



Hazardous Area & Industrial Electrical Equipment

About

Abtech has been supplying electrical connection products to hazardous and industrial markets since the 1970s. Our extensive range includes hazardous area lighting, stainless steel and GRP junction boxes, medium and high voltage enclosures and local control stations

Based in Sheffield UK, a city synonymous with quality stainless steel manufacturing, Abtech also has sales support and manufacturing facilities in Germany, South Korea, Singapore and Houston, USA as well as a fully integrated stockist assemblers network.

In conjunction with our network of stockist builders, Abtech can offer quick turnaround of orders with local customisation and assembly to suit your needs. All of our stockists are fully trained and each facility has an approved quality management system enabling full compliance to the ATEX and IECEx standards.

Our trained assembly partners are able to offer the follow services:

- Local stock of empty and fully assembled enclosures and other Abtech products
- Customisation of Abtech Enclosures
- Assembly and certification of Abtech Ex products
- Sales & technical support locally
- Drawing services
- Quotations
- In country services: Local communication, Inspection of installed equipment, FAT & SAT support, etc.
- In country value (ICV)

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ENCLOSURES BPG RANGE



Zone 1/21 IP66/67

Material
Glass reinforced polyester: available in Grey or Black (anti static)

- Key Features**
- Ambient temperature range -65°C to +130°C
 - Fire resistant to IEC 331 & BS EN 50200
 - Impact resistant IK08/IK09
 - UV resistant

The BPG enclosure is manufactured in glass reinforced polyester (GRP). This material is highly resistant to hydrocarbons and other industrial compounds, providing a high level of mechanical strength.

Available in a range of standard sizes with options for internal and external earth continuity.

Certification and Coding						
Zone	0	20	1	21	2	22
Ex eb			•	•	•	•
Ex ia	•	•	•	•	•	•
Ex ib			•	•	•	•
Ex ec					•	•
Ex t				•		•

Part No	W (mm)	H (mm)	D (mm)	Part No	W (mm)	H (mm)	D (mm)
BPG1	80	75	55	BPG9	260	160	90
BPG2	110	75	55	BPG10	360	160	90
BPG3	160	75	55	BPG11	560	160	90
BPG4	190	75	55	BPG12	255	250	120
BPG4.5	190	75	75	BPG13	400	250	120
BPG5	230	75	55	BPG13.5	400	250	160
BPG6	122	120	90	BPG14	600	250	120
BPG7	220	120	90	BPG15	400	405	120
BPG8	160	160	90				

ENCLOSURES SX RANGE



Zone 1/21 IP66/67/68/Type 4X

Material
Steel: 316L (1.404) Stainless

- Key Features**
- Ambient temperature range -50°C to +130°C
 - Impact resistant IK10
 - Corrosion resistant
 - Deluge tested
 - Wave Slam Options

Certification and Coding						
Zone	0	20	1	21	2	22
Ex e			•	•		
Ex ia	•	•	•	•		
Ex ib			•	•		
Ex op is	•	•	•	•		
Ex op pr			•	•		
Ex ec					•	
Ex t				•		•

The SX range comprises of 14 standard sizes in depths of 140, 200 or 300mm. The majority can be fitted with gland plates on any or all of the four sides. Fabricated using 316L stainless steel, the SX can also be made in bespoke sizes to suit most applications.

The SX range holds international and regional Ex accreditations making it suitable for most applications including electrical instrumentation, telecom and fibre optic connections.

Part No	W (mm)	H (mm)	D (mm)	Part No	W (mm)	H (mm)	D (mm)
SX45	114	114	51	SX2	372	324	140/200/300
SX64	102	152	63	SX3	372	448	140/200/300
SX66	152	152	102	SX4	372	510	140/200/300
SX0	152	229	140/200	SX5	510	510	140/200/300
SX0.5	184	274	140/200	SX6	510	780	140/200/300
SX1	234	324	140/200/300	SX7	650	950	140/200/300
SX1.5	306	306	140/200/300	SX8	800	1250	140/200/300

ENCLOSURES | PRE-ASSEMBLED BPGA RANGE



Zone 1/21 IP66/67

Material
Glass reinforced polyester: available in Grey or Black anti-static

- Key Features**
- Apparatus certified -50°C to +40°C T6/ 50°C to +55°C T5
 - Terminals & Links included
 - Pre-drilled entries for multiple installation arrangements

The BPGA range comprises three types of pre-assembled enclosure in two sizes. They are supplied complete with terminals, links, earthing and pre-drilled M20 threaded entries. BPGA enclosures are ideal for use as lighting, power and instrumentation junction boxes.

