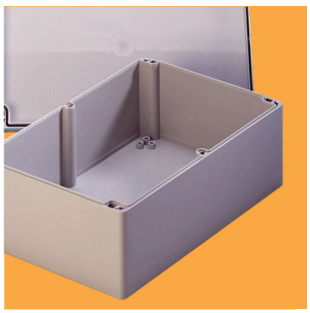
ABTECH



# Industrial Electrical Equipment

2017

**Abtech** has been supplying electrical connection products to industrial markets since the 1970's. Our range includes stainless steel and GRP junction boxes, medium and high voltage enclosures, local controls, lighting systems, cable glands and connection accessories.

Based in Sheffield UK, a city synonymous with quality stainless steel manufacturing, **Abtech** also has sales support and manufacturing facilities in Germany, Korea, Singapore and Houston USA.

**Abtech** holds ISO 9001:2008 accreditation as well as a number of third party approvals including Lloyds Register Type Approval.

ISO 9001 : 2008 sira UKAS QUALITY MANAGEMENT
Certificate No. 980141

APPROVED LR TYPE APPROVAL SCHEME

RISQS RAILWAY INDUSTRY SUPPLIER QUALIFICATION SCHEME
QUALIFIED

## HEAVY INDUSTRIAL

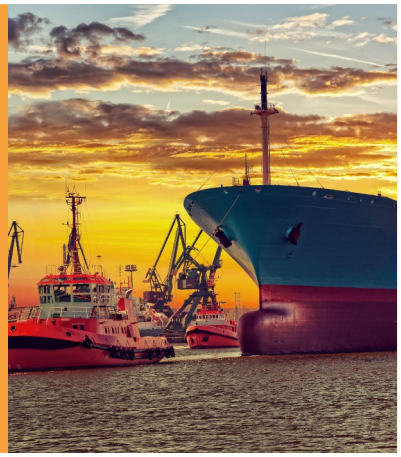
**Abtech** electrical enclosures and lighting products are designed to fully withstand the rigours of continued use in process plants and on heavy industrial sites. All products are designed and manufactured using corrosion resistant materials, from the main enclosure body to the smallest fastener.

The use of high grade materials provides resistance from organic and manufacturing contaminants often associated with industrial processes, thus ensuring maximum durability and a long service life for **Abtech** equipment.

## MARINE

From coastal storage areas and jetties through to fixed and floating offshore installations, **Abtech** products have a proven track record of longevity in highly saline environments. GRP and stainless steel enclosures are UV resistant, rated IP66/67 and are also DTS-01 deluge tested - this test requires the enclosure to provide continuous operation during the use of fire deluge systems . . . a lot of water!

An extensive range of coatings to ISO 12944 and NORSOK M-501 specifications provide further environmental protection. Full testing and inspection to NACE 3 and Frosio 3 standards also available.



## RAIL INDUSTRY

**Abtech** have been supplying the rail industry for over 25 years for both trackside and tunnel applications. Key projects range from the Channel Tunnel (supplying junction boxes and lighting actuators) through to the ongoing supply of enclosures and local control stations across London Underground and Crossrail infrastructure projects.

- Registered RISQS supplier (Railway Industry Supplier Qualification Scheme)
- LUL/TfL approved supplier for enclosures and accessories

## RENEWABLE ENERGY

From exposed offshore windfarms to efficient biomass power generation projects, **Abtech** enclosures have been used to provide the critical link from LV & MV cable jointing, lighting control relays through to Lidar and wave radar instrumentation hookups. We work closely with all partners in the supply chain including designers, EPC contractors and electrical wholesalers to ensure equipment matches project specifications and timescales.

Recent projects have included the Beatrice, Racebank and Rampion Off-shore windfarms demanding equipment that provides both high levels of ingress protection and resistance to salinity.

