



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Component intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 19ATEX1171U** Issue: **1**

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

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

6 Address: 2112 Fenton Logistics Park Blvd.
Fenton, Missouri 63026, USA

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., Notified Body Number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/A11

EN 60079-1:2014

EN 60079-31:2014

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any limitations of use are listed in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:



II 2GD

Ex db IIC Gb or Ex db IIB+H₂ Gb

Ex tb IIIC Db

Project Number 4214

Signed: 

Title: Director of Operations

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13 DESCRIPTION OF COMPONENT

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 ¾" 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 EN 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 EN 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).

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

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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

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>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

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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>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

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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>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



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Nomenclature -

Operator Series **GZ** **MK21** **RM** **3** **B** **-M**
 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

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 = 3/4" – 14 NPSM Straight Thread

Nomenclature -

Operator Series **GZ** **K21** **3** **B**
 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

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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

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.)

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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 = 3/4" – 14 NPSM Straight Thread

Nomenclature -

Operator Series	<u>GZ</u>	<u>134</u>	<u>2K2</u>	<u>-M</u>
	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 – 1MKΩ

IV – Bushing Size

-M – Metric M22 x 1.5 Straight Thread

Lack of Character = 3/4" – 14 NPSM Straight Thread



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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
GZL5 – Extended Maintained Rotary Selector Switch

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 **EXH** AD N S 15 22
 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

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IV - Length of bushing

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

V - Length of shaft

15 - 150mm
20 - 200mm

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

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MO - Motor breaker

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	15 August 2019	R80008035A	The release of prime certificate.
1	15th October 2019	4214	Transfer of certificate SIRA 19ATEX1171U from Sira Certification Service to CSA Netherlands B.V.

14.3 Certificate number Sira 16ATEX1176U Issue 4

15 SCHEDULE OF LIMITATIONS

- 15.1 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 EN 60079-1.
- 15.2 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 EN 60079-1.
- 15.3 The actuators and signalling elements shall only be used for a service temperature range of -50°C to +60°C.
- 15.4 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 ¾" NPSM thread according to table 4, from EN 60079-1. The maximum thickness of the enclosure wall is limited by size (length) of the actuating and signal elements.
- 15.5 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 ¾" 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.
- 15.6 For the pilot light and illumined buttons the maximum load for LED is 2 W.
- 15.7 The outer moulding of the elements has to be tightened according manufacturer's instructions.
- 15.8 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 EN 60079-1.
- 15.9 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 EN 60079-1.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

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The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

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Certificate Annexe

Certificate Number: Sira 19ATEX1171U
Equipment: Series "GZ" and "GZ...-M" Operators, Series "EXH" Breaker Handles/Operators, and Series "GZ" Potentiometers
Applicant: Killark - A Division of Hubbell Inc. (Delaware)

Issue 0

Drawing	Sheets	Rev	Date (Sira stamp)	Title
51748	1 of 1	A	15 Aug 19	Nameplate, GZ Operators

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