Certification and Coding						
Zone	0	20	1	21	2	22
Ex eb			•	•	•	•
Ex t				•		•

Part No	W (mm)	H (mm)	D (mm)	Terminal Type
BPG6A120	122	120	90	6 x WDU 2.5
BPG6A125	122	120	90	6 X WDU 6
BPG8A160	160	160	90	13 x WDU 2.5

ENCLOSURES | PRE-ASSEMBLED BPGF RANGE



PH120 Fire Rated IP66/67

Material
Grey glass reinforced polyester

- Key Features**
- Increased fire survivability for safety critical electronic circuits
 - PH120 (120 minutes) in accordance with BS EN 50200 and BS 8434-2
 - All fixings 316L stainless steel

The BPGF is a fire resistant range comprising two enclosure sizes, pre-assembled with Abtech's ceramic terminal block. Supplied complete with four M20 threaded entries, two stainless steel plugs and two transit plugs.

Part No	W (mm)	H (mm)	D (mm)	No. of ways
BPG6F-120	122	120	90	8
BPG8F-160	160	160	90	12

* In addition to the BPGF pre-assembled range, Abtech also manufactures a full range of fire rated enclosures in GRP and stainless steel. These can be populated with rail mounted terminals or fitted with the ATB 8 and 12 way ceramic terminal blocks.

ENCLOSURES ZAG RANGE



The ZAG range comprises 19 sizes precision die cast in marine grade aluminium alloy. Optional protection such as alochrome, anodising and powder further enhance its excellent anti-corrosion properties.

Certification and Coding						
Zone	0	20	1	21	2	22
Ex eb			•	•	•	•
Ex t				•		•

Zone 1/21

IP65/66/67

Material

Die cast Marine aluminium alloy

Key Features

- Ambient temperature range -65°C to +150°C
- Lightweight, rugged construction
- Suitable for engraving or instructions etc. to enhance durability
- Natural or powder coated finish

Part No	W (mm)	H (mm)	D (mm)	Part No	W (mm)	H (mm)	D (mm)
ZAG1	50	45	30	ZAG10	220	120	80
ZAG2	58	64	34	ZAG10/9	220	160	90
ZAG3	98	64	34	ZAG11	160	160	90
ZAG4	150	64	34	ZAG12	260	160	90
ZAG5	75	80	57	ZAG13	360	160	90
ZAG6	125	80	57	ZAG14	560	160	90
ZAG7	175	80	57	ZAG15	202	230	110
ZAG8	250	80	56	ZAG16	330	230	110
ZAG9	122	120	80	ZAG21	120	360	80
ZAG9/9	122	120	90				

ENCLOSURES | SPECIAL SOLUTIONS SSD | Ex d Enclosure



The SSD is an Ex d enclosure designed to house electrical and electronic apparatus within Zone 1 and 21 hazardous areas. Its flameproof design allows potentially sparking equipment to be safely installed in areas where explosive gasses or dust may be present.

Zone 1/21

IP66/67/68

Material

Stainless Steel: SSD Range
Aluminium: SSD-AL Range

Key Features

- Designed to house potentially sparking electrical apparatus safely within hazardous areas
- Ambient temperature range -20°C to +60°C

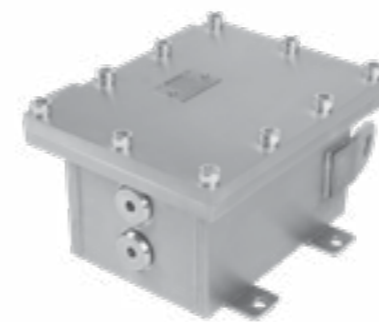
Certification and Coding

Zone	1	21	2	22
Ex db	•		•	
Ex td		•		•

Part No	W (mm)	H (mm)	D (mm)
SSD113	100	130	80
SSD234	170	230	150
SSD434-A	170	340	150
SSD434-B	220	340	150
SSD435	210	400	190
SSD445-A	250	350	190
SSD445	310	390	190
SS546	270	530	210
SSD556-A	270	430	210
SSD556-B	400	490	210
SSD646	250	630	250
SSD656	340	690	250
SSD667	450	700	250
SSD768	570	1020	390

Internal dimensions only
Other sizes available on request

ENCLOSURES | SPECIAL SOLUTIONS NAUTILUS | Ex e Enclosure



The Nautilus is a terminal enclosure that combines Ex e hazardous area certification with an unparalleled level of ingress protection. Primarily designed for submersible applications. The Nautilus is certified IP68 at 100 metres for five days to EN60529.

