



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: IECEx CSA 19 0030U Issue No: 0 Certificate history:
Issue No. 0 (2019-08-15)
Status: Current Page 1 of 3

Date of Issue: 2019-08-15

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

Ex Component: Series "GZ" and "GZ...-M" Operators, Series "EXH" 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 and Dust Protection by Enclosure

Marking:

Ex db IIC Gb or Ex db IIB+H₂ Gb
Ex tb IIIC Db

Approved for issue on behalf of the IECEx
Certification Body:


Dorin Stochitoiu

Position:

Technical Advisor

Signature:
(for printed version)

Date:


August 15, 2019

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada





IECEX Certificate of Conformity

Certificate No: IECEx CSA 19 0030U Issue No: 0

Date of Issue: 2019-08-15 Page 2 of 3

Manufacturer: Killark - A Division of Hubbell Inc. (Delaware)
2112 Fenton Logistics Park Blvd.
Fenton, Missouri 63026
United States of America

Additional Manufacturing location(s):

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 Component 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 Ex 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 : 2011 Edition 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

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

TEST & ASSESSMENT REPORTS:

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

Test Report:

[CA/CSA/ExTR19.0034/00](#)

Quality Assessment Report:

[GB/SIR/QAR16.0021/02](#)



IECEX Certificate of Conformity

Certificate No: IECEx CSA 19.0030U

Issue No: 0

Date of Issue: 2019-08-15

Page 3 of 3

Schedule

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

Actuators and signal elements, type designation GZ/GZ-M/EXH Series, sizes 25, 40 and 57, are intended for installation in category 2G (gas) or 2D (dust) enclosures., have been designed as Ex components that are fitted in equipment that is intended to be used in an explosive gas or dust atmosphere and are meant to be screwed into an enclosure via an M22 x 1.5 or 3/4" NPSM threaded hole.

All the devices use an aluminium body. The Actuators employ either a pressure-operated switch, a rotary switch or a potentiometer that works a stainless steel shaft fitted inside the aluminium body. The Signal Elements incorporate a window that is securely fixed in the aluminium body. The illuminated button is a combined Actuator and Signal Element.

For flameproof applications, the threaded entry must meet the minimum requirements specified in IEC 60079-1. The enclosure entry must comply with the requirements of Specific Condition of Use Clause iv.

For protection by enclosure (dust) applications, the threaded entry must meet the minimum requirements specified in IEC 60079-31. The enclosure entry must comply with the requirements of Specific Condition of Use Clause v.

For all applications, the devices are screwed into the threaded hole of the enclosure with the aid of a tool connected to the aluminium body. They are fully tightened using a torque of 3 Nm; to align the contact and connection modules, they can be rotated by additional 90° at a maximum torque of 6 Nm. Rotation and accidental loosening is prevented using the locknut provided (tightening torque 2 Nm) or a temperature-resistant adhesive (e.g. Loctite 641).

Refer to the Annexe for additional information and model designations

SCHEDULE OF LIMITATIONS:

1. For flameproof applications, the actuators and signalling elements shall only be installed in Ex d enclosures with maximum internal volume of 35 litres and approved for at least Group IIC according to IEC 60079-1.
2. For flameproof applications, the actuators and signalling elements shall only be installed in Ex d enclosures with maximum internal explosion pressure of 20 bar for Group IIC according to IEC 60079-1.
3. The actuators and signalling elements shall only be used for a service temperature range of -50°C to +60°C.
4. For flameproof applications, the actuators and signalling elements shall only be threaded in enclosure walls having a minimum length of 8.0 mm for M22.15 thread, and at least 5 threads engaged for 3/4" NPSM thread according to table 4, from IEC 60079-1. The maximum thickness of the enclosure wall is limited by size (length) of the actuating and signal elements.
5. For dustproof applications, the actuators and signalling elements shall only be threaded in enclosure wall having a minimum length of 3.0 mm for M22x1.5 thread or 3.7 mm for 3/4" NPSM thread. The maximum thickness of the enclosures wall is limited by size (length) of the actuating and signal elements. The elements have to be fixed in the electrical equipment in such a way that rotation and accidental loosening will be prevented.
6. For the pilot light and illuminated buttons the maximum load for LED is 2 W.
7. The outer moulding of the elements has to be tightened according manufacturer's instructions.
8. For flameproof applications, the actuators and signalling elements shall only be installed in Ex d enclosures with maximum internal volume of 160 litres and approved for at most Group IIB+H₂ according to IEC 60079-1.
9. For flameproof applications, the actuators and signalling elements shall only be installed in Ex d enclosures with maximum internal volume of 35 litres and approved for at least Group IIC according to IEC 60079-1.

