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0518

Making Hazardous Environments Work

RESTRAINED TYPE A40 350AMP 650/1300VOLT DUAL VOLTAGE FLAMEPROOF PLUGS RESTRAINED TYPE A40PR & A40PR/B

Certification number Baseefa02ATEX0098U  **I M2 Ex db I Mb**

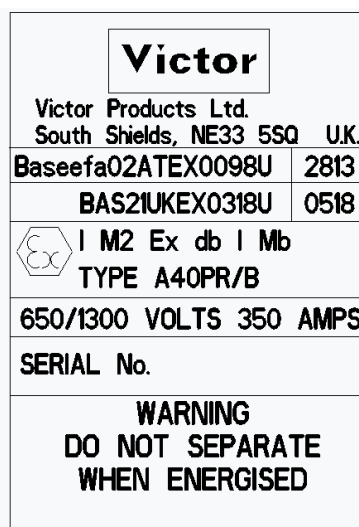
The ATEX certificate carries the ATEX group and category marking: - I M2
Where: I signifies suitability for use in mining and M2 signifies suitability for use in mines
where it must be de-energised in the presence of an explosive atmosphere.

Certification number BAS21UKEX0318U  **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-energised in the presence of an explosive atmosphere.



NAMEPLATE FOR TYPE A40PR



NAMEPLATE FOR TYPE A40PR/B

General

The restrained plugs, Types A40PR and A40PR/B are designed in accordance with BS EN IEC 60079-0:2018 and BS EN 60079-1:2014. They can be associated with any of the following certified connectors for flameproof equipment.

For India only – These plugs have been designed in accordance with IS/IEC 60079-0:2004 and IS/IEC 60079-1:2007. Test report number CIMFR/TC/P/H474.

The Restrained Plug Type A40PR can be associated with the following equipment:

Sockets:

Type A40SR, A40SR/CE and A40SR/E covered by certificate Baseefa02ATEX0099U.

Type A40SR covered by certificate BAS21UKEX0319U.
 Type 40SR, 40SR/CE and 40SR/E covered by certificate MECS93C5503U.
 Type 23SR and 23SR/B covered by certificate FLP81021.
 Plug Couplers:
 Type A40SCR covered by certificate BaseefaATEX0100.
 Type A40SCR covered by certificate BAS21UKEX0320.
 Type 40SCR covered by certificate MECS93C5504.
 Type 23SCR covered by certificate FLP81021.

The Restrained Plug Type A40PR/B can be associated with the following equipment:

Sockets:

Type A40SR/B, A40SR/BE and A40SR/DE covered by certificate Baseefa02ATEX0099U.
 Type A40SR/B covered by certificate BAS21UKEX0319U.
 Type 40SR/B, 40SR/BE and 40SR/DE covered by certificate MECS93C5503U.
 Type 23SR/A covered by certificate FLP81021.

Plug Couplers:

Type A40SCR/B covered by certificate Baseefa02ATEX0100.
 Type A40SCR/B covered by certificate BAS21UKEX0319U.
 Type 40SCR/B covered by certificate MECS93C5504.
 Type 23SCR/B covered by FLP81021.

Installation – all

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. Suitably qualified personnel in accordance with established codes of practice must carry out installation, maintenance, and inspection.
2. The Restrained Plugs are for use with electrical interlock only.
3. Ensure that the rated voltage and current are compatible with the power supply and load requirements. Alternate voltages can be achieved by rotating the insulator through 180°.
4. Ensure that an approved type and size of cable is used with the plug. The plugs are designed to accept cables from 26mm to 73mm diameter.

Important note: Ensure that the outside diameter of the cable to be gripped falls within the gripping diameter of the Clamping Ring.

