LABORATORIO OFICIAL J. M. MADARIAGA

(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 **LOM 03ATEX2004 X**

(4) Equipment or Protection System — Boxes for electrical apparatus
Type EJ...

(5) Applicant: — Cooper, Crouse-Hinds Division, CEAG
CEAG Nortem, S.A.

(6) Address: — Avda. Santa Eulalia, 290
08223 TARRASA (BARCELONA)
SPAIN

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

(8) Laboratorio Oficial J.M. Madariaga (LOM), notified body number 0163 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament 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 nr **LOM 02.003 BP**

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
– Standards **EN 50014:1997 + A1:1999 + A2:1999**
EN 50018:2000 + A1:2002

(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 this specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of the Directive applies to the manufacture 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:

Ex II 2G EEx d IIB T4..T6 Ta: -20 ºC / +55 ºC

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Madrid, 3 February 2003

Angel Vega Remesal
Head of TEX area

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ENAC INSPECCIÓN Nº 23/EI037

UNIVERSIDAD POLITÉCNICA DE MADRID
ENSAYOS E INVESTIGACIONES DE MATERIALES Y EQUIPOS PARA ATMÓSFERAS EXPLOSIVAS Y MINERÍA
(Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29 -)

Alenza, 2 - 28003-MADRID • ☎ (34) 91 4421366/ 91 3367009 • Fax.(34) 91 4419933 • ✉ lom@lom.upm.es

(A1) **SCHEDULE**

(A2) EC-Type Examination Certificate: **LOM 03ATEX2004 X**

(A3) Description of equipment or protective system

Boxes for electrical apparatus based on empty boxes with same denomination that include the same external accessories and having got the component certificate LOM 02ATEX3060U.

Types and sizes are the same as indicated in the component certificate

These boxes can include the following electrical devices and apparatus:

- Bus bars
- Terminals
- Low voltage transformers
- Air circuit-breakers
- Automatic circuit-breakers
- Control and operation circuits
- Servomotors without ventilation
- Starters and ballasts for discharge lamps
- Electronic apparatus

Included capacitors have a discharge time less than 3 s, by means of parallel resistors when necessary. In any case is permitted to include cells and batteries.

Electrical components inside enclosure are assembled in all cases following the requirements of paragraph D.2.2 of EN 50018:2000 standard.

Thermal class is determined according dissipated power (in W) inside the enclosure as show in following table:

Type	Ta: -20 / + 40 °C			Ta: -20 / + 55 °C		
	T4	T5	T6	T4	T5	T6
EJB 12.	100	60	30	83	43	18
EJB 14.	240	140	80	200	100	50
EJB 23.	240	140	60	200	100	35
EJB 110	295	170	125	245	120	75
EJB 120	480	270	150	400	195	90
EJB 121	500	280	150	415	200	90
EJB 130	590	340	200	490	245	125
EJB 131	610	350	200	505	250	125
EJB 240/241.	700	400	250	580	290	155
EJW 250	560	340	250	465	250	155
EJW 251	850	520	380	700	380	235
EJW 350	850	520	380	700	380	235
EJW 351	1000	600	450	840	450	280
EJW 561	1000	730	600	400	600	1000

LABORATORIO OFICIAL J.M. MADARIAGA LOM

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(A1) **SCHEDULE**

(A2) EC-Type Examination Certificate: **LOM 03ATEX2004 X**

(A3) Description of equipment or protective system (continue)

Maximum rated voltage: 690 V
Maximum current: 1200 A

(A4) Test report nr: **LOM 02.003 BP**

(A5) Special conditions for safe use

Same as indicated in component certificate LOM 02ATEX3060U

(A6) Individual tests

Same as indicated in component certificate LOM 02ATEX3060U

(A7) Essential Health and Safety Requirements

Explosion safe requirements are covered by application of the standards indicated in page 1/3 of this certificate

(A8) Descriptive documents:

	Rev.	Date
- Technical description	0	2002-11-21

and the documents listed in component certificate LOM 02ATEX3060U

OFICIAL LABORATORIO J.M. MADARIAGA LOM

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LABORATORIO OFICIAL J. M. MADARIAGA

(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC

(3) Supplement nr. **1** to EC-Type Examination Certificate number: **LOM 03ATEX2004 X**

(4)	Equipment or Protection System	Empty enclosures Type EJ...
(5)	Applicant	Cooper, Crouse-Hinds Division, CEAG CEAG Nortem, S.A.
(6)	Address	Avda. Santa Eulalia, 290 08223 TARRASA (BARCELONA) SPAIN

(7) This certificate supplement increases the scope of certificate LOM 03ATEX2004 X to include variants as specified in the annex to this certificate supplement and listed documents.

(8) The examination and test results are recorded in confidential report nr. **LOM 03.138 SP**

This supplement must be an inseparable part toghether base cetificate.

