



## TYPE APPROVAL CERTIFICATE

**Certificate No.** : TKY17821-EL002                      **Initial Approval** : 23rd July, 2004

**Product** : Explosion-Proof Electrical Equipment

**Manufacturer** : IDEC Corporation  
2-6-64 Nishimiyahara, Yodogawa-Ku, Osaka 532-0004, Japan

**Product Description** : EB3P-Zabcd and EB3P-ZabcdN  
(Intrinsically Safe Type Buzzer with Lamp Barrier)

\* Manufacturing Place : IDEC CORPORATION Amagasaki Factory  
5-8-10 Shioe, Amagasaki-shi, Hyogo, 661-0976,  
Japan

" See Appendix 1 "

**Approval Condition** : " See Appendix 1 "

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt. 6, Ch. 1, Sec. 9 of the Rules for Classification of Steel Ships and IEC 60079-11

This Certificate is valid until 22nd July, 2024

Issued at Busan, Korea on 9th March, 2020



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No (ME20009986289) and certificate No.(TKY17821-EL002).



KOREAN REGISTER

General Manager of  
Marine & Ocean Equipment Team

- Note :*
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
  2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
  3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
  4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

## Appendix 1

# Product Description and/or Approval Condition

Certificate No : TKY17821-EL002

Date of Issue : 9th March, 2020

## A. Product Description

### 1. Product Specification

- 1) Product Descriptions (Type : EB3P-Zabcd and EB3P-ZabcdN)

Intrinsically Safe Type Buzzer with Lamp Barrier(Ex ia IIC T6)

- Max. Output Voltage : 13.2 V
- Max. Output Current : 14.2 mA
- Max Power : 46.9 mW
- Permissible Capacitance : 260 nF
- Permissible Inductance : 100 mH(EB3P-Z), 80 mH(EB3P-ZN)
- Ambient Temperature : 60 °C

- 2) Safety Barrier

The buzzer containing piezoelectric device is used in combination with the EB3L lamp barrier or Relay barrier and Lamp barrier certified by the Society is to be applied to this product.

- 3) Type Designation

- EB3P-Zabcd(N)
  - a = Construction ;
    - U : U Series, Nil : No Designation
  - b = Fitting Size ;
    - N :  $\Phi 30$ , Nil: No Designation
  - c = Rated Voltage ;
    - 12 : 12 V, Nil : No designation
  - d = Operation ;
    - F : intermittent Sound, C : Continuous Sound, Nil : No Designation

### 2. Approved Drawings and Documents

- 1) Drawings
- A49020, A49021, A49022, A49050, A45720, A37487
- 2) Ex Certificate
- FM Approval : FM16US0364X
  - ATEX Approval : Presafe 15 ATEX 6163X, Issue 1

### 3. Test Reports, etc.

- 1) Environmental / EMC Test Report
- LIC 12-20-011, LIC 12-20-010
- 2) Ex test report
- IB-NK-002-2

## B. Approval Condition

### 1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation.
- 2) Degree of protection shall be complied with Rule Pt.6 Ch.1 Sec.2 201.2.(5).
- 3) Explosion-proof certification by a notified/recognized Certification Body is not covered by this certificate. Ratings and Special Condition for Safe Use in hazardous areas are to be obtained from the relevant valid Ex-Certificate.

### 2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is not required.

### 3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

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**4. Others**

1) Test condition

| Test        | Condition  | Remark     |
|-------------|--|------------|
| EMC         | All locations including the bridge and deck zone | Up to 6GHz |
| Temperature | -25 ~ +70℃                                       | -          |
| Vibration   | Acceleration $\pm 0.7g$                          | -          |

< End of Certificate >