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**THORNE & DERRICK UK**  
TEL 0044 191 490 1547 FAX 0044 477 5371  
TEL 0044 117 977 4647 FAX 0044 977 5582  
WWW.THORNEANDDERRICK.CO.UK

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# High Voltage

Stainless Steel and Mild Steel Enclosures

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## Stainless Steel and Mild Steel Enclosures

For many years, ABTECH have been at the forefront in the design and manufacture of high voltage connection solutions for use in hazardous areas.



All ABTECH high voltage enclosures are manufactured in 316 grade stainless steel and have an IP rating of IP66 as standard. IP67 versions are also available.

All enclosures are ATEX certified by SIRA for use in a Category 2/Zone 1 areas and Category 3/Zone 2 areas.

The entire range offers flexibility in terms of both connection options and mounting arrangements.

New variations are continually being added to the High Voltage range. For example, we can now offer Category 3/Zone 2 high voltage enclosures capable of operation at 35kV.

Whatever your requirement may be for high voltage connections in hazardous areas, call ABTECH for the solution.

Our High Voltage ranges currently consist of the following types;

### MJB Range

The MJB range provides a simple, low cost but effective solution for the connection of cables. Used primarily for joining cables or as a connection box. Maximum voltage 8.3kV.



Through constantly listening to customers needs, the range has been developed and expanded to the five major ranges shown in this section. Different sizes and options result in more than 50 combinations to choose from.

**DPJB Range**

The original high voltage 'down hole pump' connection box which has been used by many customers all over the world.

**LR Range**

The LR range was originally designed for a specialist application for a specific customer. However, this type of enclosure has since been used in more general applications where a need for the flexible connection arrangements is required. Maximum voltage 11kV

**HVJB Range**

The latest in the High Voltage range offering enhanced flexibility over the choice of cables, entries and cable terminations. Maximum voltage 11kV.

**BusBar Box**

A busbar enclosure with a maximum voltage of 11kV, a current capacity of 3000A per phase and a fault rating of 80kA for 1 second. Capable of connecting 3 phase & neutral and up to 6 cables per phase.



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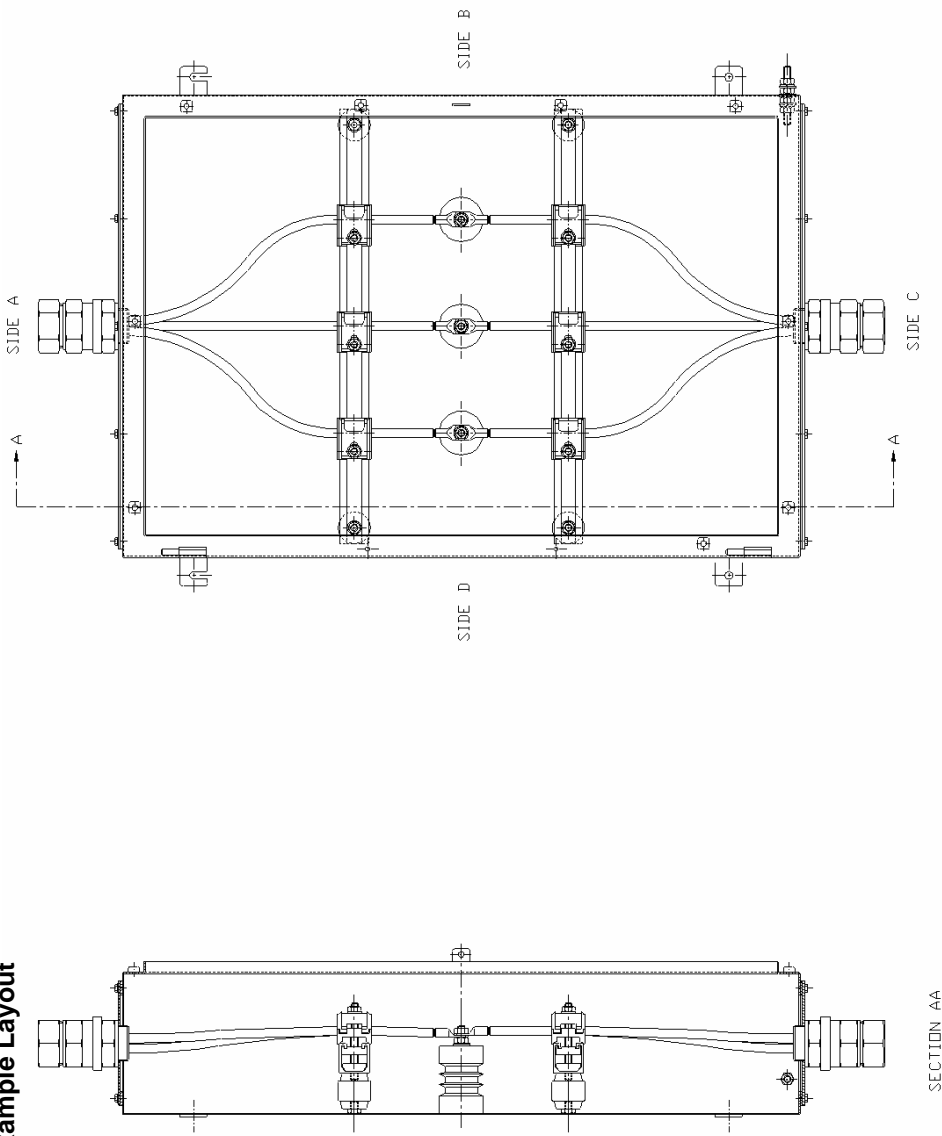
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MJB Range Example Layout



