



AMVAJE ABI
ELECTRONICS INDUSTRY

Amvaje Abi DCS & ESD Control System

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Amvaje Abi: A Legacy of Expertise and Commitment to Quality

Amvaje Abi Company stands at the forefront of the industry, boasting over two decades of invaluable experience in designing, manufacturing, and advancing control systems and precision tools. Specializing in various sectors, particularly oil and gas, this knowledge-based company has earned its reputation as a trailblazer in Iran.

Established in 2002 with a mission to develop electronic systems tailored to the nation's needs, Amvaje Abi has evolved significantly over the years. In 2010, facing economic sanctions and stringent restrictions, the company successfully diversified into the production of control systems and precision tools, consistently delivering top-notch products across industries like oil and gas, mining, and steel.

Amvaje Abi's journey includes remarkable milestones, such as expanding R&D units, stringent quality control measures, and efficient production in the engineering department in Shiraz. Complemented by a management and commercial branch in Tehran, the company operates with a dedicated team of over 50 experts and skilled engineers, all alums of prestigious universities in the country.

In its commitment to international standards, Amvaje Abi has earned membership in the EP and AVL list of the Ministry of Petroleum and the National Petrochemical Company. The company has also secured multiple certifications and approvals from renowned organizations like the Association of Oil and Gas Industry Equipment Manufacturers and the Industrial Automation Companies Association.

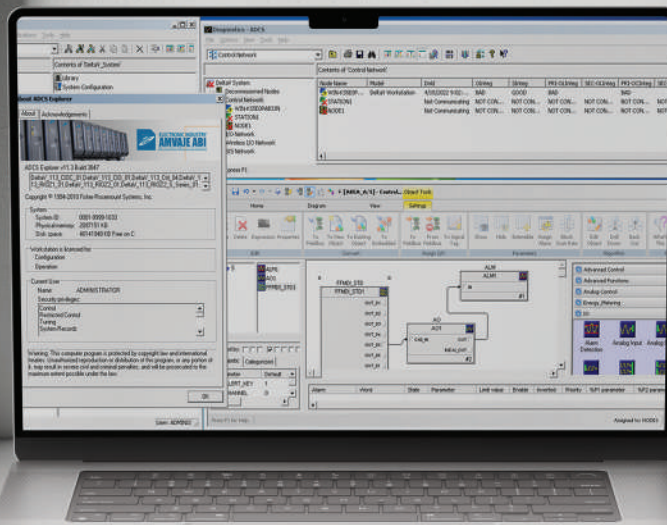
With a portfolio boasting over 200 successful products, Amvaje Abi has achieved essential certifications domestically and internationally and has also seen exclusive use in major Iranian refineries and petrochemical plants by getting an exclusive MESC Code. Notable among these are the Pars South Gas Complex, Khangiran, Parsian, Shazand Oil, and numerous other significant petrochemical complexes.

Building on its rich experiences, Amvaje Abi has ventured into international trade, exporting its high-quality products to various countries. Committed to excellence, development, support, and the incorporation of cutting-edge technologies, the company has solidified its position as a leading force in Iran's electronic and industrial control industry and is recognized as a dependable supplier.



Distributed Control System

- The Amvaje Abi Distributed Control System (DCS) is a fully digital system that provides users with a unified architecture and complete functionality, offering multiple inputs and outputs ranging from several to tens of thousands to interconnect individuals, processes, and production.
- This intelligent integration provides a suitable infrastructure for advanced applications, resulting in improved efficiency and fewer undesirable changes in the process. The Amvaje Abi DCS system is designed for the most challenging working conditions and incorporates state-of-the-art world technology.
- The comprehensive hardware and advanced software of the Amvaje Abi Distributed Control System are fully compatible with Emerson's DeltaV Distributed Control System (DCS).
- Amvaje Abi DCS has been successfully implemented in Iran's largest and most important refineries and petrochemical plants, including the Pars South Gas Complex, Amir Kabir Petrochemical Complex, Khangiran Refinery, Ilam Refinery, and Shazand Oil Refinery.