Zone 1/21

IP68

Material

Steel: 316L (1.404) Stainless

Key Features

- Submersible terminal enclosure
- Ambient temperature range -50°C to +55°C

Certification and Coding

Zone	1	21	2	22
Ex e	•		•	
Ex ib	•		•	
Ex ia	•		•	
Ex tb		•		•
Ex ta		•		•

Part No	W (mm)	H (mm)	D (mm)
NAUT1	100	130	80
NAUT2	170	230	140
NAUT3	170	340	140
NAUT3A	220	340	140
NAUT4	210	400	190
NAUT5	250	350	190
NAUT6	310	390	190
NAUT7A	270	530	210
NAUTB	370	430	210
NAUT8	400	490	210
NAUT10	340	690	250
NAUT11	570	700	390

Internal dimensions only
Other sizes available on request

ENCLOSURES ZP RANGE



The Abtech ZP range comprises of 19 different sizes which are injection moulded in either ABS plastic or polycarbonate material. There is also an option of a clear polycarbonate lid which can be fitted to either base. The enclosures are lightweight yet extremely robust and offers good protection against both corrosion and oil-based contamination.

Industrial Enclosure

IP65

Material

Polycarbonate or ABS (RAL7035)

Key Features

- Ambient temperature range -40°C to +120°C
- Can be easily machined and silk screen printed
- Can be moulded any colour (subject to minimum quantities)
- Optional transparent lid

Part No	W (mm)	H (mm)	D (mm)	Part No	W (mm)	H (mm)	D (mm)
ZP1	52	50	35	ZP11	200	120	75
ZP2	65	50	35	ZP12	200	150	75
ZP3	82	80	55	ZP13	240	120	100
ZP4	82	80	85	ZP14	240	160	90
ZP5	120	80	55	ZP15	250	160	90
ZP6	120	80	85	ZP16	240	160	120
ZP7	160	80	55	ZP17	300	230	85
ZP8	160	80	85	ZP18	360	200	150
ZP9	122	120	55	ZP19	300	230	110
ZP10	122	120	85				

ENCLOSURES | SPECIAL SOLUTIONS VisEx



The VisEx instrumentation housing is suitable for housing various POE (power over ethernet) cameras or small instruments where operation in a Zone 1 hazardous area is required.

Zone 1

IP66/67

Material

316L (1.404) stainless steel

Key Features

- Suitable for a range of instrumentation and camera devices
- Custom mounting brackets to suit installed device
- Ambient temperature range -60°C to +65°C
- Custom mounting brackets
- Superior environmental protection

Part No	W (mm)	H (mm)
VISEX116A4	1 x M16	8 (T6) 47 (T4)
VISEX216A4	2 x M16	8 (T6) 47 (T4)
VISEX120A4	1 x M20	8 (T6) 47 (T4)
VISEX220A4	2 x M20	8 (T6) 47 (T4)
VISEX116120A4	1x M16 1x M20	8 (T6) 47 (T4)

Certification and Coding

Zone	1	21	2	22
Ex d	•		•	
Ex tb		•		•



The HVJB & ABB form the mainstay of our high voltage range, offering enhanced flexibility for choice of cables, entries and terminations. Both the 11 & 15kV versions can accept up to four phase connections, either straight through or bottom entry only. The unit accommodates up to three connections per phase.

Certification and Coding				
Zone	1	21	2	22
Ex e	•		•	
Ex s	•		•	
Ex tb		•		•

Zone 1/21

Up to 11 & 15kV

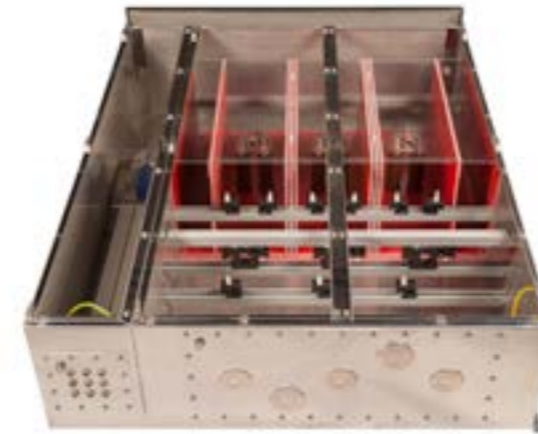
Material

Steel: 316L (1.404) Stainless

Key Features

- HVJB up to 11kV
- ABB up to 15kV
- IP66 to EN60529
- Fault rated 50kA for 1.0 sec
- Ambient temperature range -50°C to +55°C
- Optional -65°C version for extreme cold
- DTS-01 deluge tested