## MJB Range

The ABTECH MJB range offers a simple and effective means of connecting cables or equipment, and is suitable for voltages up to a maximum of 8.3 kV.

The MJB range is manufactured in either mild steel or stainless steel and utilises the SX range of enclosures from SX 5 through SX 8 all available in either 200 or 300mm depths. These are the standard sizes depending on maximum operating voltage and conductor sizes although custom sizes can be manufactured to special order.

By using the SX design the same benefits are afforded to the MJB range. These benefits include: ingress protection to IP66 as standard with IP67 available as an option, enclosure tested to the Shell/ERA deluge specification, heavy duty construction, padlock facility and internal/external earth stud fitted as standard.

All hazardous area versions are ATEX certified using the latest standards and are suitable for operation in a Category 2/Zone 1 area and Category 3/Zone 2 area.

Standard operating ambient temperature is in the range - 20°C to + 40°C. Versions are available which can accommodate an ambient temperature range of - 50°C to + 65°C.



Part Number	Width (mm) (Dimension B)	Height (mm) (Dimension A)	Depth (mm)	Dimension C (mm)	Dimension D (mm)	Power Rating (W)	Maximum Voltage (kV)	Maximum Ways	Maximum Conductor Size (mm <sup>2</sup> )
MJB5	510	510	200/300	560	360	16	6.6	3	120
MJB5/3	510	510	300	560	360	16	8.3	3	35
MJB6	510	780	200/300	560	580	23	6.6	3	120
MJB6/3	510	780	300	560	580	23	8.3	3	35
MJB7	650	950	200/300	700	750	33	6.6	4	240
MJB7/3	650	950	300	700	750	33	8.3	4	240
MJB8	800	1250	200/300	850	1050	50	6.6	4	240
MJB8/3	800	1250	200/300	850	1050	50	8.3	4	240