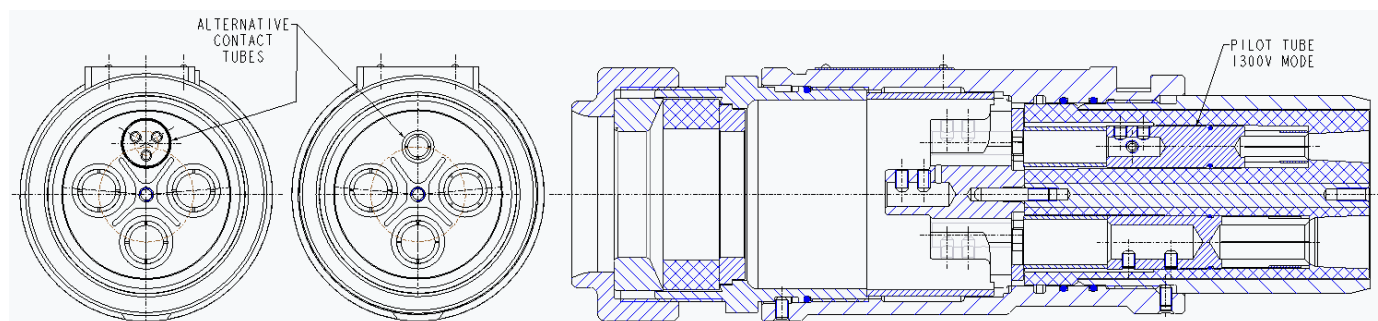


Fig 1 TYPICAL PLUG ASSEMBLIES IN 1300V MODE

Installation – Screened Trailing Cables with single Pilot or 3 Auxiliaries.

- 1) The following components should be fed onto the cable, gland nut (9), clamp washer (17), clamping ring (16), clamp insert (15), gland body (10) & spacer tube (4). Fig 1.

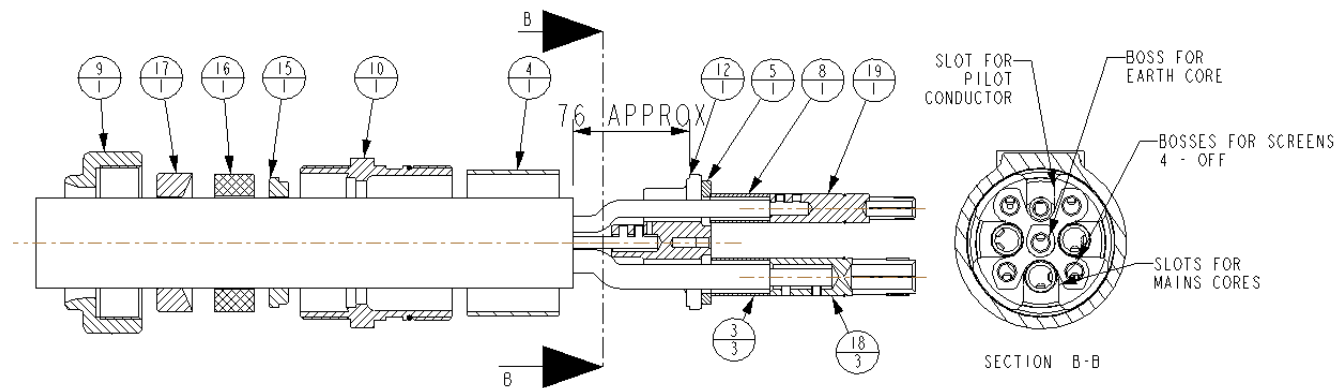


Fig.1

- 2) The cable should now be stripped to dimensions shown in figs. 2, 3, or 4 depending on what type of cable is being used. Baring of the conductors should be left to stage 3. The screens should be carefully twisted together to ensure that maximum screen covering is maintained between the cores.

Note: to assist maintaining the correct length of screening (80mm) use insulating tape over the screening prior to stripping back and twisting together.

