

**UK Type Examination Certificate CML 22UKEX1360X Issue 0****United Kingdom Conformity Assessment**

1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

2 Equipment **Control Box Type EC2B-\*\*\*\*\***

3 Manufacturer **IDEC Corporation**

4 Address **6-64 Nishimiyahara 2-chrome, Yodogawa-ku, Osaka 532-0004, Japan**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:


EN IEC 60079-0:2018

EN 60079-1:2014

EN IEC 60079-7:2015+A1:2018

EN 60079-31:2014

10 The equipment shall be marked with the following:

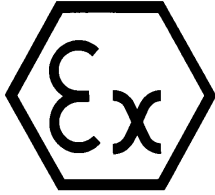
 II 2 G D

Ex db eb IIC T6 Gb

Ex tb IIIC T80°C Db

T<sub>a</sub> = -20°C to +50°C

-20°C to +40°C (when potentiometer is fitted)



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## 11 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 <sup>2</sup>	Max 2.5mm <sup>2</sup>	Max 2.5mm <sup>2</sup>	Max 2.5mm <sup>2</sup>	Max 2.5mm <sup>2</sup>

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.

### 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



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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
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



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Name of the component	Type	ATEX	IECEX
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.

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 Apr 2023	R14851B/00	Issue of the prime certificate. CML 22ATEX1044X, Issue 0 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

## 13 Conditions of Manufacture

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

- 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.
- A routine test specified by IEC 60079-7, clause 7.1 is required. See drawing number A39511, A39511-1, A39732, A39732-1 and A39737.

## 14 Specific Conditions of Use

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

- 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,



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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.

## Certificate Annex

**Certificate Number** CML 22UKEX1360X  
**Equipment** Control Box type EC2B-\*\*\*\*\*  
**Manufacturer** IDEC Corporation



### Issue 0

For all certification drawings, refer to attached certificate CML 22ATEX1044X, Issue 0.