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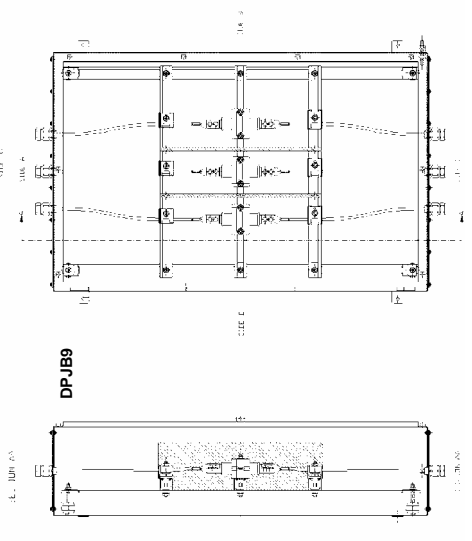
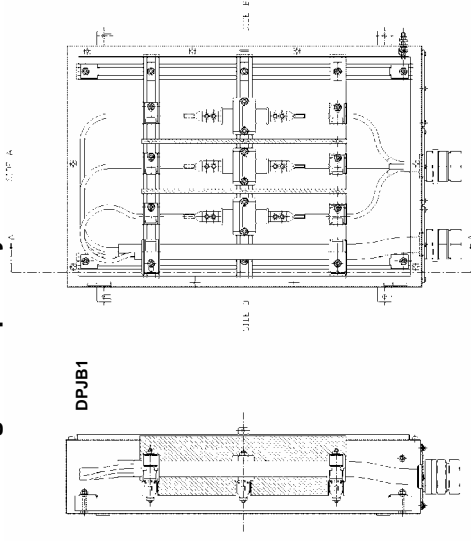
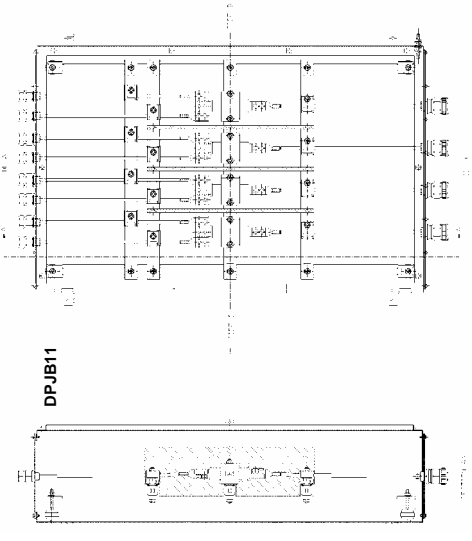
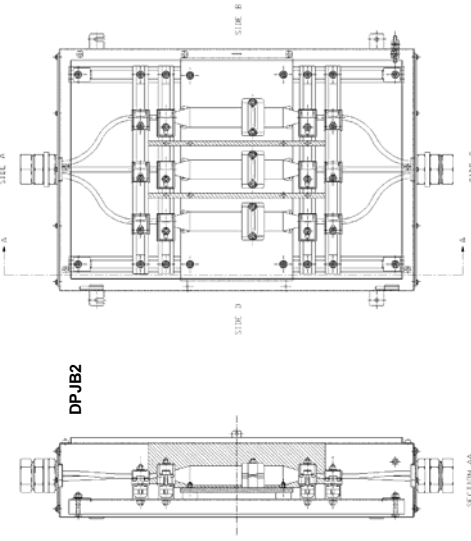
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DPJB Range Example Layouts



## DPJB Range

The ABTECH DPJB range offers an effective means of connecting cables or equipment up to a maximum of 11kV and is fault rated to 50kA for 1 second. Cable conductor sizes of up to 630mm<sup>2</sup> can be accommodated depending on the enclosure configuration and number of conductors.

The DPJB is manufactured in either mild steel or stainless steel and utilises the SX7 and SX8 enclosures in either 200 or 300mm depth depending on the operating voltage. By using the SX range design the same benefits are afforded to the DPJB range. These benefits include: ingress protection to IP66 as standard with IP67 available as an option, enclosure tested to the Shell/ERA deluge specification, heavy duty construction, padlock facility and internal/external earth stud fitted as standard.

All hazardous area versions are ATEX certified using the latest standards and are suitable for operation in a Category 2/Zone 1 areas and Category 3/Zone 2 areas.

Standard operating ambient temperature is in a range – 20°C to + 40°C. Versions are available which can accommodate an ambient temperature range of - 50°C to + 65°C. A double compartment version is available with a separate compartment which can be used to terminate control cables or fibre optic cables. This allows access to the low voltage/ fibre compartment without having to de-energise the high voltage compartment.

Versions are also available with purge protection for use in Class 1/Division 2 areas. Phase segregation is fitted as standard.

The DPJB range can be used as either a through box or with both the incoming and outgoing cable entering via one end. In the later instance it is important to consider the bending radii of the cables to ensure the enclosure is large enough

Spare copper crimp lugs are available from ABTECH to allow repairs or re-use of the enclosure.



