POWER | PROTECT | CONNECT™

bel

COMPANY OVERVIEW

About Bel

Elliot Bernstein founded Bel Fuse Inc. in 1949 as a maker of automobile fuses. Bel has created and delivered power, protection and connectivity solutions for major customers ever since—from the early days of RCA television sets and IBM mainframe computers to the contemporary era of Oracle, Facebook and Tesla.

Publicly held since 1967, Bel has grown and thrived under the continuous leadership of the Bernstein family. It operates manufacturing sites, sales offices and design centers, 32 in all, across North America, Europe and Asia. Web news service Funding Universe says: "Bel enjoys a long-standing reputation as a financially stable, world-class manufacturer—the result of its ability to engineer optimal solutions to meet changing market demands and grow through strategic partnerships." President and CEO Dan Bernstein puts it more simply: "As new technologies evolve, Bel evolves with them."

Bel's transformation has been made possible through innovation and organic growth, however, acquisitions continue to be a key aspect to the growth strategy. Since 1998, Bel has acquired fourteen companies to help build out the **Power | Protect | Connect** portfolio that exists today. Of these acquisitions, six of them were divestitures from large conglomerates including Emerson, ABB, TE, Safran, Insilco and Lucent. As in the past, Bel is committed to growing the company organically and through strategic acquisitions.
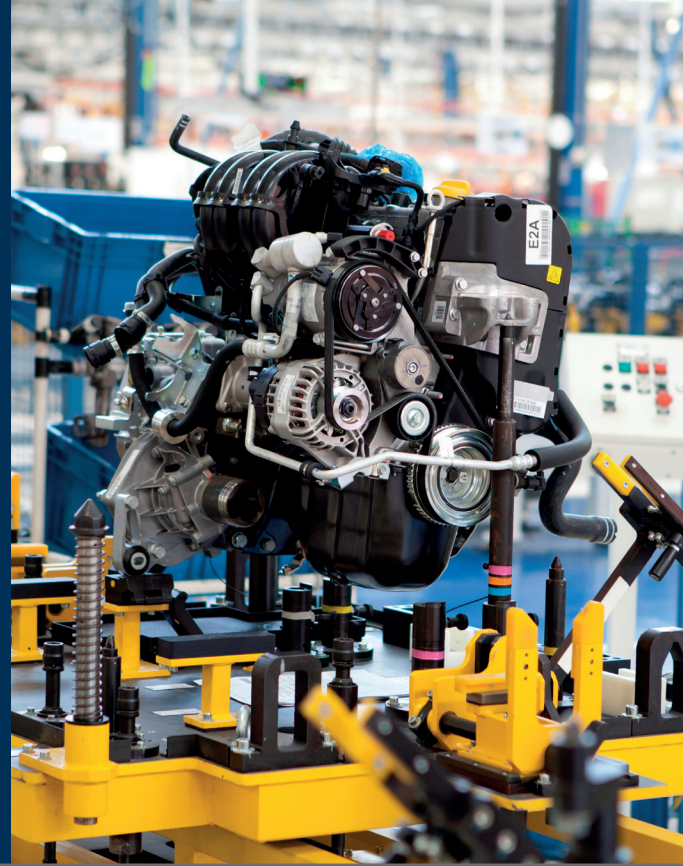

Bel corporate headquarters in Jersey City, NJ

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POWER

Bel Power Solutions and Signal Transformer products can **Power** your devices. From AC and DC Power supplies to an expansive portfolio of transformers, chokes and inductors, Bel has a broad lineup of power conversion solutions. Whether it is a standard or highly-customized requirement, Bel has the expertise and support to design, manufacture and deliver the perfect product for your application.

Bel Power Solutions

Bel Power Solutions provides intelligent, efficient and reliable AC-DC and DC-DC power conversion devices. Applications range from board-mount power to system-level architectures for servers, storage, networking, industrial and transportation. We continue to focus on the growth of our business with strategic customers and distributors.
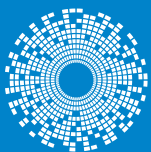
Custom Modules

The Modules business incorporates both OEM and ODM design solutions over a wide range of technology fields. The Custom Modules Group provides fast turnkey application-specific solutions as well as manufacturing solutions to a range of customers worldwide.

Signal Transformer

Since 1959, Signal Transformer has been known as the world's leader of wire wound magnetic solutions, and has over 50 years of experience manufacturing transformers, chokes, inductors and custom or modified standard products.
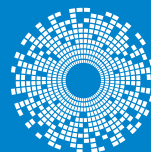
Signal offers the most comprehensive line of certified standard power conversion products, with our vast engineering, manufacturing and regulatory resources.

