# 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

Certificate No.: **IECEx EPS 14.0017**



Certificate history:
Issue 0 (2014-09-16)

Status: **Current**

Issue No: 1

Date of Issue: 2020-07-20

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

Equipment: **Control and junction box CCA /CPS series**

Optional accessory:

Type of Protection: **"db", "tb"**

Marking: Ex db IIC T6…T4 Gb,

Ex db I Mb

Ex db [ia Ga] IIC T6 Gb

Ex tb IIIC T85°C…T135°C Db IP66/IP67,

Ex tb [ia Da] IIIC T85°C Db IP66/IP67

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 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 14.0017** Page 2 of 4

Date of issue: 2020-07-20 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 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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

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/ExTR14.0035/01

Quality Assessment Report:

IT/CES/QAR10.0009/10

# IECEx Certificate of Conformity



**EQUIPMENT:**
Equipment and systems covered by this Certificate are as follows:

Control and junction boxes CCA /CPS series are Ex-d boxes certified.

These boxes are normally used for containing of electrical equipment and in general for containing of command, control, measurement, and regulation instruments with or without batteries; if necessary, they can be completed with command and signaling units installed both on lateral walls and above of enclosure locating them adjacent of the screwed cover; for this purpose some extension are available which modify the total height of enclosure and a specific kit for internal instruments assembly (only for series CPS). CPS boxes have a cover with a tempered glass sealed with a mastic suitable for working temperature range equal to -70°C ÷ +250°C. These boxes can be also used for containing of interface barriers or other intrinsically safety circuits, with or without electrical devices for command, control, measurement, regulation instruments, with or without batteries; they can also be completed with command and signaling units installed both on lateral walls and above of enclosure locating them adjacent of the screwed cover.

Max Voltage 1000 Vac/dc

Max Current: 100 A

for Terminal Strips:

Max Voltage 1000 Vac/dc

Max Current: 240 A

Max ambient temperature range: -50°C to +80°C

For further details see Annex

**SPECIFIC CONDITIONS OF USE: NO**

# IECEx Certificate of Conformity



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

**Annex:**

Annex to IECEx CoC 14.0017_01.pdf

Annexe to: IECEx EPS 14.0017 issue No.:1

Applicant: COELBO S.r.l.

Apparatus: **Control and junction box CCA /CPS series**

## Description:

All enclosures series CCA and CPS, made in Aluminium light alloy (Mg+Ti+Zirconimum < 6%), are complete of stainless steel bolts and screws and of a screwed cover which guarantees, with OR gasket installed, IP66/IP67 protection degree and protection against dust (2D). In addition, versions in Stainless Steel AISI 316L (letter "I" is added to code), Brass CW608N CuZn38Pb2 (OT58) (letter "B" is added to code) or Cast Iron (letter "C" is added to code) are available.

These boxes are normally used for containing of electrical equipment and in general for containing of command, control, measurement, and regulation instruments with or without batteries; if necessary, they can be completed with command and signaling units installed both on lateral walls and above of enclosure locating them adjacent of the screwed cover; for this purpose some extension are available which modify the total height of enclosure and a specific kit for internal instruments assembly (only for series CPS). CPS boxes have a cover with a tempered glass sealed with a mastic suitable for working temperature range equal to -70°C ÷ +250°C.

These boxes can be also used for containing of interface barriers or other intrinsically safety circuits, with or without electrical devices for command, control, measurement, regulation instruments, with or without batteries; they can also be completed with command and signaling units installed both on lateral walls and above of enclosure locating them adjacent of the screwed cover.

External standard paint is epoxyvinyl RAL 7000, whereas internal standard paint is anti-condensate coating RAL 2004. Other RAL colors are available on request. The thickness of the paint must be < 0.2 mm.

Enclosures series "CCA" and "CPS" are designed and manufactured according to the following International Standards for electrical apparatus:

- IEC 60079-0:2017
- IEC 60079-1:2014
- IEC 60079-11:2011
- IEC 60079-31:2013

The equipment here described is subjected to the conditions listed in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

## Electrical characteristics

Max Rated Voltage / Max Rated Current:
See ratings on identification plate
Max. Dissipated Power: see table below
Min. conductors section: 1,5 mm²
Max current density: 3 A/mm²(*);
(*) when the enclosure is filled as a junction box, please refer to following table for max density current:

| Densità max. di corrente<br>*Max current density* | Sect≤4 mm²<br>5 A/mm² | Sect=6 mm²<br>4 A/mm² | Sect≤35 mm²<br>3 A/mm² | Sect≤75 mm²<br>2,5 A/mm² | Sect=95 mm²<br>2 A/mm² | Sect≤160 mm²<br>1,5 A/mm² |
|---|---|---|---|---|---|---|

