



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 PTB 15.0032** Page 1 of 4 Certificate history:
Issue 0 (2016-03-09)

Status: **Current** Issue No: 1

Date of Issue: 2020-03-18

Applicant: **IDEC-Corporation**
6-64 Nishimiyahara 2-chome
Yodogawa-ku, Osaka 532-0004
Japan

Equipment: **Control Box type EC2B-*******

Optional accessory:

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

Marking: Ex db eb IIC T6 Gb
Ex tb IIIC T80°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Detlev Markus

Position:

**Head of Department 3.5 "Explosion Protection in Energy
Technology"**

Signature:
(for printed version)

Date:

18.03.2020

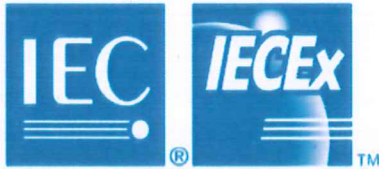
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Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





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Manufacturer: **IDEC-Corporation**
6-64 Nishimiyahara 2-chome
Yodogawa-ku, Osaka, 532-0004
Japan

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/PTB/EXTR15.0036/01](#)

Quality Assessment Report:

[NO/NEM/QAR10.0001/11](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description

The Control Box Type EC2B-***** consists of an enclosure out of stainless steel, blank or coated in the type of protection increased Safety "eb" and Protection by Enclosure "tb". It is designed to accommodate – separately certified – components in the type of protection Flameproof Enclosures "db" with operating elements, terminals as well as cable glands.

Technical Data and Nomenclature: see Annex.

SPECIFIC CONDITIONS OF USE: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- 1) New test according to IEC 60079-0:2017, IEC 60079-1:2014; IEC 60079-7:2015+A1:2017 and IEC 60079-31:2013.
- 2) The marking plate of Aluminum has been cancelled.

Annex:

[COCA15.0032-1.pdf](#)



Applicant: IDEC Corporation
6-64 Nishimiyahara 2-chome
Yodogawa-ku
Osaka, 532-0004
Japan

Electrical Apparatus: Control Box Type EC2B-*****

Description

The Control Box Type EC2B-***** consists of an enclosure out of stainless steel, blank or coated, in the type of protection Increased Safety "eb" and Protection by Enclosure "tb". It is designed to accommodate – separately certified – components listed in the table below in the type of protection Flameproof Enclosures "db" with operating elements, terminals as well as cable glands.

Technical Data

| Sizes | | Length | Width | Height |
|-------|------|--------|--------|--------|
| | min. | 170 mm | 110 mm | 106 mm |
| | max. | 400 mm | 380 mm | 106 mm |

Specification of the electrical characteristics

| | Switch | Pilot Light | Meter |
|------------------|--------------------------|--------------------------|--------------------------|
| Rated voltage | up to 600 V | up to 500 V | up to 300 V |
| Rated current | max. 10 A | max. 15 mA | max. 5 A |
| Rated wire range | max. 2.5 mm ² | max. 2.5 mm ² | max. 2.5 mm ² |

Ambient temperature: max. -20 °C to +50 °C
Ingress protection: IP 65 according to IEC 60529

The ratings specified are maximum values, actual values will be subject to the electrical equipment used from case to case. Depending on the system conditions, the mode of operation, the utilisation category, etc., the manufacturer will define the definitive ratings which will be within the range of these limiting values and will comply with the relevant standards.



Nomenclature

| | | | | | | |
|-------|---|---|---|---|---|---|
| EC2B- | * | * | * | * | * | * |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- 1) Type
- 2) No. of control unit mounting holes
- 3) Set no. of control units
- 4) Material of box
- 5) Gland and Reducer (see list below)
- 6) Wiring and terminal configuration
- 7) May be followed by additional letters

| Gland and Reducer | |
|-------------------|---|
| C1 | 5411-5225 (Plastic gland M20, \varnothing 5 to 10) |
| C2 | 5411-5235 (Plastic gland M25, \varnothing 6 to 13) |
| C3 | 5411-5245 (Plastic gland M32, \varnothing 8 to 15) |
| C4 | 5411-5255 (Plastic gland M40, \varnothing 16 to 23) |
| D1 | 5311-2720 (Metallic gland M20, \varnothing 7 to 12.5) |
| D2 | 5311-2730 (Metallic gland M25, \varnothing 9 to 16.5) |
| D3 | 5311-2740 (Metallic gland M32, \varnothing 11 to 21) |
| D4 | 5311-2750 (Metallic gland M40, \varnothing 19 to 28) |
| ** | etc., ATEX/IECEX approved models |

Note: When the Control Box has complicated specifications, Type Designation of "Material of Box", "Gland and Reducer", "Wiring and Terminal configuration" are shown by the "Manufacturing No."



List of components (ATEX + IECEx Number)

| Name of the component | Type | ATEX | IECEX |
|--|---|---|--|
| Empty enclosure | EC2-B B**B* | PTB 08 ATEX 1004 U | IECEX PTB 15.0031 U |
| Contact block for Pushbutton and Selector Switches, Pushbutton Switches, Selector Switches Lamp unit for Pilot Light, Pilot Light, Emergency stop switch, Key selector switch, Meter | EU2B-N, EU2B-YB, EU2B-YS, EU2B-XL, EU2B-YL, EU2B-YBV, EU2B-YSK, EU2B-YM | PTB 08 ATEX 1053 U | IECEX PTB 15.0006 U |
| Operator for pushbutton switch, Operator for selector switch, Operator for emergency stop switch, Operator for key selector switch, Lens unit for pilot light, Mounting hole plug | EU2B-UB*, EU2B-US*, EU2B-UBV*, EU2B-USK, EU2B-UL*, EU9Z-BP | PTB 08 ATEX 1003 U | IECEX PTB 15.0007 U |
| Terminal block | e.g. ET2A-8P*, UK2.5N | TUV 15 ATEX 7799 U, KEMA 06ATEX0119 U | IECEX TUR 15.0043 U, IECEX KEM 06.0034 U |
| Cable gland | e.g. HPN*, A2F* | NEMKO 04 ATEX 1111, LCIE 09 ATEX 3018 X | / IECEX CQM 12.0017X |
| Plug | e.g. GBE-* | TUV 15 ATEX 7798 X | IECEX TUR 15.0042 X |
| Reducer/Adapter | e.g. EC9E-H* | TUV 15 ATEX 7798 X | IECEX TUR 15.0042 X |

Important note

The control box enclosure provided with coat of paint must not be used in areas affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment) and pneumatically dust.