ABTECH

Industrial & Hazardous Area Electrical Equipment
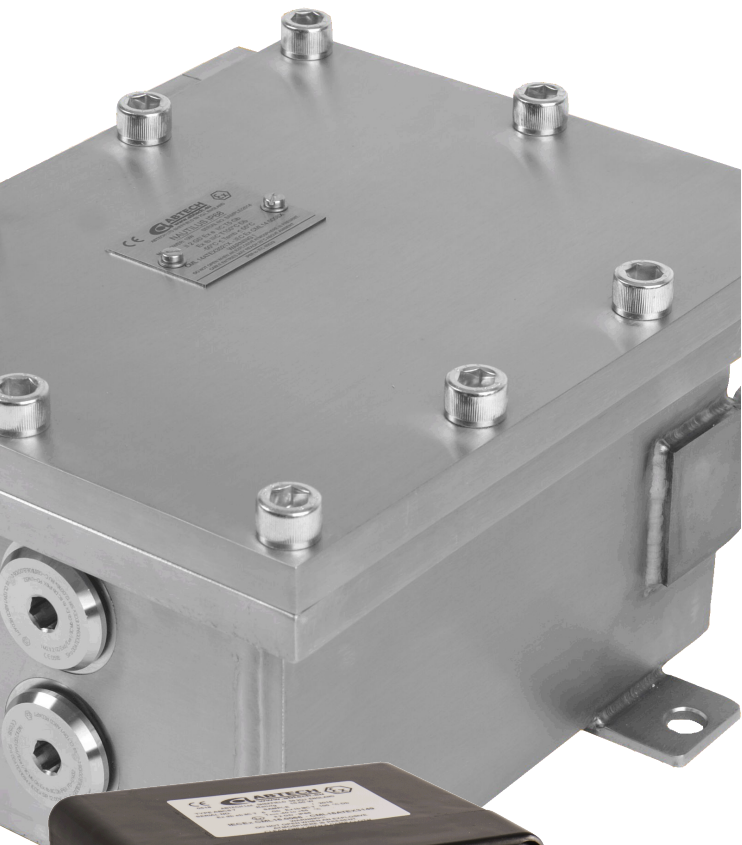
2017

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

Contents

BPG

The BPG terminal 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. It is also suitable for use in LSZH (low smoke zero halogen) applications.

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
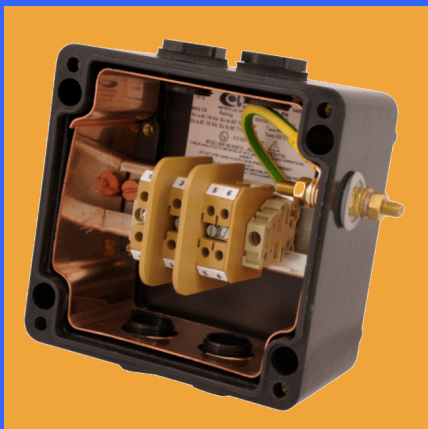- Impact resistant > 7 Nm
- UV resistant

Certification and Coding

Zone	0	20	1	21	2	22
Ex e			•	•	•	•
Ex ia	•	•	•	•	•	•
Ex ib			•	•	•	•
Ex ec					•	•
Ex nR					•	•
EX t				•		•

International Approvals

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

BPGA

The BPGA range comprises three types of pre-assembled enclosure in two different sizes. These are supplied complete with terminals, links, earthing and pre-drilled M20 threaded entries.

BPGA enclosures are ideal for use as lighting, power and instrument junction boxes.

