

BROCHURE

Feed Your Success

Improve efficiency, safety and durability in the food and beverage industry



ABB can provide you with stronger, cleaner, safer electrical connections, lighting and wire management systems

No matter how tough the challenge, innovative wiring, lighting and electrical installation systems from ABB will help you efficiently run your facility, increase your productivity, boost your profitability and produce quality products. Here are some ways our solutions stand above the rest.

Thorough testing

ABB products are lab tested for use in harsh environments, with proven results in thousands of locations.

Longer product life

ABB conduits, cables and fittings, designed for harsh environments, resist corrosion and decay, extending the life of electrical systems in some cases by as much as 300 percent.

Durability

ABB electrical products are built to withstand the severe conditions existing in your facility. Equipment that lasts longer with fewer changeovers equals more uptime—and more profit for your operation.

Cleanliness & Food Safety

ABB is continually developing innovative products that safeguard your facility, such as bacteria-resistant cable protection, cable ties, and wall offsets that kill up to 99 percent of microbes on their surfaces—even between washdowns.

Less Downtime

With production plants around the world, we can get products to you when and where you need them. ABB also designs products that are easy to install, cutting downtime.

Cleanliness. Reliability. Durability. ABB.

We feed your success.

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Liquid & Dust Ingress Protection

Harsh washdowns and particulate-laden conditions can quickly lead to failure.

That's why fittings, conduits and cable glands from ABB undergo rigorous testing in our state-of-the-art labs to ensure they meet the highest standards of ingress protection—up to IP69.

With cleanable fittings available in a broad range of materials and conduit available in flexible, rigid, metallic or non-metallic formats, we have a solution to keep your electrical connections in service longer, with fewer failures, no matter how harsh the conditions. Preventing liquid ingress can reduce your electrical downtime 40% to 50% —a direct boost to your bottom line.

Spotlight

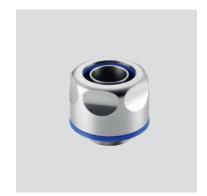
Protection Above and Beyond the Requirements ABB's State-of-the-Art Ingress Protection Testing Facility in Coleshill, England, tests the water-tightness of our products to levels that meet the limits set by IP69 standards.





What does NSF certification mean?

NSF International is a privately funded agency that creates public health and certification standards for critical industries, such as the food and beverage sector. The NSF mark assures you that a product has been rigorously tested for compliance to the agency's global standards.



SAM Single-piece Stainless Steel Fitting

- Suitable for splash zone areas and food processing equipment
- 316 stainless steel
- Face seal materials adhere to FDA and European food contact regulations
- IP 67 to IP69
- High corrosion and chemical resistance
- High fatigue life and broad temperature range



Russellstoll[°] Pin-and-sleeve Connections

- Waterproof
- Tested to 1,000 psi for washdown applications
- Full line of 20 amp to 60 amp connectors, plugs and receptacles
- Up to IP69



FSCG and FSEM Series Cable Glands

- NSF approved for food and beverage use
- 316 stainless steel
- Suitable for splash zones and washdown areas
- IP66-IP69
- FDA compliant EPDM seals
- Corrosion resistant
- Suitable for use with non-armored cable, portable cord, and tray cable
- FSEM Series suitable for use with tape or foil shielded cable, braid screened cable, and coaxial cable



T&B[°] Liquidtight Systems

- Simple installation
- High temperature thermoplastic seals keep liquids out
- Pumpkin-shaped exterior sheds liquids, prevents pooling
- 316 stainless steel, aluminum, high temperature
- Flexible conduit types available to combat temperature extremes, oil and chemicals
- NSF certified conduits available, made from FDA compliant materials

COMPLETE SYSTEMS FLEXIBLE CONDUIT SYSTEMS

- BACTERIA-RESISTANT CONDUITS AND FITTINGS
- NON-METALLIC CONDUITS
- METALLIC AND NON-METALLIC FITTINGS
- LIQUIDTIGHT SYSTEMS
- NSF APPROVED CONDUITS
- EX-NSF APPROVED CABLE GLANDS

