



(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 1053 U

(4) Component: Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB and Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL

(5) Manufacturer: IDEC Corporation

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

(7) This component 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 component 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 08-17310.

(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) 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 Component Certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified component in accordance to the Directive 94/9/EC. 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 de IIC

Zertifizierungsstelle Explosionsschutz

Braunschweig, November 24, 2008

By order:

Dr.-Ing. M. Thedens
Oberregierungsrat



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053 U**

(15) Description of component

The Contact block for Pushbutton and selector switches type EU2B-N and the Lamp unit for Pilot Light type EU2B-XL serve as Switching resp. display elements for controlling, regulating and signal electric circuits.

Connection is by means of integrated screw type terminals.

Technical data

Rated insulation voltage up to 600 V
 Free air-thermal current I_{th} max. 10 A

Rated voltage U _e		24 V	120 V	240 V	500 V
Rated current I _e	AC 50/60 Hz	AC12	10 A	6 A	2.8 A
		AC15	10 A	3 A	1.4 A
	DC	DC12	8 A	1,1 A	---
		DC13	4 A	0.55 A	---

Insulation resistance min. 100 MΩ
 Electric strength Switches 6 kV
 Pilot Light 4 kV resp. 2.5 kV

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.

Rated cross section 1.25 up to 2.5 mm²

Contact assembly 1 NO or 1 NC
 Switch assembly max. 3 contact blocks

Ambient temperature -20 °C up to +50 °C
 Maximum surface temperature +80 °C

(16) Test report PTB Ex 08-17310

(17) Notes for manufacture, installation and operation

The Contact block for Pushbutton and selector switches type EU2B-N and the Lamp unit for Pilot Light type EU2B-XL are to be installed into an enclosure, which meets the requirements of an accepted type of protection acc. to EN 60079-0 clause 1.

If the installation of the Contact block for Pushbutton and selector switches type EU2B-N and the Lamp unit for Pilot Light type EU2B-XL is made into an enclosure of the type of protection Increased safety "e" acc. to EN 60079-7, the clearances and creepage distances acc. to clause 4.4, clause 4.5 and table 1 must be maintained.

If the Contact block for Pushbutton and selector switches type EU2B-N and the Lamp unit for Pilot Light type EU2B-XL is used with intrinsically safe electric circuits, an additional label should be provided: "Only for intrinsically safe electric circuits".

The component is suitable both in group I and II, since the standard requirements are identical in this case.


(18) Essential health and safety requirements

Met by compliance with the above mentioned standards.

Zertifizierungsstelle Explosionsschutz

Braunschweig, November 24, 2008

By order:


Dr.-Ing. M. Thedens
Oberregierungsrat



1. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053 U

(Translation)

Equipment: Contact block for Pushbutton and Selector Switches type EU2B-N,
Pushbutton Switches type EU2B-YB and Selector Switches type EU2B-YS,
Lamp unit for Pilot Light types EU2B-XL and EU2B-YL

Marking:  **II 2 G Ex de IIC**

Manufacturer: IDEC Corp.

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

Description of supplements and modifications

The Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB and Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL are supplemented by the Emergency Stop switch type EU2B-YBV and the Key selector switch type EU2B-YSK.

The Contact block type EU2B-N is installed in a special Contact unit and equipped with the operator element Emergency stop switch type EU2B-U BV** and Key selector switch type EU2B-U SK**

The Technical Data are not changed.

Notes for manufacture and operation

The notes for manufacture and operation shall likewise apply to this supplement.

Applied standards

EN 60079-0:2006

EN 60079-1

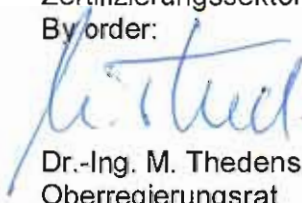
EN 60079-7:2007

Assessment and test report: PTB Ex 09-19235

Zertifizierungssektor Explosionsschutz

Braunschweig, October 26, 2009

By order:


Dr.-Ing. M. Thedens
Oberregierungsrat



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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.

2. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053 U

(Translation)

Equipment: Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB and Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL, Emergency stop switch type EU2B-U BV** and Key selector switch type EU2B-U SK**

Marking:  **II 2 G Ex de IIC**

Manufacturer: IDEC Corp.