## OIL & GAS

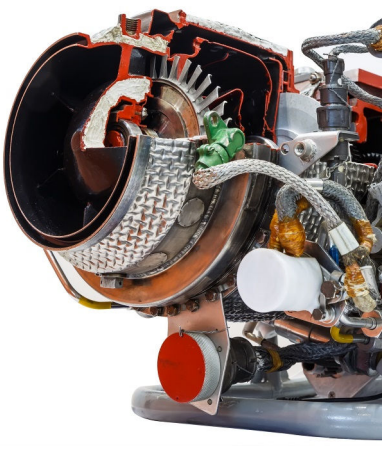
From early North Sea Oil & Gas resources to the development of floating production and storage (FPSO), **Abtech** has actively supplied hazardous area equipment to major global energy companies. Not confined to hydrocarbons, **Abtech** Ex-rated equipment is an approved supplier to companies in the distillery, pharmaceutical and food processing industries.

**Abtech**'s hazardous area portfolio includes LV/MV/HV enclosures, local controls, lighting, cable glands and connection accessories. All are both ATEX and IECEx approved with many key products also carrying national in-country standards such as EAC and InMetro, along with CSA and UL listings.

## ORIGINAL EQUIPMENT (OEM)

As a business, **Abtech** also operates as an original equipment manufacturer (OEM) supplying enclosures in GRP, Aluminum, Stainless Steel and Polycarbonate to a multitude of major manufacturers. Our customers operate in a diverse range of industries from industrial fan and turbine manufacturers, fuel dispensers and safety showers to instrumentation and sensor devices.

From an empty IP rated box to a bespoke engineered solution, our flexible range of enclosure products can be machined in almost any configuration and supplied fully fitted with terminals, trunking and electrical components as required.



# ZAG

The ZAG range comprises 19 sizes precision die cast in LM24 grade aluminium alloy, considered the most suitable for corrosion resistance in salt laden atmospheres. Additional optional protection such as alochrome, anodising and epoxy polyester painting further enhance the anti-corrosion properties of this enclosure.

IP65/66/67; Type 4X

**Material**

Die cast AL-Si 12 grade (LM24) aluminium alloy

**Key Features**

- Ambient temperature range -65°C to +150°C
- Impact resistant > 7 Nm
- Corrosion resistant in salt laden atmospheres
- Suitable for engraving of instructions etc. to enhance durability
- Unpainted or painted finish

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

# ZP

The ZP terminal enclosure range is injection moulded in either ABS plastic or polycarbonate material. Lightweight yet extremely robust, the ZP offers good protection against corrosion and oil based contaminants. Optional clear lid is an advantage where a visual inspection is required without the need to open the enclosure.

IP65; Type 4X

**Material**

Injection moulded ABS plastic or polycarbonate

**Key Features**

- Ambient temperature range
  Polycarbonate version:
  -40°C to +120°C
  ABS version:
  -40°C to +65°C
- Stainless steel captive quick release quarter turn screws as standard
- Optional clear polycarbonate lid

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

# BPG

The BPG terminal enclosure is manufactured in glass reinforced polyester (GRP). This material is highly resistant to contamination from oils, fats, aliphatic and aromatic carbohydrates, bacteria and enzymes.

IP66/67; Type 4X

**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 > 7 Nm
- UV Resistant
- Suitable for use with a wide range of third party rail mounted terminals

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

# SX

The SX range comprises 14 sizes of enclosure manufactured in either mild steel or stainless steel. 11 sizes are available in depths of 140 or 200mm and 8 sizes are available in depths of 140, 200 or 300mm. The majority of the range can be fitted with removable gland plates on any or all of the four sides.

IP66/67/68; Type 4X

**Material**

Steel: 316L (1.404) Stainless (SSX) or Mild (MSX)

**Key Features**

- Ambient temperature range -50°C to +175°C
- Impact resistant > 10 Nm
- Corrosion resistant
- Gland plates can be fitted to any or all four sides (SX66 and above)
- Suitable for use with a wide range of third party rail mounted terminals

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

* also available **D** 300mm

# FIRE RATED ENCLOSURES

Designed for use on safety critical circuits or those carrying emergency power supply, Abtech fire rated enclosures are designed to maintain insulation integrity for one hundred and twenty minutes during direct exposure to fire. This ensures that electrical devices such as fire suppression systems, smoke extractors, alarms and emergency lighting remain operational during a fire.

Testing in accordance with standards governing the fire protection requirements of cable installations, our Stainless Steel and GRP enclosures maintain the highest level of insulation integrity.

