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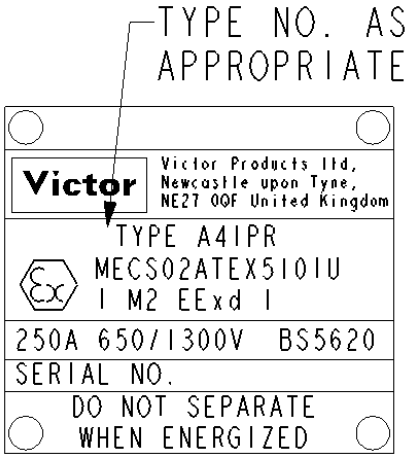
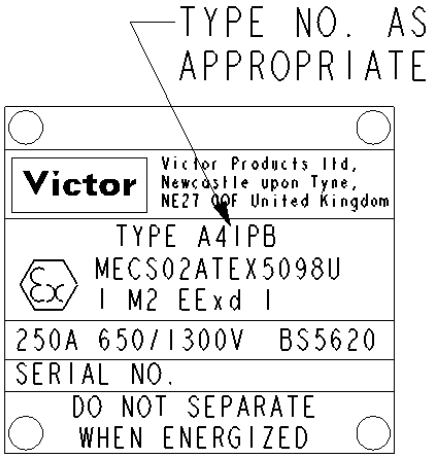
Making Hazardous Environments Work

TYPE A41 RANGE OF 250AMP 650/1300VOLT DUAL VOLTAGE FLAMEPROOF PLUGS

Certification number :
Type A41PR and A41PR/B, MECS02ATEX5101U I M2 Ex db I Mb
Type A41PB and A41PB/A, MECS02ATEX5098U I M2 Ex db I Mb
The ATEX and UKEX certificates carry 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-energised in the presence of an explosive atmosphere.



NAMEPLATE DETAIL
RESTRAINED PLUGS



NAMEPLATE DETAIL
BOLTED PLUGS

General

These plugs are designed in accordance with EN50014:1997 and EN50018:2000. They can be associated with any relevant certified connectors for flameproof enclosures Group I apparatus that complies dimensionally with BS5620, in this way connectors complying with BS5620 and certified to BS5501, or BS4683, or BS229 can be intermixed. The Type A41PR/B and A41PR/C have a non-standard cam slot and can be associated with Restrained Sockets Type A41SR/D, A41SR/E, A41SR/F, A41SR/G, A41SR/K, and A41SR/L covered by certificate no. MECS02ATEX5102U, Restrained Sockets Type 41SR/D, 41SR/E, 41SR/F, 41SR/G covered by certificate no. 94C5245U, Restrained Sockets Type 15SR/D, 15SR/E, 15SR/F, 15SR/G covered by certificate no. 80027, and Restrained Socket Type KSX covered by certificate no. 72006.

Installation - all

1. Installation, maintenance, and inspection, must be carried out by suitably qualified personnel in accordance with established codes of practice.

2. Restrained type of plugs and sockets are for use with electrical interlock.

   Bolted types of plugs and sockets may be used with or without electrical interlock.

3. Ensure that the rated voltage and current are compatible with the power supply and load requirements. The plugs can be dismantled and the insulators turned through 180° and re-assembled.

4. Ensure that an approved type and size of cable is used with the plug. The plugs are designed to accept cables from 25mm to 60mm diameter.
   Important note: Ensure that the cable to be gripped falls within the gripping diameter of the Clamping Ring.

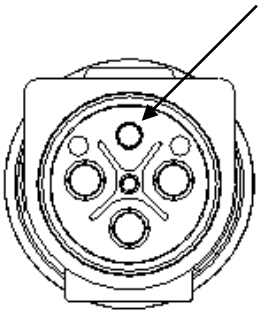


Fig.1 RESTRAINED PLUG IN 1300V MODE.