Key features

- Full Redundant System: The entire system, including controllers, IO cards, and network communication, has redundancy capabilities.
- Integrated and User-Friendly Engineering and Monitoring Software.
- Standard Ethernet network communication at 100 MB/s full duplex.
- Controller upgrade capability, using the existing engineering software .upgrade program without requiring firmware.
- Automatic identification of I/O cards using Auto Sense capability.
- Hot Swap technology for replacing or adding cards online without the need to shut down the entire system.
- Cold Restart technology based on Flash as a replacement for Battery Backup.
- Supports various industrial protocols.
- A complete hardware and software with the ability to provide licenses compatible with DeltaV software.



Modules

Controller MD & MD Plus

- Very High Efficiency And Flexibility Compared To The Similar Brand's Controller.
- Automatic Address Setting Without User Setting.
- High User Memory (48MB at MD Plus and 14MB at MD) Suitable For Complex Processes
- Complete Redundancy Without Needing Special Settings.



Power Supply DC-DC

- Power Supply Of Controller Cards And I/O Cards Of DCS
- Input: 9.4A - 12VDC
- Output: 8A-12VDC (non-isolated) – 5VDC 2A - 3.3VDC 1.2A

Power Supply DC-DC Dual

- Power Supply Of Controller Cards And I/O Cards Of DCS
- Isolated Outputs To Provide The Possibility Of Supplying Power From The Isolated 24V DC/12V Input Field Power
- Output: 8A - 12VDC (in case that using 12V input, 13A output) – 5VDC, 3.3VDC 2A





Analog Input 20-4mA HART I/O Card

- Number Of Channels: 8
- Accuracy: %0.1 of Span
- Full Signal Range: 1 to 22.5 mA, with over range checking
- Resolution: 16 bits
- Repeatability: %0.05 of span
- Local Bus Supply: 12 VDC nominal 120 mA typical, 150 mA maximum
- Field Circuit Power: 300 mA maximum at 24V DC (+%10)
- Automatic Redundancy For 'Series 2' Cards

Analog Output 20-4mA HART I/O Card

- Number of channels: 8
- Full signal range: 1 to 23 mA
- Local Bus Supply: 12 VDC nominal 120 mA typical, 150 mA maximum
- Field circuit power: 300 mA maximum at 24V DC (+%10)
- Accuracy: %0.25 of span
- Resolution: 12-bit
- Automatic Redundancy for 'Series 2' cards



Discrete Input Dry Contact I/O Card

- Number Of Channels: 8 And 32
- Detection Level For On: >2.2 mA
- Detection Level For Off: <1 mA
- Local Bus Supply: 12 V DC nominal 75 mA typical, 100 mA maximum
- Field Circuit Power: 40 mA (8 Channel), 150mA (32 Channel) - maximum at 24VDC
- Automatic Redundancy For "Series 2" Cards



Discrete Output 24V DC High Side I/O Card

- Number Of Channels: 8 And 32
- Output Range: 2V DC to 60V DC
- Local Bus Supply: 12 VDC nominal 100 mA typical, 150 mA maximum
- Discrete Output: stays in the last state submitted by the controller.
- Output Rating: 1.0 A
- Configurable Channel Types:
 - Momentary output (100ms to 100s)
 - Continuous pulse output (100ms to 100s)
- Automatic Redundancy for 'Series 2' cards



Serial Interface Card

- Modbus Communication
- Protocol 422/485/Port - RS232 2
- Reading Coils, Input Status, Holding
- Registers & Input Registers
- 32 :Number Of Data Sets Per Serial Interface Card
- Bps 115200 to 300 Baud Rate From

8-Wide Horizontal I/O Carrier

- Carrier For 8 I/O Cards & Terminal Blocks
- Ports For Power & Controller Carrier Interfacing
- Ports For Field Power
- Capacity: 8 I/O Cards And 8 Terminal Blocks
- Dimensions: 33.6 × 16.5 Cm





