



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: **Baseefa04ATEX0171X**

4 Equipment or Protective System: **Type EZE Range of Junction Boxes**

5 Manufacturer: **Hawke International**

6 Address: **Oxford Street West, Ashton-under-Lyne, Lancashire, 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 (2001) Ltd. 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. **03(C)0888/2**

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

**EN 50014: 1997 + Amds 1 & 2 EN 50019: 2000 EN 50281-1-1: 1998 + Amd 1**

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 2 GD T80°C EEx e II T(see schedule) -40°C ≤ T<sub>amb</sub> ≤ (see schedule)**

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

Baseefa (2001) Ltd. Customer Reference No. **0500**

Project File No. **03/0888**

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

**Baseefa (2001) Ltd.**

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**R S SINCLAIR**  
**DIRECTOR**  
On behalf of  
Baseefa (2001) Ltd.

13 **Schedule**

14 **Certificate Number Baseefa04ATEX0171X**

15 **Description of Equipment or Protective System**

The Type EZE Range of Junction Boxes, comprising the component certified range of empty enclosures covered by Certificate No. Baseefa04ATEX0170U, coded EEx e II fitted with terminals coded EEx e II and having their own component certified numbers. All the terminals suitable for use are listed on drawing number D2536 held on file 0500/01 and the actual terminals fitted in each enclosure are listed in the schedule of the instruction sheets A1 280 supplied with each junction box.

The terminals must be used within their relevant temperature, current and voltage limitations whilst complying with all their relevant Schedule of Limitations and creepage and clearance distances required by EN 50019.

The junction boxes may be used to terminate intrinsically safe (I.S.) circuits only or in conjunction with non-IS circuits, in which case the circuits must be suitably separated by an air gap or partition. When the box is used to terminate IS circuits a label shall be fitted stating "Intrinsically Safe Circuits Enclosed".

Earthing facilities and cable entries are covered as part of the Component Certificate Baseefa04ATEX0170U. A suitable certified internal rail mounted earth may be used. If a "clean earth" is required a rail mounted power terminal may be used.

**Table of maximum power ratings and cable lengths**

BOX TYPE	Maximum Power Dissipation (Watts)																		Max. Cable Length per Terminal (m)
	T <sub>amb</sub> 15	T <sub>amb</sub> 30°C	T <sub>amb</sub> -40°C +60°C	T <sub>amb</sub> 15	T <sub>amb</sub> 30°C	T <sub>amb</sub> -40°C +60°C	T <sub>amb</sub> 15	T <sub>amb</sub> 30°C	T <sub>amb</sub> -40°C +60°C	T <sub>amb</sub> 15	T <sub>amb</sub> 30°C	T <sub>amb</sub> -40°C +60°C	T <sub>amb</sub> 15	T <sub>amb</sub> 30°C	T <sub>amb</sub> -40°C +60°C	T <sub>amb</sub> 15	T <sub>amb</sub> 30°C	T <sub>amb</sub> -40°C +60°C	
EZE 12		17.7W			17W			5.8W			24.3W			17.7W			13.3W		0.425
EZE 12		27W			16.8W			10.1W			27W			27W			20.2W		0.335
EZE 12		31.8W			18.8W			11.8W			41.7W			31.8W			23.8W		0.278

The maximum number of terminals which may be fitted into each enclosure is calculated 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 certified current of the terminal (amps)

N = number of terminals

R<sub>t</sub> = terminal resistance (Ohms @ 20°C)

R<sub>c</sub> = resistance of one conductor (Ohms @ 20°C) when using a maximum diagonal cable length listed in the above table

**Variation 0.1**

When required a component approved breather, drain or breather/drain may be fitted to the enclosure as specified by the Component Certificate Baseefa04ATEX0170U. When fitted the IP rating of the enclosure is reduced to the IP rating of the device fitted and may no longer be suitable for category 2D.

Fitting a Redapt breather covered by Certificate SIRA99ATEX3050U does not affect the IP rating of the enclosure and thus requires no change in marking.

Fitting any of the alternative breathers specified in the certification documents reduces the dust ingress protection to IP5.

The marking of the enclosure shall include the following:-

Ⓜ II 2G 3D T80°C EEx e II T(see schedule) -40°C ≤ T<sub>amb</sub> ≤ (see schedule)

**Variation 0.2**

Optional addition of one or more earth studs to one or more of the gland plates and/or lid.

**Variation 0.3**

Intermediate sizes of enclosure may be used in accordance with Component Certificate Baseefa04ATEX0170U.

**16 Report Number**

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**17 Special Conditions for Safe Use**

1. Only the following breathers are approved for use with these enclosures:-

Manufacturer and type	Certificate No.	Code	Dust IP rating
KRON Type DLP	NEMKO Ex 94C086X	EEx e II	5
Tranberg A.S. TEF7302	NEMKO 88 217	EEx e II	5
Weidmuller BD1	BASEEFA Ex 86B3174U	EEx e II	5
Redapt	SIRA 99 ATEX 3050U	EEx e I/II	6

2. The breathers must be installed in their correct orientation in the bottom face of the enclosure. The enclosure IP rating shall match the breather and must be at least IP54.
3. Unused cable entries must be fitted with suitable certified stopping plugs as called up on the enclosure certificate.
4. All terminal screws, used and unused, shall be tightened down by the end user.
5. Insulation of conductors must extend to within 1mm of the metal of the terminal throat unless specified otherwise on the terminal certificate.
6. No more than one single or multistrand lead shall be connected into either side of any terminal unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated crimped bootlace ferrule or any method indicated on the terminal certificate.
7. Terminals shall be installed in such a manner that the creepage and clearance distances between the terminal and adjacent components, enclosure walls and covers comply with the requirements of EN 50019 for the rated voltage of the apparatus.
8. Terminal temperatures must not exceed the operating range specified on the component certificate.
9. All terminals, and accessories such as cross-connectors, shall be installed in accordance with the terminal manufacturers instructions. Hawke International will supply the relevant terminal manufacturers instructions with each junction box covered by this certificate.
10. The maximum voltage, current and dissipated power shown on the rating label must not be exceeded.
11. When connecting conductors of cross section below the maximum allowed for a particular terminal then the maximum amps/pole must be reduced in line with the maximum amps permitted for a terminal equivalent to the conductor size fitted e.g. if a terminal that can take a 10mm<sup>2</sup> conductor at 50 Amps is fitted with a 4mm<sup>2</sup> conductor then the current shall be reduced to a maximum of 21 Amps, or the rating marked on the apparatus label, whichever is the lower.

**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
9001	1	C	2/6/04	GA
9056	1	A	23/6/04	Label