Annex:

[IECEX CSA 19.0030U Annexe Issue 0 pdf](#)

Annexe to: IECEx CSA 19.0030U Issue 0

Applicant: Killark - A Division of Hubbell Inc.
(Delaware)

Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



Nomenclature -

Operator Series	<u>GZ</u>	<u>21</u>	<u>RZ</u>	<u>3</u>	<u>G</u>	<u>-M</u>
	I	II	III	IV	V	VI

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

- 21 – Short Momentary Push Button
- 1 - Long Momentary Push Button
- L1 – Extended Momentary Push Button
- 21B – Short Big Momentary Push Button
- 1B - Long Big Momentary Push Button
- L1B – Extended Big Momentary Push Button

III – GZ21 Button Color

- RZ - Red
- GZ - Green
- KZ - Black
- AZ - Amber
- WZ – White
- BZ - Blue

III – GZ1 Button Color

- RX - Red
- GX - Green
- KX - Black
- AX - Amber
- WX – White
- BX – Blue

III – GZL Button Color

- R - Red
- G - Green
- K - Black
- A - Amber
- W – White
- B - Blue

IV – Contact Configuration

- 1 – One Normally Open Block (N.O.)
- 2 - One Normally Closed Block (N.C.)
- 3 - One Universal Block (1 N.O./1 N.C.)
- 6 – Two Normally Open Blocks (N.O.)
- 7 – Two Normally Closed Blocks (N.C.)
- 8 - Two Universal Blocks (2 N.O./2 N.C.)
- 0 – Omit Contact Blocks

Annexe to: IECEx CSA 19.0030U Issue 0
Applicant: Killark - A Division of Hubbell Inc.
(Delaware)
Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



V – Legend Plate
Various Letters designating customer preference.
Lack of Character = No Legend Plate

VI – Bushing Size
-M – Metric M22 x 1.5 Straight Thread
Lack of Character = 3/4" – 14 NPSM Straight Thread

Nomenclature -

Operator Series	<u>GZ</u>	<u>MM21</u>	<u>RYX</u>	<u>3</u>	<u>C</u>	<u>-M</u>
	I	II	III	IV	V	VI

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

MM21 – Short Momentary Mushroom Button
MM1 - Long Momentary Mushroom Button
MML – Extended Momentary Mushroom Button

III Button Color

RY – Red/Yellow Center
RG – Red/Green Center
RB – Red/Black Center

IV – Contact Configuration

1 – One Normally Open Block (N.O.)
2 - One Normally Closed Block (N.C.)
3 - One Universal Block (1 N.O./1 N.C.)
6 – Two Normally Open Blocks (N.O.)
7 – Two Normally Closed Blocks (N.C.)
8 - Two Universal Blocks (2 N.O./2 N.C.)
0 – Omit Contact Blocks

V – Legend Plate
Various Letters designating customer preference.
Lack of Character = No Legend Plate

VI – Bushing Size
-M – Metric M22 x 1.5 Straight Thread
Lack of Character = 3/4" – 14 NPSM Straight Thread

Annexe to: IECEx CSA 19.0030U Issue 0

Applicant: Killark - A Division of Hubbell Inc.
(Delaware)

Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



Nomenclature -

Operator Series	<u>GZ</u>	<u>MP21</u>	<u>RM</u>	<u>3</u>	<u>C</u>	<u>-M</u>
	I	II	III	IV	V	VI

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

- MP21 – Short Maintained Mushroom Push-Pull Button
- MP1 - Long Maintained Mushroom Push-Pull Button
- MPL1 – Extended Maintained Mushroom Push-Pull Button
- MT21 – Short Maintained Mushroom Push-Twist Button
- MT1 - Long Maintained Mushroom Push-Twist Button
- MTL1 – Extended Maintained Mushroom Push-Twist Button

III – Button Color

- RM – Red
- GM - Green
- KM – Black
- R – Red (Twist)

IV – Contact Configuration

- 1 – One Normally Open Block (N.O.)
- 2 - One Normally Closed Block (N.C.)
- 3 - One Universal Block (1 N.O./1 N.C.)
- 6 – Two Normally Open Blocks (N.O.)
- 7 – Two Normally Closed Blocks (N.C.)
- 8 - Two Universal Blocks (2 N.O./2 N.C.)
- 0 – Omit Contact Blocks

V – Legend Plate

- Various Letters designating customer preference.
- Lack of Character = No Legend Plate

VI – Bushing Size

- M – Metric M22 x 1.5 Straight Thread
- Lack of Character = ¾" – 14 NPSM Straight Thread