RIGID CONDUIT SYSTEMS

STAINLESS STEEL CONDUITS

LU[®] CONDUIT BODIES

STAINLESS STEEL AND OCAL® FITTINGS

STAINLESS STEEL, OCAL[®], BLUEKOTE[®] AND SAND CAST ALUMINUM CONDUIT BODIES

BOXES AND COVERS

METAL BOXES

CONNECTIVITY & GROUNDING

MOTOR LEAD DISCONNECTS IEC CONNECTORS WATERTIGHT CONNECTORS

METAL FRAMING AND CABLE TRAY

PEAKED COVERS

HAZARDOUS LOCATIONS

HAZARDOUS AREA LIGHTING HAZARDOUS AREA PANELS NEMA ENCLOSURES

LIGHTING

Food Safety

Preventing and controlling bacterial resistance down to a microbial level is difficult, but ABB has a line of engineered products that can help your facility meet new regulations and prevent contamination.

Our Adaptaflex® flexible conduit is coated with silver-ion infused protection capable of killing 99 percent of microbes on its surface within two hours of contact—conduit that keeps on cleaning long after the washdowns are over. New Ag⁺-infused wall offsets inhibit the growth of bacteria on the product's surface and provide for 360-degree cleaning of critical equipment. The Ty-Rap detectable cable tie, infused with a specially formulated material compound, is easily detected by equipment that scans food lines for contamination.

At ABB, everything we do for the Food & Beverage industry is designed to help main your product's integrity.

An average food recall costs \$10 million—not including the loss of reputation and consumer trust.

Featured Products



SuperClean[™] Wall Offsets

- Inhibits bacterial growth on the spacer surface
- Offsets conduit, pipes and equipment from walls and posts, allowing for 360-degree access and clean around
- Helps to comply with strict regulatory standards



Adaptaflex° Flexible Conduit with Bacteria-resistant Properties

- Bacteria-resistant protection incorporated into an FDA, EC and FSA compliant DuPont Hytrel[®] jacket
- 316 stainless steel fittings protect connections up to IP69
- High corrosion resistance and fatigue life
- Galvanized steel and stainless steel core conduits available

Ty-Rap° Detectable Cable Ties

 Infused with a specially formulated material compound to increase detectability to protect your product from unnecessary contamination



Ty-Fast[®] Ag⁺ Bacteria-resistant Cable Ties

- Protects itself against bacteria, mold and fungus
- Promotes a clean environment 99.9% effective for bacterial reduction



COMPLETE SYSTEMS FLEXIBLE CONDUIT SYSTEMS

BACTERIA-RESISTANT CONDUITS AND FITTINGS

NON-METALLIC CONDUITS AND FITTINGS

STAINLESS STEEL 316 FITTINGS UP TO IP69

RIGID CONDUIT SYSTEMS

STAINLESS STEEL CONDUITS

LU[®] CONDUIT BODIES

STAINLESS STEEL AND OCAL® FITTINGS

STAINLESS STEEL, OCAL[®], BLUEKOTE[®] AND SAND CAST ALUMINUM CONDUIT BODIES

METAL FRAMING AND CABLE TRAY

WALL OFFSETS MODULAR FRAMING CHANNEL AND ACCESSORIES CLAMPS AND HANGERS METAL FRAMING FASTENERS

FASTENING SYSTEMS DETECTABLE CABLE TIES BACTERIA-RESISTANT CABLE TIES



Spotlight

Silver ion microbial protection Scientists have long known that silver ion treatments can impede microbial growth. Our technology incorporates that knowledge into products that can

help keep your plant safe from contamination. Adaptaflex° bacteriaresistant conduit, Ty-Fast Ag⁺ cable ties and SuperClean[™] nylon wall offsets prevent 99 percent of most microbes on their surfaces within two hours of contact, staying clean even between washdowns. Clean to the microbial level.

Corrosion Resistance and Harsh Environments

Corrosion is a major cause of downtime in electrical systems. Harsh chemicals, pressurized washdowns and dissimilar metals in contact with one another can accelerate the corrosion process.

Innovative products from ABB are designed to save you time and replacement costs with an array of corrosion preventive products that resist chemical attacks and washdown incursions. In every corner of your plant, from emergency lighting to junction boxes to the conduit that carries your power — we have products that can keep you operating longer, with fewer changeouts and delays.