Madrid, 27 Mars 2003

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Angel Vega Remesal
Head of ATEX area

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(A1) **ANNEX**

(A2) Supplement nr. **1** to EC-Type Examination Certificate number: **LOM 03ATEX2004 X**

(A3) Variations included in this supplement

To include inside enclosures commercial intrinsically safe associated apparatus based on 94/9/EC directive, but neither including cells nor batteries.

Wiring and apparatus distribution is detailed in applicant descriptive documents.

Ambient temperature will be Ta:-20 ºC / +55ºC. This temperature will be restrained to standard range Ta: -20 ºC / +40 ºC when at least one apparatus is not foreseen for extended ambient temperature.

(A4) Marking variations

Depending on the category of the incorporated elements the marking will have to include, among others:

Ex II 2(2) G EEx d [ib] IIB T6

Ex II 2(1) G EEx d [ia] IIB T6

Ex II 2(1/2) G EEx d [ia/ib] IIB T6

And the specific parameters related with intrinsic safety type of protection.

(A5) Test repor nr: **LOM 03.138 SP**

(A5) Special conditions for safe use

1 The special conditions for safe use indicated in the certificates of intrinsically safe associated apparatus.

2 The manufacturer will have to determine, when there are combined different circuits of intrinsic safety, the specific parameters of the type of protection as indicated in standards EN 50020 and EN 50039.

3 Only there is allowed the incorporation of associate apparatus and execution of the wired up boarder by the manufacturer.

(A7) Essential Health and Safety Requirements

No change

(A8) Descriptive documents

	Rev.	Date
Drawing nr. N117112-004.es	-	2003-03-03

OFICIAL LABORATORIO J.M. MADARIAGA

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(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC

(3) Supplement nr. **2** of EC-Type Examination Certificate: **LOM 03ATEX2004 X**

(4) Equipment or protective system: Boxes for electrical apparatus
Type EJ...

(5) Applicant: Cooper Crouse-Hinds, S.A.

(6) Address: Avda. Santa Eulalia, 290
08223 TARRASA (BARCELONA)
SPAIN

(7) Test report: **LOM 04.656 CP**

(8) Variations included in this certificate

- To increase the use for an ambient temperature Ta: -35 ºC /+55 ºC for the model EJB 110
- To increase the use for an ambient temperature Ta: -50 ºC /+55 ºC for the model EJB 23

(9) Marking changes

Change to the marking: Ta: -35 ºC /+55 ºC or Ta: -50 ºC /+55 ºC according to variants

(10) Change in individual tests

Each manufactured unit must be submitted to overpressure test according paragraph 15.1.3 of EN 50018:2000:

1650 kPa for boxes type EJB 110
2020 kPa for boxes type EJB 23

(11) Descriptive documents

	Rev.	Date
- Description nr. Low temperature EJB's.doc	-	2004-12-21

Madrid, 23th February 2005

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

This supplement must be an inseparable part together with the base certificate **LOM 03ATEX2004 X**

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ENAC INSPECCIÓN Nº 23/E1037

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LABORATORIO OFICIAL J. M. MADARIAGA

(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC

(3) Supplement nr. **3** of EC-Type Examination Certificate: **LOM 03ATEX2004 X**

(4) Equipment or protective system: Boxes for electrical apparatus
Type EJ…

(5) Applicant: COOPER Crouse-Hinds

(6) Address: Avda. Santa Eulalia, 290
08223-TERRASSA (BARCELONA)
SPAIN

(7) Test report nr.: **LOM 08.234 SP**

(8) Variations included in this certificate

1 Update to the standards EN 60079-0:2006, EN 60079-1:2007 and EN 60079-11:2007
2 Update of the manufacturer/applicant name
3 To extend the use in order to include ignition transformers with output up to 8 kV

(9) Changes in marking

Ex II 2 G Ex d IIB T4..T6

Ex II 2(2) G Ex d[ib] IIB T4..T6

Ex II 2(1) G Ex d[ia] IIB T4..T6

Ex II 2(1/2) G Ex d[ia/ib] IIB T4..T6

Temperature classes, surface temperatures and ambient temperature ranges are indicated in the base certificate and previous supplements.

(10) Descriptive documents

			Rev.	Date
- Description nr.	EJ_Extension3		2	2009-03-12
- Drawings nr.:	NOR000777DA0071		-	2008-07-08
	NOR000777DA0084		-	2008-08-08
	CCH-0805002		0	1008-05-16

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Madrid, 13th March, 2009

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

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Rev. 0

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LABORATORIO OFICIAL J. M. MADARIAGA

(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC

(3) Supplement nr. **4** to EC-Type Examination Certificate number **LOM 03ATEX2004 X**

(4)	Equipment or Protection System	Boxes for electrical apparatus Types EJ…
(5)	Manufacturer	COOPER Crouse-Hinds
(6)	Address	Avda. Santa Eulalia, 290 08223-TERRASSA (BARCELONA) SPAIN
(7)	Test report nr.:	**LOM 13.611 NP**

(8) Variations included in this certificate

- Assessment update to the standards: EN 60079-0:2012, EN 60079-1:2007, EN 60079-11:2012
- To permit batteries with a volume up to 1/100 of the free volume of the box.
- To permit capacitors with more than 3 s of discharge time
- To permit the use of inner equipment with rated voltage: Un < 14 kV.

