviation	2006
17	Al-Karj Laboratory - MODA	Kharj	MAK Est.	MODA	2006
18	Obhor Villa	Obhor	JAMED	Jaffalie	2006
19	Waqf Al-Torjoman Hotel	Madinah	A Sayyed Grp.	PRIVATE	2006
20	Abu Dhar Hotel	Madinah	A Sayyed Grp.	-----	2007
21	Plot 3070	Madinah	A Sayyed Grp.		2007
22	Administration Building	Al-Jubail	Gulf Group	Royal Commission	2007
23	Royal Center	Riyadh	Saudi Controls	-----	2007
24	SAMA Main Building	Riyadh	Saudi Controls	SAMA	2007
25	Makkah Tunnel	Makkah	VERA GROUP	-----	2007
26	National Commercial Bank Head Quarter	Jeddah	Bin Laden Grp.	NCB	2007
27	AL Bilad Bank, Worood Branch	Riyadh	SAS Grp.	Al-Bilad Bank	2007
28	Exit 11 MODA Bldg.	Riyadh	RTCC	MODA	2007
29	SEHAMIAH TOWER		SWAYEH CO.	Seham Alqusaibi	2007
30	ONAIZA MALL	ONAIZAH	ZAMIL	ZAMIL	2007

N0	Project Name	Location	Contractor	Client	
31	Taiba University, Laboratory ,Building,Phase 2	Madinah	Khereji Co.	MOHE	2007
32	Najran Hospital - Tha'ar	Najran	Watcom & Memo	MOH	2008
33	Plot 2080-Residential Hotel	Madinah	Fayha	Private	2008
34	Plot 3003-Residential Hotel	Madinah	Watcom	Private	2008
35	Plot 174,Hotel & Shopping Mall	Madinah	Cooling Rose Company	Private	2008
36	Plot 2051-Residential Hotel	Madinah	El- Khereji Company	Private	2008
37	Plot 2054-Residential Hotel	Madinah	Al-Fayhaa Est.	Private	2008
38	Plot 5066-Residential Hotel	Madinah	Al-Abdali Contracting	Private	2008
39	Madinash Hotel & Shopping Center	Madinah	SAUDI ABV	Private	2009
40	Plot 194-Residential Hotel	Madinah	A Sayyed Grp.	Private	2009
41	Girls College	Madinah	A Sayyed Grp.	MOHE	2009
42	Al-Saydan Company H. Q Tower	Riyadh	ZAMIL	Saydan Co.	2009
43	Abdullah Foud H. Q. Building	Khobar	Swayeh Co.	AFCO	2009
44	Economic City Jazzan	Jazzan	EWM	Private	2009
45	Prince Sultan Cardiac Center	Riyadh	SAS Group	MODA	2010
46	Military Industries	Al Kharj	Marco	Military Industries	2012
47	Region (B) Headquarters, Special Security Forces	Al Qateef	Seder Construction Co	Ministry Of Interior	2012
48	STC Dammam Data center (Ph#1)	Dammam	Seder Telecom	Saudi Telecom	2013
49	STC Dammam Data center (Ph#2)	Dammam	Seder Telecom	Saudi Telecom	2013
50	STC Riyadh Data center	Riyadh	Saudi Technical	Saudi Telecom	2013
51	STC Riyadh Headquarter (Central Monitoring System)	Riyadh	STC	STC	2014
52	Ministry Of Water And Electricity (6 Dams Monitoring System)	Riyadh	MOWE	MOWE	2014
53	Ras Tanura Integrated Project, SADARA Package (A,B,C,D)	Al Jubail	Al Sharqawi	SADARA	2014

(2007)King Abdullah University of Science & Technology – Jeddah

King Abdullah University of Science and Technology (KAUST), Saudi Arabia is an international, graduate-level research university dedicated to inspiring a new age of scientific achievement in the Kingdom that will also benefit the region and the world. KAUST is the realization of a decades-long vision of the Custodian of the Two Holy Mosques, King Abdullah Bin Abdulaziz Al Saud.

KAUST is governed by an independent, self-perpetuating Board of Trustees and supported by a multi-billion dollar endowment. The University, which is merit-based and open to men and women from around the world, adheres to these founding principles:

- 1 Create an international community of scholars dedicated to advanced science.
- 2 Welcome leaders in science, technology, commerce, business, and education through appointments and partnerships.
- 3 Provide researchers the freedom to be creative and experiment.
- 4 Embody the highest international standards of scholarship, research, education, and learning.
- 5 Provide unfettered access to information and share knowledge, skills, and expertise to achieve economic growth and prosperity.
- 6 Nurture and protect freedom of research, thought, and discourse relating to scholarly work

KAUST will pursue its research agenda through four strategic research thrusts that focus on areas of science and technology that are important to Saudi Arabia, the region, and the world:

- 1 Resources, Energy and Environment;
- 2 Biosciences and Bioengineering;
- 3 Materials Science and Engineering;
- 4 Applied Mathematics and Computational Science.

To support these thrusts, KAUST will establish multidisciplinary Research Centers.

The University is set to open in September 2009 with degrees in 11 fields of study. The core campus is located on more than 36 square kilometers along the Red Sea at Thuwal – about 80 kilometers north of Saudi Arabia's second largest city, Jeddah.

King Abdullah University of Science & Technology – Jeddah

Building Management System (Provided by TTS)



Execution Time Period :

January, 2008 – September, 2009

Client Representative :

Saudi ARAMCO

General Contractor :

Saudi OGER

MEP's :

1. SETRAA Advanced Technology Co.
2. G.M. Al-Zahrani EST. Capelec ME JV.
3. Saudi Technical LTD.
4. HAPCO (Hamad Alaywy and Partners Co.).
5. Drake & Scull International

TTS Scope of Works :

1. Engineering detailed design.
2. Material take-off .
3. Supply of material.
4. Material approval.
5. Supervision of installation.
6. Installation execution (for BMS at laboratories).
7. Testing and Commissioning.
8. Startup the system.
9. Integration and ICAS.
10. On-Site training and warranty.



(2009) Princess Nora Bint Abdul Rahman University

Building Management System (Provided by TTS)



Execution Time Period:
January, 2010 – May, 2012

Client Representative:
Ministry Of Education.

General Contractor:
Saudi OGER

• Consulted: Dar Al-Handassah.

TTS Scope of Works :

1. Engineering detailed design.
2. Material take-off .
3. Supply of material.
4. Material approval.
5. Complete installation of conducting, wiring, and termination.
6. Installation execution (for BMS at laboratories).

7. Testing and Commissioning.
8. Startup the system.
9. On-Site training and warranty.



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