2-Wide Power/Controller Carrier

- Carrier For 1 Controller & 1 DC/DC (Or 2 DC/DC)
- Directly Connecting To Another 2-Wide Carrier For Redundancy
- Dimensions: 9.1 × 16.5 Cm

Carrier Extender Set

- Used For Interfacing 2 Or More 8-Wides Together
- Including: Left Extender, Right Extender, Extension Cable



Terminal Blocks

- Interfaces I/O Cards To Field
- Simplex & Redundant Models
- Signal Types: A.I, A.O, Discrete, 32Ch, Serial

Interface Terminal Block



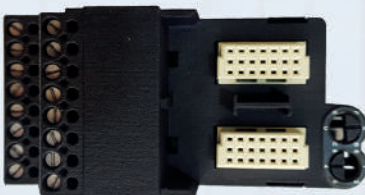
Redundant Analog Input Terminal Block



Redundant Analog Output Terminal Block



8-ch Input/Output



RTD & Thermocouple Terminal Block



32Ch Input/Output



Smart Logic Solver (SLS)



The SLS card is one of the components of the SIS security system, which is used as an Emergency Shut down (ESD) system.

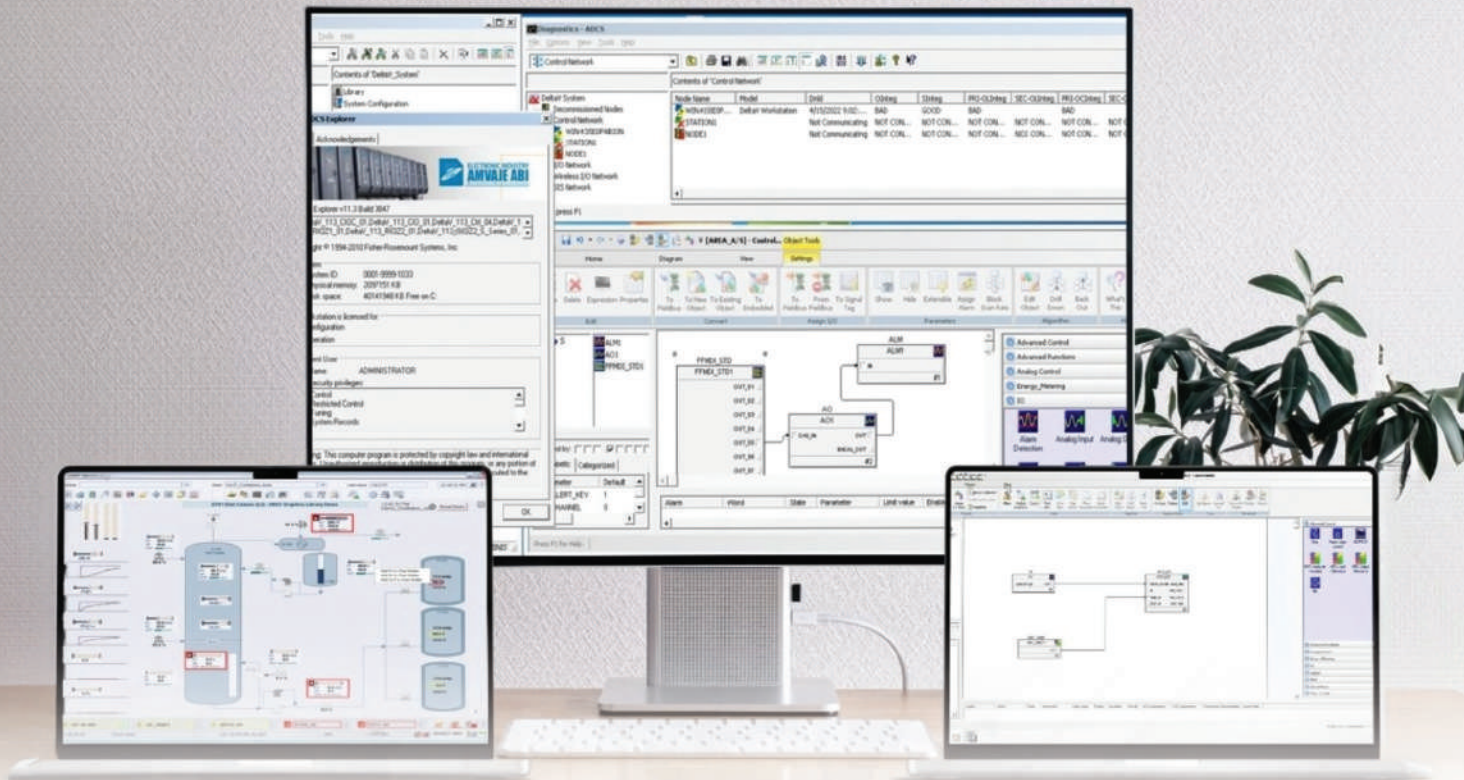
SIS (Safety Instrumented System) safety system is a modern approach to increase safety along with integrity while improving process availability. This system continuously monitors the safety equipment installed in the plant and detects the health of the entire safety loop, thus significantly reducing the risk. The SIS system, while being independent from the control system, is easily integrated with the DCS system, thus making the installation simpler and less expensive.