Bureau Veritas
Consumer Products Services Germany GmbH
Phone: +49 (0) 40 - 740 41 - 0
Fax: +49 (0) 40 - 740 41 - 1199
www.bureauveritas.de/cps
www.c-mark.bureauveritas.com

Location Hamburg
Oehleckerring 40
DE - 22419 Hamburg
cps-hamburg@de.bureauveritas.com

Location Schwerin
Wilhelm-Hennemann-Str. 8
DE - 19061 Schwerin
cps-schwerin@de.bureauveritas.com

Location Fürth
Heinrich-Stranka-Str. 3-5
DE - 90765 Fürth
cps-fuerth@de.bureauveritas.com

Location Türkheim
Businesspark A96
DE - 86842 Türkheim
cps-tuerkheim@de.bureauveritas.com

Managing Director: Michael Grytz Laboratory Accreditation ISO 17025 Reg.No. Schwerin HRB 3564

## Protection mode Ex-i

| *CCA series* | *Diss. Power* | *Temperature Class in relation to A.T.* | *CPS series* | *Diss. Power* |
|---|---|---|---|---|
| CCA 0 | 11 W | **Serie CCA / *CCA series*** | CPS 0 | 9 W |
| CCA0/182 – CCA0/212 | | $T_{amb}$ / *A.T.* | CPS 0/170 – CPS 0/200 | |
| CCA 1 | 12 W | -20°C ÷ +40°C → **T6** | CPS 1 | 10 W |
| CCA1/195 – CCA1/235 | | | CPS 1/180 – CPS 1/220 | |
| CCA 2 | 18 W | **Serie CPS / *CPS series*** | CPS 2 | 15 W |
| CCA2/235 – CCA2/303 | | $T_{amb}$ / *A.T.* | CPS 2/239 – CPS 2/289 | |
| CCA 3 | 26 W | -20°C ÷ +40°C → **T6** | CPS 3 | 23 W |
| CCA3/279 – CCA3/354 | | | CPS 3/259 – CPS 3/334 | |
| CCA 4 | 34 W | | CPS 4 | 32 W |
| CCA4/328 – CCA4/403 | | | CPS 4/305 – CPS 4/380 | |
| CCA 5 | 40 W | | CPS 5 | 37 W |
| CCA5/373 – CCA5/463 | | | CPS 5/345 – CPS 5/435 | |

## Protection mode Ex-d

| *CCA series* | *Diss. Power* | *Temperature Class in relation to A.T.* | *CPS series* | *Diss. Power* |
|---|---|---|---|---|
| CCA 0 | 23 W | ***CCA series*** | CPS 0 | 20 W |
| CCA0/182 – CCA0/212 | 32 W – 37 W | *A.T.* | CPS 0/170 – CPS 0/200 | 27 W – 31 W |
| CCA 1 | 28 W | ≤ +40°C → T6 | CPS 1 | 24 W |
| CCA1/195 – CCA1/235 | 39 W – 46 W | ≤ +50°C → T5 | CPS 1/180 – CPS 1/220 | 32 W – 38 W |
| CCA 2 | 39 W | ≤ +80°C → T4 | CPS 2 | 33 W |
| CCA2/235 – CCA2/303 | 53 W – 66 W | | CPS 2/239 – CPS 2/289 | 48 W – 57 W |
| CCA 3 | 56 W | ***CPS series*** | CPS 3 | 46 W |
| CCA3/279 – CCA3/354 | 77 W – 95 W | *A.T.* | CPS 3/259 – CPS 3/334 | 64 W – 80 W |
| CCA 4 | 80 W | ≤ +40°C → T6 | CPS 4 | 66 W |
| CCA4/328 – CCA4/403 | 109 W – 130 W | ≤ +50°C → T5 | CPS 4/305 – CPS 4/380 | 91 W – 110 W |
| CCA 5 | 90 W | ≤ +80°C → T4 | CPS 5 | 86 W |
| CCA5/373 – CCA5/463 | 139 W – 168 W | | CPS 5/345 – CPS 5/435 | 116 W – 142 W |

