



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX EPS 14.0087U** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2015-02-24)

Status: **Current** Issue No: 1

Date of Issue: 2020-09-02

Applicant: **COELBO S.r.l.**  
V. Santa Margherita, 83  
20861 Brugherio (MB)  
Italy

Ex Component: Empty and pulling enclosures series S...; SO...; RI...; ROI...; SRI...; SROI...; SJ...; SOJ...; and type EMH90...

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **Flameproof enclosure "db", dust protection by enclosure "tb"**

Marking: Ex db IIC Gb  
Ex tb IIIC Db IP66/67  
Ex db I Mb (stainless steel or brass variant only)  
Ex eb IIC Gb  
Ex eb I Mb (stainless steel or brass variant only)

Approved for issue on behalf of the IECEx  
Certification Body:

**Holger Schaffer**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**Bureau Veritas Consumer Products Services Germany GmbH**  
Businesspark A96  
86842 Türkheim  
Germany





# IECEX Certificate of Conformity

Certificate No.: **IECEX EPS 14.0087U**

Page 2 of 4

Date of issue: 2020-09-02

Issue No: 1

Manufacturer: **COELBO S.r.l.**  
V. Santa Margherita, 83  
20861 Brugherio (MB)  
**Italy**

Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/EPS/ExTR14.0089/01](#)

Quality Assessment Report:

[IT/CES/QAR10.0009/10](#)



# IECEx Certificate of Conformity

Certificate No.: **IECEx EPS 14.0087U**

Page 3 of 4

Date of issue: 2020-09-02

Issue No: 1

## Ex Component(s) covered by this certificate is described below:

The product is an Ex component.

The empty and pulling enclosures series S/SO are boxes of aluminium light alloy, series RI/ROI and SRI/SROI are boxes of stainless steel AISI 316L and series SJ/SOJ are boxes of brass. Enclosures can be fitted with extensions which modify the total height of the enclosures. Both extension and cover are locked by screws with hex socket and sealed with O-rings which guarantee IP66/67 degree of protection. Boxes series SO, ROI, SROI and SOJ have a cover with a tempered glass sealed with a resin suitable for working temperature range equal to -50°C to +250°C. Enclosures are equipped with 1 to 5 NPT or metric threaded holes.

The type EMH90... is an aluminium enclosure with threaded cover and sight glass. It is equipped with one metric M25x1,5 threaded entry (type EMH90M) or with one 3/4" NPT threaded entry (type EMH90).

### Technical specification:

Degree of protection: IP66/67

Service temperature: -40°C to +110°C with EPDM o-ring

-50°C to +160°C with silicone o-ring

The empty enclosures can be used for electrical equipment designed for ambient temperatures not exceeding a range from -40°C to +85°C (with EPDM o-ring) and -50°C to +85°C (with silicone o-ring).

Routine overpressure test is not required for series S...; RI...; SJ...

Routine overpressure test with 20 bar is required for series SO...; ROI...; SOJ...; SRI...; SROI...

Routine overpressure test with 13 bar is required for type EMH90...

See attachment for type designation and schedule of limitations.

### **SCHEDULE OF LIMITATIONS:**

- 1) The maximum number of holes, their size and position are defined on user manual.
- 2) Circuit breakers or contactors containing oil filling and apparatus producing turbulences are not allowed to be installed inside of the enclosure.
- 3) The empty enclosures can be used for electrical equipment designed for ambient temperatures not exceeding a range from -40°C to +85°C (with EPDM o-ring) and -50°C to +85°C (with silicone o-ring).
- 4) Apparatus can be installed any way inside the enclosure unless at least 40% space of any cross section area remains free according to annex D of IEC 60079-1.
- 5) The service temperature range for the sight glass is from -50°C to +160°C. The service temperature range for the EPDM o-ring is from -40°C to +110°C and for the silicone o-ring from -50°C to +160°C.
- 6) Appropriate certified cable glands for direct entry must be used.
- 7) Mechanical resistance for types SJ...; SOJ... matches to low risk of mechanical danger for component group I.
- 8) Component must be installed to avoid risk from propagating brush discharges.
- 9) Temperature assessment for Ex-e enclosure must be carried out in final installation.



