LV & MV Busduct Systems
Compact, flexible, reliable and efficient solutions for power distribution
*Photo is for illustration purpose only, as some joints are not cast.
ABB Low Voltage and Medium Voltage busducts are safe, compact, flexible, reliable and efficient solutions for electrical power distribution.

The LV & MV Busduct Systems are an alternative to cabling and provide numerous advantages to the installer and end customer including savings on space, time and cost. There are additional savings due to reduced losses, voltage drop and flexibility to reposition loads using tap-off points.

ABB provides a one-stop shop service in the supply and support of a wide range of LV & MV Busduct products.

- 3.6kV to 17.5kV Medium Voltage IP68 Cast Resin Busduct
- Up to 1kV Low Voltage IP68 Cast Resin Busduct
- Up to 1kV Low Voltage IP55 Metal Enclosed Sandwich Type Busduct

ABB’s capability to deliver complete electrical package solutions with quality and technologically advanced ABB products is well known in the oil and gas, mining, Minerals, power supply sectors, and data centres. With a wide range of product, ABB can provide high levels of engineering expertise in interface engineering to provide our customers with a high quality and flexible electrical package solution that meets their needs and requirements.
LV & MV Busduct Systems

Product range

<table>
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<tr>
<th>Method of construction</th>
<th>MV Busduct</th>
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Typical applications

**Industrial**
- Mining, Chemical, Oil and Gas, Pulp and Paper, processing plants, water treatment and desalinations plants

Generally cast resin type busducts are chosen for:
- Corrosion resistance
- Fire rating
- Reliability
- Compactness
- Harsh outdoor environments

**Infrastructure**
- Data centres, hospitals and airports

Generally cast resin type busducts are chosen for:
- Fire rating
- Reliability
- Compactness

**Manufacturing**
- Automotive and other manufacturing industries

Generally sandwich construction is chosen for:
- Indoor and non-harsh environments

**Infrastructure**
- Commercial buildings

Generally sandwich construction is chosen for:
- Indoor and non-harsh environments

- Cast resin for outdoor harsh environments

Standards

The ABB LV busduct range is built and type tested in accordance with the below standards:
- IEC61439-1
- IEC61439-6
- AS3439.2

The MV Busduct range is built and type tested as per IEC/AS 62271.201.

Both LV and MV busducts are manufactured and certificated to the following management systems.
- ISO 9001
- OHS AS18001
- ISO 140001
# Benefits of Cast Resin Type Busduct

ABB's cast resin IP68 busduct provides a complete solution due to superior features when compared to cables. The busduct has been designed with the following features and benefits:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>IP68 throughout the complete route, even at the joints.</td>
<td>Suitable for areas prone to storms, dust and corrosion</td>
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<tr>
<td>Compact overall dimensions</td>
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<td>Tailor-made terminal elements for switchboards, transformers and generators</td>
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<td>Totally maintenance-free joints</td>
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<td>Simple erection and short installation time</td>
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<tr>
<td>Self-extinguishing insulations, which are halogen free, non-flammable and emit no toxic gas</td>
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<td>Standard 3 hours fire rating, non-chimney effect (E30 and E90 according to DIN 4102-12)</td>
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<td>Explosion protected (zone 2 &amp; zone 22 according to EN60079-0).</td>
<td>Suitable to use in aggressive atmospheric conditions e.g. chemical, oil and gas industries etc.</td>
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<tr>
<td>Low voltage drop</td>
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<td>High short circuit withstanding capacity</td>
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<td>High mechanical strength</td>
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<tr>
<td>Cast Resin Busduct with aluminium conductors provide an option for the external termination to be copper.</td>
<td>The unique design and environment of the IP68 allows for the aluminium/copper transition to be encapsulated within the cast resin, which eliminates the possibility of any galvanic corrosion</td>
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<tr>
<td>Mono block joining arrangement provides adjustment of +/- 5mm per joint</td>
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<td>Chemical, UV and tropical climate resistant, no sun shades required</td>
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<tr>
<td>No grounding is required for the cast resin encapsulation. A condensation proof eliminates the need for space heaters</td>
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Low Voltage Busduct
up to 1000V

Cast Resin Type LV Busduct

Features and benefits

- Cast resin insulation and modular design
- Applicable for all areas of power distribution in all weather and site conditions
- Wide ranging from 400A to 6000A
- Provide ideal solution for portable switch room solution where busduct bending can be achieved in very limited space as small as 200mm height
- Copper or aluminum conductors available (Aluminium busbars are galvanically tin-plated along their entire length)
- Most compact design
- No fire barrier required due to 3 hour fire rated construction
- 5 year standard warranty (when installed and maintained according to manufacturer’s specification)
- Also suitable for DC application

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Low Voltage Busduct up to 1000V

Cast Resin Type LV Busduct up to 6000A
Low Voltage Busduct
up to 1000V

Sandwich type LV busduct

Features and benefits
- Modular design
- Ingress Protection-IP55 is suitable for indoor application without a canopy
- Ease of installation
- Conversion elements are designed to join cast resin type busducts (outdoor sections) with sandwich type busducts (indoor sections), to achieve the most flexible, and highest performance outcomes whilst maintaining a low project cost
- The 3mm thick extruded aluminium alloy enclosure provide integral earthing
- The aluminium enclosure helps to reduce magnetic flux leakage
- Copper or aluminium conductors are available. (Aluminium busbars are galvanically tin-plated along their entire length)
- Low maintenance cost and 3 year standard warranty (when installed and maintained according to manufacturer’s specification)
- All busbars are fully insulated using a halogen free polyester sheath of thermic class F. It has a continuous operating temperature of 150°C
- Also suitable for DC application
- Low temperature rise and natural cooling
- Fixed and plug in type tap-off point

Technical data

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Medium Voltage Busduct  
3.6 to 7.2 kV

Monobody MV busduct

Features and benefits
- Cast resin type busduct
- 3 phase in one physical block, one of the most compact medium voltage busducts
- Especially suitable for harsh environments
- Copper or aluminum conductors are available
- No earth bar is required due to cast resin insulation instead of a metal enclosure

Technical data

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Medium Voltage Busduct
3.6 to 17.5 kV

MV-R MV busduct

Features and benefits
- Cast resin type
- Applicable for all areas of power distribution
- Wide current range from 1250A-5000A
- Air and water-tight wall bushings
- Non chimney effect
- Copper conductors
- The enclosure is made of 3mm thick aluminium sheet to protect from mechanical damage and to minimise magnetic flux leakage

Technical data

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ABB Australia provides a complete package solution for design, manufacture, installation and servicing of LV & MV Busduct Systems.

- Dedicated Busduct System execution team in Australia
- Product management and project management
- Engineering and workshop drafting
- Complete coordination at site for busduct layout dimensioning along with contractor/installer
- Detailed busduct layout engineering
- Coordination with switchgear and transformer/generator supplier for tailor-made busduct termination
- Site training in busduct installation for contractor
- Site supervision during installation of busduct system
- Supervision in testing and commissioning of the busduct system
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