Signal Transformer excels in the design and manufacture of cost effective, specialized platforms.
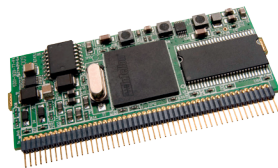
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signal TRANSFORMER
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Power Solutions

Front-End Modules

Power Shelves & Racks

Open Frame

Configurable

Linear

DIN Rail

Compact PCI

LED Drivers

BMP Input Filters

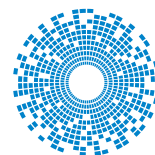BMP Isolated Bricks

BMP Non-Isolated Bricks

Rugged BMP

Rugged Cassettes

eMobility Products

Powerline Modules

SFP Transceiver

Custom Modules

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Signal Transformer

Linear Magnetics

Power Transformer
Isolation Transformer
Auto Transformer
Class 2
Step Up / Step Down
Choke / Rectifiers

SMD Inductors

Shielded
Unshielded
Low Profile
High Current
Low Current
Low EMI

High Frequency Magnetic

Common Mode Choke
Switchmode Transformer
Flyback Transformer
Powder Core Toroid
Surface Mount Inductors
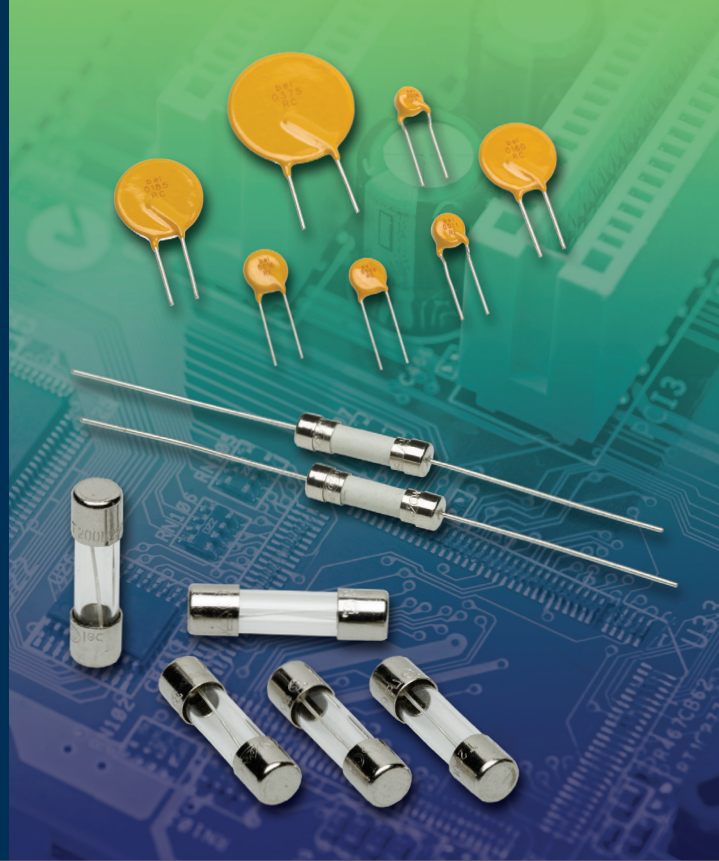Current Sensor
High Current Toroidal Inductors

Custom Designs

Three Phase and Single Phase
Wire Harness Assembly
Common Mode Choke
Toroidal Design
Modified Stock Product

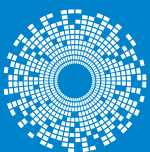## signal
TRANSFORMER
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PROTECT

Bel Circuit Protection products **Protect** your circuits and are found in every major market. The portfolio includes a broad range of PCB Mount, Surface Mount and PTC resettable fuses. PCB Mount products include radial, standard glass and ceramic cartridge fuses. The company has been at the forefront of the industry's shift to surface mount fuse designs, such as brick and chip fuses, that incorporate the need for small, compact technology.

Circuit Protection

Bel Circuit Protection offers a broad range of PCB Mount, Surface Mount and PTC resettable fuses. PCB Mount products include radial, standard glass and ceramic cartridge fuses. The company has been at the forefront of the industry's shift to surface mount fuse designs, such as brick and chip fuses, that incorporate the need for small, compact technology. Bel Circuit Protection also offers a complete product offering of PTC resettable fuses in both surface mount and radial styles.

Fuse products are certified by many 3rd party agencies to varied performance standards. The certification marks are obtained through agencies such as UL, CSA, PSE, CCC, VDE and Semko. The fuse and PTC resettable products are all RoHS 2 compliant.