Smart Logic Solver, SLS Card Specifications

- Input Power : 24VDC+ 20%, 1.0A Plus Field Power (5.0A Total)
- Number Of Channels: 16 Configurable Channels
- Isolation: Each Channel Is Optically Isolated From The System And Factory-Tested To 1500VDC
- Analog Input Channel Specifications:
 - Nominal Signal Span: 4 To 20 mA
 - Hart Protocol Support
 - Resolution: 16 Bits
- Hart Two-State Output Channel Specifications:
 - Nominal Signal Span: On State 20 mA / Off State 0 Or 4 mA (Configurable)
 - Hart Protocol Support
 - Compliance Voltage: 20 mA Into 600 Ω Load
- Discrete Input Channel Specifications:
 - Detection Level For On ≥ 2 mA / Detection Level For Off ≤ 1.65 mA
 - Input Compatibility: Inputs Compatible With Namur Sensors (12 V)
 - Dry Contact Line Fault Detection
- Discrete Output Channel Specifications:
 - Output Voltage: Field Power Minus 2 V
 - Field Power: 0.5A Continuous Per Channel; 4.0A Max Per Card
 - Short Circuit Protection: Outputs Current Limited To 2.0 A Typical

Software

- Providing a Designed Software That's Fully Compatible With The Original DeltaV Software
- Providing Licenses For The Designed Software And The Original DeltaV Software



EMC & environmental test Certificate



Performance Certificates

South Pars Gas Complex

The image displays four panels of performance certificates for the South Pars Gas Complex. Each panel contains technical specifications, test results, and official signatures. The panels are arranged in a 2x2 grid. The top-left panel includes a header with the company logo and a table of data. The top-right panel features a large signature and a table. The bottom-left panel shows a table with multiple columns of data. The bottom-right panel includes a table and a large signature. The certificates are issued by various entities, including the Ministry of Petroleum and the National Gas Refining and Processing Company.

Hasheminejad(Khangiran) Gas Refining Company

The image displays four panels of performance certificates for the Hasheminejad(Khangiran) Gas Refining Company. Each panel contains technical specifications, test results, and official signatures. The panels are arranged in a 2x2 grid. The top-left panel includes a header with the company logo and a table of data. The top-right panel features a large signature and a table. The bottom-left panel shows a table with multiple columns of data. The bottom-right panel includes a table and a large signature. The certificates are issued by various entities, including the Ministry of Petroleum and the National Gas Refining and Processing Company.