Part No	W (mm)	H (mm)	D (mm)
HVJB73 / ABB73	650	950	300
HVJB83 / ABB83	800	1250	300
HVJB84 / ABB84	800	1250	400



The 4TJB can accept up to three single-phase connections (one conductor per phase) in either a bottom entry or through box configuration. The -125 variants offer a unique solution for the termination of offshore umbilical cables or onshore distribution systems. In this design, the power conductor compartment houses the HV cables. A separate control compartment is used for terminating fibre optic or control cables.

Zone 1/21

Up to 45kV

Material

Steel: 316L (1.404) Stainless

Key Features

- IP66 to EN60529
- Fault rated 50kA for 1.0 sec
- DTS-01 deluge tested

Part No	W (mm)	H (mm)	D (mm)
4TJB	1300	1500-2000	500

Certification and Coding

Zone	1	21	2	22
Ex sb	•		•	
Ex op pr	•		•	
Ex tb		•		•



The HVJB/ABJB 125 provides a unique solution for the termination of offshore umbilical cables or onshore distribution systems. The power conductor compartment houses connections up to 11kV. A separate control compartment is used for terminating fibre optic or control cables.

Certification and Coding				
Zone	1	21	2	22
Ex e	•		•	
Ex s	•		•	
Ex op is	•		•	

Zone 1/21

Up to 15kV

Material

Steel: 316L (1.404) Stainless

Key Features

- Work on optical fibres or control conductors without isolating HV supply
- Each compartment independently IP66
- Fault rated 50ka for 1.0 second
- DTS-01 deluge tested enclosure
- Range of paint and surface finishes

Part No	W (mm)	H (mm)	D (mm)	Max No. of Ways
HVJB1253 LH	1200	1250	300	3
HVJB1254 LH	1200	1250	300	4
ABJB1253 RH	1200	1250	300	3
ABJB1254 RH	1200	1250	300	4



Designed to simplify the connection of medium voltage electrical supplies by converting conventional Ex-rated junction boxes into medium voltage enclosures.

MV terminal is suitable for up to 6.6kV and 250A, depending on conductor size and lug configuration.

MVH terminal is suitable for up to 8.8kV and 600A.

Zone 1/21

Up to 8.8kV

Material

GPR with Tinned Copper Links

Key Features

- Component certified terminal available in three to eight-way configurations
- Link in pairs or multiples
- Ambient temperature range -40°C to +130°C

Part No	Max (kV)	Max (A)	Max Ways	Part No	Max (kV)	Max (A)	Max Ways
TATEMV3T	6.6	250	3	TATEMVH3T	8.8	600	3
TATEMV4T	6.6	250	4	TATEMVH4T	8.8	600	4
TATEMV6T	6.6	250	6	TATEMVH6T	8.8	600	6
TATEMV8T	6.6	250	8	TATEMVH8T	8.8	600	8

*MV Terminal must be fitted in a suitable Abtech enclosure

Busbar Box



Designed to accommodate inflexible high current cables, the Busbar Box can safely terminate conductors up to 3200 amps in harsh and hazardous locations.

A busbar is a crucial element of any efficient electrical power distribution system allowing for greater flexibility and reduced overall installation costs.

Suitable for connectors over 400mm², the enclosure can connect three-phase plus neutral supplied with up to six conductors per phase.

Zone 1/21 Up to 3.2kA

Material
Steel: 316L (1.404) Stainless

- Key Features**
- Up to 3,200 per phase*
 - Available as bottom entry or through box configurations
 - Fault rated 90kA for 1 second
 - Ambient temperature range -40°C to +40°C or -40°C to +60°C (see certificate)
 - IP66 to EN60529; Type 4x
 - DTS-01 deluge tested

*Maximum line current when connected in Delta configuration

Part No	W (mm)	H (mm)	D (mm)
BBB	770-1250	675-1250	770

Certification and Coding

Zone	1	21	2	22
Ex e	•		•	
Ex tb		•		•

66kV



Ex & Marine Up to 66kV

Material
Steel: 316L (1.404) Stainless

- Key Features**
- Compact tee connector up to 66kV
 - EPDM jacket for 'safe to touch' screening
 - Complete protection against partial discharge
 - 100% AC withstand fault-tested

Designed to operate in the harshest of marine conditions and to accommodate the demand for increased voltages, our 66kV enclosures are suitable for offshore wind farms and oil & gas installations. Separable, highly insulated tee connectors are housed within our stainless steel enclosures for maximum environmental protection. They can be configured either as side-by-side or back-to-back connections. The latter has the option of two separate, lockable compartments that can be individually terminated and secured. This allows subsea and topside connections to be made in isolation by different installation contractors.