IP66/67

Material
Glass reinforced polyester: available in grey or black (anti static)

Key Features
- Ambient temperature range -65°C to +130°C
- Impact resistant > 7 Nm
- UV Resistant
- Supplied with SAK or WDU terminals

Certification and Coding
- Ex e apparatus certified
- Dual labelled ATEX & IECEx T5/T6

International Approvals

Part No	W (mm)	H (mm)	D (mm)
BPG6A120	122	120	90
BPG6A125	122	120	90
BPG8A160	160	160	90

Part No	Terminals	Power Rating (W)
BPG6A120	6 x SAK 2.5	9.378
BPG6A125	6 x WDU 6	9.378
BPG8A160	13 x SAK 2.5	10.348

SX

The SX range of enclosures are manufactured in either stainless or mild steel. Various sizes are available in depths of 140 or 200mm or 300mm. The majority of the range can be fitted with removable gland plates on any or all of the four sides.

Electro-polished and painted finishes are available.

IP66/67/68

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)

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				•		•

International Approvals

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

BPGF

The BPGF is a fire resistant range comprised of two enclosure sizes, pre-assembled with Abtech's ceramic terminal block.

It is supplied complete with four M20 threaded entries, two stainless steel plugs and two transit plugs.

Fire Resistant PH120

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
- Tested in accordance with IEC 311
- 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

In addition to the BPGF pre-assembled range, Abtech also supplies a 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.

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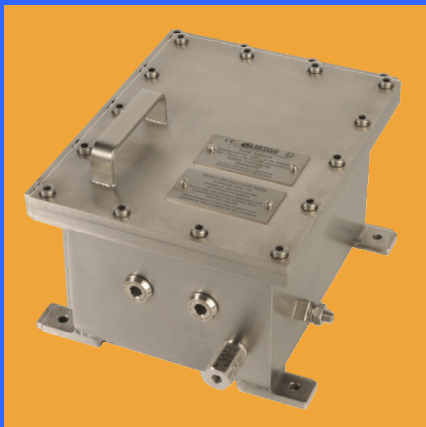
SSD

The SSD is a marine grade stainless steel flameproof enclosure suitable for use in Zone 1 and 21 hazardous areas.

Any size of enclosure is possible as long as each dimension falls within the range of smallest to largest size as shown.

IP66

Material
316L (1.404) stainless steel

Key Features
– Designed to house electrical apparatus safely within hazardous areas
– Ambient temperature range -20°C to +60°C
– Variable entry combinations on any of the 4 vertical sides

Certification and Coding

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

International Approvals

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
SSD546	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

NAUTILUS

The Nautilus combines hazardous area certification with an unparalleled level of ingress protection.

Primarily designed for submersible applications, it is IP68 certified to 100 metres for five days.

IP68

Material
316L (1.404) stainless steel

Key Features
– Submersible terminal enclosure
– Ambient temperature range -50°C to +55°C
– Ingress protection to IP68 (100m for 5 days, 50m for 14 days to EN60529)
– Variable entry combinations on any of the 4 vertical sides

Certification and Coding

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

International Approvals

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
NAUT7B	370	430	210
NAUT8	400	490	210
NAUT9	250	630	210
NAUT10	340	690	250
NAUT11	570	1020	390

Internal dimensions only
Other sizes available on request
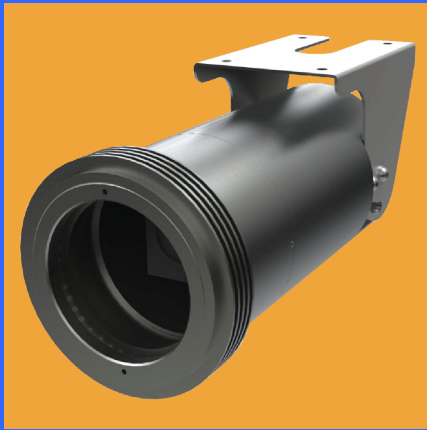
VisEx

The VisEx is a flameproof instrumentation housing suitable for various POE (Power Over Ethernet), vision and instrumentation systems where operation in a hazardous area is required.