Iranian Ghadir Iron and Steel Company

The image displays a performance certificate for the Iranian Ghadir Iron and Steel Company. It includes a header with the company logo and a table of data. The certificate is issued by the Ministry of Petroleum and the National Gas Refining and Processing Company.

Amirkabir Petrochemical Company

The image displays four panels of performance certificates for the Amirkabir Petrochemical Company. Each panel contains technical specifications, test results, and official signatures. The panels are arranged in a 2x2 grid. The top-left panel includes a header with the company logo and a table of data. The top-right panel features a large signature and a table. The bottom-left panel shows a table with multiple columns of data. The bottom-right panel includes a table and a large signature. The certificates are issued by various entities, including the Ministry of Petroleum and the National Gas Refining and Processing Company.

Shahid Tondgoyan Petrochemical Company

The image displays a performance certificate for the Shahid Tondgoyan Petrochemical Company. It includes a header with the company logo and a table of data. The certificate is issued by the Ministry of Petroleum and the National Gas Refining and Processing Company.

Parsian Gas Refining Company

The image displays four panels of performance certificates for the Parsian Gas Refining Company. Each panel contains technical specifications, test results, and official signatures. The panels are arranged in a 2x2 grid. The top-left panel includes a header with the company logo and a table of data. The top-right panel features a large signature and a table. The bottom-left panel shows a table with multiple columns of data. The bottom-right panel includes a table and a large signature. The certificates are issued by various entities, including the Ministry of Petroleum and the National Gas Refining and Processing Company.

Company's Services

- Engineering and Manufacturing Services:

- Designing various electronic and control systems.
- Reverse engineering and redesigning electronic cards and control systems.
- Electronic component assembly and mass production of various electronic and control systems.
- Testing and quality control of electronic cards.

- Specialized commercial services:

- Consultation and procurement of industrial control systems.
- Consultation and procurement of various electronic, telecommunication, and precision instruments.
- Consult and procure remote control wireless systems.

- Specialized Repairs:

- Specialized repair of electronic cards and precision instruments for refineries and petrochemical plants.

- Training and Technical Engineering Support

- Updating and Upgrading electronic and control systems

- Control Systems Integration and Commissioning

○ In addition to its diverse and prominent activities, Amvaje Abi Company, with its essential capabilities, is recognized as one of the active companies in the field of designing and integrating control systems and precision instruments. This includes implementation, commissioning, support, and maintenance. The Instrument and Control System Department of Amvaje Abi, with over 15 years of practical experience in industrial automation and precision instruments, has become a key player in providing suitable solutions for major industries, including oil and gas, petrochemicals, steel, etc.

The primary activities and services of the Instrument and Control System Department at Amvaje Abi:

- Consultation and Engineering
- Software design and development
- Conducting FAT processes
- Upgrading and Revamping
- Procurement of project components
- Design of engineering documents and documentation
- Control systems Integration and precision instruments
- Cybersecurity Based On Project Requirements
- SAT
- Commissioning
- Repair and Maintenance
- Training
- Project Management

Customers



Implemented Standards

ISO9001-2015

Certificates and Standards

Membership in the AVL of the Oil Ministry



انجمن صنایع الکترونیک اموج آبی
تاریخ پوزیشن: ۱۳۹۸

شماره ملی: ۱۵۳۱۳۵۸۰۹
شماره ملی: ۱۵۳۱۳۵۸۰۹
شماره ملی: ۱۵۳۱۳۵۸۰۹

ردیف	نام شرکت	نوع فعالیت	تاریخ عضویت	نام مدیرعامل	نام مدیرعامل	نام مدیرعامل
۱	شرکت صنایع الکترونیک اموج آبی	تولید تجهیزات الکترونیک	۱۳۹۸/۰۳/۰۱	مهندس مهندس	مهندس مهندس	مهندس مهندس

اینجانب، **مهندس مهندس**، مدیرعامل شرکت صنایع الکترونیک اموج آبی، به اینجمن صنایع الکترونیک اموج آبی عضویت یافته‌ام.

