Delivering Standards-Based Technical Resources to the Industrial Automation Community

The International Society of Automation (ISA) (www.isa.org) is a non-profit professional association founded in 1945 to create a better world through automation. ISA advances technical competence by connecting the automation community to achieve operational excellence. The organization develops widely used global standards; certifies industry professionals; provides education and training; publishes books and technical articles; hosts conferences and exhibits; and provides networking and career development programs for its 40,000 members and 400,000 customers around the world.

Industries we serve:

- Aerospace
- Automotive
- Building Automation
- Chemical
- CPG
- Food & Beverage
- Mining & Metals
- Oil & Gas
- Packaging
- Pharmaceutical
- Power & Energy
- Pulp & Paper
- Textiles
- Warehouse & Logistics
- Water & Wastewater

Technical topics we specialize in:

- Smart Manufacturing/ Industry 4.0
- Continuous and Batch Processing
- Connectivity & Cybersecurity
- Discrete Manufacturing & Machine Control
- Operations & Management

How does ISA and its brand family bring value to automation professionals?

For engineers, technicians, and management engaged in industrial automation, ISA is the trusted providerof standards-based technical resources, driving the advancement of individual careers and the overall profession.

ISA's brand family exists to serve automation professionals around the world. ISA's brand family includes:

ISA	ISA delivers cutting-edge, peer-reviewed technical resources
AUTOMATION FEDERATION	The Automation Federation unifies stakeholders around cybersecurity, workforce development, and STEM initiatives
ISASecure®	ISASecure® offers standards-based industrial cybersecurity conformance assessments
ISA100 WIRELESS™	ISA100 WCI offers standards-based wireless conformance assessments
AUTOMATION.COM	Automation.com delivers real-time automation news and digital content
ISA GLOBAL CYBERSECURITY ALLIANCE	ISA Global Cybersecurity Alliance is a collaborative forum to advance cybersecurity awareness, education, readiness, and knowledge sharing

For more information about ISA's brand family, visit brandfamily.isa.org.

Standards

ISA is recognized globally for the development of consensus industry standards for automation technologies and applications. With over 150 standards documents, ISA's key areas of focus include cybersecurity, process safety, management of alarms, batch process control, enterprise-control integration, wireless communications, and traditional instrumentation, measurement, and control. Over 4,000 industry professionals on 140 committees and subcommittees have contributed to the development of ISA standards.

ISA is accredited by the American National Standards Institute (ANSI) to create standards that uphold open participation rules and a balance of interests among users, suppliers, integrators, regulators/government, and other participants. ISA standards are published as American National Standards and most are submitted through ANSI to receive international standard adoption through the International Electrotechnical Commission (IEC) based in Geneva.

When a standard reaches wide-scale industry adoption, manufacturing companies must prove their conformance or verify that their vendor procurement aligns with the intent of the standard. ISA's brand family includes two compliance institutes to assist with this process: the ISA Security Compliance Institute (**www.isasecure.org**) and the ISA100 Wireless Compliance Institute (**www.isa100wci.org**.)

Learn more: **www.isa.org/standards**

A few of ISA's most popular standards:

- Management of Alarm Systems for the Process Industries (ISA-18/IEC 62682)
- Functional Safety: Safety Instrumented Systems for the Process Industry Sector (ISA-84/IEC 61511)
- Batch Control Systems (ISA-88/IEC 61512)
- Enterprise-Control System Integration (ISA-95/IEC 62264)
- Cybersecurity for Industrial Automation and Control Systems (ISA-99/IEC 62443)
- Wireless Systems for Automation (ISA-100/IEC 62734)
- Instrumentation Symbols and Identification (ISA-5)
- Human Machine Interfaces for Process Automation Systems (ISA-100)
- Intelligent Device Management (ISA-108)

Certification

ISA certification provides an objective, third-party assessment, and confirmation of an individual's skill set. Certification programs help improve company ROI by impacting mission-critical decisions, increasing safety and productivity, and establishing professional credentials for both engineers and technicians alike.

ISA currently offers two certification programs: Certified Automation Professional® (CAP®) and Certified Control Systems Technician® (CCST®).

ISA's certification programs are based on real-world requirements and undergo a rigorous and scientific development process. Each program leverages ISA's standards and technical content, which adds practicality as well as value to professionals working within the industry.

The ISA Certified Automation Professional (CAP) Program tests proficiency in the direction, design, and deployment of systems and equipment. The areas of the exam include: Feasibility Study; Definition; System Design; Development; Deployment; and Operations & Maintenance.

The ISA Certified Control Systems Technician (CCST) Program features three levels (I, II, and III.) The CCST exams test proficiency in calibrating, documenting, troubleshooting, and repairing/replacing instrumentation. The areas of the exam include: calibration, maintenance, repair, and troubleshooting; project start-up, commissioning, loop-check, project organization, and planning; documentation; and administration, supervision, and management.

ISA also offers two certificate programs, the ISA/IEC 61511 Safety Instrumented Systems Certificate Program and the ISA/IEC 62443 Cybersecurity Certificate Program. The certificate programs are based on ISA's world-renowned standards and consist of coursework and exams.

