



(1) **EC-TYPE-EXAMINATION CERTIFICATE**  
(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**



(3) EC-type-examination Certificate Number:

**PTB 08 ATEX 1048**

(4) Equipment: Control Box Type EC2B-\*\*\*\*\*

(5) Manufacturer: IDEC Corp.

(6) Address: 7-31 Nishimiyahara 1-chome , Yodogawa-ku, Osaka, 532-8550, Japan

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 08-18163.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0:2006                      EN 60079-1:2007                      EN 60079-7:2007**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

**II 2 G Ex de IIC T6**

Zertifizierungsstelle Explosionsschutz

Braunschweig, November 24, 2008

By order:

Dr.-Ing. M. Thedens  
Oberregierungsrat

(13)

## SCHEDULE

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1048

(15) Description of equipment

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 - switches and pilot lights in the type of protection Flameproof Enclosures "d" with operating elements, terminals as well as cable glands.

#### Technical data

Sizes		Length	Width	Height
	smallest	170 mm	110 mm	106 mm
	largest	350 mm	310 mm	106 mm

	Switch	Pilot Light
Rated Voltage	up to 600 V	up to 500 V
Rated current	max. 10 A	max. 15 mA
Rated wire range	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>

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.

Ambient temperature: max. - 20 °C to +50 °C,

Protection against foreign bodies and ingress of water: IP65 according to EN 60529

(16) Test report PTB Ex 08-18163

(17) Special conditions for safe use

None

(18) Essential health and safety requirements

Met by compliance with the aforementioned Standards

Zertifizierungsstelle Explosionsschutz

Braunschweig, November 24, 2008

By order:

  
Dr.-Ing. M. Thedens  
Oberregierungsrat



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## 1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1048

(Translation)

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

Marking:  II 2 G Ex de IIC T6

Manufacturer: IDEC Corp.

Address: 7-31 Nishimiyahara 1-chome, Yodogawa-ku,  
Osaka, 532-8550, Japan

### Description of supplements and modifications

The Control Box Type EC2B-\*\*\*\*\* may also be used in areas in which explosive atmospheres produced by dust/air mixtures may occasionally occur.

The marking will thus change to:

 II 2 G Ex de IIC T6

 II 2 D Ex tD A21 IP65 T80°C

The Control Box is supplemented by two sizes with the dimensions  
400 mm x 310 mm x 106 mm and 400 mm x 380 mm x 106 mm.

### Technical data

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

	Switch	Pilot Light
Rated Voltage	up to 600 V	up to 500 V
Rated current	max. 10 A	max. 15 mA
Rated wire range	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>

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.

Ambient temperature: max. -20 °C to +50 °C,

Protection against foreign bodies  
and ingress of water: IP65 according to EN 60529

### Notes for manufacture and operation

The control box 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 conveyed dust.

### Applied standards

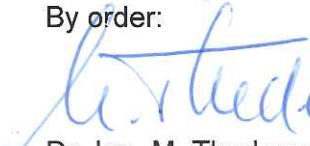
EN 60079-0:2006, EN 60079-1:2004, EN 60079-7:2007, EN 61241-0:2006, EN 61241-1:2004

Assessment and test report: PTB Ex 09-19157

Zertifizierungssektor Explosionsschutz

Braunschweig, October 26, 2009

By order:

  
Dr.-Ing. M. Thedens  
Oberregierungsrat



## 2. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1048

(Translation)

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

Marking:  II 2 G Ex de IIC T6  
II 2 D Ex tD A21 IP65 T80°C

Manufacturer: IDEC Corp.

Address: 7-31 Nishimiyahara 1-chome, Yodogawa-ku, Osaka, 532-8550, Japan

### Description of supplements and modifications

The Control Box type EC2B-\*\*\*\*\* can alternatively be equipped with the meter type EU2B-YM.

### Technical data

Sizes	Length	Width	Height
minimum	170 mm	110 mm	106 mm
maximum	400 mm	380 mm	106 mm

	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: ..... -20 °C to +50 °C

Protection against foreign bodies

and ingress of water: ..... IP65 according to EN 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.

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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

### Notes for manufacture and operation

The control box 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 conveyed dust.

### Applied standards

EN 60079-0:2006, EN 60079-1:2007, EN 60079-7:2007, EN 61241-0:2006, EN 61241-1:2004

Test report: PTB Ex 12-11053

Zertifizierungssektor Explosionsschutz  
On behalf of PTB:

Braunschweig, May 4, 2012

  
Dr.-Ing. U. Klausmeyer  
Direktor und Professor



### 3 SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1048

(Translation)

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

Marking:  II 2 G Ex d e IIC T6  
 II 2 D Ex tD A21 IP65 T80°C

Manufacturer: IDEC Corporation

Address: 6-64 Nishimiyahara 2-chome, Yodogawa-Ku, 532-0004 Osaka, Japan

Description of supplements and modifications

The control box type EC2B-\*\*\*\*\* is changed in following points:

- 1) The address of the manufacturer is changed to: IDEC Corporation, 6-64 Nishimiyahara 2-chome, Yodogawa-Ku, 532-0004 Osaka, Japan.
- 2) The pilot light, which is a component of the control box may optionally be added with a rating AC/DC 100/110/120 V and AC/DC 230/240 V.
- 3) The mounting of the nameplate may optionally be screwed with another method.
- 4) The control box was tested according to the following standards EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007 und EN 60079-31:2014.

The marking is thus changed to:

 II 2 G Ex d e IIC T6 Gb  
 II 2 D Ex tb IIIC T80°C Db

Technical data

Sizes	Length	Width	Height
minimum	170 mm	110 mm	106 mm
maximum	400 mm	380 mm	106 mm

	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>

ZSEx10101e b

### 3 SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1048

Ambient Temperature max. - 20 °C to +50 °C,  
Protection against foreign bodies  
and ingress of water IP65 according to EN 60529

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values depended on power supply specifications, operating mode, utilization category, etc.

#### Applied standards

EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2014

Test report: PTB Ex 15-15086

Konformitätsbewertungsstelle, Sektor Explosionsschutz  
On behalf of PTB:

Braunschweig, March 9, 2016

  
Dr.-Ing. U. Klausmeyer  
Direktor und Professor