شماره ملی: ۱۵۳۱۳۵۸۰۹
شماره ملی: ۱۵۳۱۳۵۸۰۹
شماره ملی: ۱۵۳۱۳۵۸۰۹

Membership Certificate Of Industrial Automation Companies Association



انجمن صنایع شرکت‌های اتوماسیون صنعتی
گواهی عضویت

شماره عضویت: ۹۸۱۰۳
تاریخ صدور: ۱۳۹۸/۰۳/۰۱
شماره عضویت: ۹۸۱۰۳
تاریخ صدور: ۱۳۹۸/۰۳/۰۱

Association of Industrial Automation Companies
CERTIFICATE OF MEMBERSHIP

MEMBERSHIP NO: 98102
ISSUE DATE: Aug.22.2020
REGISTRATION DATE: Aug.23.2019
VALID UNTIL: 06.21.2021

رئیس هیأت مدیره
مهندس مهندس

Membership Certificate Of Association of Oil and Gas Industry Equipment Manufacturers



انجمن صنایع تجهیزات صنعت نفت و گاز
گواهی عضویت

شماره ملی: ۱۵۳۱۳۵۸۰۹
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اینجانب، **مهندس مهندس**، مدیرعامل شرکت صنایع تجهیزات صنعت نفت و گاز، به اینجمن صنایع تجهیزات صنعت نفت و گاز عضویت یافته‌ام.

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شماره ملی: ۱۵۳۱۳۵۸۰۹
شماره ملی: ۱۵۳۱۳۵۸۰۹

Operation License



وزارت نفت
گواهی مجوز

شماره مجوز: ۹۸۱۰۳
تاریخ صدور: ۱۳۹۸/۰۳/۰۱
شماره مجوز: ۹۸۱۰۳
تاریخ صدور: ۱۳۹۸/۰۳/۰۱

اینجانب، **مهندس مهندس**، مدیرعامل شرکت صنایع تجهیزات صنعت نفت و گاز، به این وزارت نفت مجوز فعالیت یافته‌ام.

شماره مجوز: ۹۸۱۰۳
تاریخ صدور: ۱۳۹۸/۰۳/۰۱
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تاریخ صدور: ۱۳۹۸/۰۳/۰۱

Technology Unit Certificate



انجمن صنایع تجهیزات صنعت نفت و گاز
گواهی مجوز واحد فناوری

شماره مجوز: ۹۸۱۰۳
تاریخ صدور: ۱۳۹۸/۰۳/۰۱
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شماره مجوز: ۹۸۱۰۳
تاریخ صدور: ۱۳۹۸/۰۳/۰۱

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جمهوری اسلامی ایران
 مجلس شورای اسلامی
 وزارت معارف و اوقاف و صنایع مستظرفه

شماره: ۱۳۳۴
 تاریخ: ۱۳۳۴/۱/۱

به استحضار می‌رساند که:

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 ۲- ...
 ۳- ...

این سند در تاریخ ... در محل ...

امضاء: ...
 مهر: ...

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بسم الله الرحمن الرحيم

ملفوظات

میرزا محمد باقر

در بیان مرام حرکت ملت گزینانک هجرت الی

مکه شریف و در آید که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

که از این حرکت ملت گزینانک هجرت الی مکه شریف و در آید که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

است و حرکت ملت گزینانک هجرت الی مکه شریف و در آید که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

باین جنبش می بیند که این حرکت ملت گزینانک هجرت الی مکه شریف و در آید که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

مجموعه را در این مرامی که هر یک از این مرامی که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

باین مرامی که هر یک از این مرامی که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

و این است که این مرامی که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

هر دو با هم یک مرام و این مرامی که در هر باره مستحقه این مرتبه شریفی که خود را از این مرام و مرامی خود را می بیند

میرزا محمد باقر

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