



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX ULBR 22.0006U** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-12-19

Applicant: **Killark, A Division of Hubbell Inc. (Delaware)**  
2112 Fenton Logistics Park Blvd.  
Fenton, MO 63026  
**United States of America**

Ex Component: Actuator and Signal Elements, Series "GZ" and "GZ...-M" Operators, Series "GZCB" Breaker Handles/Operators, and Series "GZ" Potentiometers

*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: **Flameproof "db", Dust Ignition Protection by Enclosure "tb"**

Marking: Ex db IIC Gb or Ex db IIB+H<sub>2</sub> Gb  
Ex tb IIIC Db

Approved for issue on behalf of the IECEx  
Certification Body:

**Katy A. Holdredge**

Position:

**Senior Staff Engineer**

Signature:  
(for printed version)

Date:  
(for printed version)

2022-12-19

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24 Andar - Brooklin - Sao Paulo  
**Brazil**





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Manufacturing locations: **Killark, A Division of Hubbell Inc. (Delaware)**  
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**United States of America**

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 products 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 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](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

#### TEST & ASSESSMENT REPORTS:

A sample(s) of the component listed has successfully met the examination and test requirements as recorded in:

Test Report:

[BR/ULBR/ExTR22.0006/00](#)

Quality Assessment Report:

[GB/SIR/QAR16.0021/06](#)



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

Actuators and signal elements, types designation GZ/GZ-M/GZCB Series, M22x1.5 and 3/4"NPSM thread sizes 25 mm (N-normal), 40 mm (L-large), 57 mm (X- extra-large), and 68 mm (M – Mega large), M16x1.5 thread sizes 44 mm (N-normal) and 76 mm (L-Large), and M10x1.5 threads sizes 37 mm (N-normal), 68 mm (L-large). They are intended for installation in certified enclosures in an area where requires EPLs Gb and/or Db.

The actuating devices are pressure-operated or rotary switches. The signal elements are provided with a window. The illuminated button is a combined actuating and signal element.

**Please see Annex for additional information.**

## SCHEDULE OF LIMITATIONS:

For the flameproof enclosures "db" and protection by enclosures "tb", the actuators and signal elements are to be screwed into M22x1.5, M16x1.5, M10x1.5 or 3/4" NPSM threaded holes of certified enclosures with the same type of protection and follow the requirements:

- The threads must meet the minimum requirements specified in IEC 60079-1;
- The enclosure wall must be at least 8 mm thick for M22x1.5, M16x1.5, M10x1.5 threads or 9.1 mm thick for 3/4" NPSM thread. The maximum thickness of the enclosure wall is limited by the size of the actuating and signal elements. The actuating and signal elements shall be fixed in the electrical equipment in such a way that rotation and accidental loosening will be prevented. For dustproof applications, the actuators and signaling elements shall only be threaded in enclosure wall having a minimum length of 3.0 mm for M22x1.5, M16x1.5 and M10x1.5, or 3.7 mm for 3/4"NPSM thread.

For flameproof applications, the actuators and signaling elements shall only be installed in Ex db enclosures with a maximum internal volume of 35 litres and approved for Group IIC in accordance to IEC 60079-1.

For flameproof applications, the actuators and signaling elements shall only be installed in Ex db enclosures with a maximum internal explosion pressure of 20 bar, for Group IIC or Group IIB+H2.

For flameproof applications, the actuators and signaling elements shall only be installed in Ex db enclosures with a maximum internal volume of 160 litres and approved for Group IIB+H2.

For the pilot light and illuminated buttons the maximum load for LED is 2 W.

The outer molding of the elements must be tightened according to manufacturer's instructions.

The flameproof joints shall not be repaired.

These Ex devices are to be mounted on the wall position, only.

**WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS**

For dust applications, the models MP, MM, DS25/DS5/LDS5/XLDS5, 25/26/27/34/35/5/6/7/14/15/L5/L6/L7/L14/L15/XL5/XL6/XL7/XL14/XL15, 133/113, CBHGA, CBHG1, MT, 134/114, MK, CBHMCB, 23/B3/L3/XL3 and 24/B4/L4/XL4 (Mushroom Head Button, Rotary Switch with Handle, Potentiometer, Circuit Breaker Actuators, Pilot Light and Illuminated Pushbutton) shall be cleaned with a damp cloth, only.

## Annex:

[Annex to IECEX ULBR 22.0006U Issue 0.pdf](#)



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## TYPE DESIGNATION

Nomenclature:

<b>GZ</b>	X	X	X
1	2	3	4

(1) – **GZ**: Product Series

(2) – Function and Size: Code Function and Size

(**CBHGAS**) = Short Adjustable Circuit Breaker Actuator – Switch handle 25 mm  
(**CBHGAL**) = Long Adjustable Circuit Breaker Actuator – Switch handle 25 mm  
(**CBHGAX**) = Extended Adjustable Circuit Breaker Actuator – Switch handle 25 mm  
(**CBHGA2X**) = 2XL Adjustable Circuit Breaker Actuator – Switch handle 25 mm  
(**CBHG1S**) = Short Adjustable Circuit Breaker Actuator – Switch handle 40 mm  
(**CBHG1L**) = Long Adjustable Circuit Breaker Actuator – Switch handle 40 mm  
(**CBHG1X**) = Extended Adjustable Circuit Breaker Actuator – Switch handle 40 mm  
(**CBHG12X**) = 2XL Adjustable Circuit Breaker Actuator – Switch handle 40 mm  
(**CBHADS**) = Short Adjustable Circuit Breaker Actuator – Switch handle 100 mm (no molding)  
(**CBHADL**) = Long Adjustable Circuit Breaker Actuator – Switch handle 100 mm (no molding)  
(**CBHADX**) = Extended Adjustable Circuit Breaker Actuator – Switch handle 100 mm (no molding)  
(**CBHAD2X**) = 2XL Adjustable Circuit Breaker Actuator – Switch handle 100 mm (no molding)  
(**CBHMCBS**) = Short Adjustable Circuit Breaker Actuator compact (no molding)  
(**CBHMCBL**) = Long Adjustable Circuit Breaker Actuator compact (no molding)  
(**MT21**) = Short Mushroom head button with swivel return Ø 39 mm  
(**MT1**) = Long Mushroom head button with swivel return Ø 39 mm  
(**MTL**) = Extended Mushroom head button with swivel return Ø 39 mm  
(**MTXL**) = 2XL Mushroom head button with swivel return Ø 39 mm  
(**MM21**) = Short Mushroom head Push Button (spring return) Ø 40 mm  
(**MM1**) = Long Mushroom head Push Button (spring return) Ø 40 mm  
(**MML1**) = Extended Mushroom head Push Button (spring return) Ø 40 mm  
(**MMXL1**) = 2XL Mushroom head Push Button (spring return) Ø 40 mm  
(**MP21**) = Short Mushroom head Push Button  
(**MP1**) = Long Mushroom head Push Button  
(**MPL**) = Extended Mushroom head Push Button  
(**MPXL**) = 2XL Mushroom head Push Button  
(**MK21**) = Short Mushroom head Pushbutton with Key Ø 40 mm  
(**MK1**) = Long Mushroom head Pushbutton with Key Ø 40 mm  
(**MKL1**) = Extended Mushroom head Pushbutton with Key Ø 40 mm  
(**MKXL1**) = 2XL Mushroom head Pushbutton with Key Ø 40 mm  
(**21**) = Short Pushbutton Ø 23 mm  
(**1**) = Long Pushbutton Ø 23 mm  
(**L1**) = Extended Pushbutton Ø 23 mm  
(**XL1**) = 2XL Pushbutton Ø 23 mm  
(**21B**) = Short Pushbutton Ø 29 mm  
(**1B**) = Long Pushbutton Ø 29 mm  
(**L1B**) = Extended Pushbutton Ø 29 mm  
(**XL1B**) = 2XL Pushbutton Ø 29 mm