## Insulation Integrity – PH120

This test relates to the resistance of cables with cable junction boxes for use in emergency circuits and determines the minimum period for which insulation integrity is maintained. The test is conducted in accordance with BS EN 50200 (>842°C) and using the principles outlined in BS 5839-1: 2013.

Abtech BPG (GRP) and SX (Stainless Steel) enclosures have both been tested and exceeded the PH120 requirement.

To ensure the integrity of the electrical circuit, all fire rated enclosures are supplied fitted with ceramic terminals. These can withstand much higher internal temperatures than poly or KRG terminals. For larger cable diameters of up to 240mm$^2$ Abtech have also developed a range of ceramic pillars.

| Flame Exposure Period | Class |
|---|---|
| 15 minutes | PH15 |
| 30 minutes | PH30 |
| 60 minutes | PH60 |
| 90 minutes | PH90 |
| 120 minutes | PH120 |

## BPGF

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

IP66

**Material**
Grey glass reinforced polyester

**Key Features**
- Increased fire survivability for safety critical electronic circuits
- PH120 to BS EN 50200 and BS 8434-2
- Tested in accordance with IEC 311
- 8-way or 12-way ceramic terminals
- All fixings 316 stainless steel

| Part No | W (mm) | H (mm) | D (mm) |
|---|---|---|---|
| BPG6F-120 | 122 | 120 | 90 |
| BPG8F-160 | 160 | 160 | 90 |

| Part No | Terminals |
|---|---|
| BPG6F-120 | 8 way up to 6mm$^2$ |
| BPG8F-160 | 12 way up to 6mm$^2$ |

Designed to be a flexible junction box for use in safety critical applications. The range is configured to include everything you need for a PH120 compliant installation, right out of the box. With eight and twelve way ceramic terminal blocks the BPGF is ideal for:

- Emergency lighting circuits
- Fire suppression systems
- Smoke extraction installations
- Fire Alarms

**IMPORTANT**
**Please consider cable selection when specifying fire resistant electrical systems.**

# HIGH VOLTAGE ENCLOSURES

The latest in Abtech's high voltage ranges offer enhanced flexibility over the choice of cables, entries and terminations. For example the **HVJB** can accept up to 4 phase connections either straight through or bottom entry only. The unit can accommodate up to three connections per phase.

## HVJB

IP66; Type 4X

**Material:** 316L (1.404) stainless steel

**Key Features**

- Fault rated 45kA for 0.2 seconds
- Ambient temperature range
  -20°C to +40°C or
  -50°C to +55°C (see certificate)
- DTS-01 deluge tested
- Suitable for low temperature applications
- Lift-off, pad-lockable cover with heavy duty machined hinges
- Range of paint finishes

### MJB

Up to 8.3kV; stainless steel; simple - low cost - effective; up to 4 phase connections top and bottom

### 4TJB

Up to 45kV; stainless steel; 3-phase connections straight through or bottom entry; one connector per phase in/out (standard configuration)

### HVJB125

Up to 15kV; stainless steel; unique - combine optical fibres and power cable supplies in a single enclosure

# LIGHTING PRODUCTS

All rated IP66/67 and have a 5 year complete system warranty

### GAMMA range features:

- Marine grade stainless steel construction with built in junction box for simple installation
- Control gear with thermal cut-off protection to maintain LED life

## GAMMA

High output floodlight with high performance LED module giving uniform, crisp white light

- 13,600 lumens
- 5,700K

## GAMMA LG

Low Glare LED hybrid luminaire for use as either floodlight or lowbay. Patented light guide technology reduces visual discomfort

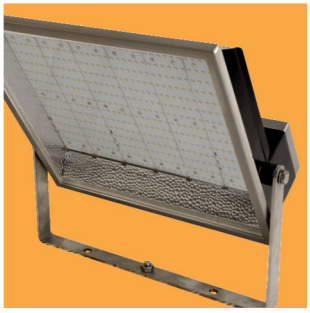
## DELTA

Asymmetric floodlight designed to reduce light pollution and glare.

**Material:** 316L (1.404) stainless steel

**Key features**

- Quick access lamp chamber reduces maintenance time, no need to open cover
- Marine grade stainless steel
- Optional remote control gear box for weight saving when pole or mast mounting



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