| CUSTODIA *Enclosure* | Ambiente +40°C *Ambient +40°C* | | | Ambiente +50°C *Ambient +50°C* | | | Ambiente +60°C *Ambient +60°C* | | | Ambiente +70°C *Ambient +70°C* | | | Ambiente +80°C *Ambient +80°C* | | | Circuiti SI Amb. +40°C *IS circuits Amb. +40°C* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | T6 | T5 | T4 | T6 | T5 | T4 | T6 | T5 | T4 | T6 | T5 | T4 | T6 | T5 | T4 | T6 |
| CCA 0 | 23 | 29 | 49 | 14 | 23 | 43 | 9 | 17 | 37 | 3 | 12 | 32 | 0 | 6 | 26 | 11 |
| CCA 0/182 | 32 | 40 | 68 | 20 | 32 | 60 | 12 | 24 | 52 | 4 | 46 | 44 | 0 | 8 | 36 | |
| CCA 0/212 | 37 | 46 | 79 | 23 | 37 | 69 | 14 | 28 | 60 | 5 | 19 | 51 | 0 | 9 | 42 | |
| CCA 1 | 28 | 35 | 60 | 18 | 28 | 53 | 11 | 21 | 46 | 4 | 14 | 39 | 0 | 7 | 32 | 12 |
| CCA 1/195 | 39 | 49 | 83 | 24 | 39 | 73 | 15 | 29 | 63 | 5 | 20 | 54 | 0 | 10 | 44 | |
| CCA 1/235 | 46 | 58 | 98 | 24 | 46 | 86 | 17 | 35 | 75 | 6 | 23 | 63 | 0 | 12 | 52 | |
| CCA 2 | 39 | 49 | 83 | 24 | 39 | 73 | 15 | 29 | 63 | 5 | 20 | 54 | 0 | 10 | 44 | 18 |
| CCA 2/235 | 53 | 66 | 113 | 33 | 53 | 99 | 20 | 40 | 86 | 7 | 27 | 73 | 0 | 13 | 60 | |
| CCA 2/303 | 66 | 83 | 140 | 41 | 66 | 124 | 25 | 50 | 107 | 8 | 33 | 91 | 0 | 17 | 74 | |
| CCA 3 | 56 | 70 | 119 | 35 | 56 | 105 | 21 | 42 | 91 | 7 | 28 | 77 | 0 | 14 | 63 | 26 |
| CCA 3/279 | 77 | 96 | 164 | 48 | 77 | 144 | 29 | 58 | 125 | 10 | 39 | 106 | 0 | 19 | 87 | |
| CCA 3/354 | 95 | 119 | 202 | 59 | 95 | 178 | 36 | 71 | 154 | 12 | 48 | 131 | 0 | 24 | 107 | |
| CCA 4 | 80 | 100 | 170 | 50 | 80 | 150 | 30 | 60 | 130 | 10 | 40 | 110 | 0 | 20 | 90 | 34 |
| CCA 4/328 | 109 | 136 | 232 | 68 | 109 | 204 | 41 | 82 | 177 | 14 | 55 | 150 | 0 | 27 | 123 | |
| CCA 4/403 | 130 | 163 | 276 | 81 | 130 | 244 | 49 | 98 | 211 | 16 | 65 | 179 | 0 | 33 | 146 | |
| CCA 5 | 90 | 113 | 191 | 56 | 90 | 169 | 34 | 68 | 146 | 11 | 45 | 124 | 0 | 23 | 101 | 40 |
| CCA 5/373 | 139 | 174 | 295 | 87 | 139 | 261 | 52 | 104 | 226 | 17 | 70 | 191 | 0 | 35 | 156 | |
| CCA 5/463 | 168 | 210 | 357 | 105 | 168 | 315 | 63 | 126 | 273 | 21 | 84 | 231 | 0 | 42 | 189 | |