Systems from ABB can extend the life of your electrical system up to 300%.



Q

Let us assess your electrical systems

Our detailed assessment of the electrical systems in your food & beverage plant will show you areas where we can improve corrosion resistance in harsh environments—potentially saving significant future costs. Call your distributor to set up a free and confidential walk-through today.





Ocal° Conduit and Fittings

- Watertight fit helps reduce condensation
- Rugged PVC coating stops corrosion before it starts
- LU conduit bodies fit multiple configurations helping to reduce SKUs



Stainless Steel Conduit and Fittings

- Cleanable surfaces
- Protects against corrosion
- Conduit, conduit bodies, fittings and elbows in a broad array of sizes
- Lines of 304 and 316



Sand Cast Form 7 Conduit Bodies

- CorroStall[®] aluminum alloy; among the most corrosion-resistant
- Available in all common styles and sizes, including the SKU-reducing LU universal elbow

COMPLETE SYSTEMS FLEXIBLE CONDUIT SYSTEMS

BACTERIA-RESISTANT CONDUITS AND FITTINGS

NON-METALLIC CONDUITS

METALLIC AND NON-METALLIC FITTINGS

LIQUIDTIGHT SYSTEMS

NSF APPROVED CONDUITS

EX-NSF APPROVED CABLE GLANDS

RIGID CONDUIT SYSTEMS

STAINLESS STEEL CONDUITS LU® CONDUIT BODIES STAINLESS STEEL AND OCAL® FITTINGS STAINLESS STEEL, OCAL®, BLUEKOTE® AND SAND CAST ALUMINUM CONDUIT BODIES

BOXES AND COVERS

METAL BOXES

CONNECTIVITY & GROUNDING

IEC CONNECTORS WATERTIGHT CONNECTORS

METAL FRAMING AND CABLE TRAY

WALL OFFSETS MODULAR FRAMING CHANNEL AND ACCESSORIES CLAMPS AND HANGERS CABLE TRAYS BASKET TRAYS PEAKED COVERS METAL FRAMING FASTENERS

FASTENING SYSTEMS

DETECTABLE CABLE TIES UV-RESISTANT CABLE TIES CHEMICAL-RESISTANT CABLE TIES BACTERIA-RESISTANT CABLE TIES STAINLESS STEEL CABLE TIES WIRING DUCTS

HAZARDOUS LOCATIONS

HAZARDOUS AREA LIGHTING HAZARDOUS AREA PANELS NEMA ENCLOSURES

LIGHTING

Condensation Protection

In your facility where harsh washdowns are a daily fact of life, condensation is one of your electrical system's biggest enemies.

ABB fittings are designed with rounded edges to help prevent liquid pooling and are extensively tested to ensure watertight fits that can limit internal condensation.

When condensation does occur inside boxes and enclosures, the stainless steel drain adapter and ball valve is an inexpensive and convenient tool for draining liquid before it build ups and inflicts damage. Our research is focused on finding innovative solutions to keep your equipment dry and functioning longer, even in the challenging temperature differentials caused by hot washdowns.

PMA° nylon solutions have low thermal conductivity which can help prevent condensation and subsequently corrosion.





Stainless Steel Drain Adapter and Ball Valve

- Easy to install
- Drains condensates from the inside of electrical boxes
- NSF certified. FDA-approved materials
- Can be set to drain continuously or through manual control
- No internal moving parts to clog
- Curved surfaces and built-in gasket prevent direct liquid intrusion from washdowns



T&B° Cable Tray

- Built in aluminum, steel and non-metallic fiberglass to work in any environment
- Modular construction ensures easy installation and proper fit
- Peaked covers shed liquids, prevents pooling



PMA° Flexible Nylon Conduit and Fitting Systems

- Nylon has low thermal conductivity preventing condensation from occurring
- Over extruded conduit is smooth for
 easy cleaning
- Withstands constant vibration
- IP69 connections
- NSF certified components for the food zone non contact and splash zones
- FDA compliant materials
- Zero corrosion