The tee connector range is available in voltages ranging from 15kV up to 66kV and can be configured for Ex-rated (Ex s, Ex nR and Ex d options) or exposed marine environments.

SX Busbar



This high-current enclosure offers enhanced flexibility using a range of tinned copper busbars mounted in a tiered arrangement. The SX busbar provides termination for cables carrying up to 3000 Amps. The arrangement of busbars in this enclosure can be tailored, allowing a variety of configurations suitable for inflexible, higher-current carrying cables.

The SX Busbar can accommodate up to five conductors per phase, plus neutral with an optional earth bar facility. All in a bottom or top entry-only configuration. The full load current is determined per connector and is size-dependent.

Zone 1 Up to 3kA

Material
Steel: 316L (1.404) Stainless

- Key Features**
- Simple connection for multiple and inflexible conductors
 - Ambient temperature range up to 90°C
 - Impact resistant IK10
 - Corrosion resistant
 - Anti-rotation design for smaller conductors

Part No	W (mm)	H (mm)	D (mm)	No. of Ways	Max Voltage
SSXBB54	510	510	400	3	3.3
SSXBB64	510	780	400	3 + N	5
SSXBB74	650	950	400	3 + N	5
SSXBB84	800	160	400	3+ N	5

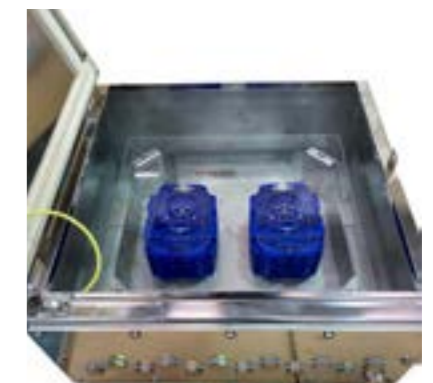
Fibre Optics



Material
Steel: 316L (1.404) Stainless or GRP

- Key features**
- Environmental protection for fibre optic communications
 - Splice trays, bulkheads, pigtails and adaptors to suit installation
 - Ex op is & Ex op pr certification available
 - Secure internal armour termination

Abtech has also developed several fibre optic termination enclosures to complement our power connection enclosures. Based on the field-proven SX range, models are available in single and double-door cabinets with the option of certification to Ex optical radiation standards. Critical data communication can be protected in the harshest of environments.





IP66

IP66

Material

Anti-static carbon loaded GRP

Key Features

- Combine a wide range of operators and terminals for ease of installation
- Typical ambient temperature range -40°C to +55°C

Coding

- Ex db eb IIC T* Gb
- Ex db eb mb IIC T* Gb
- Ex db IIIC T*C Db

Terminals

Direct termination as standard, 2.5/4mm² terminals available

Available Operator, Ammeter and Terminal Types

Common to ABCS and SXCS - ranges available with 1NC/1NO, 2NC or 2NO contacts
Range of operator covers and guards also available.

Push Button	Momentary; single or double push; coloured/marked inserts are required	
Emergency Stop	Push-pull or twist to release; red/yellow mushroom head	
Key Release	Colour: red	
Mushroom Head	Momentary; colour: black, green and red	
Indicator Lamp	Red/green/yellow/blue or white; Ex e and Ex i versions available	
Illuminated Push Button	Red/green/yellow/blue or white; available with 1NC or 1NO contacts	
Selector Switch - Small Handle	39mm diameter; 2, 3 or 4 position; self-lock or self-reset; 2 pole contact configurations and label inserts to suit application	
Selector Switch - Large Handle	60mm diameter; 2, 3 or 4 position; self-lock or self-reset; 2 pole contact configurations and label inserts to suit application	
Ammeter	Direct measuring with x2 overload scale (max scale: 0-15A/30A); 1A or 5A current transformer with x2 or x5 overload scale (max scale: 0-600A/3000A)	
Voltmeter	0-25V, 0-40V, 0-150V, 0-250V, 0-500V	
Buzzer	Audible (60Db at 30cm) or flashing buzzer for warning alarm. 10-28V AC/DC and 20 - 250V AC/DC	



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