Part Number	Width (mm) (Dimension B)	Height (mm) (Dimension A)	Depth (mm)	Power Rating (W)	Maximum Voltage (kV)	Maximum Ways	Max. Conductor Size (mm <sup>2</sup> )
DPJB1	650	950	200	48.6	6.6	3	630
DPJB3	650	950	200	48.6	6.6	4	630
DPJB5	800	1250	300	48.6	6.6	3	630
DPJB7	800	1250	300	48.6	6.6	4	630
DPJB9	800	1250	300	48.6	11	3	630
DPJB11	800	1250	300	48.6	11	4	630
DPJB2	650	950	200	50.0	6.6	4	120

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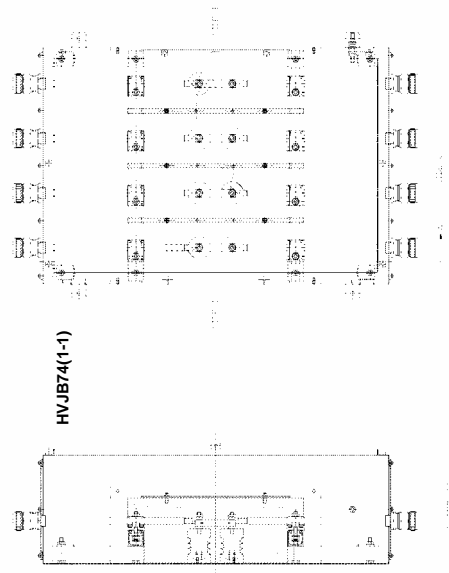
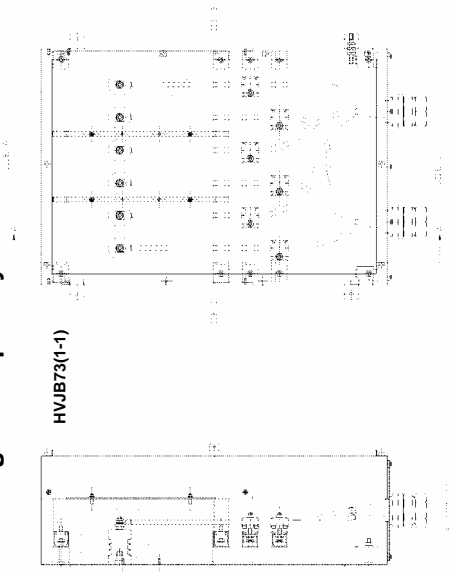
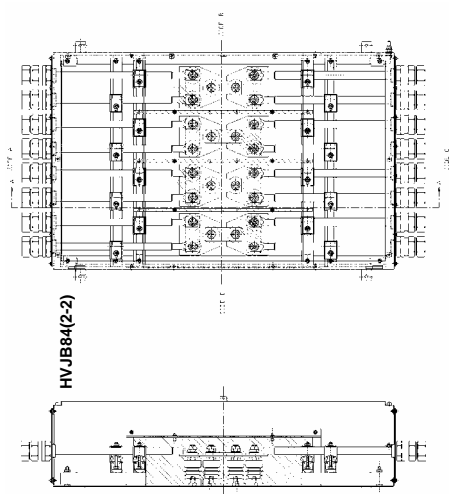
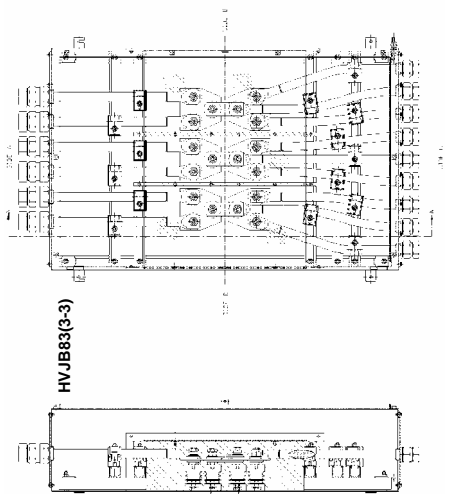
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HVJB Range Example Layouts





## HVJB Range

The ABTECH HVJB range is the latest range in the High Voltage series and offers improved flexibility over the DPJB range in many situations and is suitable for operating voltages of up to 11 kV maximum.

In conjunction with most of the High Voltage series it is manufactured in either mild steel or stainless steel and utilises the SX7 and SX8 range of enclosure. This is the standard sizes although custom sizes are available to special order. The HVJB range can accommodate conductors up to 630mm<sup>2</sup> and can be split in to 4 phases, 3 ways in each direction. Incoming and outgoing cables can enter from the same end of the enclosure or from different ends.

All hazardous area versions are ATEX certified to the latest standards and are suitable for operation in a Category 2/Zone 1 area and Category 3/Zone 2 area.

Standard operating ambient temperature is in the range - 20°C to + 40°C. Extended temperature ranges are available by special order.