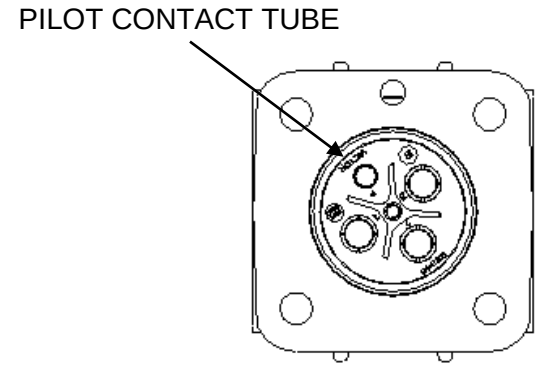
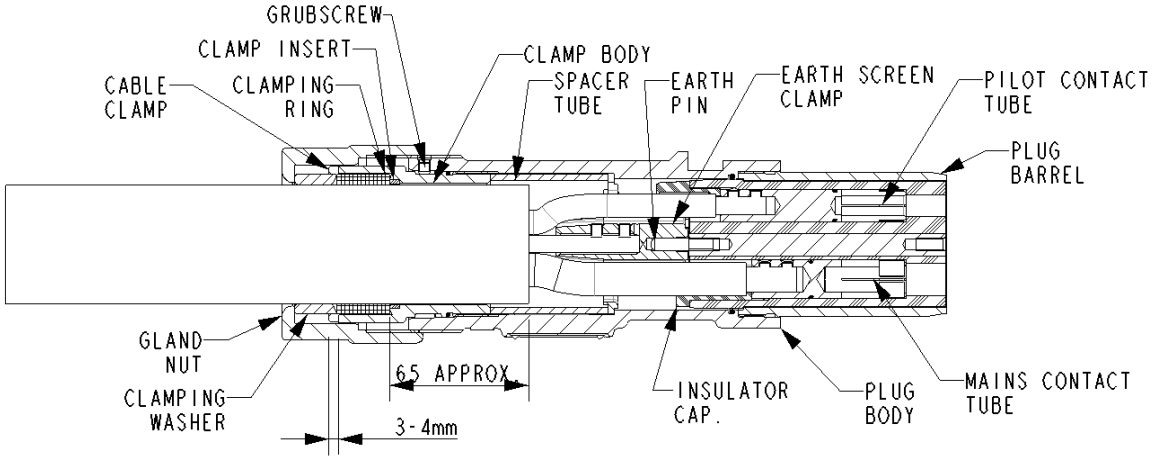


Fig.2 BOLTED PLUG IN 1300V MODE

Installation – Screened Trailing Cables



RESTRAINED PLUG FOR SCREENED TRAILING CABLE SHOWN IN 1300V MODE
(Assembly process of Bolted Plug is the same)

1. Thread the Gland Nut, Clamping Washer, Clamping Ring, Cable Clamp (fitted with Clamp Insert), and Spacer Tube along the cable in that order (Fig.3).

2. The cable should now be stripped in accordance with the appropriate diagram (Fig.4) with the baring of the power and pilot conductor left until stage 4. The screening of each core should be carefully twisted together to form individual 'ropes' ensuring that maximum screen covering is maintained between the cores. Do not cut back the screening rope until section 5.

