



1. EC-TYPE EXAMINATION CERTIFICATE

2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3. **EC-Type Examination Certificate Number:** ITS13ATEX17741X

4. **Equipment or Protective System:** PCS2 Control Enclosure

5. **Manufacturer:** Pyroban Ltd

6. **Address:** Endeavour Works,
Dolphin Road,
Shoreham-by-Sea,
BN43 6QG

7. This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8. Intertek Testing and Certification Limited, notified body number 0359 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.


The examination and test results are recorded in confidential Intertek Report Ref: G101063387 Issue 1, dated August 2013

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN 60079-0:2012, EN 60079-1:2007, EN 60079-18:2009 and EN 60079-11:2012 except in respect of those requirements referred to at item 16 of the Schedule.

10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11. This EC Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12. The marking of the equipment or protective system shall include the following:-

 II 2(2) G Ex d [ib] mb IIB T4 Gb
Tamb -20°C to +60°C

Vijay K. Varma

V K Varma
Certification Officer
07 October 2013

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SCHEDULE

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13. Description of Equipment or Protective System

This assessment covers the combined use of two previously certified equipments: the Flameproof Enclosure and the Control Boards. Also incorporated into the system are pre-certified lamps, pushbuttons and a switch.

Flameproof Enclosure:

The PCS2 Aluminium Flameproof Enclosure is primarily intended to house control equipment for vehicles or engines installed in hazardous areas where potentially explosive gasses occur. It has both internal (M6) and external (M8) earth connections (tapped boss), M25 threaded entries (11 off) and M20 threaded entries (12 off) for the connection of suitable certified lamps, pushbuttons and cable glands (cable glands not supplied with the enclosure). All unused entries are to be fitted with suitable certified blanking plugs. A nitrile o-ring is provided with the enclosure.

Control Boards:

The Control Boards of the PCS2 are intended to enable a diesel engine to be located in an explosive atmosphere by protecting it against over speed and over temperature during operation via control of the air and fuel inlet valves. The Control Boards also provide an emergency stop facility for the diesel engine. The Control Boards comprise of a main control board with 10 intrinsically safe switch inputs and a single intrinsically safe speed sensor input, a single relay board with 8 volt-free relay connections, two LED boards each with 12 intrinsically safe outputs and a single auxiliary board with 15 intrinsically safe switch inputs. Also provided are intrinsically safe outputs to allow for the external connection of speed and temperature sensors as well as LED indicators and switch inputs. The PCS2 system is intended to be powered directly from the diesel engine battery supply via connections on the main control board.

14. Report Number

Intertek Report Ref: G101063387 Issue: 1 Dated: August 2013

15. Conditions of Certification

(a). Special Conditions for safe use

- The fasteners of the door of the enclosure shall be a minimum strength grade 70 and are to be tightened to 18.4 Nm
- If the lens of the indicator lamp becomes damaged or detached then the indicator Lamp should be replaced

(b). Conditions of Manufacture

None

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16. **Essential Health and Safety Requirements (EHSR's)**

The relevant EHSR's have been identified and assessed in Intertek Report Ref: G101063387 Issue: 1
Dated: August 2013

17. **Drawings and Documents**

Title	Drawing No.:	Rev. Level:	Date:
PCS2 Control Unit, Installation, Operation and Maintenance Manual	MAN-GDP0009-01	3	12/07/2013
PCS2 Assembly (sheet 1)	C825003	7	13/09/2013
PCS2 Assembly (sheet 2)	C825003	7	13/09/2013

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