



EC - TYPE EXAMINATION CERTIFICATE

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

- 3 EC - Type Examination Certificate Number: **Baseefa03ATEX0171X**
- 4 Equipment or Protective System: **TYPE JB11 JUNCTION BOX**
- 5 Manufacturer: **MEDC LIMITED**
- 6 Address: **Colliery Road, Brookhill Industrial Estate, Pinxton,
Nottingham, NG16 6JF**
- 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)0229, dated 15 April 2003**
- 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 50028: 1987
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 G EEx e II T4 to T6 (See Schedule) -55°C ≤ Tamb ≤ 55°C (See Schedule)

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

Baseefa (2001) Ltd. Customer Reference No. 0676

Project File No. 03/0229

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.

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



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Schedule

14

Certificate Number Baseefa03ATEX0171X

15 Description of Equipment or Protective System

The Type JB11 Junction Box comprises a moulded base and cover assembly manufactured from BIP glass reinforced polyester G8B L57000. The cover is secured by four socket head cap screws and sealed by a retained nitrile rubber 'O' ring. The junction box is fitted with an internal earth continuity plate. In this arrangement the lower ambient temperature is limited to -20°C.

The JB11 Junction Box may be fitted with a range of terminals as indicated in Table 1 below, together with the rated voltage of the enclosure and the rated current of each terminal.

Terminal Type	Certificate Number	Voltage Rating V	Current Rating A	Max Number of Terminals		Temperature Class	
				JB10	JB11	@ 40°C	@55°C
SAK 2.5	KEMA97ATEX1798U	550	15	10	16	T6	T4
SAK 4	KEMA97ATEX1798U	550	21	9	15	T4	T4
SAK 6N	KEMA97ATEX1798U	550	26	7	12	T4	T4
SAK 10	KEMA97ATEX1798U	550	37	5	9	T4	T4
SAK 16	KEMA97ATEX1798U	550	47	-	8	T4	T4
UK 2.5N	KEMA98ATEX1651U	550	15	9	15	T6	T4
UK 5N	KEMA98ATEX1651U	418	21	8	14	T4	T4
UK 10N	KEMA98ATEX1786U	550	37	6	11	T4	T4
UK 16N	KEMA98ATEX1786U	550	47	5	8	T4	T4
AKZ 2.5	SIRA02ATEX3001U	60	15	11	19	T6	T4
HTB4 HTB6	BAS01ATEX2275U	550	37	1	1	T6	T6
MK6/6	SIRA01ATEX3249U	418*	26	1	1	T5	T5
BK4 BK6	SIRA01ATEX3247U	275	21	1	-	T5	T5

Table 1

*Note. When MK6/6 is fitted with a QB2 or QB4 cross connection link, the rated voltage is reduced to 275V.

An internal earth facility is provided by fitting an EK4 or EK10 rail mounted earth terminal (both certified under Certificate No. KEMA97ATEX1798U), or a USLKG5, USLKG10N or USLKG16N rail mounted earth terminal (all certified under Certificate No. KEMA 98ATEX4487U), or an AKE 2.5 rail mounted earth terminal (certified under Certificate No. SIRA02ATEX3001U).



Terminals of different types and from different manufacturers may be assembled on to a terminal rail. The temperature class of such arrangements is T4. The maximum number of mixed terminals which may be fitted corresponds to the maximum of the largest terminal specified in Table 1.

Variation 0.1

Reduction in the overall size of the enclosure to form a Type JB10 Junction Box.

The JB10 Junction Box may be fitted with a range of terminals as indicated in Table 1, together with the rated voltage of the enclosure and the rated current of each terminal.

Variation 0.2

To permit the following optional modifications to the JB10 and JB11 Junction Box enclosures:

- A cable gland up to size M20 may be fitted to the base of the enclosure in a plain or tapped hole. Ring terminal Type HTB is not suitable for use in this arrangement.
- A cable gland up to size M32 may be fitted to the lid of the enclosure in a plain or tapped hole. The following terminals are permitted with lid entry cable glands:

JB10	JB11
BK6	BK6
MK6	MK6
AKZ2.5	AKZ 2.5
	SAK 2.5
	UK 2.5N

Table 2

- The cable entries in the sides of the enclosure may be drilled with a counterbore.
- A conductive coating may be applied to the internal surfaces of the junction box enclosure.
- An epoxy paint coating may be applied to the external surfaces of the enclosure.

