



Hazardous Area Electrical Equipment



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

**Abtech** holds ISO9001: 2015 accreditation as well as a number of third party approvals including Lloyds Register Type Approval.

## Contents

Terminal Enclosures	2
Pre-Assembled Enclosures	4
Special Enclosure Solutions	5
MV & HV Enclosures	6
Control Stations	9
Hazardous Area Lighting	10
Cable Glands	12



**ENCLOSURES** www.abtech.co.uk





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			٠	٠	•	٠
Ex ia	•	•	٠	•	٠	٠
Ex ib			•	•	٠	٠
Ex ec					٠	٠
Ex nR					٠	•
Ex t				٠		

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



## ZAG

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

## **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	160	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

































**APPROVALS** 

**ENCLOSURES** www.abtech.co.uk





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.

## IP66/67/68

## Material

Steel: 316L (1.404) Stainles

### **Kev Features**

- Ambient temperature range -50°C to +175°C
- Impact resistant >10 Nm
- Corrosion resistant

	Part No	W (mm)	H (mm)	D (mm)
SS	SX45	114	114	51
	SX64	102	152	63
	SX66	152	152	140/200
	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
2	SX6*	510	780	140/200
	SX7*	650	950	140/200
	SX8*	800	160	140/200
	* a	lso availal	ole <b>D</b> 300	)mm

## Certification and Coding

Zone	0	20		21	2	22
Ехе			•		•	
Ex ia	•		•		٠	
Ex ib			٠		٠	
Ex op is	•		•		•	
Ex op pr			•		•	
Ex ec					•	
Ex t				•		

INTERNATIONAL **APPROVALS** 















## **SX Busbar**

Utilising the rugged construction of the SX range, the SX Busbar has been designed for high current connections. A range of sizes are available to suit most applications. These are mounted in a tiered arrangement to allow maximum flexibility are are suitable for a full load current of 3kA.

Part

No

SX5

SX6

SX7

SX8

W

(mm)

510

510

650

800

(mm)

510

780

950

160

(mm)

400

400

400

400

## IP66/67/68

## Material

Steel: 316L (1.404) Stainless

## **Kev Features**

- Simple connection for multiple and inflexible conductors
- Up to 3kA and 5.5kV\*
- Rated for T4, T5 & T6
- Ambient temperature range up to 90°C\*\*
- Single bottom or top gland plate
- Anti-rotation design for smaller conductors
- \* May vary due to cable type and quantity
- \*\* Ambient range is dependent on  $\Delta T \& A$









## **BPGA**

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.

## **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

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	90
BPG6A125	6 x WDU 6	90
BPG8A160	13 x SAK 2.5	90



## **BPGF**

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.

## **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 W H D (mm) (mm) (mm)

BPG6F-120 122 120 90

BPG8F-160 160 160 90

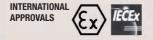
Part No	Terminals
	8 way up to 6mm <sup>2</sup>
BPG8F-160	12 way up to 6mm <sup>2</sup>

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.

#### **IMPORTANT**

Please consider cable selection when specifying fire resistant electrical systems





The SSD is a marine grade stainless steel flameproof enclosure for use in Zone 1 and 21 hazardous areas. Any size of enclosure is possible as long as each dimension falls within the range (smallest to largest) as shown.

## IP66/67/68

#### Material

316L (1.404) stainless steel

### **Kev Features**

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

Internal dimensions only Other sizes available on request

(mm)

100

170

170

220

210

250

310

270

370

400

250

340

(mm)

130

230

340

340

400

350

390

530

430

490

630

690

D

(mm)

80

140

140

140

190

190

190

210

210

210

210

250

390

Part

No

NAUT1

NAUT2

NAUT3

NAUT3A

NAUT4

NAUT5

NAUT6

NAUT7A

NAUT7B

NAUT8

NAUT9

NAUT10









The Nautilus combines hazardous area certification with an unpralleled level of ingress protection. Primarily designed for submersible applications, it is IP68 certified to 100 metres for 5 days, 50m for 14 days to EN60529.

