Victor Products Ltd Unit 3A, Tyne Dock East Side Port of Tyne, South Shields, Tyne and Wear NE33 5SQ United Kingdom Tel : +44(0)191 2808000 Fax : +44(0)191 2808080



# Making Hazardous Environments Work

# TYPE A43PB 500AMP 3300VOLT BOLTED FLAMEPROOF PLUGS

Certification number Baseefa09ATEX0121U 🐼 I M2 Ex db I Mb Certification number IECEx BAS 09.0048U 🐼 I M2 Ex db I Mb Certification number BAS22UKEX0031U 🐼 I M2 Ex db I Mb The certificate carries the group and category marking:- I M2 Where I signifies suitability for use in mining and M2 signifies suitability for use in mines where it must be de-energized in the presence of an explosive atmosphere. For India only – The Plug has been designed in accordance with IS/IEC 60079-0:2004 and IS/IEC 60079-1:2007. Test report number CIMFR/TC/P/H154

# **TYPE A43PB DETAILS**

## <u>General</u>

The Type A43PB Bolted Plug is designed in accordance with BS EN IEC 60079-0:2018 and BS EN 60079-1:2014 and can be associated with any of the following Group 1 certified components:

Bolted Socket Type A43SB	
Bolted Socket Type 43SB	
Bolted Socket TypeA772A2	
Bolted Socket Type A43SB	

Bolted Plug Coupler Type A43SCB	-
Bolted Plug Coupler Type 43SCB	-
Bolted Plug Coupler Type A772A2	-
Bolted Plug Coupler Type A43SCB	-

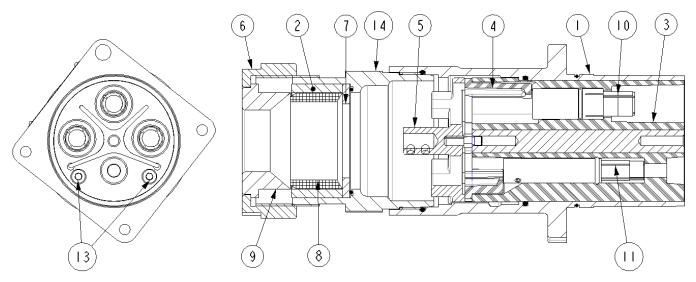
Certificate Baseefa03ATEX0024U Certificate MECS96D5085U Certificate HSE(M)905137U Certificate Baseefa09ATEX0121U IECEx BAS 09.0048U BAS22UKEX0031U Certificate Baseefa03ATEX0027 Certificate MECS96D5088 Certificate HSE(M)905283 Certificate Baseefa09ATEX0122X IECEx BAS 09.0049X BAS22UKEX0030X

#### Installation

Note - It is the end users responsibility to follow the installation roles protecting other equipment energized via the connectors against the hazards arising from power failures.

1. Only suitably qualified personnel in accordance with established codes of practice should carry out installation, maintenance, and inspection. Ensure the rated voltage and current are compatible with the power supply and load requirements.

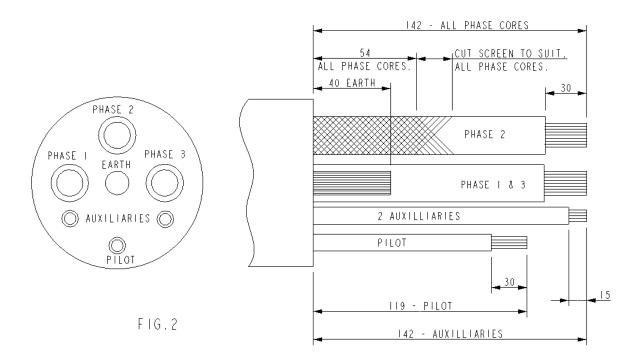
2. Ensure that an approved type and size of cable is used with the plug.



- 3. Dismantle the plug assembly by removing the gland nut (6), the clamp cone (9), sealing ring (8), sleeve (2 if fitted) and backing ring (7).
- 4. The remainder of the plug can now be dismantled by the removal of the socket set screw (12 not shown) that locks the gland body (14) into the plug body (1). The earth clamp (5), insulator cap (4), insulator (3) and contact tubes (10, 11 and 13) can now be removed.

