



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

Ex COMPONENT CERTIFICATE

Certificate No.: IECEx PTB 15.0006U

Issue No: 1

Certificate history:

Status: **Current**

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Issue No. 1 (2019-09-09)

Issue No. 0 (2015-05-29)

Date of Issue: **2019-09-09**

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

Ex Component: **Contact block type EU2B-N**, Lamp unit EU2B-XL** and Meter type EU2B-YM*******

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

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

Marking:

Ex db eb IIC Gb
Ex tb IIIC Db

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Detlev Markus

Position:

Head of Department Explosion Protection in Energy Technology

Signature:
(for printed version)

Date:

99.09.19

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](http://www.iecex.com).

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 Component 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 Ex Component 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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	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 Ex Component listed has successfully met the examination and test requirements as recorded in

Test Report:

[DE/PTB/ExTR15.0004/01](#)

Quality Assessment Report:

[NO/NEM/QAR10.0001/12](#)



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Schedule

Ex Component(s) covered by this certificate is described below:

Description

Contact block and Pilot light

The Contact block type EU2B-N** and the Lamp unit EU2B-XL** in the type of protection Flameproof enclosure "d" serves as switching resp. display element for controlling, regulating and signal electric circuits. Connection is by means of integrated screw type terminals.

Meter

The meter type EU2B-YM in the type of protection Flameproof Enclosure "d" is used as voltmeter or ammeter. Connection is by means of integrated screw type terminals. The meter can be used in dust-hazardous areas (EPL Db).

Technical Data, Nomenclature and Schedule of Limitations see Annex.

SCHEDULE OF LIMITATIONS:

The Contact block type EU2B-N**, Lamp unit EU2B-XL** and the Meter type EU2B-YM***** have to be mounted in an enclosure that meets the requirements of an approved type of protection as specified in IEC 60079-0, section 1.

When installing Contact block type EU2B-N**, Lamp unit EU2B-XL** and the Meter type EU2B-YM***** in an enclosure designed to Increased Safety "e" type of protection in compliance with IEC 60079-7, the clearance and creepage distances specified in sections 4.4 and 4.5, and in table 1 must be maintained.

The type of protection IP65 of the meter is guaranteed only by compliance with the manufacturer's instructions and proper installation in the enclosure.



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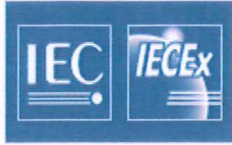
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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

New test according to IEC 60079-0:2017 (Ed. 7), IEC 60079-1:2014 (Ed. 7), IEC 60079-7:2015 (Ed. 5), IEC 60079-31:2013 (Ed. 2).

Annex:

[COCA-15.0006U-Issue 1.pdf](#)



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

Electrical Apparatus: Contact block type EU2B-N**
Lamp unit type EU2B-XL**
Meter type EU2B-YM*****

Description

Contact block and Pilot light

The Contact block type EU2B-N** and the Lamp unit EU2B-XL** in the type of protection Flameproof enclosure "db" serves as switching resp. display element for controlling, regulating and signal electric circuits. Connection is by means of integrated screw type terminals.

Together with an contact block adapter and an operator and lens unit (see IECEx PTB 15.0007U) following switches and lamp units can be constructed.

Switches and lamp units	Type
Pushbutton Switches	type EU2B-YB
Selector Switches	type EU2B-YS
Lamp unit for Pilot Light	type EU2B-YL
Emergency Stop switch	type EU2B-YBV
Key selector switch	type EU2B-YSK

Meter

The Meter type EU2B-YM***** in the types of protection Flameproof Enclosure "db" and Protection by Enclosure "tb" is used as voltmeter or ammeter. Connection is by means of integrated screw type terminals.

Technical Data

Technical data Contact block type EU2B-N**

Rated insulation voltage	up to 600 V						
Free air-thermal current	max. 10 A						
Rated voltage Ue			24 V	120 V	240 V	500 V	
Rated current Ie	AC	50/60 Hz	AC12	10 A	10 A	6 A	2.8 A
			AC15	10 A	6 A	3 A	1.4 A
	DC	DC12	8 A	2,2 A	1,1 A	---	
		DC13	4 A	1.1 A	0.55 A	---	
Insulation resistance	min. 100 MΩ						
Electric strength	Switches 6 kV						
Rated cross section	1.25 up to 2.5 mm ²						



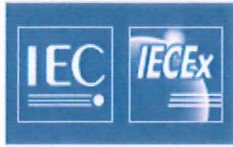
Contact assembly	1 NO or 1 NC
Switch assembly	max. 3 contact blocks
Rated service temperature	-20 °C up to +80 °C
Maximum surface temperature	+80 °C
Provided the making and breaking capacities defined in the relevant regulations are met, rated values other than those specified above are acceptable and will be defined by the manufacturer on the basis of the operating mode, utilisation category, etc.	