IP66/67

Material
316L (1.404) stainless steel

Key Features
− Ambient temperature range
  -60°C to +65°C
− Custom mounting brackets
− Superior environmental
  protection

Certification and Coding

Zone	1	21	2	22
Ex d	●		●	
EX tb		●		●

Part No	Entries	Max power rating
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	1 x M16 1 x M20	8 (T6) 47 (T4)

International Approvals

LR

The LR Box is designed to allow MV cables to enter and exit at 90° to each other.

Supplied complete with three gland plates, its unique design can be modified by the installer to allow either left hand or right hand cable connections.

IP66/67

Material
316L (1.404) stainless steel

Key Features
− Flexible on-site installation
− Max voltage 3.3kV
− Max current 1,250A
− Overload current 1,845A for 10
  seconds
− Ambient temperature range
  -50°C to +55°C (T3)
  -50°C to +40°C (T4)
− DTS-01 deluge tested
− Suitable for extreme low
  temperature applications

Certification and Coding

Zone	1	21	2	22
Ex e	●		●	
Ex tb		●		●

Part No	W (mm)	H (mm)	D (mm)
LR52 LH	510	510	220
LR52 RH	510	510	220
LR73 LH	650	950	220
LR73 RH	650	950	220

International Approvals

MJB

The MJB range provides a simple, low cost but effective solution for the connection of high voltage cables. Used primarily for jointing cables or as a connection box, the MJB is suitable for up to 4 phase connections (top and bottom) and a maximum of 8.3kV.

Up to 8.3kV

Material
316L (1.404) stainless steel

Key Features
– Ambient temperature range
  -20°C to +40°C standard
  -50°C to +65°C option
– IP66 to EN60529
– DTS-01 deluge tested
– 180° in and out cable connection
– Suitable for low temperature applications
– Range of paint finishes available

Certification and Coding

Zone	1	21	2	22
Ex e	●		●	
Ex tD		●		●

International Approvals

Part No	W (mm)	H (mm)	D (mm)
MJB65	510	510	200
MJB85	510	510	300
MJB66	510	780	200
MJB86	510	780	300
MJB67	650	950	200
MJB87	650	950	300
MJB68	800	1250	200
MJB88	800	1250	300

ABJB & HVJB

The latest in the high voltage range offering enhanced flexibility over the choice of cables, entries and terminations. 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.

Up to 15kV

Material
316L (1.404) stainless steel

Key Features
– ABJB up to 15kV, HVJB up to 11kV
– Fault rated 45kA for 0.2 seconds
– IP66 to EN60529
– Ambient temperature range
  -20°C to +40°C or
  -50°C to +55°C
– DTS-01 deluge tested
– Suitable for low temperature applications
– Heavy duty machined hinges with lift-off, pad-lockable cover
– Range of paint finishes available

Certification and Coding

Zone	1	21	2	22
Ex e	●		●	
Ex s	●		●	
Ex tb		●		●

International Approvals

Part No	W (mm)	H (mm)	D (mm)
HVJB73	650	950	300
HVJB83	800	1250	300
HVJB84	800	1250	400
ABJB73	650	950	300
ABJB83	800	1250	300
ABJB84	800	1250	400

AB/HV 125

Up to 15kV

Material
316L (1.404) stainless steel

Key Features
- Unique termination solution to combine optical fibres and power cable supplies in a single enclosure
- IP66 to EN60529
- Fault rated 45kA for 0.2 seconds
- DTS-01 deluge tested

Part No	W (mm)	H (mm)	D (mm)
HVJB1253 LH	1200	1250	300
HVJB1254 LH	1200	1250	300
ABJB1253 RH	1200	1250	300
ABJB1254 RH	1200	1250	300

Certification and Coding

Zone	1	21	2	22
Ex e	•		•	
Ex s	•		•	
Ex op is	•		•	

International Approvals

TFJB

Up to 36kV

Material
316L (1.404) stainless steel

Key Features
- IP66 to EN60529
- Maximum current 312A
- Three phase connections via bottom entry only
- One connector per phase in/out (standard configuration)
- DTS-01 deluge tested