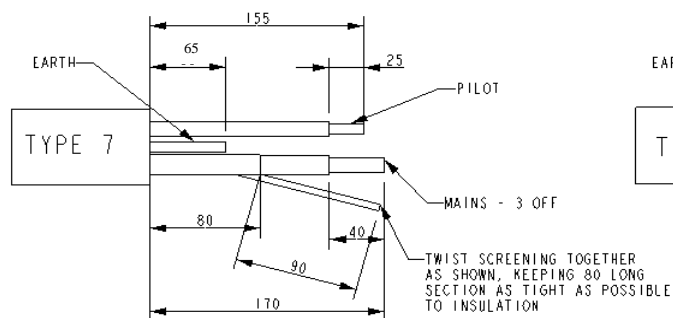


Fig.2

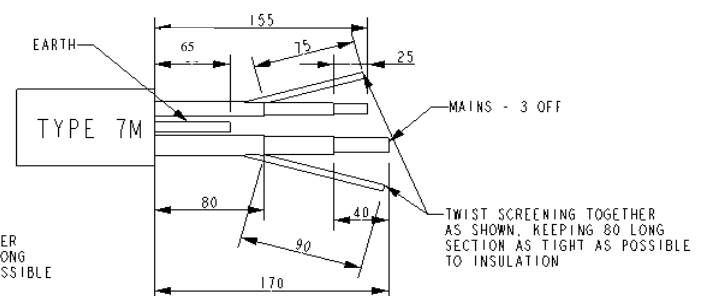


Fig.3

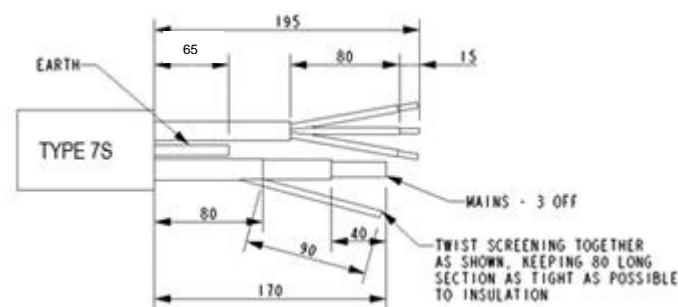
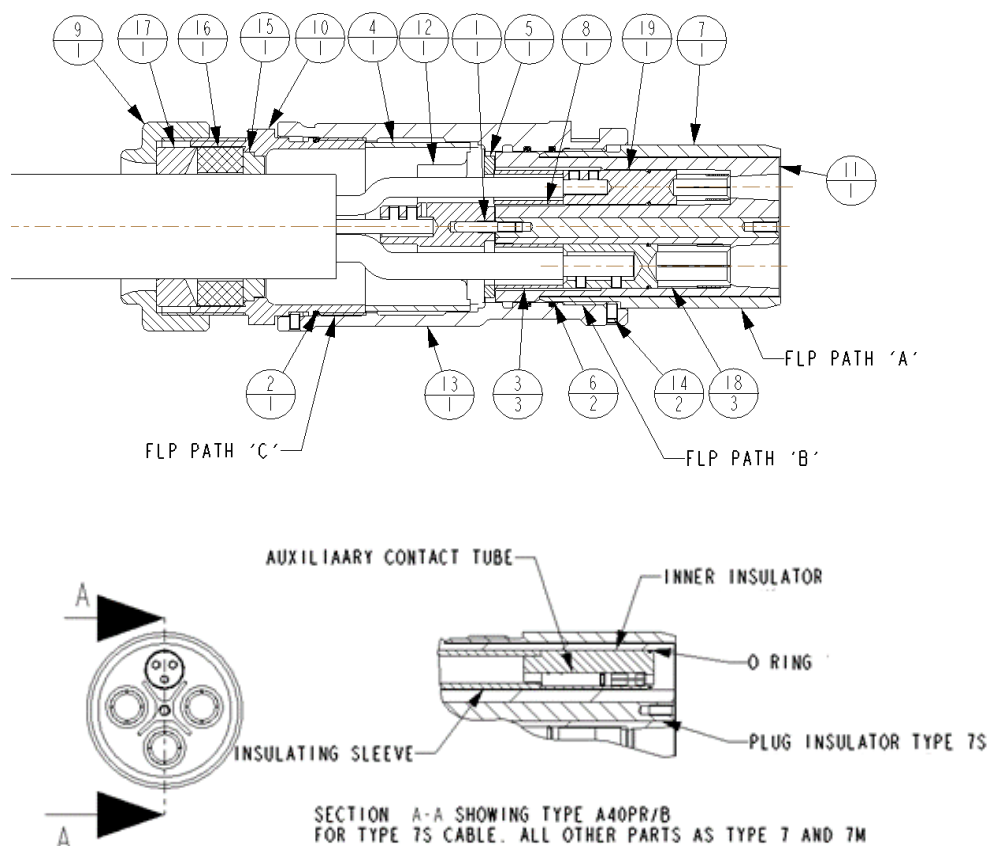


Fig.4

- 3) The earth screen clamp (12) can now be positioned, the earth core and screens should be fed into their respective terminals. To ensure that the earth conductors fully engaged it should be possible to see the conductor through the small sight hole. Easy access to the centre earth fixing screws can be achieved by bending back the pilot core.
- 3) The power and pilot/auxiliary cores should be now bared and the mains and pilot/auxiliary insulating spacer tubes (3 and 8) fitted, fit contact tubes (18 and 19) secure with grub screws.
- 4) If sweating the contact tubes the insulating tubes should be pushed down the cable to allow access, the 'O' rings should be removed to prevent heat damage. If crimped tubes are supplied, see table 1 for crimp details. Further crimp details are available from the manufacturer.