### **IP68**

IP68 glands available, please contact Sales Office

#### Material

316L (1.404) stainless steel

## **Key Features**

INTERNATIONAL

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



NAUT11 570 700

Internal dimensions only
Other sizes available on request

# **NAUTILUS**

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

IP66/67
Material
316L (1.404) stainless steel
Key Features

• Ambient temperature range -60°C to +65°C

• Custom mounting brackets

• Superior environemntal protection

**VisEx** 



	oc. ciiic				9
q	Zone	1	21	2	22
١	Ex d	٠		٠	
	Ex tb		٠		

Certification and Coding

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)



## **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

### **Kev Features**

- Ambient temperature range
   -20°C to +40°C (standard)
   -50°C to +65°C (option)
- IP68 to EN60529
- DTS-01 deluge tested
- 180° in/out cable connection
- Suitable for low temperature applications
- Range of paint finishes available

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

Certific	ation a	nd Codi	ng	
Zone	1	21	2	22
Ехе	٠		•	
Ex tD		•		•
INTERNATIONAL				
APPRO	VALS	(Ex	<b>&gt;</b>	



## **ABJB & HVJB**

The latest in our high voltage range, offering enhanced flexibility for choice of cables, entries and terminations. The HVJB can accept up to 4 phase connections, either straight through or bottom entry only. The unit accommodates up to 3 connections per phase.

Part

No

HVJB73

HVJB83

HVJB84

Part

No

ABJB73

ABJB83

ABJB84

W

(mm)

650

800

800

W

(mm)

650

800

800

(mm)

950

1250

1250

(mm)

950

1250

1250

(mm)

300

300

400

(mm)

300

300

400

## Up to 15kV

### Material

316L (1.404) stainless steel

## **Key Features**

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

Certification and Coding				
Zone		21	2	22
Ex e	•		•	
Ex s	•		٠	
Ex tb		٠		•

INTERNATIONAL APPROVALS





## **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 sec
- DTS-01 deluge tested

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

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

#### **Certification and Coding**

Zone		21	2	22
Ex e	٠		٠	
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

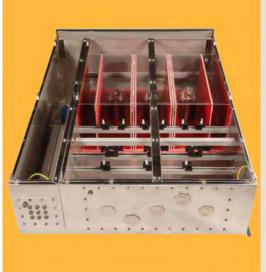
Part	W	H	D
No	(mm)	(mm)	(mm)
TFJB 83 (0-2)	800	1250	400

## Certification and Coding

Zone 1 21 2 22				- 5	
E	Zone	1	21	2	22
EX e • •	Ex e	•		•	
Ex tb • •	Ex tb		•		•

INTERNATIONAL APPROVALS





## 4TJB/125

## Up to 45kV

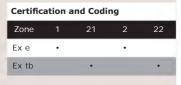
### Material

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
- Optional fibre optic compartment

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



INTERNATIONAL APPROVALS







This enclosure is designed to safely carry supplies up to 11kV with extreme current loadings in Zone 1 hazardous areas. Suitable for connectors over 400mm<sup>2</sup>, the enclosure is capable of connecting three phases plus neutral and up to six conductors per phase.

## Up to 11kV

## Material

316L (1.404) stainless steel

No	(mm)	(mm)	(mm)
BBB	770- 1250	675- 1250	770

## **Key Features**

- Up to 3,200A 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
- DTS-01 deluge tested
- \* Maximum line current when connected in a Delta configuration

Certific	ation a	and Codi	ng	
Zone	1	21	2	22
Ехе	•		•	
Ex tb		•		•
INTERNA	TIONAL		To See	
APPROV	ALS	(Fv)	IECE	
		(- A)		INMET



## **MV Terminal**

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 suitably certified ATEX or IECEx Zone 1 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

Part No	W (mm)	H (mm)	D (mm)
ТАТЕМ3	168	220	102
TATEM4	212	220	102
TATEM6	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

Certification and Coding

Zone 1 21 2 22

Ex eb • •

INTERNATIONAL APPROVALS











## **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**

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

### Codina

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<sup>2</sup> terminals available

INTERNATIONAL APPROVALS





# **SXCS**

## **IP66**

### Material

316L stainless steel

## **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

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; 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

6



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)





## **ExLed**

Utilising high efficiency encapsulated LED modules, the 4ft ExLed is designed for use in Zone 1 & 2 hazardous areas (ExLed 2 for Zone 2 & 22).