#### Preparing the cable and assembly.

- 5. Pass the gland nut (6), clamp cone (9), sealing ring (8), sleeve (2 if fitted), backing ring (7) and gland body (14) along the cable. If convenient this can be done after making the cable off as fig.2.
- 6. As shown in Fig.2 remove 142mm from the outer sheath, unravel the screening around each of the main conductors and twist each screening into a rope.



- 7. Remove 30mm of insulation from the phase and pilot conductors and 15mm from the auxiliary conductors. Note: to assist in maintaining the correct length of screening (80mm) use insulating tape over the screening prior to stripping back and twisting together.
- 8. The contact tubes (10, 11 and 13) can now be fitted onto the cable ends. If crimped tubes are fitted they should be crimped using the appropriate die-sets shown in Table 1. If contact tubes with grubscrews are fitted ensure that the grubscrews are fully tightened down.
- 9. If not already done pass the gland nut (6), clamp cone (9), sealing ring (8), sleeve (2 if fitted), backing ring (7) and gland body (14) should be passed along the cable in this order.
- 10. Pass each contact tube through its respective hole in the earth screen clamp (5). The central bare earth conductor (if applicable) must be located into the central boss. The earth screen clamp (5) should be tapped with a mallet to ensure that the earth core is fully engaged before tightening the set screws. The screen ropes should be fed into their respective holes in the earth screen clamp (5), set screws tightened and any excess screening trimmed back to the earth screen clamp (5) face.
- 11. The insulator cap (4) can now be passed over the contact tubes and should fit neatly between the earth screen clamp and contact tubes.
- 12. The insulator (3) can now be pushed over the contact tubes (10, 11 and 13) and located into the insulator cap (4) with the central earth pin in the insulator locating into the centre hole of the earth screen clamp (6). When fully home, the insulator cap (4) should be clamped between the end faces of the insulator (3) and the earth screen clamp (5).
- 13. Slide the plug body (1) over the insulator assembly ensuring that the flat on the side of the insulator and insulator cap locates with the flat on the inside of the plug body.

Main Pin	70mm2	95mm2	120mm2	FURTHER INFORMATION ON
Neilson	ME29	ME29	ME29	DIESETS IS AVAILABLE ON
Pilot Tube	35mm2	50mm2	70mm2	REQUEST.
Neilson	ME14			

### Table 1.

#### Cable gland assembly.

- 14. The gland body (14) can now be screwed into the plug body (1) until it clamps up against the earth screen clamp (5). It can now be locked in place with set screw (12), not shown.
- 15. Feed the backing ring (7), sealing ring (8), sleeve (2 if fitted) and clamp cone (9) back along the cable and position within the gland body (14).
- 16. Screw the Gland Nut (6) onto the gland body (14) until hand tight and with the assistance of a strap wrench, fully tighten until no further movement can be achieved.

Ensure that when the plugs are connected for use with their mating plugs or couplers that they are fully engaged and connected with fasteners of the correct type and strength.

# **TYPE A43RAPB DETAILS**

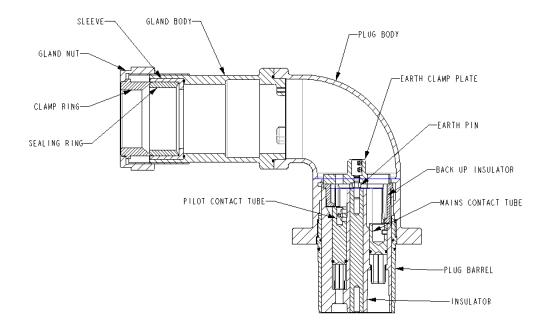
The Type A43RAPB Bolted Plug is designed in accordance with BS EN IEC 60079-0:2018 and BS EN 60079-1:2014 and can be associated with any of the following Group 1 certified components:

Bolted Socket Type A43RASB Bolted Socket Type A43SB Certificate Baseefa03ATEX0024U Certificate Baseefa09ATEX0121U IECEx BAS 09.0048U BAS22UKEX0031U

#### **Installation**

Note - It is the end users responsibility to follow the installation roles protecting other equipment energized via the connectors against the hazards arising from power failures.