Part Number	Maximum Current (A)	Maximum Voltage (kV)	Maximum Ways	Top Cables	Bottom Cables	Max. Conductor Size (mm <sup>2</sup> )
HVJB x3 (0-2)	980	11	3	0	2	630
HVJB x3 (0-3)	980	11	3	0	3	630
HVJB x3 (2-0)	980	11	3	2	0	630
HVJB x3 (3-0)	980	11	3	3	0	630
HVJB x3 (1-1)	980	11	3	1	1	630
HVJB x3 (1-2)	980	11	3	1	2	630
HVJB x3 (2-1)	980	11	3	2	1	630
HVJB x3 (2-2)	980	11	3	2	2	630
HVJB x3 (1-3)	980	11	3	1	3	630
HVJB x3 (3-1)	980	11	3	3	1	630
HVJB x3 (2-3)	980	11	3	2	3	630
HVJB x3 (3-2)	980	11	3	3	2	630
HVJB x3 (3-3)	980	11	3	3	3	630
HVJB x4 (0-2)	980	11	4	0	2	630
HVJB x4 (0-3)	980	11	4	0	3	630
HVJB x4 (2-0)	980	11	4	2	0	630
HVJB x4 (3-0)	980	11	4	3	0	630
HVJB x4 (1-1)	980	11	4	1	1	630
HVJB x4 (1-2)	980	11	4	1	2	630
HVJB x4 (2-1)	980	11	4	2	1	630
HVJB x4 (2-2)	980	11	4	2	2	630
HVJB x4 (1-3)	980	11	4	1	3	630
HVJB x4 (3-1)	980	11	4	3	1	630
HVJB x4 (2-3)	980	11	4	2	3	630
HVJB x4 (3-2)	980	11	4	3	2	630
HVJB x4 (3-3)	980	11	4	3	3	630

The letter 'x' in the Part Number above should be replaced with the number 7 or 8 depending on the size of enclosure required. 7 refers to an SX7 size enclosure measuring 650 x 950 x 300mm. 8 refers to an SX8 enclosure measuring 800 x 1250 x 300mm. If cables greater than 300mm<sup>2</sup> are used it is advisable to use the SX8 size enclosure.

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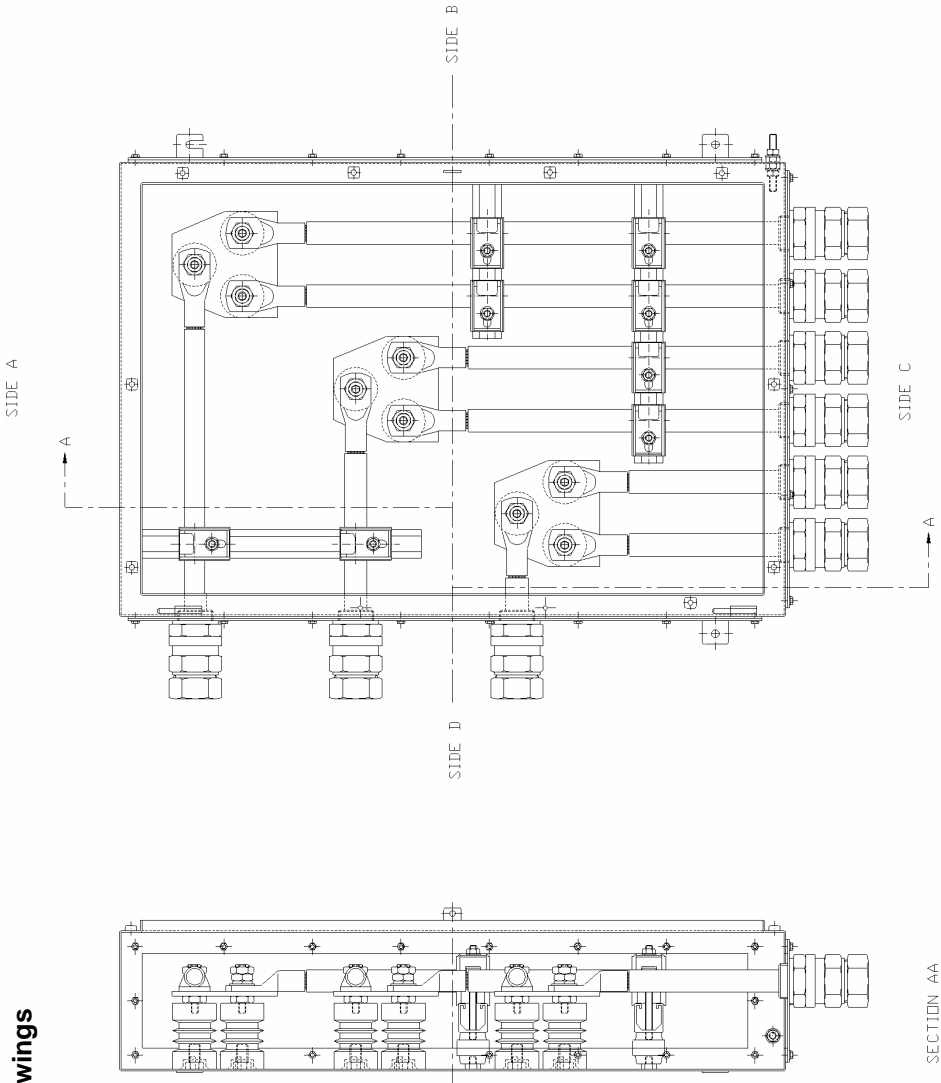
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LR Range Drawings



