



EC-Type Examination Certificate

- (1)
- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 94/9/EC**
- (3) Examination certificate number: **SEV 10 ATEX 0133 X**
- (4) Equipment: Flameproof enclosure PYROBAN
Type C0243
- (5) Manufacturer: Pyroban Ltd., Safe Handlig Division
- (6) Address: Endeavour Works, Dolphin Road, Shoreham-by-Sea
West Sussex, BN43 6QG, UK
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Electrosuisse SEV, notified body No. 1258 in accordance with article 9 of the Council Directive of the European Communities of 23 March 1994 (94/9/EC), certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment or protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The results of the examination are recorded in confidential report no. 10-IK-0087.01 incl. extension 1 to 3.
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:
- EN 60079-0:12 EN 60079-1:07 EN 60079-31:09**
- (10) If the sign «X» is placed after the certificate number, it indicates that the equipment or protective system is subjected to special conditions for safe use specified in the schedule to this certificate.
- (11) This examination certificate relates only to design and construction of the specified equipment in accordance with the directive 94/9/EC. Further requirements of this directive apply to the manufacturing process and the placing on the market of the equipment.
- (12) The marking of the equipment shall include the following:



II 2G Ex d IIB T* Gb



II 2D Ex t IIIC T* °C Db

* Temperature classification (2G) and temperature (2D) respectively is determined by testing. See special conditions X (1).



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SEV 10 ATEX 0133 X / page 1 of 3

(13)

Appendix

(14)

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(15) Description of the equipment

The flameproof enclosures are designed as control housings. Each enclosure comprises a fabricated case with a bolt-on cover.

A glass viewing window assembly can be fitted. The glass is retained by means of a bolt-on plate and is sealed by means of a silicone sealant that forms a cemented joint.

Threaded apertures for the fitting of suitably certified and dimensioned cable entries are provided.

The flameproof enclosures contain control/monitoring gear and circuitry specific to the application; these are specified on the schedule drawings.

Optional internal switches are actuated by up to 18 control shafts passing through the enclosure wall or cover.

Although references are made on drawing number C0243 to intrinsically safe equipment, the scope of this certificate does not cover its installation or associated circuitry.

In each configuration the internal contents:

- occupy at least 20 % of the enclosure volume
- do not divide more than 75 % of the cross sectional area
- are either mounted flush to the enclosure walls or on bosses at least 5 mm from the enclosure walls

The different versions of C0243-enclosures are detailed by the different part numbers which refer to the specific master requirements in the CO-243-drawing. There also the specific design requirements for all the sizes of enclosures are given.

For the enclosure volume range, enclosure material, reference pressure and corresponding routine pressure test see Table 1.

Table 1:

Enclosure volume range	Enclosure material	Reference pressure	Corresponding routine pressure test
<5544 cm ³	Aluminium, mild steel or stainless steel	6.85 bar	10.30 bar
<5544 cm ³ <20520 cm ³	Aluminium, mild steel or stainless steel	7.90 bar	11.90 bar
<20520 cm ³ <21600 cm ³	Aluminium, mild steel or stainless steel	7.70 bar	11.60 bar
<21600 cm ³ <51840 cm ³	Aluminium, mild steel or stainless steel	8.10 bar	12.20 bar
<51840 cm ³ <71680 cm ³	Mild steel or stainless steel	6.07 bar	9.10 bar

The dimensions are such that the ratios below are maintained:

W ≥ 25 % H

D ≥ 25 % H

(Where W is the enclosure width, H is the enclosure height and D is the enclosure depth.)

Production site:

Pyroban Ltd., Dolphin Road, Shoreham-by-Sea, West Sussex, BN43 6QG, UK
Pyroban Benelux B.V., Grotenoord 24-26, NL-3341 LT Hendrik Ido Ambacht

Rating(s):

Tension: 12 VDC to 280 VDC / VAC

Classification of installation and use: Fixed installation or fixed installation on vehicle

Ingress protection: IP66

Rated ambient temperature range: -20 °C...+50 °C

Remarks:

1. According to the Directive 94/9/EC (ATEX 95), Appendix I, the flameproof enclosures are devices of equipment group II, category 2G, which according to the Directive 99/92/EC (ATEX 137) can be used in zones 1 and 2 and gas groups IIA and IIB, which are potentially explosive due to the presence of flammable materials in the temperature classes T1 to T6.
For use/installation, the requirements of EN 60079-14 are applicable.
2. According to Directive 94/9/EC (ATEX 95), Appendix I, the flameproof enclosures are devices of equipment group II, category 2D, which according to the Directive 99/92/EC (ATEX 137) can be used in zones 21 and 22 subject to combustible dusts.
For use/installation, the requirements of EN 61241-14 are applicable.

(16) Test Report 10-IK-0087.01 incl. extension 1 to 3

(17) Special conditions for safe use

1. The manufacturer shall conduct a thermal assessment and, if necessary, thermal rise test on each enclosure. The test shall be carried out on the fully assembled enclosure using the test cycle defined in clause 6.2 of EN 1755:2000+A2:2013 or clause 26.5 of EN 60079-0:2012 as appropriate. The following maximum temperatures shall be determined:
 - external enclosure hot spot (determining the T-class on the enclosure label)
 - cable entry position (determining the warning on the enclosure label)
2. Only the exact size and grade of screws, as specified by the manufacturer, shall be fitted to the covers.
3. Only separate certified cable glands and blanking elements are to be used.

(18) Fundamental essential health and safety requirements

Fulfilled by the standards applied.



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SEV 10 ATEX 0133 X / page 3 of 3