



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: **Baseefa08ATEX0272X**

4 Equipment or Protective System: **PL7** Range of Junction Boxes**

5 Manufacturer: **Hawke International**

6 Address: **Oxford Street West, Ashton-under-Lyne, OL7 0NA**

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 Baseefa, Notified Body number 1180, 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 Report No. **GB/BAS/ExTR08.0196/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

IEC 60079-0: 2007, EN 60079-7: 2007, EN 61241-1: 2004

except in respect of those requirements listed at item 18 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 and construction of the specified equipment or protective system. 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 2GD Ex e IIC T(variable) Gb Ex tb A21 IIIC T80°C Db

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **0500**

Project File No. **04/0903**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa

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R S SINCLAIR
DIRECTOR
On behalf of
Baseefa



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Schedule

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Certificate Number Baseefa08ATEX0272X

15 Description of Equipment or Protective System

The PL7** Range of Junction Boxes consist of the type ZPL7* range of plastic empty enclosures covered by Baseefa08ATEX0271U Exe II. The junction boxes are fitted with a variety of different terminal arrangements. All the terminals are covered by their own component certificates and are coded Exe II. The terminals are listed on D9160 held on Baseefa General Technical File 0500. The actual terminals fitted to each junction box will be listed in the schedule of the instruction sheet supplied with the junction box.

The terminals must be used within their relevant temperature range, voltage and current limitations, and fitted in accordance with EN 60079-7 with regard to creepage and clearance distances by Hawke International. Details on drawing C2542 describe partitioning arrangements which allow for the termination of intrinsically safe (i.s.) circuits and non i.s. circuits within the same junction box. When i.s. circuits are present an additional label is fitted to the outside of the junction box stating 'INTRINSICALLY SAFE CIRCUITS ENCLOSED'.

The maximum power dissipation within each junction box is as follows:

BOX TYPE	Maximum Power Dissipation (Watts)															Max. Cable Length per Terminal (M)			
	T _{amb} T ₆	T _{amb} 80°C	T _{amb} -??°C* to +40°C	T _{amb} T ₆	T _{amb} 80°C	T _{amb} -??°C* to +55°C	T _{amb} T ₆	T _{amb} 80°C	T _{amb} -??°C* to +65°C	T _{amb} T ₅	T _{amb} 80°C	T _{amb} -??°C* to +40°C	T _{amb} T ₅	T _{amb} 80°C	T _{amb} -??°C* to +55°C		T _{amb} T ₅	T _{amb} 80°C	T _{amb} -??°C* to +65°C
PL712	3.35			2.15			1.2			4.6			3.35			2.4			0.142
PL722	5.32			3.23			1.9			7.3			5.32			3.9			0.226

* Ambient temperature:

- 20°C with integral moulded-in earth continuity plate
- 60°C without integral moulded-in earth continuity plate

The maximum number of terminals which may be fitted into each junction box is calculate using the following formula:

$$\text{Power} = I^2 \times N (R_t + R_c) \text{ Watts}$$

Where:

I = Actual current through the conductor up to the maximum permitted certified current of the terminal when fitted in a junction box (Amps).

N = Number of terminals

R_t = Terminal resistance (Ohms at 20°C)

R_c = Resistance of one conductor (Ohms at 20°C) when using a maximum diagonal cable length listed in the above table.

Earth facilities and cable entries are described on the component certificate for the empty enclosures Baseefa08ATEX0271U. A suitable certified internal rail mounted earth terminal may be used if the integral moulded-in earth continuity plate is fitted, but shall be used if this plate option is not fitted. If a 'clean earth' is required a rail mounted power terminal may be used.

When required a component certified breather, drain or breather-drain or stopping plug may be fitted to the junction box as specified on the component certificate Baseefa08ATEX0271U.

The enclosures are fitted with a riveted label on the outside of the lid, with options for labels to be secured by adhesive or screws complete with Nyloc nuts.



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17 Special Conditions for Safe Use

1. Do not allow dust layers to build up on this product.
2. Unused cable entries must be fitted with stopping plugs as listed on the ZPL7 component certificate Baseefa08ATEX0271U. The operating temperature range and Ingress Protection rating of the enclosure is limited to that of the stopping plug fitted.
3. Only breather/drain devices as specified in the empty enclosure certificate Baseefa08ATEX0271U may be used with these enclosures. The breather/drain devices must be installed in their correct orientation in either the bottom face or bottom face gland plate of the enclosure. The operating temperature range and Ingress Protection rating of the enclosure is limited to that of the breather/drain device fitted.
4. All terminal screws, used and unused, shall be fully tightened down by the end user.
5. No more than one single or multi-stranded lead shall be connected to either side of any terminal unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated bootlace ferrule, or any method indicated on the terminal certificate.
6. Terminals shall be installed in such a manner that the creepage and clearance distances between the terminal and adjacent components, enclosure walls and covers complying with the requirements of EN 60079-7 for the rated voltage of the equipment.
7. Terminal temperatures must not exceed the operating range specified on the component certificate.
8. All terminals, and accessories such as cross-connectors, shall be installed in accordance with the terminal manufactures instructions. Hawke International will supply the relevant terminal manufacturer's instructions with each junction box covered by this certificate.
9. The maximum voltage, current and dissipated power shown on the rating label must not be exceeded.
10. When connecting conductors of cross section below the maximum allowed for the particular terminal then the maximum amps per pole must be reduced inline with the maximum amps permitted for a terminal equivalent to the conductor size fitted e.g. If a terminal that can take a 10mm² conductor at 40Amps is fitted with a 4mm² conductor then the current shall be reduced to a maximum of 22Amps, or the rating marked on the apparatus label, whichever is the lower.
11. When label fixing is by screws complete with Nyloc nuts then the Ingress Protection Rating is IP66.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
C2540	---	B	21/11/08	General Arrangement

Common to and held on IECEx BAS 08.0091X



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

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

- 3 Supplementary EC - Type Examination Certificate Number: **Baseefa08ATEX0272X/1**
- 4 Equipment or Protective System: **PL7** RANGE OF JUNCTION BOXES**
- 5 Manufacturer: **HAWKE INTERNATIONAL**
- 6 Address: **Oxford Street West, Ashton-under-Lyne, Lancashire, OL7 0NA**
- 7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa08ATEX0272X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **0500**

Project File No. **10/0718**

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On behalf of
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Schedule

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Certificate Number Baseefa08ATEX0272X/1

15 **Description of the variation to the Equipment or Protective System**

Variation 1.1

Addition of a further Special Condition for Safe Use regarding closing of unused entries.

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17 **Additional Special Conditions for Safe Use**

Unused entries may be fitted with alternative stopping plugs and or breather drains to those listed in the schedule. The user is responsible for ensuring that the protection concept, temperature class and relevant IP rating are maintained.

18 **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 **Drawings and Documents**

None