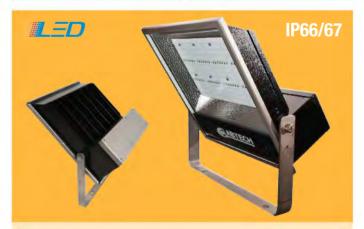
### **Kev Features**

- Tough GRP body with UV resistant frosted polycarbonate diffuser
- Emergency battery back-up version with charging and fault indication
- Overvoltage, overload, short circuit and excess temperature protection
- Effective replacement for 2 x 36W T8





Zone	Coding	Zone	Coding
1	II 2 G Ex eb mb op is q IIC T4 Gb	2	II 3 G Ex Na IIC T4 Gc
21	II 2 D Ex tb op is IIIC T180°C Db	22	II 3 D Ex tc IIIC T180°C Dc



## Gamma

The Gamma is a high output LED floodlight for use in Zone 1 & 2, 21 & 22 hazardous areas. Five 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



Zone	Coding
1/21	II GD, Ex eb ib op is qb IIB T* Gb, Ex tb IIC T* 0°C Db
2/22	Ex nA IIC T* Gc. Ex th IIIC T*°C Db. Ex tc IIIC T*°C Dc



## nD8611

The nD8611 is a compact LED bulkhead designed for use in Zone 2 & 22 hazardous areas, heavy industrial and marine environments to identify escape routes.

### **Key Features**

- Compact and lightweight, ideal for buildings, walkways and stairwells
- Maintained or Non-Maintained operation
- Instant 100% light output in emergency mode
- Automatic battery monitoring and fault indication
- Exit signage to ISO 7010 and ASR A1.3 (Viewing distance = 22m)





Zone Coding Ex II 3 G Ex nR\* IIC T4 Gc Gc, Ex II 3 D Ex tc IIIC T80°C Dc



## **Nimbus**

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

#### **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 and automatic self-testing
- Plug and socket connection between panel and driver for easy installation 5 year complete system warranty







Coding

Ex ib IIB T4 Gb, Ex eb [ib Gb] qb IIB T4 Gb



## 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**

- High performance optical design for maximum spacing between poles
- Low windage design suitable for mounting on poles 7-10 metres
- Maintenance free LED design
- 120W: 12.348 lumens
- 5 year complete system warranty



### Coding

Ex nR IIC T\* Gc, Ex tc IIIB T100°C Dc



## **Exodus**

The Exodus is an emergency bulkhead with integral battery for use in Zone 1 hazardous areas. Five year complete system warranty.

### **Key Features**

- Compact design ideal for perimeter, walkway or stairwell lighting
- Manufactured in LM24 aluminium alloy, powder coated for corrosion
- Illuminated using LED technology
- Accommodates any fire exit sign to ISO7010 (300 x 150mm)
- 20W; 5,700 lumen output







## Coding

Ex ib IIB T4 Gb, Ex eb [ib Gb] qb IIB T4 Gb



## Nimo

A rugged LED submersible luminaire for use in Zone 1 hazardous areas. It is rated IP68 to 30m in accordance with EN60529 and can be submerged for extended periods.

### **Kev Features**

- LED light source for low maintenance operation
- 12W LED provides 2,000 lumens, 5700K
- 316 stainless steel construction for maximum marine protection
- 50,000 hours L<sub>70</sub>/B<sub>10</sub> @25°C





### Coding

II 2 GD Ex eb ib qb op is IIB T4



## **APC**

The APC provides controlled switching of lighting in Zone 1 and 2 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







## Coding

II 2 GD Ex e mb IIC T6 Gb, Ex tb IIIC T80° Db

**CABLE GLANDS** www.abtech.co.uk



## **AAG Range**

Armoured Gland - Double Compression

#### Material

Nickel plated brass or stainless steel

### **Applications**

- Indoor and 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; Dust Ex t

INTERNATIONAL APPROVALS







## **ABG Range**

**Armoured Barrier Gland** - Compound

#### Material

Nickel plated brass or stainless steel

#### **Applications**

- Indoor and 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; 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; Dust Ex t

INTERNATIONAL





## **ASG Range**

Non-Armoured Gland - Single Compression



#### 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
- Flameproof Ex d; Increased Safety Ex e; Dust Ex t

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 Zone 1 & 2, 21 & 22 hazardous areas.

### Accessories

Also available is an extensive range of associated accessories including earth tags, sealing washers, serrated washers, locknuts and PVC shrouds - go to website for further details

INTERNATIONAL APPROVALS









Abtech Limited
199-201 Newhall Road
Lower Don Valley
Sheffield S9 2QJ
United Kingdom

- t +44 (0)114 244 2424
- **f** +44 (0)114 243 4312
- e sales@abtech.co.uk
- w abtech.co.uk