# IECEX Certificate of Conformity

Certificate No.: **IECEX EPS 14.0087U**

Page 4 of 4

Date of issue: 2020-09-02

Issue No: 1

**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**  
Standards updated.

**Annex:**

[IECEX EPS 14.0087U-Attachment.pdf](#)



**Type designation (except EMH90...):**

**(a) (b) (c) (d) (e)**

**(a) – Series:**

- S\* Aluminium enclosure without sight glass
- R\*I stainless steel enclosure without sight glass
- S\*J brass enclosure without sight glass
- SO\* Aluminium enclosure with sight glass
- RO\*I stainless steel enclosure with sight glass
- SO\*J brass enclosure with sight glass
- SR\*I stainless steel enclosure without sight glass, with bottom soldered threaded hole
- SRO\*I stainless steel enclosure with sight glass, with bottom soldered threaded hole

\*Number and position of threaded holes – ...; A; B; C; L; D; M; T; W; X; XA

NOTE: With the following cable entries scheme C, L, T and X may be provided external fixing bracket identified with the letter “F” (i.e. SFC, SOFL, SFT, SOFX, etc.).

**(b) – Dimension of cable entry**

NPT (Std)	EN 10226 (Gk)	ISO 261
Tapered Threading	tapered threading	Cylindrical Threading
1 – 1/2" NPT	1..U – 1/2"	1..M – M20x1.5
2 – 3/4" NPT	2..U – 3/4"	2..M – M25x1.5
3 – 1" NPT	3..U – 1"	3..M – M32x1.5
4 – 1.1/4" NPT	4..U – 1.1/4"	4..M – M40x1.5
5 – 1.1/2" NPT	5..U – 1.1/2"	5..M – M50x1.5
6 – 2" NPT	6..U – 2"	6..M – M63x1.5
H – Mixed		

**(c) – Size of the enclosure**

- 4; 6; 236; 65; 7; 9 (series S...; SO...; EMH90)
- 4; 6; 6A; 7; 8; 9 (series RI...; ROI...; SRI...; SROI...; SJ...; SOJ...)

**(d) – Internal height of enclosure (“/...” if any extension is used)**

**(e) – Cable entries threading identification**

- “N” for NPT (standard) threading
- “M” in case of ISO 261 metric threading
- “U” in case of EN 10226 Gk tapered threading
- In case of different threading, only letter “H” may be also used in the marking (at manufacturers discretion)



Attachment to Certificate  
IECEx EPS 14.0087U Issue No.: 0



**Type designation of enclosure type EMH90..:**

**EMH90 (a)**

(a) – Dimension of cable entry:

“...” – for NPT (standard) threading

“M” – in case of ISO 261 metric threading

“U” – in case of EN 10226 Gk tapered threading

**Schedule of limitations:**

- 1) The maximum number of holes, their size and position are defined on user manual.
- 2) Circuit breakers or contactors containing oil filling and apparatus producing turbulences are not allowed to be installed inside of the enclosure.
- 3) The empty enclosures can be used for electrical equipment designed for ambient temperatures not exceeding a range from -40°C to +85°C (with EPDM o-ring) and -50°C to +85°C (with silicone o-ring).
- 4) Apparatus can be installed any way inside the enclosure unless at least 40% space of any cross section area remains free according to annex D of IEC 60079-1.
- 5) The service temperature range for the sight glass is from -50°C to +160°C. The service temperature range for the EPDM o-ring is from -40°C to +110°C and for the silicone o-ring from -50°C to +160°C.
- 6) Appropriate certified cable glands for direct entry must be used.
- 7) Mechanical resistance for types SJ...; SOJ... matches to low risk of mechanical danger for component group I.
- 8) Component must be installed to avoid risk from propagating brush discharges.
- 9) Temperature assessment for Ex-e enclosure must be carried out in final installation.