| CUSTODIA *Enclosure* | Ambiente +40°C *Ambient +40°C* | | | Ambiente +50°C *Ambient +50°C* | | | Ambiente +60°C *Ambient +60°C* | | | Ambiente +70°C *Ambient +70°C* | | | Ambiente +80°C *Ambient +80°C* | | | Circuiti SI Amb. +40°C *IS circuits Amb. +40°C* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | T6 | T5 | T4 | T6 | T5 | T4 | T6 | T5 | T4 | T6 | T5 | T4 | T6 | T5 | T4 | T6 |
| CPS 0 | 20 | 25 | 43 | 13 | 20 | 38 | 8 | 15 | 33 | 3 | 10 | 28 | 0 | 5 | 23 | 9 |
| CPS 0/182 | 27 | 34 | 57 | 17 | 27 | 51 | 10 | 20 | 44 | 3 | 14 | 37 | 0 | 7 | 30 | |
| CPS 0/212 | 31 | 39 | 66 | 19 | 31 | 58 | 12 | 23 | 50 | 4 | 16 | 43 | 0 | 8 | 35 | |
| CPS 1 | 24 | 30 | 51 | 15 | 24 | 45 | 9 | 18 | 39 | 3 | 12 | 33 | 0 | 6 | 27 | 10 |
| CPS 1/195 | 32 | 40 | 68 | 20 | 32 | 60 | 12 | 24 | 52 | 4 | 16 | 44 | 0 | 8 | 36 | |
| CPS 1/235 | 38 | 48 | 81 | 24 | 38 | 71 | 14 | 29 | 62 | 5 | 19 | 52 | 0 | 10 | 43 | |
| CPS 2 | 33 | 41 | 70 | 21 | 33 | 62 | 12 | 25 | 54 | 4 | 17 | 45 | 0 | 8 | 37 | 15 |
| CPS 2/235 | 48 | 60 | 102 | 30 | 48 | 90 | 18 | 36 | 78 | 6 | 24 | 66 | 0 | 12 | 54 | |
| CPS 2/303 | 57 | 71 | 121 | 36 | 57 | 107 | 21 | 43 | 93 | 7 | 29 | 78 | 0 | 14 | 64 | |
| CPS 3 | 46 | 58 | 98 | 29 | 46 | 86 | 17 | 35 | 75 | 6 | 23 | 63 | 0 | 12 | 52 | 23 |
| CPS 3/279 | 64 | 80 | 136 | 40 | 64 | 120 | 24 | 48 | 104 | 8 | 32 | 88 | 0 | 16 | 72 | |
| CPS 3/354 | 80 | 100 | 170 | 50 | 80 | 150 | 30 | 60 | 130 | 10 | 40 | 110 | 0 | 20 | 90 | |
| CPS 4 | 66 | 83 | 140 | 41 | 66 | 124 | 25 | 50 | 107 | 8 | 33 | 91 | 0 | 17 | 74 | 32 |
| CPS 4/328 | 91 | 114 | 193 | 57 | 91 | 171 | 34 | 68 | 148 | 11 | 46 | 125 | 0 | 23 | 102 | |
| CPS 4/403 | 110 | 138 | 234 | 69 | 110 | 206 | 41 | 83 | 179 | 14 | 55 | 151 | 0 | 28 | 124 | |
| CPS 5 | 86 | 108 | 183 | 54 | 86 | 161 | 32 | 65 | 140 | 11 | 43 | 118 | 0 | 22 | 97 | 37 |
| CPS 5/373 | 116 | 145 | 247 | 73 | 116 | 218 | 44 | 87 | 189 | 15 | 58 | 160 | 0 | 29 | 131 | |
| CPS 5/463 | 142 | 178 | 302 | 89 | 142 | 266 | 53 | 107 | 231 | 18 | 71 | 195 | 0 | 36 | 160 | |

**Special conditions for manufacturing and installation :**

1. All IECEx Certified and tested components that are built into the enclosure's walls need to fulfill the requirements of types of explosion protection used as well as the IP level and operation range shown on the type label.

2. Any openings that are not used shall be closed as specified in IEC 60079-1, section 11.

3. The requirements for installation according to Annex D of IEC 60079-1 shall be observed.

4. The relevant temperature class is given by manufacturer tables depending on ambient temperature and maximum power dissipation of each enclosure size. Each installation must be validated to conform with maximum values of the associated power dissipation tables.

6. [Ex i] certified components shall be installed only in accordance with the relevant installation requirements and instructions of manufacturer. Creepage and clearance distances must be respected. It must be also assured that the thermal operating conditions of the used intrinsic safe components are not exceeded. If the enclosure containing IS limited devices is installed for standard ambient temperature (-20°C ÷ +40°C) the maximum dissipated power for each size of enclosure is indicated in table above.
If the enclosure containing IS limited devices is installed for ambient temperatures compatible with those of intrinsic safety equipment, no limitations concerning ambient temperature have to take into account.
If, on the other hand, ambient temperature does not coincide with apparatus working temperature, the user and/or the installer must ensure the proper functioning of "IS" device by the use of safety devices.

7. Batteries inside enclosure and safety devices must be certified in accordance with IEC 60079-1 Annex E.

8. Rotating machines or other devices which create turbulence shall not be incorporated.