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

Description of supplements and modifications

The Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB, Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL, Emergency Stop switch type EU2B-YBV and Key selector switch type EU2B-YSK are supplemented by the meter type EU2B-YM.

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 marking of the meter is:

 **II 2 G Ex d e IIC Gb**

 **II 2 D Ex tb IIC Db IP65**

The Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB, Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL, Emergency Stop switch type EU2B-YBV and Key selector switch type EU2B-YSK have been tested according to the standard EN 60079-0:2009.

Therefore the marking changes to:

 **II 2 G Ex d e IIC Gb**

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053 U

Technical data

For the 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 mm²

Ambient temperature -20 °C to +50 °C

Degree of protection IP65 according to EN 60529

For the Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB, Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL, Emergency Stop switch type EU2B-YBV and Key selector switch type EU2B-YSK

Rated insulation voltage up to 600 V

Free air-thermal current I_{th} max. 10 A

Rated voltage U _e		24 V	120 V	240 V	500 V	
Rated current I _e	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
 Pilot Light.. 4 kV resp. 2.5 kV

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.

Rated cross section 1.25 up to 2.5 mm²

Contact assembly 1 NO or 1 NC

Switch assembly max. 3 contact blocks

Ambient temperature -20 °C up to +50 °C

Maximum surface temperature +80 °C

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053 U

Notes for manufacture and operation

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 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.

Applied standards

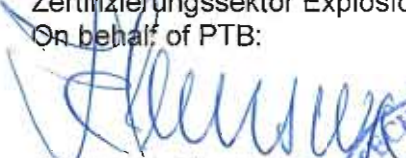
EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2009

Test report: PTB Ex 12-11055

Zertifizierungssektor Explosionsschutz

On behalf of PTB:

Braunschweig, May 10th, 2012


Dr.-Ing. U. Klausmeyer
Direktor und Professor



3rd SUPPLEMENT
according to Directive 94/9/EC Annex III.6
to EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053U
(Translation)

Equipment: Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB and Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL, Emergency stop switch type EU2B-YBV**, Key selector switch type EU2B-YSK** and Meter type EU2B-YM

Marking:  **II 2 G Ex d e IIC Gb**
 **II 2 D Ex tb IIC Db IP65**

Manufacturer: IDEC Corporation

Address: 6-64 Nishimiyahara 2-chome , 5320004 Yodogawa-Ku, Osaka, Japan

Description of supplements and modifications

The Contact block for Pushbutton and Selector Switches type EU2B-N, Pushbutton Switches type EU2B-YB and Selector Switches type EU2B-YS, Lamp unit for Pilot Light types EU2B-XL and EU2B-YL, Emergency Stop switch type EU2B-YBV, Key selector switch type EU2B-YSK and Meter type EU2B-YM are changed in following points:

1) The type designation is changed to: Contact block type EU2B-N**, Lamp unit type EU2B-XL** und Meter type EU2B-YM*****.

Together with an contact block adapter and an operator and lens unit type EU2B-U*** (PTB 08 ATEX 1003 U) 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

2) The address of the manufacturer is changed to: IDEC Corporation, 6-64 Nishimiyahara 2-chome , 5320004 Yodogawa-Ku, Osaka, Japan

3) On the pilot light the rated voltages 100/110/120 V und 230/240 V are supplemented.

3rd SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053U

4) The Contact block type EU2B-N**, the Lamp unit type EU2B-XL** and the Meter type EU2B-YM***** have been retested according to the standards EN 60079-0:2012 und EN 60079-31:2014. The marking is as follows:

For Contact block and Lamp unit

 **II 2 G Ex d e IIC Gb**

For the meter

 **II 2 G Ex d e IIC Gb**

 **II 2 D Ex tb IIC Db**

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	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.						

3rd SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053U

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	4 kV resp. 2.5 kV for 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

Notes for manufacture 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.

3rd SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 08 ATEX 1053U

Applied standards

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

Test report: PTB Ex 15-14136

Konformitätsbewertungsstelle, Sektor Explosionsschutz

Braunschweig, 3 June 2015

On behalf of PTB:



Dr.-Ing. U. Klausmeyer
Direktor und Professor