COMPLETE SYSTEMS FLEXIBLE CONDUIT SYSTEMS

BACTERIA-RESISTANT CONDUITS AND FITTINGS

NON-METALLIC CONDUITS

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NSF APPROVED CONDUITS

EX-NSF APPROVED CABLE GLANDS

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STAINLESS STEEL CONDUIT

LU[®] CONDUIT BODIES

STAINLESS STEEL AND OCAL® FITTINGS

STAINLESS STEEL, OCAL[®], BLUEKOTE[®] AND SAND CAST ALUMINUM CONDUIT BODIES

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IEC CONNECTORS WATERTIGHT CONNECTORS

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LIGHTING

Hazardous Locations

ABB's hazardous product solutions can help keep your electrical connections safe and secure, even in areas where potentially hazardous dust, gases or chemicals are a concern.

Our wide variety of high-performance, explosion-proof solutions are specifically designed to protect electrical equipment in NEC-defined hazard zones, even if frequent washdowns are involved. For areas ranging from chemical storage rooms to dust-generating zones, we have innovative solutions that allow you to run your equipment with security and ease Explosion-proof connections and lights from ABB help keep workers safe in areas filled with flammable grain, flour or sugar dust.

Featured Products



Hazlux[®] Location Lighting

- Explosion-proof fixtures for Class I, II and III hazardous locations
- Enclosed, gasketed and rated NEMA 4X, IP66 and UL 1598 for wet locations



T&B° XP Explosion-proof Flexible Couplings

- Explosion-proof and corrosion resistant
- Suited for high motion and vibration installations



Russellstoll[®] MaxGard[®] Explosion-proof Connection Devices

- Safety center ground pin makes first contact and breaks last
- Waterproof even when connections are not mated
- Pull-and-turn withdrawal offers all plugs an explosion-proof rating



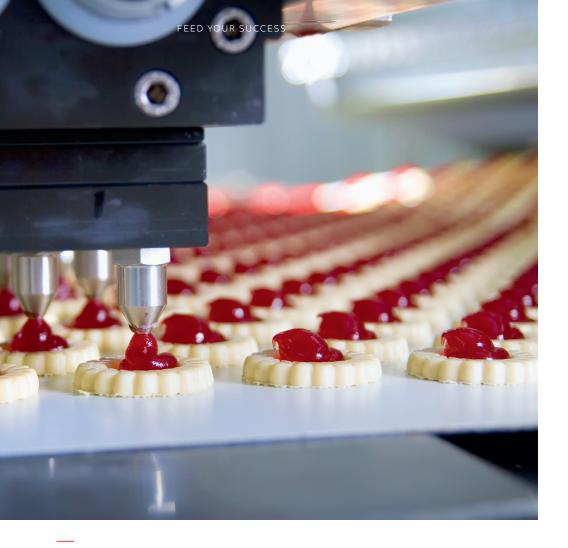
IEC Aluminum Enclosure

- Robust construction
- Can be supplied with terminals and glands so all on site combinations are covered



XPCJ Series Explosion Proof Enclosure

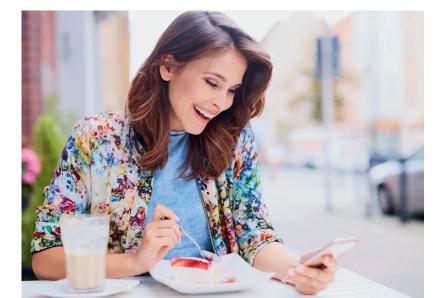
 Special Nitrile rubber cover gasket NEMA 4 watertight seal for corrosion and water



Spotlight

Hazard zones

In North America, the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) rate equipment for use in potentially hazardous conditions that may be found in three main classifications. Class I locations are areas in which flammable vapors and gases may be present. Class II locations may involve combustible dust. Class III areas involve ignitable fibers and flyings. Other regions, including Europe, divide work spaces into Zones 0, 1 and 2 depending on the likelihood that hazardous vapors will be present, or into Zones 20, 21 and 22 depending on the likelihood that hazardous dust will be encountered. Equipment may be labeled for use in either system, or in both.