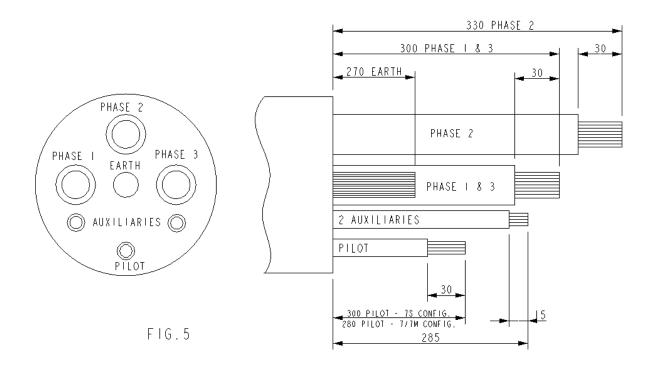
- 1. Only suitably qualified personnel in accordance with established codes of practice should carry out installation, maintenance, and inspection. Ensure the rated voltage and current are compatible with the power supply and load requirements.
- 2. Ensure that an approved type and size of cable is used with the plug.



3. Fully dismantle the plug assembly and store the parts in clean area.

#### Preparing the cable

- 4. In this order slide the gland nut, clamp ring, sealing ring and if fitted, the sleeve along the cable that is to be made off. If convenient this may be done later after making the cable off.
- 5. As shown in Fig.5 remove 330mm from the outer sheath, unravel the screening around each of the main conductors and spilt into 2 bunches.
- 6. Make off the 3 phase, the 2 auxiliaries, the pilot and earth as Fig.5. It is advisable to wrap insulating tape around the bare conductors to stop them from splaying out when being fed through the gland and plug body.



- Feed the gland body and plug body onto the cable as far as it will go ensuring the cable cores are the same orientation as shown in Fig.4. The conductors should pass sufficiently through the body for terminating into their respective parts.
- 8. Terminate the central earth into the centre of the earth screen clamp. This has been left slightly longer and may have to be pulled between the phase cores when fitting the contact tubes.
- 9. Pass the phase conductors, pilot and auxiliary conductors through the earth plate ensuring the phase 2 conductor passes through the middle one of the 3 holes.
- 10. The central earth lead of the cable should be located into the centre boss of the earth plate and fastened into position with the grubscrews.
- 11. Fit the contact pins to the respective conductors and fully tighten with respective grubscrews.
- 12. Slide the back up insulator over the contact tubes. The lips on the inside of 3 phase legs of the back up insulator should fit in between the end face of the insulation of the phase cores and the end face of the contact tube.
- 13. Ensure the earth pin is fitted into the insulator. Slide the insulator over the 6 contact tubes and the back up insulator until the earth pin locates into the earth screen clamp. A slight resistance may be felt as the earth pin enters the hole. This will require the end of the insulator to be gently tapped into its final position. Placing a flat piece of non-metallic material over the end face of the insulator for protection against damage, gently push or tap the insulator fully home.
- 14. The screening from the 3 phase conductors can be trimmed to length and terminated into the remaining holes in the earth screen clamp ensuring there is enough length of screening for the bend of the plug body. The plug has 3 additional earth screen termination points at the rear of the plug body. Access to these can be achieved by removing the gland body and with the excess screening terminated into the supplied crimped lugs. These crimped lugs should be removed if not required.

- 15. The insulator assembly can now be located into the body, aligning the flat on the insulator with the flat on pad inside of the plug body. Push fully home.
- 16. The plug barrel can now be passed over the insulator into the plug body. Taking care not to cross the threads and with the assistance of a strap wrench fully screw the plug barrel home. When screwing the barrel in, a resistance will be felt as the barrel slips inside the internal sealing ring, and with the assistance of a strap wrench, fully tighten until no further movement can be achieved.
- 17. Finally, slide the sealing ring, clamp washer along cable and screw onto the not onto the gland body, taking care not to cross the screw threads. Screw the Gland Nut onto the gland body until hand tight and with the assistance of a strap wrench, fully tighten until no further movement can be achieved.