Part No	W (mm)	H (mm)	D (mm)
TFJB 83 (0-2)	800	1250	400

Certification and Coding

Zone	1	21	2	22
Ex e	•		•	
Ex tb		•		•

International Approvals

4TJB

Up to 45kV

Material
316L (1.404) stainless steel

Key Features
- IP66 to EN60529
- Three phase connections either straight through or bottom entry
- One connector per phase in/out (standard configuration)
- DTS-01 deluge tested
- Heavy duty machined hinges with lift-off double doors

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

Certification and Coding

Zone	1	21	2	22
Ex e	•		•	
Ex tb		•		•

International Approvals

BUSBAR BOX

This 11kV enclosure is designed to safely carry medium voltage supplies with extreme current loadings in Zone 1 hazardous areas.

Accommodates large diameter cables, suitable for connectors up to 1000mm².

Up to 11kV

Material
316L (1.404) stainless steel

Key Features
− Up to 3,200A per phase
− Connect three phases + neutral and up to six conductions per phase
− 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
− DTS-01 deluge tested

Certification and Coding

Zone	1	21	2	22
Ex e	●		●	
Ex tb		●		●

International Approvals

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

MV

The MV medium voltage terminal is a component certified device that simplifies the connection of 4.4 to 6.6kV electrical supplies.

It can be used with any ATEX or IECEx Zone 1 certified enclosure.

Up to 6.6kV

Material
Plastic UTR Laminate GP03 Grade 1494

Key Features
− Available in three, four and six way configurations
− Linkable in pairs or multiples
− Ambient temperature range
  -40°C to +130°C

Certification and Coding

Zone	1	21	2	22
Ex eb	●		●	

International Approvals

Part No	W (mm)	H (mm)	D (mm)
TATEMV3	168	220	102
TATEMV4	212	220	102
TATEMV6	300	220	102
TATEMV3T	168	220	114
TATEMV4T	212	220	114
TATEMV6T	300	220	114

Part No	Max (kV)	Max (A)	Max Ways
TATEMV3	4.4	250	3
TATEMV4	4.4	250	4
TATEMV6	4.4	250	6
TATEMV3T	6.6	250	3
TATEMV4T	6.6	250	4
TATEMV6T	6.6	250	6

PCS

IP66

Material
Corrosion resistant polyamide

Key Features
- Universal contact block mounted direct to integral moulded rail
- Typical ambient temperature range -40°C to +40°C
- Linkable enclosure modules

Coding
Ex de IIC T6
Ex e II T6
Ex tD A21

International Approvals

ABCS

IP66

Material
Carbon loaded GRP

Key Features
- Hazardous and Industrial areas
- 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, 2.5/4mm^2 terminals available

International Approvals

SXCS

IP66

Material
316L stainless steel

Key Features
- Hazardous and Industrial areas
- 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, 2.5/4mm^2 terminals available

International Approvals

Available Operator, Ammeter and Terminal Types

Common to PCS, ABCS and SXCS Ranges available with 1NC/1NO, 2NC or 2NO contacts

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 available. Ex e and Ex i versions	
Illuminated Push Button	Red/green/yellow/blue or white available. 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)	

Alpha

IP66/67

The Alpha is a highly efficient Ex de asymmetric floodlight designed for use in Zone 1 and 21 hazardous areas.

Key features:

- Simple and quick lamp replacement, single tool operation, no need to remove cover
- Internal flame path removes the need for routine physical inspection
- Dark Sky asymmetric design reduces light pollution and glare
- Ignitor in lamp body allows optional remote gear box and reduced weight on pole
- II 2 GD Ex de IIB

Gemini

IP66

An 18W and 36W linear T8 fluorescent. The Gemini is designed for use in Zone 1 and 21 hazardous areas.

