



Liquid Ingress Protection

Thomas & Betts. Your best connection for innovative solutions.

Thomas & Betts

The financial impact of allowing liquid to migrate into electrical systems can be significant — whether the result of downtime or having to replace damaged components.

Thomas & Betts Solution Sets



Liquid Ingress Protection



Corrosion & Harsh Environment Protection



Grounding & Bonding



Power Quality, Efficiency & Reliability



Safety



Continuous Operation & Sustainability



Hazardous Location Protection



Total Project Cost Reduction



Extreme Temperature Protection

Liquid Ingress Can Wreak Havoc

If your electrical components are buried underground, are continuously exposed to the elements, or operate in wet conditions, liquid ingress protection is a critical element in keeping your electrical systems operational. Exposure to water in indoor or outdoor applications, condensation and accidental spills of machine oils and lubricants can all shorten the life of your electrical system. Effective protection of your electrical system can mean the difference between consistent operations, or unscheduled downtime while liquid-damaged components are replaced or the system is rebuilt.

Consider the following issues related to liquid ingress:

- Liquid ingress can deteriorate or short out an electrical system immediately or over time
- Electrical system components designed with round surfaces help to shed liquids and contaminants, rather than creating a shelf where they can collect
- Abrasive and corrosive contaminants present in many processing environments, combined with moisture, present extra challenges for liquidtight electrical components

Electrical systems with components that prevent liquid ingress — like fittings, electrical housings and conduit — help prevent corrosion and deterioration, meaning longer system life and higher operational reliability.

A Complete System to Keep You Dry

Thomas & Betts offers not only solutions for protecting your electrical system, but a complete catalog of components specifically designed to prevent liquid ingress at every level.

From T&B® Fittings Stainless Steel Liquidtight Fittings to Russellstoll® Waterproof Pin-and-Sleeve Interconnections, Thomas & Betts provides components built to ensure that your equipment and systems are protected from corrosion and deterioration caused by liquid ingress.

When building an electrical system or upgrading or maintaining your current system, trust Thomas & Betts to provide the products and solutions that lead to long-lasting electrical systems that prevent liquid ingress — from the wires up.





Delivering value through system solutions based on engineering innovation

Our Value Commitment

Thomas & Betts is committed to helping you meet the challenges of liquid ingress with electrical solutions, services and systems that deliver value. These include:

T&B Engineered solutions — Our products are designed to perform dependably under conditions such as constant moisture, harsh chemicals, extreme temperatures, high-pressure washdown, ultraviolet exposure, hazardous areas, high-vibration equipment and continuous operation.

Tested reliability — Our products are rigorously tested for use in harsh environments, with proven results in thousands of installations.

Expert support — Thomas & Betts trained sales representatives and technical services experts are available at every stage of a project, from planning and site preparation through construction and MRO.

Training and certification — Thomas & Betts conducts training programs on specific products and systems and works closely with accredited electrical industry associations. Contact us for details.

Product availability — Our industry-leading distributor network assures you of reliable and on-time delivery. This global electrical product support system ensures that our solutions are available when and where you need them.

Product Platforms

For over a century, Thomas & Betts has provided customers with electrical system solutions to help protect their people and assets, while meeting applicable codes, lowering installed costs and providing overall value.

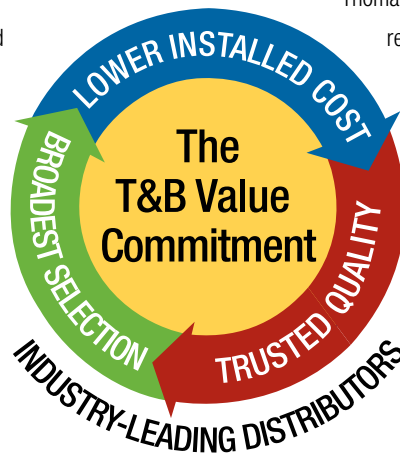
Wire and Cable Management — Thomas & Betts invented Ty-Rap® Cable Ties in 1958 and continues to lead the industry in innovative wire and cable management solutions. From cable tray systems and electrical boxes to metal framing and meter sockets, end-users depend on

Thomas & Betts products to get the job done right and to help reduce costs and installation time.