#### **Maintenance and Inspection**

It should be noted that the original manufacturer must supply all components that are to be replaced. Failure to use such components invalidates the certification and approval and may make the apparatus dangerous. NO modifications should be made to the apparatus without the knowledge and approval of the manufacturer. If in doubt, refer to the manufacturer. A copy of the Spare Parts List is available from Victor Products Ltd.

Before re-assembly ensure that all flameproof paths are visually inspected and dimensionally checked for any abnormality.

#### HEALTH AND SAFETY AT WORK etc. ACT 1974

In the United Kingdom all equipment must be installed, operated and disposed of (as required) within the legislative requirements of the Health and Safety at Work etc. Act 1974. Leaflet No. HSS L1 refers to the Company's obligation and is available on request.

It is the responsibility of the user to select, install, operate and maintain the equipment in accordance with the relevant legislation and appropriate code of practice.



Prices and design are subject to alteration without notice. All products are sold subject to our conditions of sale, copies of which are available on request.

We reserve the right to change characteristics of our products. All data is for guidance only

## **UK Attestation of Conformity**



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#### TYPE A43TPB RANGE OF 500AMP 3300VOLT BOLTED FLAMEPROOF PLUGS Certification number BAS22UKEX0031U

Victor Products Ltd

Hereby declare our sole responsibility that the product which is the subject of this attestation is in conformity with the following standards or normative documents.

Number and date of standard	UK Legislation
BS EN IEC 60079-0:2018 BS EN 60079-1:2014	Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016
EN50082 (1992) EN55015 (1993) EN 60555-2 (1987)	89/336 EEC: Electromagnetic Compatability
Notified Body: Sira Certifiction Services CSA Group Deeside CH5 3US Notified Body No. 0518	P Do P. Devlin Operations Manager January 2024

SERIAL NUMBER

**Attestation of Conformity** 

Attestation de Conformitè Konformitätsbescheinigung



Victor Products Ltd Unit 3A, Tyne Dock East Side Port of Tyne, South Shields, Tyne and Wear NE33 5SQ United Kingdom

### TYPE A43 RANGE OF 500AMP 3300VOLT BOLTED FLAMEPROOF PLUGS Certification number Baseefa09ATEX0121U IECEx BAS 09.0048U

#### Victor Products Ltd

Hereby declare our sole responsibility that the product which is the subject of this attestation is in conformity with the following standards or normative documents.

Erklären in alleiniger Verantwortung, da $\beta$  das Product auf das sich diese Bescheinigung bezieht, mit der/den folgenden Norm(en) oder normativen Dokumenten Ubereinstimmt.

Déclarons de notre seule responsabilité, que le produit auquel cette attestation se rapporte, est conforme aux norme(s) ou aux documents normatifs suivants.

Number and date of standard	Directive description
Nr. Sowie Ausgabedatum der Norm	Bestimmungen der Richtlinie
No. Ainsi que date d'emission des normes.	Prescription de la directive
BS EN IEC 60079-0:2018	Equipment and protective systems intended for use in
BS EN 60079-1:2014	potentially explosive atmospheres.
BS EN 00079-1.2014	This Attestation is valid for directive 2014/34/EU.
	Geräte und Schutzsysteme zur bestimmungsgemäßen
	Verwendung in explosionsgefährdeten Bereichen.
	Diese Bescheinigung gilt für die Richtlinie 2014/34 /EU.
	Appareils et systèmes de protection destinés a êtré utilisés en atmosphères explosibles.
	Cette Attestation est valable pour la directive 2014/34 /UE.
EN50082 (1992)	89/336 EEC: Electromagnetic Compatability
EN55015 (1993)	
EN 60555-2 (1987)	89/336 EWG: Elektromagnetische Verträglichkeit
	89/336 CEE: Compatabilité électromagnétique
Notified Body: CSA Group Netherlands B.V. Notified Body No. 2813	P Do P. Devlin Operations Manager January 2024

SERIAL NUMBER