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Circuit Protection

Brick Miniature SMT Fuses

Low Profile SMT Chip Fuses

Low Profile SMD PTC Resettable Devices

RADIAL PTC Resettable Devices
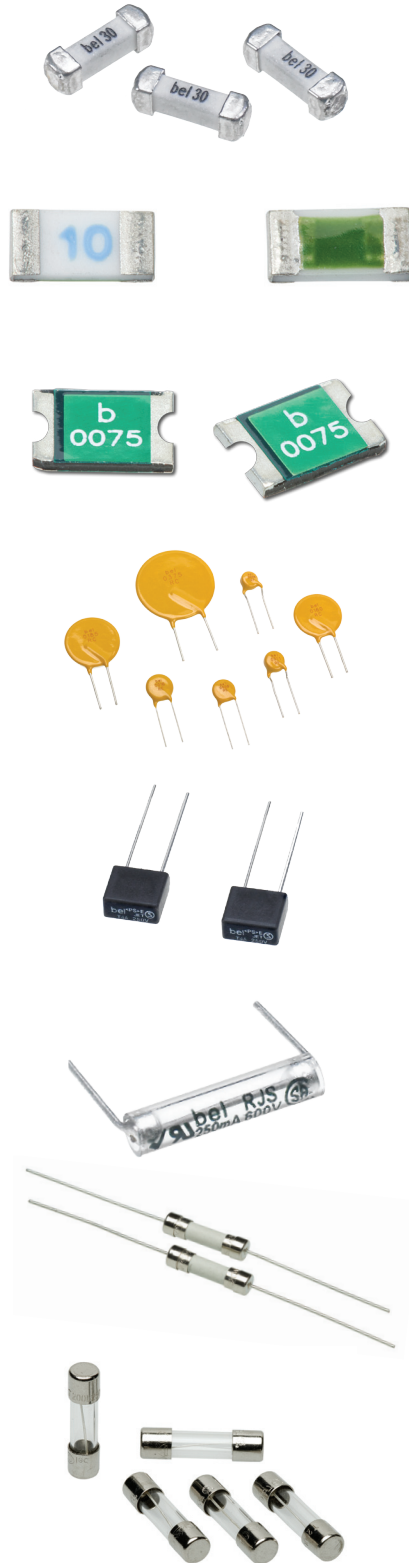
250/277/350 Volt Radial Fuses

Pre Formed 600 Volt Radial Fuses

Miniature Axial Leaded Fuses

Glass and Ceramic Fuses

**High Voltage/Power
(up to 600 VAC; 500 VDC)**

Miniature Ceramic Fuses

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CONNECT

Bel Connectivity Solutions helps **Connect** the world and makes global communication a reality by manufacturing electronic components for the computer, networking, telecommunications, defense/aerospace and transportation industries. Bel is recognized as a world class RF connector, cable assembly and microwave component supplier, providing solutions for harsh environment, fiber optic and expanded beam connectivity applications.

Cinch Connectivity Solutions

For 100 years, Cinch Connectivity Solutions has manufactured high quality and reliable high performance connectors and cable assemblies to the Aerospace, Military/Defense, Commercial, Rugged Harsh Environments and Communication markets. Our custom solutions deliver creative, hands-on engineering whilst utilizing multiple contact technologies including fiber optic expanded beam and QPL listed products. We aim to exceed our customers' expectations and continually provide innovative solutions to the rapidly changing needs of the markets and customers we serve.

Stewart Connector

Stewart Connector's portfolio of products includes one of the broadest ranges of Ethernet connectivity. Our interconnect products includes passive jacks, plugs and cable assemblies that provide connectivity in networking equipment. Modular plugs and cable assemblies are used within the structured cabling system, known as premise wiring.

All connector products are designed to meet current performance standards, including Category 6a regulations for Gigabit Ethernet and 10Gigabit Ethernet applications.

Bel Magnetics

Bel Magnetics offers an extensive line of Integrated Connector Modules (ICM), where the Ethernet magnetics solution is integrated into a connector package. The ICM product line covers every Ethernet application in the market today.

Our products include one of the broadest ranges of magnetic-based solutions for high-speed networking and computer applications. ICMs cover a range of Ethernet speeds and technologies from 10/100Base-T, 1GBase-T, 10GBase-T and Power over Ethernet (PoE).

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Cinch Connectivity Solutions

MIL-DTL-M26500, BACC45 & BACC63	**Omega**
QPL Mil-Spec, Galley & Filter Connectors	CINCH **MIL/AERO** **Circulars**
Passive Microwave Components	**MIDWEST MICROWAVE**
RF Connectors & Cable Assemblies	**JOHNSON**
Coax, Twinax / Triax, Patching & 1553 Data Bus	**TROMPETER** RF connectivity
High Performance Microwave Cable Assemblies & Bulk Cable	**Semflex** microwave solutions
EN 4644 Rectangular, Modular & Composite Interconnect	**c-enx™**
M83513, Micro-D & T-Block	**Dura-Con™**
Expanded Beam Fiber Optics & Interconnect, EBOSA & M83526 QPL	**FIBRECO**
Active Optics, Transceivers & Media Converters	**STRATOS** optical technologies
Jones Plugs, Barrier Blocks, Edge & Ribbon Connectors, M24308, Commercial D-subs & Accessories	**INDUSTRIAL** CINCH
Ruggedized Enclosure Systems, I/O SHS Header & Harness Connectors	**ModICE®**
Compression Interconnect Products	**CIN::APSE®**
Fuel Quantity Indicating System for Commercial Aerospace	**FQIS**
RF, CATV, Data / Telecom Connectors & Cables	**AIM CAMBRIDGE**
RF Coaxial Interconnect & Cable Assemblies	**VITELEC®** ELECTRONICS
CATV, Amplifiers & Pocket Oscillators	**Viewsonics™**