Annexe to: IECEx CSA 19.0030U Issue 0

Applicant: Killark - A Division of Hubbell Inc.
(Delaware)

Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



Nomenclature -

Operator Series	<u>GZ</u>	<u>23</u>	<u>G</u>	<u>23</u>	<u>C</u>	<u>-M</u>
	I	II	III	IV	V	VI

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

23 – Short Pilot Light
B3 - Long Pilot Light
L3 – Extended Pilot Light

III – Lens & LED Lamp Color

R - Red
G - Green
A - Amber
C – Clear
B - Blue

IV – Lamp Voltage

4 – 24V AC/DC
12 – 12V AC/DC
23 – 120V AC/DC
24 – 220V/240V AC
48 – 48V AC/DC

V – Legend Plate

Various Letters designating customer preference.
Lack of Character = No Legend Plate

VI – Bushing Size

-M – Metric M22 x 1.5 Straight Thread
Lack of Character = 3/4" – 14 NPSM Straight Thread

Nomenclature -

Operator Series	<u>GZ</u>	<u>MK21</u>	<u>RM</u>	<u>3</u>	<u>B</u>	<u>-M</u>
	I	II	III	IV	V	VI

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

MK21 – Short Mushroom Maintained Push-Key Release Button
MK1 - Long Mushroom Maintained Push-Key Release Button
MKL1 – Extended Mushroom Maintained Push-Key Release Button

Annexe to: IECEx CSA 19.0030U Issue 0

Applicant: Killark - A Division of Hubbell Inc.
(Delaware)

Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



III – Button Color

- RM – Red
- R – Red (Extended)

IV – Contact Configuration

- 1 – One Normally Open Block (N.O.)
- 2 - One Normally Closed Block (N.C.)
- 3 - One Universal Block (1 N.O./1 N.C.)
- 6 – Two Normally Open Blocks (N.O.)
- 7 – Two Normally Closed Blocks (N.C.)
- 8 - Two Universal Blocks (2 N.O./2 N.C.)
- 0 – Omit Contact Blocks

V – Legend Plate

Various Letters designating customer preference.
Lack of Character = No Legend Plate

VI – Bushing Size

-M – Metric M22 x 1.5 Straight Thread
Lack of Character = ¾" – 14 NPSM Straight Thread

Nomenclature -

Operator Series	<u>GZ</u>	<u>K21</u>	<u>3</u>	<u>B</u>
	I	II	III	IV

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

- K21 – Short Maintained Push Button-Key Release Button
- K1 - Long Maintained Push Button-Key Release Button
- KL1 – Extended Maintained Push Button-Key Release Button

III – Contact Configuration

- 1 – One Normally Open Block (N.O.)
- 2 - One Normally Closed Block (N.C.)
- 3 - One Universal Block (1 N.O./1 N.C.)
- 6 – Two Normally Open Blocks (N.O.)
- 7 – Two Normally Closed Blocks (N.C.)
- 8 - Two Universal Blocks (2 N.O./2 N.C.)
- 0 – Omit Contact Blocks

IV – Legend Plate

Various Letters designating customer preference.
Lack of Character = No Legend Plate

V – Bushing Size

-M – Metric M22 x 1.5 Straight Thread
Lack of Character = ¾" – 14 NPSM Straight Thread

Annexe to: IECEx CSA 19.0030U Issue 0

Applicant: Killark - A Division of Hubbell Inc.
(Delaware)

Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



Nomenclature -

Operator Series	<u>GZ</u>	<u>24</u>	<u>A</u>	<u>23</u>	<u>3</u>	<u>C</u>	<u>-M</u>
	I	II	III	IV	V	VI	VII

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

- 24 – Short Illuminated Momentary Push Button
- B4 - Long Illuminated Momentary Push Button
- L4 – Extended Illuminated Momentary Push Button

III – Lens & LED Lamp Color

- R - Red
- G - Green
- A - Amber
- C – Clear
- B - Blue

IV – Lamp Voltage

- 4 – 24V AC/DC
- 12 – 12V AC/DC
- 23 – 120V AC/DC
- 24 – 220V/240V AC
- 48 – 48V AC/DC

V – Contact Configuration

- 1 – One Normally Open Block (N.O.)
- 2 - One Normally Closed Block (N.C.)
- 3 - One Universal Block (1 N.O./1 N.C.)
- 6 – Two Normally Open Blocks (N.O.)
- 7 – Two Normally Closed Blocks (N.C.)
- 8 - Two Universal Blocks (2 N.O./2 N.C.)
- 0 – Omit Contact Blocks