## LR Range

The ABTECH LR range was initially designed as a special for a particular application but has seen increasing use by clients due to the unique flexibility afforded by the design.

The LR range is manufactured in either mild steel or stainless steel and utilises the SX range of enclosures from SX5 through to SX8 all available in either 200 or 300mm depths. These are the standard sizes depending on maximum operating voltage and conductor sizes, although custom sizes can be manufactured to special order.

By using the SX design the same benefits are afforded to the LR range. These benefits include: ingress protection to IP 66 as standard with IP 67 available as an option, enclosure tested to the Shell/ERA deluge specification, heavy duty construction, padlock facility and an internal/external earth stud fitted as standard.

All hazardous area versions are ATEX certified using the latest standards and are suitable for operation in a Category 2/Zone 1 area and a Category 3/Zone 2 area.

Standard operating ambient temperature is in the range - 20°C to + 40°C. Versions are available which can accommodate an ambient temperature range of - 50°C to + 65°C.



Part Number	Width (mm)	Height (mm)	Depth (mm)	Maximum Current (A)	Maximum Voltage (kV)	Maximum Ways	Max. Conductor Size (mm <sup>2</sup> )
LR52(200)	510	510	200	1250	3.3	2	630
LR52(300)	510	510	300	1250	3.3	2	630
LR73(200)	650	950	200	1250	3.3	3	630
LR73(300)	650	950	300	1250	3.3	3	630

The LR52 version ATEX certification is based on the SX5-3GP-200 (3 gland plates, 200mm deep) and SX5-3GP-300 (3 gland plates, 300mm deep).

The LR73 version ATEX certification is based on the SX7-3GP-200 (3 gland plates, 200mm deep) and SX7-3GP-300 (3 gland plates, 300mm deep).

Other sizes are available on request.