(9) Changes in marking

Ex II 2 G Ex d IIB T4..T6 Gb

Ex II 2(2) G Ex d[ib] IIB T4..T6 Gb

Ex II 2(1) G Ex d[ia Ga] IIB T4..T6 Gb

Ex II 2(1/2) G Ex d[ia Ga/ib Gb] IIB T4..T6 Gb

When equipment includes batteries, with a volume of up to 1% of the free volume of the box, the marking shall include the warning: "*DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT*"

When equipment includes capacitors with discharge time longer that opening of the enclosure the marking shall include the warning: "*AFTER DE-ENERGIZING, DELAY xx MINUTES BEFORE OPENING*" where *xx* is decay time.

In all other cases: "*DO NOT OPEN* WHEN *ENERGIZING* "

(10) Changes in the special conditions for a safe use

Conditions of base certificate and previous supplements remain unchanged

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Eric Kandel, 1 – 28906 GETAFE (MADRID) • ☎ (34) 91 4421366 • 🖷 (34) 91 4419933 • 🖳 lom@lom.upm.es

(3) Supplement nr. **4** to EC-Type Examination Certificate number **LOM 03ATEX2004 X**

(11) Descriptive documents

	Rev.	Date
- Technical dossier:	1	2014-03-01

Getafe, 2014-05-05

Carlos Fernández Ramón
Responsible of the Certification Committee

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(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC

(3) Supplement nr. **5** to EC-Type Examination Certificate number **LOM 03ATEX2004 X**

(4)	Equipment or Protection System	Boxes for electrical apparatus Types EJ…
(5)	Manufacturer	COOPER Crouse-Hinds
(6)	Address	Avda. Santa Eulalia, 290 08223-TERRASSA (BARCELONA) SPAIN
(7)	Test report nr.:	**LOM 14.233 LP**

(8) Variations included in this certificate

- To include a new type of boxes EJB 241_H and accessories as specified in the component certificate LOM 02ATEX3060U, suitable for IIB + H2 atmospheres.

(9) Changes in marking

For the variants EJB 241_H

II 2 G Ex d IIB+ H_2 T4..T6 Gb

II 2(2) G Ex d[ib] IIB+ H_2 T4..T6 Gb

II 2(1) G Ex d[ia Ga] IIB+ H_2 T4..T6 Gb

II 2(1/2) G Ex d[ia Ga/ib Gb] IIB+ H_2 T4..T6 Gb

(10) Changes in the special conditions for a safe use

In addition to the conditions specified in the base certificate and previous supplements is added:

- The dimensions of the flameproof joints are, in part, other than those specified as maximum or minimum in paragraph 5 of EN 60079-1: 2007. The manufacturer shall transfer to the user the appropriate information about the dimensions of these flameproof joints.

(11) Descriptive documents

	Rev.	Date
- Technical description: EJ Suplemento Nº 5	-	2014-10-28

Getafe, 2015-04-10

Carlos Fernández Ramón
Head of Certification Committee

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(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC

(3) Supplement nr. **6** to EC-Type Examination Certificate number **LOM 03ATEX2004 X**

(4)	Equipment or Protection System	Boxes for electrical apparatus Types EJ…
(5)	Manufacturer	COOPER Crouse-Hinds
(6)	Address	Avda. Santa Eulalia, 290 08223-TERRASSA (BARCELONA) SPAIN
(7)	Test report nr.:	**LOM 15.467 XP**

(8) Variations included in this certificate

- To permit the use in atmospheres of group IIB+H_2 when used the appropriated empty boxes as included in the component certificate LOM 02ATEX3060U
- To include enclosures with glass windows type EFS 72

(9) Changes in marking

The EJB___H variant is marked as indicated for the equipment based on the enclosure EJB241_H

(10) Changes in the special conditions for a safe use

The following special conditions are added:

- The internal contents of the boxes marked for gas group IIB+H_2 should mounted as indicated in the paragraph D.3.10 of EN 60079-1: 2014, and including indicated for group IIC.
- Boxes with any kind of glass windows are only suitable for equipment marked T6 or T5

(11) Descriptive documents

	Rev.	Date
- Technical description:	0	2016-02-12

Getafe

FERNANDEZ RAMON, CARLOS (FIRMA)
2016.04.13 08:46:24 +02'00'

Head of Certification Committee

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