Key features:

- Tough GRP body with UV resistant polycarbonate diffuser
- Mechanical interlock for automatic de-energisation upon opening
- Emergency version with charging and fault indication
- Single lamp emergency operation
- II 2 GD Ex deq II C T4 Gb, Ex tD A21 T80°C

Junos

IP66/67

The Junos is a linear LED luminaire designed as a replacement for Zone 1 T8 surface mounted fluorescents.

Key features:

- Low glare design, even uniformity of light
- Complete stainless steel construction ensures maximum operational life
- Emergency version with battery status/fault condition indicator and automatic self-testing
- Fixing centres to match popular 18W and 36W fluorescent types
- 5 year complete system warranty
- II 2 GD Ex eb ib qb IIB Gb

Exodus

IP66/67

The Exodus bulkhead is designed for use in heavy industrial and marine environments. Five year complete system warranty.

Key features:

- Compact design ideal for building perimeter, walkway or stairwell lighting
- Manufactured in LM24 aluminium alloy, powder coated for corrosion resistance
- Illuminated using LED technology
- Accommodates any fire exit sign to ISO 7010 (300 x 150mm)
- 20W, 5,700 lumen output
- II 2G Ex eb ib qb IIB Gb
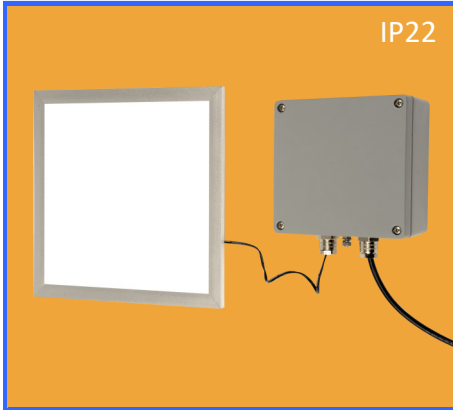
Nimbus

IP22

The Nimbus is a low-profile LED panel which provides significant weight and energy savings over a traditional recessed fluorescent.

Key features:

- Excellent uniformity and colour rendering
- Range of sizes all with built in dimming (push to dim)
- Emergency version with battery status/fault condition indicator automatic self-testing
- Plug and socket connection between panel and driver for easy installation
- 5 year complete system warranty
- Ex ib IIB T4 Gb, Ex eb [ib Gb] qb IIB T4 Gb

Gamma

IP66/67

The Gamma is a high output LED floodlight for use in Zone 1 and 2, 21 and 22 hazardous areas. 5 year complete system warranty.

Key features:

- High performance LED module providing uniform and crisp white light
  - Zone 1 - 72W/10,000 lumens
  - Zone 2 - 96W/13,600 lumens
- Marine grade stainless steel construction
- Control gear with thermal cut-off
- II GD, Ex eb ib op is qb IIB T* Gb, Ex tb IIC T* 0°C Db
- Ex nA IIC T* Gc, Ex tb IIIC T*°C Db , Ex tc IIIC T*°C Dc

Refer to individual Product Data Sheets for full specifications, T rating and ambient range

IP66/67

APC

The APC provides controlled switching of lighting in hazardous areas without the need for major rewiring of existing circuits.

Key features:

- Based on proven BPG enclosure range
- Reduces carbon emissions and running costs by switching off lighting automatically when a specific light level is reached
- Standard switching level is 70 lux
- Built in delay of 25 seconds to prevent nuisance switching
- II 2 GD Ex e mb IIC T6 Gb, Ex tb IIIC T80°C Db

IP66/67

Gamma LG

The Gamma LG is a low glare luminaire that can be used as either floodlight or lowbay. Its design minimises the effects of disability glare.

Key features: **LED**

- Patented light guide technology reduces visual discomfort for safe working
- Marine grade stainless steel construction with built in junction box for simple installation
- Control gear with thermal cut-off protection to maintain LED life
- 5 year complete system warranty
- Ex nA IIC T* Gc, Ex tb IIIC T*°C Db and Ex tc IIIC T*°C Dc

IP66

STR1

The STR1 is an LED road lantern designed for use in Zone 2 and 22 hazardous areas. It provides excellent horizontal distribution.