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- (24) = Short Illuminated Pushbutton
- (B4) = Long Illuminated Pushbutton
- (L4) = Extended Illuminated Pushbutton
- (XL4) = 2XL Illuminated Pushbutton
- (133) = Short Dial for Single – Turn Potentiometer
- (113) = Long Dial for Single – Turn Potentiometer
- (L113) = Extended Dial for Single – Turn Potentiometer
- (XL113) = 2XL Dial for Single – Turn Potentiometer
- (134) = Short Dial for Multi-Turn Potentiometer
- (114) = Long Dial for Multi-Turn Potentiometer
- (L114) = Extended Dial for Multi-Turn Potentiometer
- (XL114) = 2XL Dial for Multi-Turn Potentiometer
- (SRST) = Short Reset pushbutton Ø 23 mm
- (RST) = Long Reset pushbutton Ø 23 mm
- (LRST) = Extended Reset pushbutton Ø 23 mm
- (XLRST) = 2XL Reset pushbutton Ø 23 mm
- (SRSTB) = Short Reset pushbutton Ø 29 mm
- (RSTB) = Long Reset pushbutton Ø 29 mm
- (LRSTB) = Extended Reset pushbutton Ø 29 mm
- (XLRSTB) = 2XL Reset pushbutton Ø 29 mm
- (K21) = Short Pushbutton with key
- (K1) = Long Pushbutton with key
- (KL1) = Extended Pushbutton with key
- (KXL1) = 2XL Pushbutton with key
- (DS25) = Short Rotary Switch
- (DS5) = Long Rotary Switch
- (LDS5) = Extended Rotary Switch
- (XLDS5) = 2XL Rotary Switch
- (25 / 26 / 27 / 34 / 35) = Short Rotary switch with cage
- (5 / 6 / 7 / 14 / 15) = Long Rotary switch with cage
- (L5 / L6 / L7 / L14 / L15) = Extended Rotary switch with cage
- (XL5 / XL6 / XL7 / XL14 / XL15) = 2XL Rotary switch with cage
- (28 / 56 / 57 / 58 / 59) = Short Rotary switch actuator with key
- (8 / 36 / 37 / 38 / 39) = Long Rotary switch actuator with key
- (L8 / L36 / L37 / L38 / L39) = Extended Rotary switch actuator with key
- (XL8 / XL36 / XL37 / XL38 / XL39) = 2XL Rotary switch actuator with key
- (23) = Short Pilot light (glass lens)
- (B3) = Long Pilot light (glass lens)
- (L3) = Extended Pilot light (glass lens)
- (XL3) = 2XL Pilot light (glass lens)
- (22) – Short Double Pushbutton (no molding)
- (2) – Long Double Pushbutton (no molding)
- (L2) – Extended Double Pushbutton (no molding)
- (XL2) – 2XL Double Pushbutton (no molding)
- (CBSRST) – Short Pushbutton test – DR Circuit Breaker (no molding)
- (CBRST) – Long Pushbutton test – DR Circuit Breaker (no molding)



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\* Sizes (Thread length):

Short = 25 mm (M22x1.5 and 3/4"NPSM)  
Short = 35 mm (M22x1.5 and 3/4"NPSM for CBHADS model)  
Short = 44 mm (M16x1.5)  
Short = 37 mm (M10x1.5)  
Long = 40 mm (M22x1.5 and 3/4"NPSM)  
Long = 50 mm (M22x1.5 and 3/4"NPSM for CBHADL model)  
Long = 76 mm (M16x1.5)  
Long = 68 mm (M10x1.5)  
Extended = 57 mm (M22x1.5 and 3/4"NPSM)  
Extended = 67 mm (M22x1.5 and 3/4"NPSM for CBHADX model)  
2XL = 68 mm (M22x1.5 and 3/4"NPSM)  
2XL = 78 mm (M22x1.5 and 3/4"NPSM for CBHAD2X)

