

EC-TYPE EXAMINATION CERTIFICATE



- [1]
- [2] **Component intended for use on/in equipment or protective system
intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**
- [3] EC-Type Examination Certificate Number: **DEMKO 01 ATEX 015742U Rev. 0**
- [4] Component: **HK Series Flameproof Enclosures**
- [5] Manufacturer: **Killark, Div of Hubbell Inc (Delaware)**
- [6] Address: **3940 Martin Luther King Drive, St. Louis, MO 63113 USA**
- [7] This Component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S, notified body number 0539 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 design and construction of components intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no. **4786422904**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-1:2007 EN 60079-1:2014 EN 60079-31:2009
- [10] The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- [11] This EC-Type examination certificate relates only to the design, examination and tests of the specified component in accordance with 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 db IIC Gb

II 2 D Ex tb IIIC Db IP66

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Component described herein ("Certified Component") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Equipment Certification Program Requirements. This certificate and test results obtained apply only to the component sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured component. UL has not established Follow-Up Service or other surveillance of the component. The Manufacturer is solely and fully responsible for conformity of all component to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Re-issued: 2015-02-03



Notified Body

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Schedule
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Description of Component:

These devices are empty aluminum or stainless steel flameproof enclosures, with a single or double enclosure body. The cover can be of blank, glass lens, dome, or glass lens dome construction, with various openings and locations.

Nomenclature for type *HKB, HKBD, HKSB, 2HKB, and 2HKSB Enclosures:*

HKB	2GLDC	2DC	22S	MOD
I	II	III	IV	V

I - Indicates Series Designation

- HKB – Aluminum construction
- HKBD – Aluminum deep construction
- HKSB – 316 Stainless Steel construction
- 2HKB – Aluminum double port
- 2HKSB – 316 Stainless Steel double port

II - Indicates cover use on single chamber enclosure or on power side of double chamber enclosure

- BC – Blank cover
- GLC – Glass lens cover
- 1GLDC – 1 in. Glass lens cover
- 2GLDC – 2 in. high lens dome cover
- 4GLDC – 4 in. Glass lens cover
- 1DC – 1 in. dome cover
- 2DC – 2 in. high dome cover
- 4DC – 4 in. high dome cover

III - Indicates cover used on instrument side enclosure (Only for Cat. Nos. beginning with "2")

- BC – Blank cover
- GLC – Glass lens cover
- 1GLDC – 1 in. Glass lens cover
- 2GLDC – 2 in. high lens dome cover
- 4GLDC – 4 in. Glass lens cover
- 1DC – 1 in. dome cover
- 2DC – 2 in. high dome cover
- 4DC – 4 in. high dome cover

IV - Indicates enclosure openings

- 01 – 1/2 in. NPT hub in bottom +
 - 02 – 3/4 in. NPT hub in bottom +
 - 10 - 1/2 in. NPT hub in side+
 - 20 – 3/4 in. NPT hub in side
 - 21 – 3/4 in. NPT hub in side; 1/2 in. NPT hub in bottom +
 - 22 – 3/4 in. NPT hub in side; 3/4 in. hub in bottom +
 - 02S – 3/4 in. NPSM hub in bottom+
 - 22S – 3/4 in. NPT hub in side; 3/4 in. NPSM hub in bottom +*
 - 2S2S - 3/4 in. NPSM hub in side; 3/4 in. NPSM hub in bottom +*
 - 2S0 - 3/4 in. NPSM hub in side+*
 - 2S1 - 3/4 in. NPSM hub in side; 1/2 in. NPT hub in bottom +*
 - 2S2 - 3/4 in. NPSM hub in side; 3/4 in. NPT hub in bottom +*
- +Not available on catalog numbers beginning with 2
 *NPSM entries are not intended for connection to conduit/cable

V – Indicates optional machined slots into chamber separating wall to allow installation of various instrument connectors (only for catalog numbers beginning with "2").

- MOD – Optional RS-232 machining.