Certification Levels
Level I – Technician
Level II – Specialist
Level III – Master

Learn more: **www.isa.org/certification**

Education and Training

ISA offers flexible, dynamic, and industry-relevant training designed to meet the demands of a fast-paced schedule. Recognized as a worldwide leader in vendor-neutral, standards-based education and training programs— ISA provides expert-taught knowledge to automation professionals across all levels of experience.

ISA's courses are respected worldwide for their unbiased, practical approach to technology application. For more than 75 years, ISA has built upon its proven track record of identifying and providing the real-world resources needed by organizations and automation and control professionals by working with leading content experts to deliver rapid, customized solutions.

Choose your training, and customize your delivery:

- Instructor-led, classroom courses: attend a course in a convenient regional location covering a variety of hot topics
- Online, instructor-assisted training courses: experience a flexible, multi-week format that allows you to complete an ISA course anytime, anywhere
- Online courses: choose from dozens of courses and course libraries on fundamental topics, such as automation and control, electrical maintenance, industrial awareness, machine technology, mechanical maintenance, predictive maintenance, and workplace skills
- Live and recorded webinars: interactive presentations, conducted via the Internet and your telephone
- On-site, instructor-led courses and certification exams at your location: bring an ISA course to you and save your company time, travel costs, and downtime
- Innovative boot camp courses on critical topics: experience condensed learning, access to ISA's industry experts, plant tours, and hands-on lab exercises
- Hands-on portable laboratories: immerse yourself in experiential learning through our innovative labs, which are incorporated into many of our in-person courses

Learn more: **www.isa.org/training**

Publishing

ISA is the authoritative publisher of technical resources covering the automation profession. Written and reviewed by experts, these publications help keep automation professionals fully informed about the latest technological developments, applications, trends, and standards.

ISA's publishing portfolio includes a library of books focusing on the real-world application of technologies and methodologies across numerous topics such as cybersecurity, instrumentation, process control, wireless technology, and much more. ISA publishes a bi-monthly magazine, *InTech*, leveraging the vast knowledge, industry proven technical skills, and in-depth experience of thousands of subject-matter experts to deliver compelling content in print and digital editions.

Designed for research professionals and academia, ISA publishes an award-winning journal, *ISA Transactions*, focused on advances in the science and engineering of measurement and automation.

In addition to these innovative publications, ISA members can easily access over 5,500 technical papers online, covering every area of automation.

Through ISA's ownership of Automation.com, readers and advertisers can access enewsletters, web articles, online topic-focused portals, white papers, video alerts, online advertising, the ISA Directory of Automation, and the ISA Job Board.

Learn more: **www.isa.org/publishing**

ISA's Best Selling Book Titles
- *Safety Instrumented Systems: Design, Analysis, and Justification, Second Edition*
- *A Guide to the Automation Body of Knowledge, Second Edition*
- *Safety Instrumented Systems Verification: Practical Probabilistic Calculations*
- *The Condensed Handbook of Measurement and Control, Third Edition (with CD)*
- *Calibration: A Technician's Guide*
- *Troubleshooting: A Technician's Guide, Second Edition*
- *Measurement and Control Basics, Fifth Edition (with CD)*
- *Fundamentals of Industrial Control, Second Edition (with CD)*
- *SCADA: Supervisory Control and Data Acquisition, Fourth Edition*

www.isa.org

Conferences and Events

ISA hosts six annual events that provide quality education, the latest automation developments, and real-world scenarios, with presentations delivered by experts, peers, and industry leaders. ISA's conferences include expert technical presentations, social functions, and exhibit opportunities.

ISA's Annual Events include:

ISA Analysis Division Symposium
Exploring leading-edge in process stream and laboratory method analysis

ISA Cybersecurity Standards Implementation Conference
Focusing on awareness and solutions for organizational threats/vulerabilities with a standards-based cybersecurity program

ISA Digital Transformation in Deepwater Production Conference
Analyzing applications of technology that accelerate the facilities design process, while improving safety and efficiency

ISA Energy & Water Automation Conference
Implementing novel solutions to complex problems in the power generation and municipal water/wastewater systems

ISA IIoT & Smart Manufacturing Conference
Illustrating advances in connectivity, automation, and security

ISA Process Industry Conference
Fostering safe and effective process measurement and control

Learn more:
www.isa.org/conferences

Membership

ISA is the professional home for engineers, technicians, leaders, and students engaged in industrial automation. We are creating the future of automation, and we need your skills and insight to make it happen. Join us!

ISA Membership Benefits:

- Network with automation professionals around the world through geographic sections and technical divisions
- Engage in technical conversations and share best practices through ISA Connect
- Online access to ISA standards, recommended practices, and technical reports developed by industry experts
- Expand automation knowledge by attending and presenting at industry-specific events throughout the year
- Access to the ISA Automation Career Center
- Take on a leadership role at the local, technical, or society level to develop and improve creativity, decision-making, and communication skills
- Earn a certification through ISA's unbiased, vendor-neutral training and certification programs, which help develop skills through in-depth, real-world material
- Receive a subscription to *InTech*, the premier magazine for automation professionals
- Online viewing of *ISA Transactions*, which covers the latest advances in the science and engineering of measurement and automation

Learn more:
www.isa.org/membership

> *The most important benefits of being an ISA member are access to the most current technical information and expertise from other people in the industry that you cannot get any other way.*
>
> —Brian Mast
> Copper Bell Consulting LLC
> Seattle, Washington, USA

For more information, and to join ISA, visit www.isa.org