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 CML 22.0004X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2023-04-06)
Date of Issue:	2023-07-20		
Applicant:	**IDEC CORPORATION** 2-6-64 Nishimiyahara, Yodogawa-ku, Osaka 532-0004 **Japan**		
Equipment:	**Control Box Type EC2B-********		
Optional accessory:			
Type of Protection:	**Flameproof Ex "db", Increased Safety Ex "eb" and Dust Protection by Enclosure Ex "tb"**		
Marking:	Ex db eb IIC T6 Gb Ex tb IIIC T80°C Db Ta = -20°C to +40°C or +50°C		

Approved for issue on behalf of the IECEx Certification Body:	**R C Marshall**
Position:	**Operations Manager**
Signature: (for printed version)	
Date: (for printed version)	2023-07-20

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:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

IECEx Certificate of Conformity

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

Manufacturing locations: **IDEC Corporation, Amagasaki Plant**
5-8-10, Shioe
Amagasaki-shi
Hyogo, 661-0976
Japan

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 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 Reports:

GB/CML/ExTR22.0016/00 GB/CML/ExTR23.0144/00

Quality Assessment Report:

NO/NEM/QAR10.0001/17

IECEx Certificate of Conformity

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

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.

Refer to Annex for full description and conditions of manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Annex for specific conditions of use.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

This issue introduced the following change:

1. Update to manufacturer address.

Annex:

IECEx CML 22.0004X Iss. 1 Certificate Annex_1.pdf

Annexe to: **IECEx CML 22.0004X Issue 1**

Applicant: **IDEC Corporation**

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 in the type of protection Flameproof Enclosures “db” with operating elements, terminals as well as cable glands.

Technical data

Size	Length	Width	Height
Min	170mm	110mm	106mm
Max	400mm	380mm	106mm

Specification of the electrical characteristics

	Switch	Pilot Light	Meter	Buzzer	Potentiometer
Rated voltage	Up to 600V	Up to 500V	Up to 300V	Up to 250V	Up to 500V
Rated current	Max 10A	Max 20mA	Max 5A	- (max 8VA)	- (max 1W)
Rated wire range	Max 2.5mm^2	Max 2.5mm^2	Max 2.5mm^2	Max 2.5mm^2	Max 2.5mm^2

Ambient temperature	-20°C to +50°C -20°C to +40°C when Potentiometer is fitted
Ingress protection	IP65 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.

Eurofins E&E CML Limited
Newport Business Park
New Port Road
Ellesmere Port
CH65 4LZ

T +44 (0) 151 559 1160
E info@cmlex.com

www.cmlex.com

Company Reg No. 8554022 VAT No. GB163023642

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, 5 to 10)
C2	5411-5235 (Plastic gland M25, Ø 6 to 13)
C3	5411-5245 (Plastic gland M32, Ø 8 to 15)
C4	5411-5255 (Plastic gland M40, Ø 16 to 23)
D1	5311-2720 (Metallic gland M20, Ø 7 to 12.5)
D2	5311-2730 (Metallic gland M25, Ø 9 to 16.5)
D3	5311-2740 (Metallic gland M32, Ø 11to 21)
D4	5311-2750 (Metallic gland M40, Ø 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

Name of the component	**Type**	**ATEX**	**IECEx**
Empty enclosure	EC2B-B***	PTB 08ATEX1004U	IECEx PTB 15.0031U
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 08ATEX1053U	IECEx PTB 15.0006U
Lamp unit for Pilot Light, Pilot Light	EU2B-XL EU2B-YL	CML 21ATEX11190U	IECEx CML 21.0140U
Lens Unit for Pilot Light	EU2B-U	CML 21ATEX31294U	IECEx CML 21.0150U

Name of the component	Type	ATEX	IECEx
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 08ATEX1003U	IECEx PTB 15.0007U
Terminal block	e.g. ET2A-8P,	TUV 15ATEX7799U,	IECEx TUR 15.0043U,
Terminal block	264-238	PTB 98ATEX3129U	IECEx PTB 04.0003U
Terminal block	WDU 2.5N	DEMKO 14ATEX1338U	IECEx ULD 14.0005U
Terminal block	WDU 2.5, WPE 2.5, WPE2.5N	DEMKO 14ATEX1338U	IECEx ULD 14.0005U
Terminal block	SAK 2.5/*, EK2.5N	KEMA 97ATEX1798U	IECEx KEM 06.0014U
Terminal block	ZDU2.5, ZPE2.5	DEMKO 15ATEX1467U	IECEx ULD 15.0008U
Terminal block	ZDU 2.5N, ZPE 2.5N	DEMKO 15ATEX1467U	IECEx ULD 15.0008U
Terminal block	A2C 2.5	TUV 16ATEX7909U	IECEx TUR 16.0036U
Terminal block	UT 2.5, UT2.5-PE	KEMA 04ATEX2048U	IECEx KEM 06.0027U
Terminal block	ST 2.5, ST 2.5-PE	KEMA 04ATEX2052U	IECEx KEM 06.0051U
Terminal block	UK2.5N	PTB 19ATEX1014U	IECEx PTB 19.0039U
Cable gland	HPN*	DNV 22ATEX73816U	IECEx DNV 22.0099U
Cable gland	EC9E-S	DNV 22 ATEX 73666U	IECEx DNV 22.0109U
Control and signalling device adapters (for potentiometer)	05-0003-00** / * ***	CML 13ATEX3010U	IECEx CML 14.0005U
Control and Switching Unit (Potentiometer)	07-337*-****/****	CML 17ATEX1119U	IECEx CML 17.0057U
Buzzer Unit	EC9F-Z*	CML 21ATEX11398U	IECEx CML 21.0165U

Notes:

- PTB 08ATEX1048 / IECEx PTB 15.0032 is superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by PTB 08ATEX1048 / IECEx PTB 15.0032 apart from the modifications shown in section 1.1.1.
- Where PTB 08ATEX1048 / IECEx PTB 15.0032 is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. A routine test specified by IEC 60079-7:2017 Ed. 5.1, clause 7.1 is required. See drawing number A39511, A39511-1, A39732, A39732-1 and A39737.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

i. To prevent an electrostatic charging hazard - when the control box enclosure is provided with a coat of paint, the enclosure shall not be used in affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment) and pneumatic movement of dust.
ii. Cables or insulated wires used with the equipment shall have a heat resistant temperature of 70°C or higher.
iii. No modifications shall be made to the flamepaths of the unit without consulting the manufacturer.
iv. The end user shall ensure that the cable is suitably clamped to prevent pulling on the cable/cable gland.

Buzzer

v. The buzzer shall be operated by a control system that limits operation to:
   a. Less than 10 minutes continuous operation, or
   b. Energised/de-energised cycles with shorter energised durations and with the de-energised time greater than or equal to half of the total cycle time.

   At no time shall the buzzer remain energised for greater than 10 minutes.

Components covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEx KEM 06.0014U	IEC 60079-0 Ed 4 IEC 60079-7 Ed 3	Technical differences evaluated and found satisfactory. For detail see ExTR
IECEx CML 17.0057U	IEC 60079-0 Ed 6.0 IEC 60079-1 Ed 7.0 IEC 60079-7 Ed 5.0	No applicable technical differences
IECEx PTB 15.0007U	IEC 60079-0 Ed.6.0 IEC 60079-31 Ed.2.0 IEC 60079-7 Ed.4.0	No applicable technical differences