



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

(2) Component Intended for Use in Potentially Explosive Atmospheres
Directive 2014/34/EU

(3) EU-Type Examination Certificate Number:

PTB 08 ATEX 1053 U

Issue: 01

(4) Product: Contact block type EU2B-N**, Lamp unit type EU2B-XL**D* and
Meter type EU2B-YM*****

(5) Manufacturer: IDEC Corporation

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

(7) This component and any acceptable variation thereto is 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 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report PTB Ex 19-19007.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015, EN 60079-31:2014

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This partial certification may be used as a basis for certification of an equipment or protective systems.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified component in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

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

 **II 2 G Ex db eb IIC Gb**

 **II 2 D Ex tb IIIC Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, September 9, 2019


Dr.-Ing. D. Markus
Direktor und Professor



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EU-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.

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate Number PTB 08 ATEX 1053 U, Issue: 01**

(15) Description of Product

Contact block und Lamp unit

The Contact block type EU2B-N** and the Lamp unit type EU2B-XL**D* 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	EU2B-YB
Selector Switches	EU2B-YS
Lamp unit for Pilot Light	EU2B-YL
Emergency Stop switch	EU2B-YBV
Key selector switch	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 Contact block type EU2B-N**

Rated insulation voltage	up to 600 V						
Free air-thermal current	max. 10 A						
Rated voltage			24 V	120 V	240 V	500 V	
Rated current	AC	AC12	10 A	10 A	6 A	2.8 A	
		AC15	10 A	6 A	3 A	1.4 A	
	50/60 Hz	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	6 kV						
Rated cross section	1.25 to 2.5 mm ²						
Contact assembly	1 NO or 1 NC						
Switch assembly	max. 3 contact blocks						
Service temperature range	-20 °C to +80 °C						
Maximum surface temperature	+80 °C						



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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 Lamp unit 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 for secondary
Rated cross section	1.25 to 2.5 mm ²
Service temperature range	-20 °C 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

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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-XLD***

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

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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



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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

Changes with respect to previous editions

New test according to EN IEC 60079-0:2018, EN 60079-1:2014; EN 60079-7:2015 and EN 60079-31:2014

(16) Test report PTB Ex 19-19007

(17) Notes for manufacture, installation and operation

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 EN 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 EN 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.

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(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, September 9, 2019


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Direktor und Professor