Main Tube	50mm ²	70mm ²	95mm ²
Erma	HK	HM	HM
BICC	U874	U856	U856
Neilson	ME17	ME19	ME19
Pilot Tube	35mm ²	50mm ²	70mm ²
Erma	HJ	HJ	HJ
BICC	U855	U855	U855
Neilson	ME14	ME17	ME17

- 5) The thrust plate (5) should now be assembled over the contact tubes (18 and 19) and the insulating spacer tubes (3 and 8), then secure to the earth screen clamp using screws in the clamp.



- 6) Ensure the centre earth pin in the insulator is fully screwed into the insulator (11) which can now be fitted over the contact tubes (18 & 19) until the earth pin engages into the earth screen clamp (12) and the locating key engages into the keyway of the insulator (11).

- 7) The plug body assembly is fitted with numerous 'o' rings that should be smeared with water-repellent grease. Pass the plug body (13) over the insulator (11) ensuring that the key on the earth screen clamp (12) locates into the key way of the plug body (13) in the correct voltage mode.
- 8) Smear the plug barrel (7) threads with water-repellent grease. Pass over the insulator (11) and screw tightly into the plug body (13) locking it into position with grubscrew (14).
- 9) The spacer tube on the cable (4) should now be passed down the cable into the plug body. The sealing ring and cable body should be smeared with water-repellent grease before being carefully screwed into the plug body and the earth screen clamp ensuring earth continuity. The locking screw (14) in the plug body (13) should be screwed in securely.
- 10) To avoid any distortion to the FLP paths, the plug body (13) should be held securely around the nameplate pad and the area opposite, avoiding excessive force. The clamp insert (15), clamping ring (16) and clamping washer (17) should now be fed along the cable to locate inside the gland body (10) and ensuring that they are fully inserted. As a guide the end face of the clamping ring should be approximately 4mm below the end face of the gland body. The gland nut (9) can now be fed along the cable and screwed hand tight onto the gland body until no further rotation can be achieved. Ensure that the cable is positioned centrally at all times into the sealing ring and plug body. Using a strap or chain wrench of approximately 300mm in length on the hexagonal part of the nut, fully tighten until no further movement can be achieved. The torque should be 220Nm minimum, with the exception of the 68-73mm sealing ring which should be 450Nm minimum. As a visible aid to assist in any possible movement of the gland nut due to distortion in the cable, a pop mark can be made on the gland nut (9) aligning with the arrow on the plug body (13).

Maintenance and Inspection

It should be noted that the original manufacturer must supply all components that are 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.

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 can be tightened or the marks are not in line, then 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.



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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**Restrained Type A40 350Amp 650/1300Volt Dual Voltage Flameproof Plugs
Type A40PR and A40PR/B.**

Certification number BAS21UKEX0318U  I M2 Ex db I Mb

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 Certification Services CSA Group Deeside CH5 3US Notified Body No. 0518	 P. Devlin Operations Manager January 2024

SERIAL NUMBER

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Konformitätsbescheinigung



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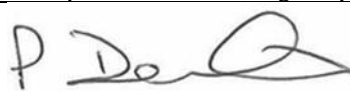
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Hereby declare our sole responsibility that the product which is the subject of this attestation is in conformity with the following standards or normative documents.

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'émission des normes.	Directive description Bestimmungen der Richtlinie Prescription de la directive
BS EN IEC 60079-0:2018 BS EN 60079-1:2014	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 à être 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 Compatibility 89/336 EWG: Elektromagnetische Verträglichkeit 89/336 CEE: Compatibilité électromagnétique
Notified Body: CSA Group Netherlands B.V. Notified Body No. 2813	 P. Devlin Operations Manager January 2024

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