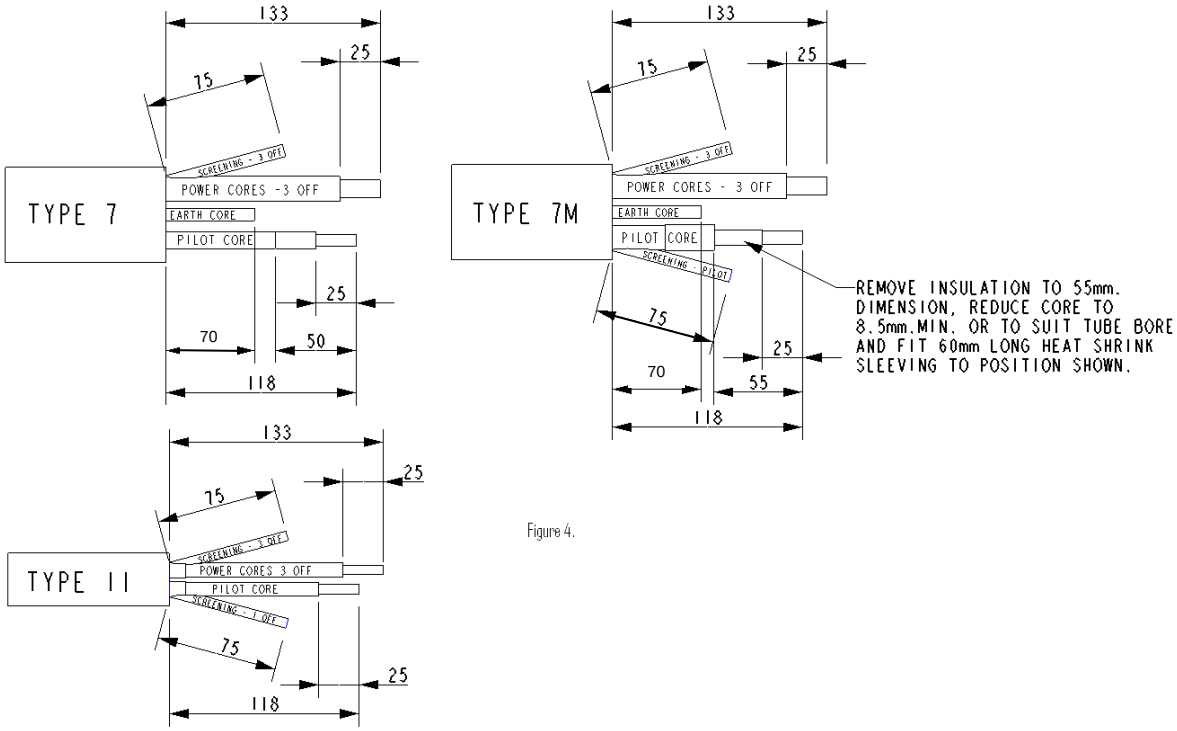


Figure 4.

SCREENED TRAILING CABLE MAKE OFF – Figure 4.

3. Feed the conductors through the Earth and Screen Clamp noting that the pilot core is fed through the open slot.

4. The power and pilot cores can now be bared and fitted into the Contact Tubes. The tubes can be either grubscrew or crimped type. For crimped type use crimping dies 'Erma' ref. HJ or 'BICC' ref. U855 or 'Neilson' ref. ME14 on the Mains Tubes, and 'Erma' ref. HF or HG, or 'BICC' ref. U854, or 'Neilson' ref. ME14 on the Pilot Tubes.

5. Fit Insulator Cap over Contact Tubes ensuring it sits squarely onto the flat surface of the Earth and Screen Clamp and also that the tubes sit on the shoulder of the Insulator Cap.
6. Pass the insulator over the contact tubes to make a sub assembly. This will assist in keeping everything together. This should be removed before fitting the plug body.

7. The screens can now be fitted into the earth screen clamp and secured using the grubscrews. Note: The screens can either be cut back to the 75mm or they can be left at full length and folded over.
8. Slide the spacer along the cable onto the earth screen clamp followed by the cable clamp body.

9. The Plug Body should now be passed over the assembly ensuring that the keys on the Earth and Screen Clamp locate fully in the keyways in the body in the selected voltage mode.
10. The cable clamp body should be carefully screwed into the body. Do not fully tighten at this stage as this will assist in when the plug barrel is screwed into position.

11. The Plug Barrel can now be passed over the Insulator and screwed fully home into the Plug Body. A strap wrench may be used to assist in fitting the barrel to avoid marking the FLP plug barrel. When fully home the end face of the Insulator should be level or just below the end face of the Plug Barrel.

