



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx PTB 15.0032 Issue No: 0 Certificate history:  
[Issue No. 0 \(2016-03-09\)](#)

Status: Current Page 1 of 3

Date of Issue: 2016-03-09

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

Electrical Apparatus: Control Box type EC2B-\*\*\*\*\*  
Optional accessory:

Type of Protection: "e", "d", "tb"

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

Approved for issue on behalf of the IECEx  
Certification Body:

Dr.-Ing. Uwe Klausmeyer

Position:

Head of Department 3.5 "Explosion Protection in Energy Technology"

Signature:  
(for printed version)

  
10.03.2016

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 the [Official IECEx Website](#).

Certificate issued by:

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  
location(s):

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 electrical apparatus 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "I"
<b>IEC 60079-7 : 2006-07</b> Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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/ExTR15.0036/00](#)

Quality Assessment Report:

[NO/NEM/QAR10.0001/08](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Description

The Control Box Type EC2B-\*\*\*\*\* consists of an enclosure out of painted sheet steel in the type of protection Increased Safety "e". It is designed to accommodate – separately certified – components listed in the table below in the type of protection Flameproof Enclosures "d" with operating elements, terminals as well as cable glands.

Technical Data and Nomenclature: see Annex.

CONDITIONS OF CERTIFICATION: NO

#### Annex:

[COCA15.0032-00.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 painted or unpainted sheet steel in the type of protection Increased Safety "e". It is designed to accommodate – separately certified – components listed in the table below in the type of protection Flame-proof Enclosures "d" 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 <sup>2</sup>	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>

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,φ5 to 10)
C2	5411-5235 (Plastic gland M25,φ6 to 13)
C3	5411-5245 (Plastic gland M32,φ8 to 15)
C4	5411-5255 (Plastic gland M40,φ16 to 23)
D1	5311-2720 (Metallic gland M20,φ7 to 12.5)
D2	5311-2730 (Metallic gland M25,φ9 to 16.5)
D3	5311-2740 (Metallic gland M32,φ11 to 21)
D4	5311-2750 (Metallic gland M40,φ19 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

### Notes for manufacturing and operation

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.