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UNITED KINGDOM CONFORMITY ASSESSMENT UK-TYPE EXAMINATION CERTIFICATE

[2]

**Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1**

[3]

UK-Type Examination Certificate No.: **UL21UKEX2160X Rev. 0**

[4]

Product: **HKH Series Control Stations**

[5]

Manufacturer: **Killark, A Division of Hubbell Inc. (Delaware)**

[6]

Address: **2112 Fenton Logistics Park Blvd., Fenton, MO 63026 USA**

[7]

This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.
The examination and test results are recorded in the confidential report **UKRCC-4789935584.1**.

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Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-18:2015+A1:2017
EN IEC 60079-7:2015+A1:2018 EN 60079-31:2014

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

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If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

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This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

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The marking of the product shall include the following:

II 2 G Ex db eb IIC T6...T4 Gb
 II 2 G Ex eb mb IIC T6...T4 Gb
 II 2 G Ex eb IIC T6...T4 Gb
 II 2 G Ex db eb mb IIC T6...T4 Gb
 II 2 D Ex tb IIIC T85°C...T135°C Db

Certification Manager
David Lloyd

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the Ex UK Product Certification Program Requirements. This certificate and test results obtained apply only to the product 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 product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2021-12-21

Approved Body UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100



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Schedule

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[15] Description of Product

The HKH Series Control Station are stainless steel or polymeric enclosures that can house a variety of Ex components, such as pilot lights, contact blocks, operators, E-Stops, and terminals.

The components are covered under the following Ex component certificates:

HKH Series Contact Block:	DEMKO 12 ATEX 1202251U	
HKH Series Pilot Light:	DEMKO 14 ATEX 1337U	
HKH Series Actuators, Pilot Light Lens Covers and Plugs:	DEMKO 14 ATEX 1400U	
HKH Series Polymeric Enclosures:	DEMKO 14 ATEX 1399U	
HKH Series Stainless Steel Enclosures:	DEMKO 14 ATEX 1323U	
HKH Series E-Stops:	DEMKO 15 ATEX 1422U	
ABB ZS4 Terminal Blocks:	LCIE 08 ATEX 0007U	
Weidmuller WDU 2.5 or 4 and WPE 2.5 or 4 Terminal Blocks	DEMKO 14 ATEX 1338U	UL21UKEX2114U
EXM Calotte Cover	SIRA 15 ATEX 3333U	
CZ0205 Series Ammeter/Milliammeter/ Voltmeter	SIRA 14 ATEX 3169U	

Ex db eb IIC T6...T4 Gb

To be used when control station includes an HKH Contact Block, HKH Pilot Light, HKH E-Stop, WDU, WPE or ZS4 Terminal Blocks, and a CZ0205 Ammeter.

Ex eb IIC T6...T4 Gb

To be used when control station includes only series WDU, WPE, or ZS4 terminal blocks, and/or CZ0205 ammeter.

Ex eb mb IIC T6...T4 Gb

To be used when control station includes only series WDU, WPE, or ZS4 terminal blocks, and a CZ0205 voltmeter or milliammeter.

Ex db eb mb IIC T6...T4 Gb

To be used when control station includes an HKH contact block or HKH pilot light and a CZ0205 voltmeter or milliammeter.

Ex tb IIIC T85°C...T135°C Db

All options.

Note: When a CZ0205 meter is in use, the EXM calotte cover shall also be installed.

Nomenclature for HKH Series Control Station:

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
HKH	1B	N	P	x	E	xx	3	x	xx	x	S

I – Product Series

HKH Series Control Stations

II – Enclosure Type/Size

- 1A - One Device
- 1B - One Device / Two Device
- 1C - Two Device / Three Device

III – Enclosure Material

- N - Polymeric
- S - 316 Stainless Steel (Inward Flange)
- E - 316 Stainless Steel (Outward Flange)

IV - Contact Block / Pilot Light Mounting Method

- D - DIN-rail mount
- P - Panel mount

V - Cable Entry (optional)

- x - Letter or Digit indicating size and location

VI - Earthing Plate (optional)

- E - Brass Earthing Continuity Plate (Metric Only)

VII - Operator/ Meter

- xx - Letter-Digit or Letter-Letter indicating HKH Series Actuator(s) and/or Series CZ0205 meter installed