12. The cable clamp body should now be fully tightened into the plug body and secured using the Locking Screw..

13. To avoid any distortion to the FLP paths, the plug body should be held securely around the nameplate pad and the area immediately opposite (avoid excessive force). The Clamp Insert, Clamping Ring and Clamp Washer should now be fed along the cable to locate inside the Clamp Body ensuring they are fully inserted. As a guide the end face of the Clamping Ring should be approximately 3-4mm below the end face of the Clamp Body. The gland nut can now be fed along the cable and screwed hand tight onto the Plug Body until no further rotation can be achieved. Please ensure that the cable is positioned centrally at all times into the sealing ring and plug body. With the plug body securely held around the gripping area and with the aid of a strap or chain wrench of approximately 300mm length, fully tighten the nut until no further movement can be achieved.
    As a visible aid to assist in detecting any possible movement of the Gland Nut due to bending forces or distortion in the cable, a ‘pop’ mark can be made on the Gland Nut that aligns with the cast/stamped arrow on the Plug Body.
    See also Maintenance and Inspection.

14. Ensure that when the plugs are connected for use with their mating sockets, they are fully engaged.

    Restrained plugs are fully engaged with their sockets when the handle on the socket is wound fully home.

    Bolted plugs are fully engaged with their sockets when the two mating flanges meet and the four bolts are fully tightened.

Installation – Screened and P.W.A. Trailing Cables

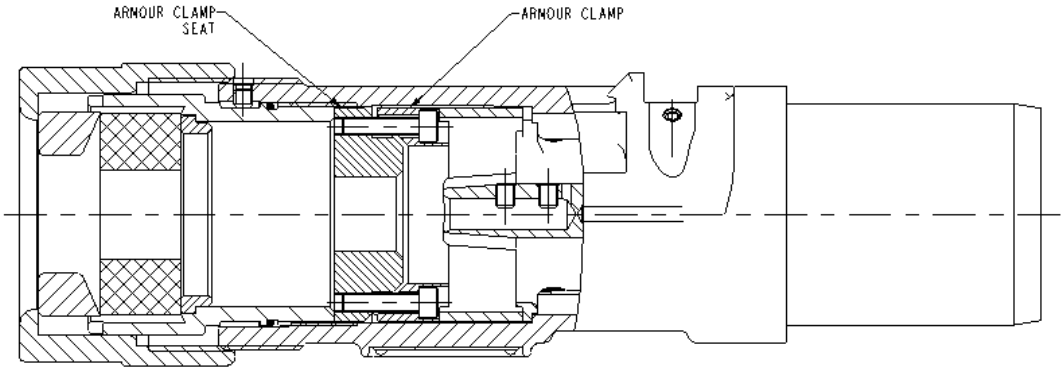


Fig.5. RESTRAINED PLUG FOR SCREENED AND P.W.A.TRAILING CABLE SHOWN IN 1300V MODE

(Assembly process of Bolted Plug is the same)

1. As note 1 for screened trailing cables but do not pass Spacer Tube over at this stage.

2. Strip off outer sheath to approximately 160mm from end of cable. Thread Armour Clamp Seat over cable up to the end of the outer sheathing. Bend back armour wire, as equally spaced as possible over tapered surface of seat, ensuring tapped holes are not covered. Cut off inner rubber sheathing level with the clamp and strip cable in accordance with the appropriate diagram (Fig.6). Baring of the power and pilot cores should be left until stage 4. The screens should be carefully twisted together ensuring that the maximum screen covering is maintained between the cores. Pass Armour Clamp over cable and firmly clamp armour by tightening the socket head cap screws. Trim off armour wire so that it is below the diameter of the seat and clamp. Thread on Spacer Tube.