Technical data Pilot light type EU2B-XL**

Rated insulation voltage	500 V, 250 V for secondary
Rated voltage	AC/DC 6 V, 12 V, 24 V, 110 V, 100/110/120 V, 230/240 V AC 100/110 V, 115 V, 120 V, 200/220 V, 230 V, 240 V, 380 V, 400/440 V, 480 V
Insulation resistance	min. 100 MΩ
Electric strength	Pilot Light 4 kV resp. 2.5 kV fpr secondary
Rated cross section	1.25 up to 2.5 mm ²
Rated service temperature	-20 °C up to +80 °C
Maximum surface temperature	+80 °C

Technical data Meter type EU2B-YM*****

Rated insulation voltage	up to 300 V (AC ammeter) up to 150 V (DC voltmeter, DC ammeter)
Rated voltage	DC 5 V, 10 V, 15 V etc. up to max. 150 V
Rated current	AC: 1 A up to max. 5 A DC: 1 mA, 10 mA up to max. 20 mA
Insulation resistance	min. 100 MΩ
Electric strength	4 kV (AC ammeter) 2,5 kV (DC voltmeter, DC ammeter)
Rated cross section	1.25 to 2.5 mm ²
Rated service temperature	-20 °C to +80 °C
Degree of protection	IP65 according to EN 60529



Nomenclature

Contact block EU2B-N**

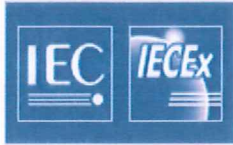
EU2B-N	*	*
1	2	3

- 1: type
- 2: terminal configuration
 - C = screw terminal
 - F = screw terminal (IP20)
- 3: contact arrangement
 - 10 = 1NO
 - 01 = 1NC

Lamp unit for pilot light EU2B-XL**

EU2B-XL	*	*	D	*
1	2	3	4	5

- 1: Type
- 2: Operating voltage
 - 66 = AC/DC 6 V
 - 11 = AC/DC 12 V
 - 22 = AC/DC 24 V
 - 16 = AC 100/110 V (for Transformer)
 - 116 = AC 115 V (for Transformer)
 - 110 = AC/DC 100 V / 110 V / 120 V
 - 126 = AC 120 V (for Transformer)
 - 26 = AC 200/220 V (for Transformer)
 - 236 = AC 230 V (for Transformer)
 - 240 = AC/DC 230 V / 240 V
 - 246 = AC 240 V (for Transformer)
 - 386 = AC 380 V (for Transformer)
 - 46 = AC 400/440 V (for Transformer)
 - 486 = AC 480 V (for Transformer)
- 3: Terminal configuration
 - C = screw terminal
 - F = screw terminal (IP20)
- 4: Part of the type
- 5: LED color
 - R = red
 - G = green
 - A = amber
 - W = white
 - S = blue
 - PW = pure white



Meter EU2B-YM*****

a) AC ammeter

EU2B-YM	*	*	*	*	*	*
1	2	3	4	5	6	7

- 1: type
- 2: input current
 - 1 = 1 A
 - 5 = 5 A
- 3: specification of overload scale
 - 3 = 3 times
 - 2 = 2 times
 - 5 = 5 times
 - N = Non
- 4: type of meter
 - A = AC ammeter
- 5: measuring range
- 6: terminal configuration
 - C = screw terminal
 - F = screw terminal (IP20)
- 7: set pointer
 - blank = non
 - R = with setting pointer

b) DC voltmeter

EU2B-YM	*	*	*	*	*
1	2	3	4	5	6

- 1: type
- 2: input voltage
 - 010 = 0 - 10 V
 - 005 = 0 - 5 V
 - 015 = 0 - 15 V
 - 105 = 1 - 5 V
 - etc.
- 3: type of meter
 - VD = DC voltmeter
- 4: terminal configuration
 - C = screw terminal
 - F = screw terminal (IP20)
- 5: Specification of scale
- 6: set pointer
 - blank = non
 - R = with setting pointer



c) DC ammeter

EU2B-YM	*	*	*	*	*
1	2	3	4	5	6

- 1: type
- 2: input current
 - 001 = 0 - 1 mA
 - 420 = 4 - 20 mA
 - 010 = 0 - 10 mA
- 3: type of meter
 - MD = DC ammeter
- 4: terminal configuration
 - C = screw terminal
 - F = screw terminal (IP20)
- 5: Specification of scale
- 6: set pointer
 - blank = non
 - R = with setting pointer

Schedule of Limitations

The meter type EU2B-YM have to be mounted in an enclosure that meets the requirements of an approved type of protection as specified in IEC 60079-0, section 1.

When installing the meter type EU2B-YM in an enclosure designed to Increased Safety "eb, ec" type of protection in compliance with IEC 60079-7, the clearance and creepage distances specified in sections 4.4 and 4.5, and in table 1 must be maintained.

The type of protection IP65 of the meter is guaranteed only by compliance with the manufacturer's instructions and proper installation in the enclosure.

Installation of electrical components requires a further assessment by an ExCB.