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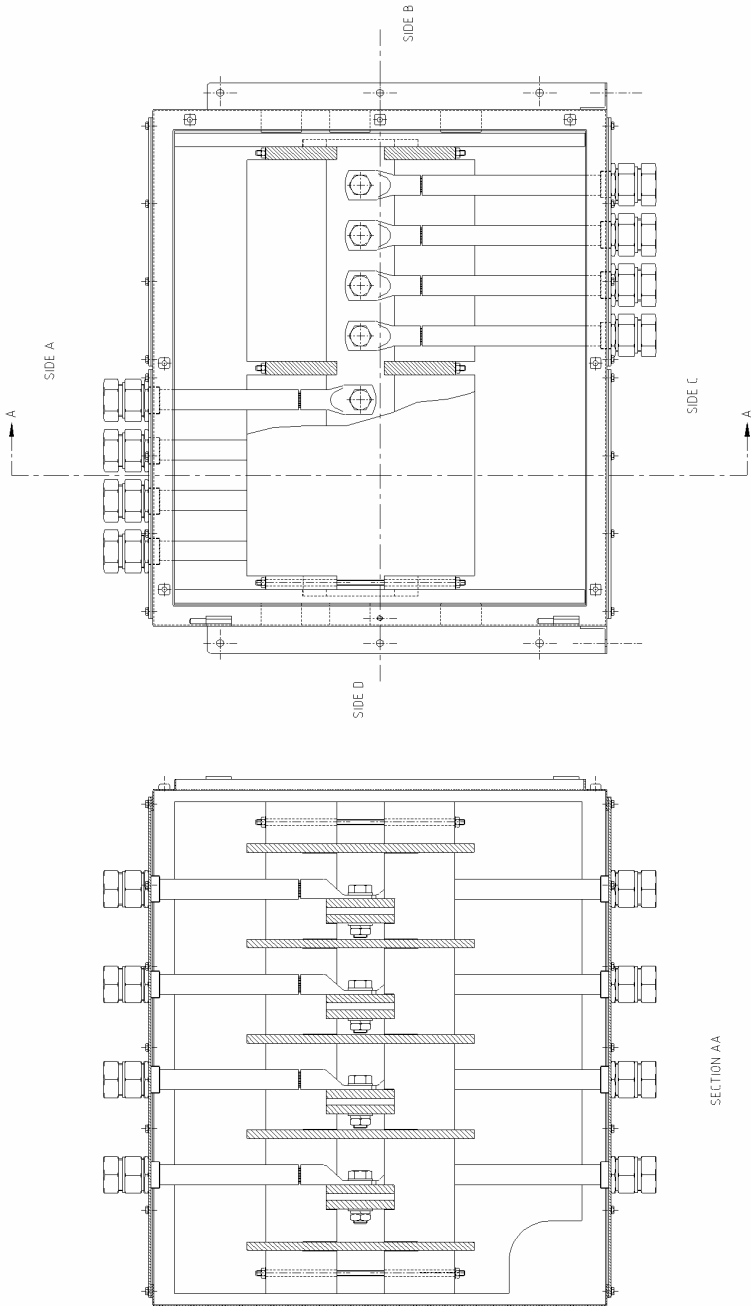
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Bus-Bar Range Drawing



## Bus-Bar Range

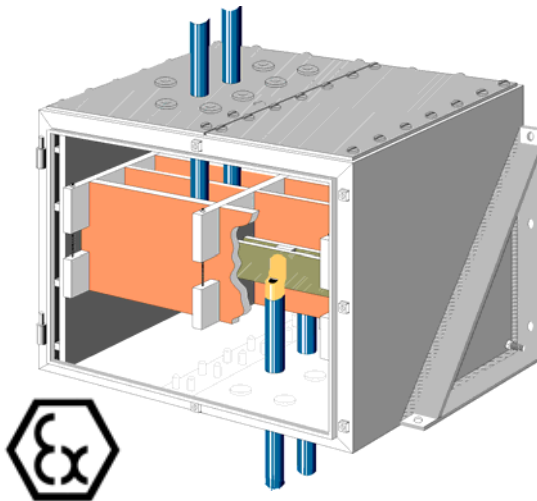
The ABTECH Bus-Bar box is used for the connection of cables or equipment where the conductor size and number of cables being connected would make it very difficult in any other ABTECH High Voltage range.

The Bus-Bar box is ideally suited for conductor sizes over 400mm<sup>2</sup>, as the design allows cables to enter the enclosure and be terminated onto the busbar without having to be bent. This makes for quick and easy installation in applications which have normally been considered difficult to accomplish.

Although not based on a particular size of standard enclosure, the Bus-Bar box utilises the SX range features and is consequently afforded the same benefits from the use of these. These benefits include: ingress protection to IP66 as standard with IP67 available as an option, heavy duty construction, padlock facility and an internal/external earth stud fitted as standard. Additionally, the Bus-Bar box incorporates heavy duty mounting facilities which can be adapted to suit the customer's requirements.

The Bus-Bar box is ATEX certified using the latest standards and is suitable for operation in a Category 2/Zone 1 area and a Category 3/Zone 2 area.

Standard operating ambient temperature is in the range - 20°C to + 40°C. Versions are available which can accommodate an ambient temperature range of - 50°C to + 65°C.



Part Number	Maximum Width (mm)	Maximum Height (mm)	Maximum Depth (mm)	Maximum Current (A)	Maximum Voltage (kV)	Maximum Ways	Maximum Conductors per Way	Maximum Ways	Max. Conductor Size (mm <sup>2</sup> )
Bus-Bar Box	770	770	1250	3000	11	4	6	4	1000

The sizes stated above are the maximum sizes allowable. Smaller sizes are available to accommodate customer's requirements.



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