Cable Protection Systems — Electrical systems exist in harsh and corrosive environments, extreme temperatures and hazardous locations. Thomas & Betts has engineered, tested and certified cable protection solutions for all types of wires, cables and cords, offering long life and safe, reliable, maintenance-free performance, regardless of environmental conditions.

Power Connection and Control — Advanced electronic and electrical systems require signals and controls to be extremely accurate, consistent and reliable. Our power connection and control system solutions make this expectation a reality for your low-, medium- and high-voltage electrical system needs.

Safety Technology — Thomas & Betts is a worldwide leader in hazardous location lighting, emergency lighting and supporting central battery systems. We use state-of-the-art technologies to design our electrical system solutions so they meet global safety and reliability standards.





Thomas & Betts products for liquid ingress protection

Carlon®

- PVC Fittings
- Flex Conduit

Elastimold®

- Switchgear and Cable Accessories

Emergi-Lite®

- Survive-All™ Series NEMA-4X Rated Emergency Lighting
- SIPE Series Wet-Location Fluorescent Fixture

Homac®

- Flood-Seal® Insulating Covers
- Flood-Seal® Multi-Port Connectors

Iberville®

- Liquidtight Fittings
- EMT Concrete-Tight Fittings

Lumacell®

- LN Series NEMA-4X Rated Emergency Lighting
- SIPL Series Wet Location Linear Fluorescent Fixture

Ocal®

- Conduit Body with NEMA 4X Cover

PMA®

- Flexible Nylon Conduit Systems

Ready-Lite®

- TUF NM Series NEMA 4X-Rated Emergency Lighting
- SIPR Series IP65 Wet Location Linear Fluorescent Fixture

Red•Dot®

- Code Keeper® Weatherproof While-in-Use Covers
- Weatherproof Boxes and Conduit Bodies

Reznor®

- EWHB Wet-Environment/Washdown Area Heater

Russellstoll®

- Waterproof Pin-and-Sleeve Interconnections

Shrink-Kon™

- Submersible Insulation Products
- Self-Fusing Insulation Tape

Steel City®

- MopTite™ Floor Boxes

T&B® Fittings

- Cord Connectors
- Liquidtight Fittings
- Stainless Steel Liquidtight Fittings
- Liqueatite® Flexible Metallic and Nonmetallic Conduit
- Silver Grip® Fittings for Tray Cable and Portable Cord
- Star Teck® and Star Teck XP® Fittings for Jacketed Metal-Clad and Teck Cable

From wire protection to liquidtight conduit and fittings, Thomas & Betts knows how to keep your systems safe from liquid ingress in the most demanding applications.



Liquid Ingress Protection

Ocal™

Conduit Body with NEMA 4X Cover

- Ocal™ provides the only NEMA 4X rated PVC-coated conduit body cover
- Double coated inside and out for corrosion protection
- Stainless steel encapsulated cover screws can be hand-tightened — using only 15 in.-lbs. of torque — to achieve the UL® Listed Type 4X watertight rating
- UL® Listed Type 4X and NEMA 4X rating for excellent protection against washdown, moisture, rain, ice or snow



Russellstoll®

Waterproof Pin-and-Sleeve Interconnections

- O-ring sealed pin and sleeves ensure protection against liquid ingress into the connector housing
- Standard Neoprene O-ringed interior components provide separation at the front of each device
- 24 single-rate device polarizations ensure exact voltage, frequency and phase differentiation
- All system components use mating screw collars



Shrink-Kon™

Self-Fusing Insulation Tape

- Quick and easy insulation — no heat or adhesive required
- Just two layers form a moisture-proof, abrasion-resistant, dielectric seal — resistant to UV, moisture and saltwater



Nonmetallic Solutions

PMA®

Flexible Nylon Conduit Systems



- Snap-in installation provides a quick and secure connection, saving time and money
- Ingress protection conforms to recognized test methods
- Connectors are commonly IP66, IP68 or IP69K rated
- PMA® has nylon conduit systems specifically designed for extreme-temperature environments