Key features: **LED**

- High performance optical design for maximum spacing between poles
- Low windage design suitable for mounting on poles 7-10m
- Maintenance free LED design
- 120W, 12,348 lumens
- 5 year complete system warranty
- Ex nR IIC T* Gc, Ex tc IIIC T100°C Dc

IP66/67

Delta

The Delta Ex nR asymmetric floodlight is designed for use in Zone 2 & 22 hazardous areas

Key features:

- Dark Sky asymmetric design reduces light pollution and glare
- Quick access lamp chamber reduces maintenance time, no need to open cover
- Marine grade stainless steel construction
- Optional remote control gear box for weight saving when pole or mast mounting
- Ex nR IIC T* Gc, Ex tc IIIC T°C Dc

IP66/67

Novus

The Novus Ex nR symmetric floodlight is designed for use in Zone 2 & 22 hazardous areas.

Key features:

- Compact design with internal control gear
- Quick access lamp chamber reduces maintenance time, no need to open cover
- Timed ignitor supplied as standard
- Ex nR IIC T* Gc, Ex tc IIIC T°C Dc

IP66/67

Optimus

The Optimus wellglass is for use in Zone 2 & 22 hazardous areas. For maximum flexibility a range of mounting styles are available.

Key features:

- Flexible body layout capable of accepting a wide range of lamp types
- Lightweight aluminium construction
- Hinged base/body combination for easy installation
- Versatile range of mounting options
- Ex nR IIC T* Gc, Ex tc IIIC T°C Dc

Refer to individual Product Data Sheets for full specifications, T rating and ambient range

AAG Range

Armoured Gland - Double Compression

IP66/67

Material
Nickel plated brass or stainless steel

Applications
– Indoor or outdoor use
– Single wire armour (W), wire braided (X), steel tape (Z), screened flexible wire braid
– Temperature Range -60°C to +100°C
– Flameproof Ex d, Increased Safety Ex e and Dust Ex t

International Approvals

ABG Range

Armoured Barrier Gland - Compound

IP66/67

Material
Nickel plated brass or stainless steel

Applications
– Indoor or outdoor use
– Single wire armour (W); wire braided (X); screened flexible wire braid
– Temperature Range -60°C to +100°C
– Flameproof Ex d, Increased Safety Ex e and Dust Ex t

International Approvals

ADG Range

Non-Armoured Gland - Double Compression

IP66/67

Material
Nickel plated brass or stainless steel

Applications
– Two independent seals, a flameproof seal on the inner or outer sheath with a 2nd IP seal on the outer
– Non-armoured elastometer and plastic cables
– Temperature Range -60°C to +100°C
– Flameproof Ex d, Increased Safety Ex e and Dust Ex t

International Approvals

ASG Range

Non-Armoured Gland

IP66/67

Material
Nickel plated brass or stainless steel

Applications
– Provides a seal on the outer cable sheath
– Non-armoured elastometer and plastic cables
– Temperature Range -60°C to +100°C
– Suitable for sealing outer cable sheath
– Flameproof Ex d, increased safety Ex e and Ex t Dust

International Approvals

Adapters, Reducers and Stopping Plugs

A range of thread adapters, reducers and stopping plugs is available manufactured from nickel-plated brass or stainless steel for use in hazardous areas Zone 1 & 2, 21 & 22.

ACCESSORIES: Also available is an extensive range of associated accessories including earth tags, sealing washers, serrated washers, locknuts and PVC shrouds - see main catalogue for further details.

International Approvals

Abtech Limited

199-201 Newhall Road	**t**:	+44 (0)114 244 2424
Lower Don Valley	**f**:	+44 (0)114 243 4312
Sheffield S9 2QJ	**e**:	sales@abtech.eu
United Kingdom	**w**:	abtech.eu