COMPLETE SYSTEMS FLEXIBLE CONDUIT SYSTEMS

BACTERIA-RESISTANT CONDUITS AND FITTINGS

NON-METALLIC CONDUITS

METALLIC AND NON-METALLIC FITTINGS

LIQUIDTIGHT SYSTEMS

NSF APPROVED CONDUITS

EX-NSF APPROVED CABLE GLANDS

RIGID CONDUIT SYSTEMS STAINLESS STEEL CONDUITS

CONNECTIVITY & GROUNDING MOTOR LEAD DISCONNECTS GROUNDING SYSTEMS TOOLING

METAL FRAMING AND CABLE TRAY

BACTERIA-RESISTANT WALL OFFSETS MODULAR FRAMING CHANNEL AND ACCESSORIES CLAMPS AND HANGERS METAL FRAMING FASTENERS

FASTENING SYSTEMS

DETECTABLE CABLE TIES UV-RESISTANT CABLE TIES CHEMICAL-RESISTANT CABLE TIES BACTERIA-RESISTANT CABLE TIES STAINLESS STEEL CABLE TIES WIRING DUCTS

PERSONAL SAFETY

CUSTOM LABELS TAGS BARRICADE TAPE SIGNS MARKER BOOKS

HAZARDOUS LOCATIONS

HAZARDOUS AREA PANELS HAZARDOUS AREA JUNCTION BOXES NEMA ENCLOSURES DTS EXPLOSION-PROOF EQUIPMENT

LIGHTING

Continuous Operations

Our long-lasting equipment keeps you moving, and that can be a big factor in maintaining and boosting your bottom line.

We enhance your OEE—operational equipment effectiveness with products that are designed to minimize the problems that can lead to failure in your electrical equipment: liquid intrusion, corrosion, pull-outs, power failures and electrical faults. When the power goes out, our uninterruptible power supplies can keep your operation running. When small faults erode the effectiveness of your systems, our faulted circuit indicators can help you find the problems quickly. When it is time to do a change-out, we supply products that are as easy as possible to remove and install, from quick-change motor lead disconnects to snap-in cable glands. In addition, our many innovative range-taking products, such as the BluKote[®] LU[®], allow you to reduce SKUs and reduce installation errors.

Long lasting products designed for easy installation can reduce your changeover and downtimes by 40 to 50%.

Spotlight

NEMA ratings

National Electrical Manufacturers Association (NEMA) represents around 350 manufacturers of electrical and medical imaging equipment. It serves as a forum for developing technical standards that are intended to promote the safe and effective design, installation and use of electrical products. ABB is a longstanding member.





Let us assess your electrical systems Our detailed assessment of the electrical systems in your food and beverage plant will show you areas where we can improve liquid and dust ingress protection—potentially saving significant future costs. Call your distributor to set up a free and confidential walk-through today.



Color-Keyed[®] Motor Lead Disconnects

- Fast, secure connections for quicker motor change out
- Eliminates torqueing and taping
- Includes sealing boot to keep liquids out
- Available with duct seal to prevent moisture from getting into the connector assembly inside the boot

Type A Liquidtight Conduit Systems

- Watertight steel or plastic fittings connect flexible conduit solidly to enclosures
- High pull out resistance
- Fewer pull outs and high vibration resistance mean fewer repairs and fewer changeovers



Sta-Kon[°] Terminals

- Long, serrated barrels for reliable crimping and high pullout resistance—fewer failures and repairs
- High conductivity copper with corrosionresistant plating
- Standard-setting terminals in all sizes



Joslyn° Surge Protection Devices

- Global leader in surge protection
- Protects operations against lightning strikes, internal surges
- Backed by thorough lab testing
- Installed in more than 130 countries
- Meets or exceeds UL 1449 4th edition standards



Fisher-Pierce[®] Faulted Circuit Indicators

- Quickly locates faults; shortens outages
- Adaptive reset logic eliminates need for replacement as load changes
- SCADA ready for remote communication
- Option for temporary fault detection to
- locate time-consuming intermittent failures

COMPLETE SYSTEMS FLEXIBLE CONDUIT SYSTEMS

BACTERIA-RESISTANT CONDUITS AND FITTINGS NON-METALLIC CONDUITS METALLIC AND NON-METALLIC FITTINGS LIQUIDTIGHT SYSTEMS NSF APPROVED CONDUITS EX-NSF APPROVED CABLE GLANDS