HOMAC®

Flood-Seal® Insulating Covers



- Ensure a fully insulated, watertight and submersible splice connection

HOMAC®

Flood-Seal® Multi-Port Connectors



- Ensure a fully insulated, watertight and submersible tap connection
- All connectors are 100% Hi-Pot Tested at 4000V for 60 seconds to ensure that connectors are 100% watertight and molded correctly

Liquid Ingress Protection

T&B® Fittings

BlueKote® Conduit Bodies

- T&B® Fittings BlueKote® Conduit Bodies protect the electrical raceway against liquid ingress
- Marine-grade Type 316 stainless steel construction in rugged Form 8 design in sizes to 2" and LB, T, TB and LU® shapes
- Ferrous Form 7 and Form 8 designs in all popular sizes and shapes with triple-layer, corrosion resistant BlueKote® finish



T&B® Fittings

Liquatite® Flexible Metallic and Nonmetallic Conduit

- Creates a liquid-, dust-, and oil-tight seal
- Suitable for operating temperatures from -20° C to 60° C
- Range of flexible conduit available for use in extreme temperatures and harsh environments



Carlon® PVC Fittings



- One-piece body design requires no disassembly of components for installation

T&B® Fittings

Star Teck® Teck Fittings

- Form a mechanical grip and water- and/or oil-resistant termination
- Provide grounding continuity of cable armor



T&B® Fittings

Liquidtight Flexible Conduit Fittings

- Rounded gland nut deflects water from connector
- Continuous sealing ring ensures a liquidtight seal
- Available in steel, stainless steel, aluminum, PVC-coated, and nonmetallic



Carlon®

Flex Conduit

- Liquidtight flexible non-metallic conduit
- Non-conductive, non-corrosive and resistant to oil, acid, ozone and alkaline



PMA®

High-Performance Flexible Nylon Conduit and Fittings System

- Wide selection of flexible polyamide conduit, which provides excellent flexing and fatigue life in extreme operating temperature ranges.
- Ideal for continuous flexing or vibration applications
- Creates a liquid, dust, and oil tight seal
- Suitable for operating temperatures from -20° to 60° C



EMERGI-LITE® / LUMACELL®



All-Climate, All-Purpose Emergency Lighting



- Exit signs, battery and combo units, remote fixtures
- Extremely resistant to water, strong impacts, vibrations and variations in temperature
- Ideally suited for any environment that strains standard emergency lighting such as schools, transit platforms, parking garages, wet and cold locations and any location prone to vandalism

T&B® Fittings

Portable Cord Connectors Fittings



- Available in steel, stainless steel, aluminum, PVC-coated, and nonmetallic
- Ranger® metallic liquidtight cord fittings allows for 1/4" more range of cord, providing an opportunity to reduce inventory, taking twice the cable range of ordinary strain relief connectors
- Black Beauty® non-metallic cord connector offers the convenience of tool-free installation, with a segmented chuck for high mechanical pullout performance, and neoprene bushings for a secure, liquidtight installation

redodot®

Code Keeper® Weatherproof While-in-Use Covers



- The Code Keeper® series of while-in-use weatherproof products provides superior weather and liquid ingress protection
- "Extra-duty" metallic weatherproof while-in-use covers
- Alloy A380 aluminum and stainless steel springs for increased corrosion resistance and durability



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Visit the Thomas & Betts world of electrical product solutions

Visit our web site for more information about Thomas & Betts solutions and our newest products. For a user-friendly catalogue and competitive part number search, application and technical support and other useful information, go to: www.tnb.ca

Industry codes and specifications

All Thomas & Betts products meet or exceed applicable industry specifications or codes detailed in the appropriate Thomas & Betts product literature.



Online CAD library

Thomas & Betts offers free download of two- and three-dimensional CAD models of many of its products in more than 90 native CAD formats at: www.tnb.com/cadlibrary



All information and specifications contained in this catalogue are subject to change due to engineer design, errors and omissions. Illustrations and diagrams within this catalogue may vary from actual products.

Thomas & Betts. Your best connection for innovative solutions.

Wire & Cable Management • Cable Protection Systems • Power Connection & Control • Safety Technology

Thomas & Betts