VI – Legend Plate

- Various Letters designating customer preference.
- Lack of Character = No Legend Plate

VII – Bushing Size

- M – Metric M22 x 1.5 Straight Thread
- Lack of Character = ¾" – 14 NPSM Straight Thread

Annexe to: IECEx CSA 19.0030U Issue 0
Applicant: Killark - A Division of Hubbell Inc.
(Delaware)



Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers

Nomenclature -

Operator Series GZ 134 2K2 -M
 I II III IV

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

- GZ134 – Short Multi-Turn Potentiometer with POT*
- GZ114 - Long Multi-Turn Potentiometer with POT*
- GZL114 – Extended Multi-Turn Potentiometer with POT*
- GZ133 – Short Single-Turn Potentiometer with POT*
- GZ113 - Long Single-Turn Potentiometer with POT*
- GZL113 – Extended Single-Turn Potentiometer with POT*

III – * Potentiometer Resistance Value

- 220K – 220Ω
- 470R – 470Ω
- 1K – 1KΩ
- 2K2 – 2.2KΩ
- 2K7 – 4.7KΩ
- 10K – 10KΩ
- 22K – 22KΩ
- 47K – 47KΩ
- 100K – 100KΩ
- 220K – 220KΩ
- 470K – 470KΩ
- 1M – 1MΩ

IV – Bushing Size

- M – Metric M22 x 1.5 Straight Thread
- Lack of Character = ¾" – 14 NPSM Straight Thread

Nomenclature -

Operator Series GZ 25 2A 3 F -M
 I II III IV V VI

I – Operator Series designation. Sermatex w/ Black Profile 2 Bezel

II - Type of operator.

- GZ25 – Short Maintained Rotary Selector Switch
- GZ5 - Long Maintained Rotary Selector Switch
- GZLS – Extended Maintained Rotary Selector Switch

Annexe to: IECEx CSA 19.0030U Issue 0

Applicant: Killark - A Division of Hubbell Inc.
(Delaware)

Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



III – Number of Positions

- 2A – Two Position
- 3C – Three Position
- 4H – Four Position

IV – Contact Configuration

- 1 – One Normally Open Block (N.O.)
- 2 - One Normally Closed Block (N.C.)
- 3 - One Universal Block (1 N.O./1 N.C.)
- 6 – Two Normally Open Blocks (N.O.)
- 7 – Two Normally Closed Blocks (N.C.)
- 8 - Two Universal Blocks (2 N.O./2 N.C.)
- 88 – Four Open Blocks to Close in each Position
- 0 – Omit Contact Blocks

V – Legend Plate

Various Letters designating customer preference.
Lack of Character = No Legend Plate

VI – Bushing Size

-M – Metric M22 x 1.5 Straight Thread
Lack of Character = ¾" – 14 NPSM Straight Thread

Nomenclature -

Breaker Handle Series	<u>EXH</u>	<u>AD</u>	<u>N</u>	<u>S</u>	<u>15</u>	<u>22</u>
	I	II	III	IV	V	VI

I – Series for CB handles

II – SERMATEX

AD - ADA2 series

III - Thread form

N - 3/4-14 NPT
M - M22 X 1.5

IV - Length of bushing

S - 35mm
M - 50mm
L - 67mm

V - Length of shaft

15 - 150mm
20 - 200mm

Annexe to: IECEx CSA 19.0030U Issue 0

Applicant: Killark - A Division of Hubbell Inc.
(Delaware)

Apparatus: Series "GZ" and "GZ...-M" Operators,
Series "EXH" Breaker Handles/Operators,
and Series "GZ" Potentiometers



VI - Fork model

- 22 - 22mm DIA.
- 15 - 15 X 26mm SLOT
- 12 - 12 X 26mm SLOT
- 10 - 10 X 26mm SLOT

Nomenclature -

Breaker Handle Series	<u>EXH</u>	<u>GD</u>	<u>N</u>	<u>N</u>	<u>15</u>	<u>CS</u>
	I	II	III	IV	V	VI

I – Series for CB handles

II – SERMATEX GADA

- GA - GADA series
- G1 - GADA1 series

III - Thread form

- N - 3/4-14 NPT
- M - M22 X 1.5

IV - Length of bushing

- N - 25mm
- P - 40mm
- R - 57mm

V - Length of shaft

- 10 - 100mm
- 15 - 150mm
- 20 - 200mm

VI - Fork model

- CS - Slim slider
- SS - Slim w/o slider
- SR - Offset w/o slider
- CR - Offset w/slider
- MO - Motor breaker