RIGID CONDUIT SYSTEMS

STAINLESS STEEL CONDUITS OCAL® PVC-COATED CONDUITS LU® CONDUIT BODIES STAINLESS STEEL AND OCAL® FITTINGS STAINLESS STEEL, OCAL®, BLUEKOTE® AND SAND CAST ALUMINUM CONDUIT BODIES

BOXES AND COVERS

METAL BOXES

CONNECTIVITY & GROUNDING

MOTOR LEAD DISCONNECTS IEC CONNECTORS WATERTIGHT CONNECTORS TERMINALS GROUNDING SYSTEMS TOOLING

METAL FRAMING AND CABLE TRAY

BACTERIA-RESISTANT WALL OFFSETS MODULAR FRAMING CHANNEL AND ACCESSORIES CLAMPS AND HANGERS METAL FRAMING FASTENERS

FASTENING SYSTEMS

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PERSONAL SAFETY

CUSTOM LABELS TAGS BARRICADE TAPE SIGNS MARKER BOOKS

HAZARDOUS LOCATIONS

HAZARDOUS AREA PANELS HAZARDOUS AREA JUNCTION BOXES NEMA ENCLOSURES DTS EXPLOSION-PROOF EQUIPMENT

LIGHTING



Personal Safety

Between lost time and the sheer cost of injury, safety in the workplace means everything, and a safe work environment is produced by having the proper measures in place.

Emergency lighting illuminates escape paths and exit doors. Signage alerts people to potential dangers. Safety switches, relays, light curtains and controllers can shut down equipment before serious consequences ensue.

Workers in food manufacturing are more likely to be injured or killed than workers in private manufacturing as a whole.

ABB provides products to help keep people safe in your plant, from the front door through the loading docks, with materials that are water sealed and cleanable. We help your people, and your bottom line, stay healthy.

Featured Products



Jokab Safety Switches, Light Curtains, Relays & Sensors

- Systems can automatically protect large work areas against multiple hazards
- Universal relays available
- Designed to withstand washdowns, harsh conditions



E-Z-CODE[®] Danger and Warning Labels and Signs

- Automated wire markers and printers
- Lockout/tagouts
- Safety signs and hazard tapes
- Multiple varieties for resistance to heat, solvents, abrasion



Emergi-Lite[®] Emergency Lighting

- Survive-All[™] egress lighting and exit signs NEMA-4x and NSF approved
- HP Remote Series for washdown areas, wide temperature fluctuations
- Bright, economical LED
 designs



Stainless Steel Emergency Lighting

 Uniform and excellent pictogram lighting available in both wall-mounted and ceiling-mounted models









The ABB Benefit

From field to fork, ABB's extensive offering of products and services can help feed your success.

Our ability to serve extends well beyond the electrical connection systems, lighting and wire management you need to keep your plant up and running.

ABB is a trusted brand and a global partner with local expertise that can provide you with cutting edge power and productivity solutions. From sophisticated process controls and monitoring devices to efficient power supplies that improve manufacturing, ABB's comprehensive portfolio has the total recipe for your success.

Along with the equipment, we provide comprehensive service. No matter where you operate, our worldwide network of sales and service is available to help you choose the right systems, install them effectively and maintain them in the most efficient manner.

Whether you are building a processing facility from the ground up or trying to maintain one more effectively, we will work together to develop the products you need and create easy, smart and costeffective solutions to improve maintenance, efficiency and up-time for your facility. We are the technology partner that will power, automate and digitalize your future.

ABB. We feed your success.



ABB Inc. Electrification Products Installation Products 860 Ridge Lake Boulevard Memphis, TN 38120

new.abb.com/low-voltage/industries/food-beverage

Customer Service 800-816-7809 7:00 a.m. - 5:30 p.m., CST, Monday-Friday elec_custserv@tnb.com

Technical Support

888-385-1221, Option 1 7:00 a.m. - 5:30 p.m., CST, Monday-Friday lvps.support@us.abb.com

All products may not be available in your area. Please contact your ABB representative for more information.