Temperature range

The ambient temperature range is -20 °C to +60 °C for enclosure with glass lens cover and -20 °C to +70 °C for enclosures with blank cover .

Installation Instructions

All cable entry devices and blanking elements shall be certified in type of explosion protection flameproof enclosure "d", suitable for the conditions of use and correctly installed.

Unused apertures shall be closed with suitable blanking elements.

Mounting instructions

Refer to "Instructions".



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Routine tests

Routine tests according to EN 60079-1 cl. 16.1 are not required, as the enclosures have been successfully tested at four times the reference pressure.

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Descriptive Documents

Project Report No.: 4786422904 (Hazardous Location Testing)

Documents:

Description:	Document No.:	Rev. Level:
2HK & 2HKS Series Certification Drawing	D-20675 (Sheets 1-3)	C
HKB, HKBD & HKSB Series Certification Drawing	D-20676 (Sheets 1-3)	C
Lens Retaining Ring Assembly	PR-0114	B
Approval Nameplate	B-24261	B
Installation Instructions	Form No. K1232	ECO 2-061-14

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Schedule of limitations:

- Where necessary for safety, the contents of the enclosure shall comply with the appropriate requirements of relevant standards for electrical apparatus for use in potentially explosive atmospheres.
- The assembled equipment shall comply with the appropriate requirements of relevant standards for electrical apparatus for use in potential explosive atmospheres.
- The enclosure's apparatus may be placed in any arrangement provided that an area of at least 40% of each cross sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.
- Rotating or other devices, which create turbulence, shall not be incorporated.
- Liquids shall not be used when there is risk of producing an explosive mixture by the decomposition of or release of oxygen by these liquids.
- The use of energy storage devices may present difficulties, due to the possibility of sparking, after isolation from the supply, when the enclosure cover is removed. In addition, secondary cells, and in some cases primary cells may emit flammable gas not considered under the normal certification conditions. The following requirements shall apply:
 - All such devices shall be provided with adequate means to prevent incendive sparking when flameproof covers are removed.
 - Enclosures which can be opened more quickly than the time necessary for the discharge of incorporated capacitors to a residual energy of:
 - 0.2 mJ for electrical apparatus of Group I or Group IIA, or
 - 0.06 mJ for electrical apparatus of Group IIB
 - 0.02 mJ for electrical apparatus of Group IIC
 shall be provided with a label stating the delay required before attempting to open the enclosure.
 - If enclosed components have a temperature above that of the temperature classification of the electrical apparatus a label shall be provided stating the delay necessary before attempting to open the enclosure to allow the component to cool below the temperature classification.
- Oil-filled contactors shall not be used.
- No holes, whether for mechanical or electrical purpose and whether blind or clear, shall be drilled in the enclosure other than those shown on the Component Certificate Drawings D-20675 & D-20676.
- All entry devices shall be of a type specified in the certification documents having an appropriate component Certificate and suitable for the conditions of use, or be specifically certified with the apparatus.
- Any unused entry shall be closed by a device specified in the certification documents having an appropriate Component Certificate or be specifically certified with the apparatus.
- The holder of the final Certificate will be required to provide information to enable the test authority to verify compliance with the above and the relevant parts of the certification standard not explicitly covered by the Component Certificate (e.g. temperature classification).
- The window temperature must not exceed 120°C.
- Flameproof joints are not to be repaired in the field. If the flamepath is damaged the enclosure is to be removed from service and replaced with a new properly working enclosure.



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- [18] Essential Health and Safety Requirements
Concerning ESRs this Schedule verifies compliance with the Annex III of ATEX directive only. By placing the product on the market, the manufacturer declares compliance with other relevant Directives, and all other safety related requirements including those of Annex II of this Directive.

Additional information

The HKB, HKBD, 2HKB, HKSB, and 2HKSB Series have in addition passed the tests for Ingress Protection to IP66 in accordance with EN60529: 1991/A1 2000.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