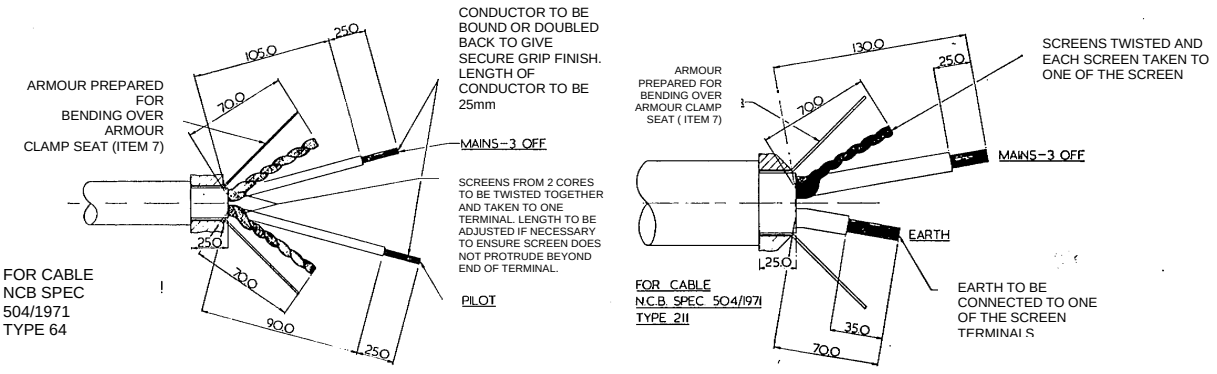


Fig.6 SCREENED TRAILING CABLE MAKE OFF

3. As note 3 for screened trailing cables.

4. As note 4 for screened trailing cables.

5. As note 5 for screened trailing cables.

6. As note 6 for screened trailing cables.

7. The Cable Clamp/Clamp Insert should now be passed down the cable and carefully screwed into the body. The grubscrew should be screwed home ensuring it is below the profile of the thread. The Spacer Tube and Armour Clamp will be clamped between the Plug Body and Earth and Screen Clamp, ensuring good earth contact.

8. As note 8 for screened trailing cables.

9. As note 9 for screened trailing cables.

10. As note 10 for screened trailing cables.

11. As note 11 for screened trailing cables.

12. As note 12 for screened trailing cables.

Maintenance and Inspection

It should be noted that all components that are replaced must be supplied by the original manufacturer. 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.

It is highly recommended that the tightness of the gland nut is checked at regular intervals and also that the pop mark and arrow are aligned. If the gland nut has become loose or the marks are not in line, then the reason should be investigated. The gland nut must be further tightened as described in section 10. The gland nut can then be remarked with 2 pop marks and so on. If the amount of pop marks becomes confusing then the gland nut can be replaced.

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.

EU Only

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

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Attestation of Conformity
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Konformitätsbescheinigung

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

TYPE A41 RANGE OF 250AMP 650/1300VOLT Dual Voltage Flameproof Plugs
Type A41PR, A41PR/A, A41PR/B, and A41PR/C, MECS02ATEX5101U I M2 EExd I
Type A41PB and A41PB/A MECS02ATEX5098U I M2 EExd I

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, daß 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 Nr. Sowie Ausgabedatum der Norm No. Ainsi que date d'emission des normes.	**Directive description** Bestimmungen der Richtlinie Prescription de la directive
EN 50014 (1998) EN 50018 (2000) This equipment has been reviewed against the requirements of EN60079-0: 2018 and EN60079-1: 2014, in respect of the differences from the standards to which this certificate was issued; none of these differences affect this equipment. Dieses Gerät wurde hinsichtlich der Unterschiede zu den Standards, für die dieses Zertifikat ausgestellt wurde, mit den Anforderungen von EN60079-0: 2018 und EN60079-1: 2014 verglichen. Keiner dieser Unterschiede wirkt sich auf dieses Gerät aus. Cet équipement a été passé en revue contre les conditions d'EN60079-0 : 2018 et EN60079-1 : 2014, en ce qui concerne les différences des normes auxquelles ce certificat a été délivré ; aucune de ces différences n'affecte cet équipement.	**Equipment and protective systems intended for use in potentially explosive atmospheres.** 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) EN55015 (1993) EN 60555-2 (1987)	**89/336 EEC: Electromagnetic Compatability** 89/336 EWG: Elektromagnetische Verträglichkeit 89/336 CEE: Compatabilité électromagnétique
Notified Body: CSA Group Netherlands B.V. Notified Body No. 2813	P. Devlin Operations Manager January 2024

SERIAL NUMBER