Variation 0.3

A potted semiconductor light emitting diode may be fitted to the lid of the JB10 and JB11 Junction Box enclosures. In this arrangement the protection code of the apparatus is modified to EEx em II T4 or T6 (see schedule). Type SAK 16 and Type UK 16N terminals are not permitted in this arrangement.

Variation 0.4

To enhance the ambient temperature range of the JB10 and JB11 Junction Boxes when fitted with a Type MK6/6 terminal block and using a continuous silicone rubber 'O' ring in place of the nitrile rubber original.

In this case, the ambient temperature range is either:

-55°C to 55°C or -55°C to 40°C

Variation 0.5

To permit the addition of an encapsulated resistor assembly which may be fitted into the Type JB11 Junction Box. In this arrangement the protection code of the apparatus is modified to EEx em II T4 or T6 (see schedule).



When fitted in addition to 15 Type SAK 2.5 rail mounted terminals, the apparatus carries a T4 Temperature Class with an ambient temperature range of -20°C to 40°C.

Variation 0.6

To allow the fitting of a zener diode rated at 5W and up to 18 Volts in the encapsulated resistor.

16 Report Number

03(C)0229

17 Special Conditions for Safe Use

1. Partitions are to be fitted between terminals from different manufacturers.
2. Leads connected to terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1mm of the metal of the terminal throat. For the pillar terminals, this insulation shall extend to within 3mm of the metal, and the bared end shall not extend beyond the other side of the slot by more than 1mm.
3. All terminal screws or terminal caps on terminals, used or unused, shall be tightened down.
4. Only one single or multiple stranded wiring lead shall be connected into either side of a terminal. Conductors of unequal size shall not be inserted into the same terminal post of the pillar type terminals unless specifically permitted in the component certificate of that terminal.
5. The electrical supply to the encapsulated resistor allowed at Variation 0.5 is limited to a maximum of 1.2W.
6. When the zener diode allowed at Variation 0.6 is fitted, the maximum power available from the supply must not exceed 1.4W.

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
197-204	1 & 2	A	16-12-02	General Arrangement
197-205	1	A	16-12-02	Internal Assemblies
197-206	1	A	16-12-02	G.A. JB11 c/w Resistor Block



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: **Baseefa03ATEX0171X/1**

4 Equipment or Protective System: **TYPE JB11 JUNCTION BOX**

5 Manufacturer: **Cooper MEDC LIMITED**

6 Address: **Colliery Road, Brookhill Industrial Estate, Pinxton,
Nottingham, NG16 6JF**

7 This supplementary certificate extends EC - Type Examination Certificate No. **Baseefa03ATEX0171X** 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. 0676

Project File No. 08/0512

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.

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On behalf of
Baseefa



13 **Schedule**

14 **Certificate Number Baseefa03ATEX0171X/1**

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

Variation 1.1

To permit the addition of a flameproof resistor module Type GHG 41...R...to PTB97ATEX1081U to the JB10 Junction Box. In this arrangement the enclosure is rated up 24V, 15A and protection code of the apparatus to JB10 is modified to EEx de IIC T4 (Tamb -20°C to + 55°C).

Variation 1.2

To permit alternative rail mounted earth terminals Types DFG1 and DFG2 to PTB03ATEX1117U.

16 **Report Number**

None.

17 **Special Conditions for Safe Use**

None additional to those listed previously

18 **Essential Health and Safety Requirements**

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

19 **Drawings and Documents**

Number	Sheet	Issue	Date	Description
196-217	1	A	03.07.08	JB10 enclosure with flameproof resistor module
197-205	1	B	11.07.08	Internal Assemblies