(3) – Not relevant Ex variation designation

(4) – Thread types:

(-M) = M22 x 1.5 (except for CBHMCBS, CBHMCBL, CBSRST and CBRST models)  
(Blank) = 3/4" NPSM (except for CBHMCBS, CBHMCBL, CBSRST and CBRST models)  
(16) = M16 x 1.5 (for CBHMCBS and CBHMCBL models, only)  
(10) = M10 x 1.5 (for CBSRST and CBRST models, only)

## PARAMETERS RELATING TO THE SAFETY

Service temperature range is -50°C to +100°C.

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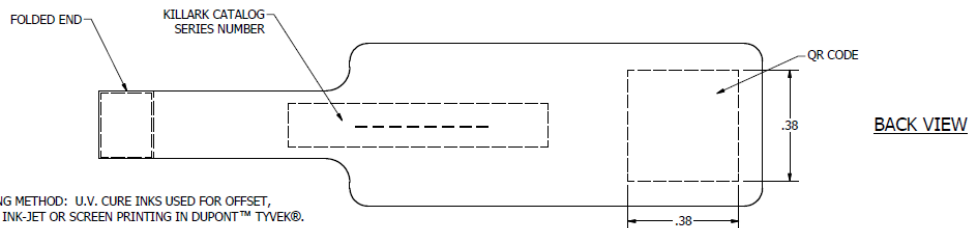
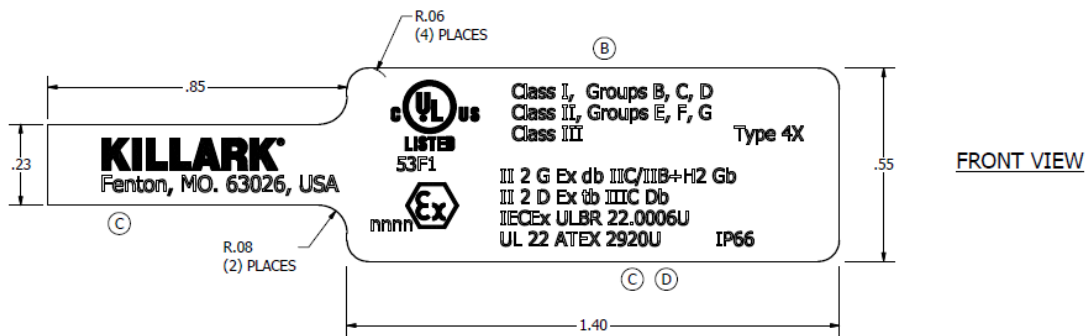
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## MARKING

Marking has to be readable and indelible; it has to include the following indications:



- NOTES :
- MARKING METHOD: U.V. CURE INKS USED FOR OFFSET, FLEXO, INK-JET OR SCREEN PRINTING IN DUPONT™ TYVEK®.
  - (B) NAMEPLATE/TAG IS ASSEMBLED INTO OPERATOR HOUSING BY MECHANICALLY TRAPPING THE FOLDED END DURING ASSEMBLY.
  - (C) ALL OPERATOR HOUSINGS ARE PERMANENTLY MARKED WITH A LOT NUMBER [ WWYY ] ..WEEK ..YEAR. METHOD OF MARKING VARIES ACROSS PRODUCT MODELS AND MAY INCLUDE HOT STAMPING, LASER, SILK-SCREEN, PAD PRINTING OR AN ADHESIVE LABEL.

## ROUTINE EXAMINATIONS AND TESTS

Routine tests according to IEC 60079-1, clause 16, are not required as the Ex component have been successfully tested at four times the reference pressure.