

Installation & Maintenance Manual for Calstar Bulkhead Fitting

Specifications

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|---------------------------------------|---|--|
| Types | 300/XXX Ex e terminal box 350/XXX Ex d terminal box XXX/CFL compact fluorescent lamp fitting XXX/GLS/ES incandescent lamp fitting with Edison screw lampholder XXX/GLS/BC incandescent lamp fitting with bayonet cap lampholder | |
| Hazardous Area | SIRA00ATEX1107X IECEX SIR 10.0077X POCC DE.ГБ06.В01007 | |
| ATEX certificate number | SIRA00ATEX1107X | |
| IECEX certificate number | IECEX SIR 10.0077X | |
| GOST certificate number | POCC DE.ГБ06.В01007 | |
| INMETRO certificate number | | |
| CE number | CE 0102 | |
| Certification coding for ATEX/IECEX | | |
| 300/XXX types | Ex II 2 GD | Ex de IIC T* Gb Ex tb IIIC T** Db |
| 350/XXX types | Ex II 2 GD | Ex d IIC T* Gb Ex tb IIIC T** Db |
| Gas/dust temperature class | T6/T85°C @ Ta+49°C (horizontally mounted) T5/T100°C @ Ta+54°C (vertically mounted, terminal box down) | |
| XXX/CFL types | | |
| XXX/GLS types | T3/T200°C @ Ta+60°C (horizontally mounted) T4/T135°C @ Ta+41°C (vertically mounted, terminal box down) | |
| Minimum ambient temperature | -20°C | |
| Cable entry point maximum temperature | 84°C | |
| IP Rating | IP67 (IP6X for XXX/XXXX/P models) | |
| Mechanical | | |
| Material | Light metal alloy | |
| Castings | Light metal alloy | |
| Overtube | Borosilicate glass or polycarbonate for XXX/XXX/P models | |
| Finish | | |
| Castings | Epoxy powder coated RAL7032 | |
| Reflector | Epoxy powder coated white | |
| Entry threadform | M20 | |
| Electrical | | |
| Operating voltage | 220 – 254V | |
| Frequency | 50/60Hz | |
| Operating current | CFL – 0.08A, GLS – 0.25A | |
| Power factor | 0.98 | |
| Terminal capacity | 2.5mm ² | |
| Other | | |
| Lamp type | 13W compact fluorescent or 60W GLS | |
| Conformity | EN 60079-0: 2006 IEC 60079-0: 2007 Ed 5 EN 61241-1: 2004 | EN 60079-1: 2007 EN 60079-7: 2007 EN 60529 |
| Dimensions | | |



Installation

To minimise the risk of ignition by electrical apparatus in hazardous areas efficient installation, inspection and maintenance of apparatus and systems is essential and the work should be carried out by suitably trained personnel in accordance with the prevailing code of practice.

- 1) If the environment in which the luminaire is to be mounted contains aggressive liquids, vapours, dusts or compounds seek expert advice from Pepperl+Fuchs. It is important to ensure that the luminaire is not likely to have its concepts of protection compromised by any environmental conditions. This is particularly important for models with a polycarbonate overtube.
- 2) Disconnect the earth wire from the exterior of the terminal housing. Mount the support clip to its operating position using the 10mm fixing hole. Offer the fitting to the support clip and mark the two mounting holes of the support bracket through their fixing holes. Prepare the two fixing holes on the mounting surface. Finally, offer the fitting to the support clip and fit the luminaire using the previously prepared holes. Reconnect the earth wire.
- 3) To make electrical connections separate the control housing from the overtube assembly by unscrewing the two captive screws. The overtube can be withdrawn and lowered; an internal tie wire will support the tube.
- 4) For 300/XXX types cable entries should be made only with suitably approved Ex e / Ex tb glands noting that this equipment is suitable for use with gas group IIC & dust group IIIC. IP ratings should be suitable for the intended area of installation.
- 5) For 350/XXX types cable entries should be made only with suitably approved Ex d / Ex tb glands noting that this equipment is suitable for use with gas group IIC & dust group IIIC. IP ratings should be suitable for the intended area of installation. Ensure that the type of cable being used is suitable for the type of gland. Certain types of cable have a hollow centre and must not be used with compression type glands. With these types of cables, barrier or 'stuffing' glands should be used.
- 6) All unused entries should be fitted with suitably approved stopping plugs.
- 7) A corrosion inhibiting grease may be applied to the surface of the flameproof joints before assembly. If applied, the grease should be of a type that does not harden because of ageing, does not contain any evaporating solvent and does not cause corrosion of the joint surfaces.
- 8) Once the cover is fitted, ensure that all fasteners are fully tightened.
- 9) Switch on the mains supply and ensure that the luminaire operates correctly.
- 10) No metal should be removed from the enclosure i.e. extra cable entries or mounting points should not be made.**
- 11) No modifications should be made to the fitted equipment without consultation with Pepperl+Fuchs. The fitted equipment has been assessed to produce a heat rise that will maintain the stated gas/dust temperature classes.**

Special Conditions for Safe Use

- 1) The polycarbonate overtube that may be used in the construction of these luminaires (XXX/XXX/P models) can present a risk of electrostatic discharge; therefore, products that are fitted with this type of overtube shall only be cleaned with a damp cloth.

Maintenance

Electrical apparatus installed in hazardous locations has design features that make it operationally safe under normal conditions. In order to ensure that the apparatus remains serviceable the following points should be attended to on a periodical basis. The period between inspections is not fixed, but should be adjusted to suit the environmental conditions where the equipment is situated. An initial inspection after 12 months of use is suggested.

- 1) Ensure that all fasteners are present and of the correct property class. Refer to the certification label for details.
- 2) Ensure that the luminaire is not damaged or distorted so as to affect the dimensions of the flameproof joints.
- 3) Ensure external earth bonding connections are in place and in good condition.
- 4) Ensure that all entry devices are in good condition and securely tightened.
- 5) Ensure that the certification label is present and legible.

Ensure that the location where the luminaire is fitted is free from flammable gas or dust. With the terminal box separated from the overtube:

- 6) Ensure that the 'o' ring on the spigot that inserts into the terminal box remains in place and is in good condition. Replacement 'o' rings are available from Pepperl+Fuchs.
- 7) Look for pitting or damage to the flamepaths of the terminal box and spigot. Surface corrosion may be removed, but abrasive cleaners should not be used.
- 8) The flamepaths of the luminaire should be cleaned, and may optionally be coated in grease to guard against corrosion. If applied, the grease should be of a type that does not harden because of ageing, does not contain any evaporating solvent and does not cause corrosion of the joint surfaces.
- 9) With the terminal box refitted, ensure that all fixings are fully tightened.

Lamp Replacement

Ensure that the location where the luminaire is fitted is free from flammable gas or dust.

- 1) Separate the terminal box from the overtube as described in the installation section.
- 2) For 300/XXX types disconnect the lamp cables from the terminal block. For 350/XXX types disconnect the Molex connectors in the lamp cables.
- 3) Screw the socket cap head screw under the barrier into which the lamp cables are cemented INWARDS.
- 4) The barrier may now be unscrewed and the complete lampholder assembly withdrawn.
- 5) With new lamps fitted, screw the barrier all the way in by hand, then back it off until the slot aligns with the socket cap head screw underneath. UNSCREW the socket cap head screw to lock the barrier in place.
- 6) Reconnect the lamp cables and refit the terminal box to the overtube.