100 years
cinch CONNECTIVITY SOLUTIONS
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of Ingenuity 1917 - 2017

Stewart Connector

Modular Plugs

Performance levels from Cat3 through Cat6a supporting 10G Base-T Ethernet

Numerous wire management systems to ease plug assembly and improve performance

Slim-line strain relief boots with latch protection available

Modular Jacks

45, 90, and 180 degree single port connector configurations available for 1G, 2.5G, 5G and 10G applications

Multiport single row and stacked connectors for 1G and 2.5G applications

Numerous LED and shield options available in all configurations

Harsh Environment

S-RJFTV D38999 Series
(IP68 rated connector and cable assemblies for military and heavy industrial applications)

SealJack
(IP67 rated connectors and cable assemblies for industrial applications)

Specialty

ARJ45 CAT8.2 connector system

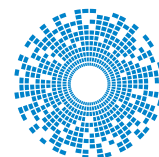RJ point five connectors and cable assemblies

MRJ21 cable assemblies and patch panels

EPP-918A Protective Sealant

CableJack connectors supporting Gigabit Ethernet data transmissions

Compu-Shield connectors for demanding environments

Punch down blocks for wire to PCB connection

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Integrated Connector Modules

Single Row ICMs

10/100Base-T, 1GBase-T (10/100/1000-Base-T),
2.5GBase-T and 5GBase-T,
10GBase-T, 60W, 4P Power over Ethernet (PoE)

LEDs, EMI tabs, through hole, low profile
packages and vertical mount

Wide variety of pin out and footprint configurations

LAN discrete magnetic ICMs available for
1G thru 10G under single port header

1xN Port ICMs

10/100Base-T, 1GBase-T, 2.5GBase-T,
5GBase-T, 10GBase-T and 60W
PoE 1x2 through 1x8 configurations, low profile

LEDs, Tab-up and Tab-down Configurations

Open Compute 1x4 compatible ICMs

2xN Port ICMs

10/100Base-T, 1GBase-T, 10GBase-T and 60W PoE

2x1, 2x2, 2x4, 2x6 and 2x8 configurations

LEDs, Press-fit and shield flanges with gaskets

Compressed height version designed for
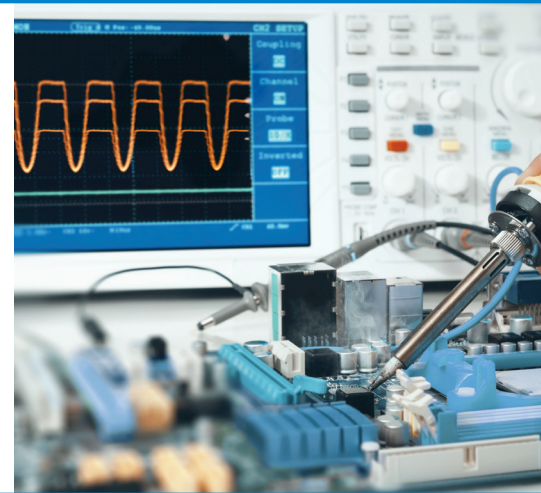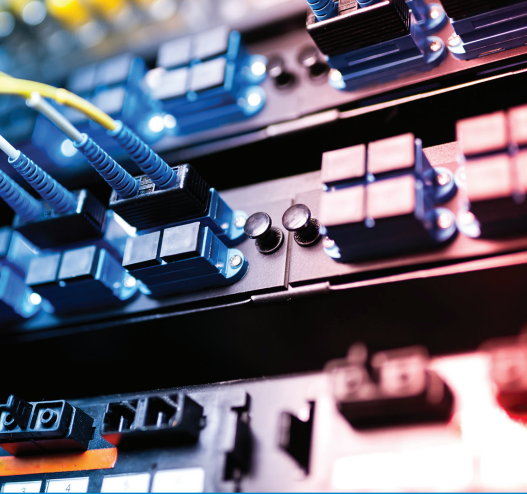1U Advanced TCA rack applications

Specialty ICMs

10/100Base-T, 1GBase-T and 10GBase-T

RJ45, LEDs and USB-1A or USB-2A connectors

USB 2.0 and 3.0 compliant

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