VIII - Control Module

- L - LED Lamp (Pilot Light)
- 1 - 1 NO / 1 NC
- 2 - 1 NO
- 3 - 1 NC
- 4 - 2 NO



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5 - 2 NC

IX - Legend Plate (optional)
x - Letter or Digit

X - Accessory Type (optional)
xx - Letter-Digit

XI - Hub / Gland Designator (optional)
x - Letter or Digit

XII - Earthing Stud Kit (optional)
S - Internal/External Earth Stud

Alternate Nomenclature

I HKH	II MOD	III xxxxxx
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I – Product Series
HKH Series Control Stations

II – Extended Catalog Number Designator
MOD – indicates the Standard Nomenclature exceeds 18 characters

III – Dedicated Configuration Designator
Xxxxxx – 1 to 6 characters indicating a specific component configuration

Additional optional suffix numbers or letters indicating labelling or other non-construction related options may follow those noted above.

The relation between ambient temperature and the assigned temperature class is as follows:

Ambient temperature range	Temperature class	Maximum Surface Temperature	Control Station Limitations
-50 °C to +60 °C	T6...T4	T85°C...T135°C	See below
-40°C to +55°C (when calotte or CZ0205 meter is installed)	T5	T100°C	See below

For a **T6** Temperature Code/**T85°C** Maximum Surface Temperature, the following electrical ratings are in effect:

Enclosure Size	Maximum No. of CZ Meters	Maximum No. of HKH Contact Blocks	Max. No. of ABB ZS4 Terminal Blocks	Maximum No. of HKH Pilot Lights	Minimum Wire Size	Maximum Continuous Current Rating
2c	2	12	16	6	2 mm ² (14 AWG)	10 A
2a	1	8	16	4	2 mm ² (14 AWG)	10 A
1c	1	6	8	3	2 mm ² (14 AWG)	10 A
1b	1	4	6	2	2 mm ² (14 AWG)	10 A
1a	1	2	N/A	1	4 mm ² (12 AWG)	20 A



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For a **T5** Temperature Code/**T100°C** maximum Surface Temperature, the following electrical ratings are in effect:
(For Complete Control Stations with Pilot Lights only)

Enclosure Size	Maximum No. of CZ Meters	Maximum No. of HKH Pilot Lights	Minimum Wire Size	Maximum Wattage Rating	Maximum Continuous Current Rating
2c	2	6	0.5 mm ² (20 AWG)	0.6 Watts	20A
2a	1	4	0.5 mm ² (20 AWG)	0.6 Watts	20A
1c	1	3	0.5 mm ² (20 AWG)	0.6 Watts	20A
1b	1	2	0.5 mm ² (20 AWG)	0.6 Watts	20A
1a	1	1	0.5 mm ² (20 AWG)	0.6 Watts	20A

For a **T4** Temperature Code/**T135°C** Maximum Surface Temperature, the following electrical ratings are in effect:

Enclosure Size	Maximum No. of CZ Meters	Maximum No. of HKH Contact Blocks	Max. No. of ABB or Weidmuller Terminal Blocks	Maximum No. of HKH Pilot Lights	Minimum Wire Size	Maximum Continuous Current Rating
2c	2	12	16	6	4 mm ² (12 AWG)	20 A
2a	1	8	16	4	4 mm ² (12 AWG)	20 A
1c	1	6	8	3	4 mm ² (12 AWG)	20 A
1b	1	4	6	2	4 mm ² (12 AWG)	20 A

Electrical data:

Killark HKH Series Contact Blocks, E-Stops, and Operators:

AC690V, 16A, AC-12, 50-60Hz

AC230V, 16A, AC-15, 50-60Hz

DC60V, 5A, DC-13, 50-60Hz

DC125V, 1A, DC-13, 50-60Hz

Killark HKH Series Pilot Light:

12 - 254 Vac/dc, 50/60Hz, 0.6 Watts

Weidmuller WDU and WPE 2.5 Series Terminal Blocks:

21A, 690 V

Weidmuller WDU and WPE 4 Series Terminal Blocks:

28 A, 690 V

ABB ZS4 Series Terminal Blocks:

32 A, 693 V

CZ 0205 Series Milliammeter

0-20/40 mA, 4-20/40mA; DC, AC 50/60 Hz

CZ 0205 Series Ammeter

0-1 A, 0-5 A, 0-10A; AC 50-60 Hz

CZ 0205 Series Voltmeter

0-10V, 0-25V, 0-40V, 0-50V, 0-100V, 0-120V, 0-150V, 0-250V, 0-500V; AC50/60 Hz

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Installation Instructions:

- The HKH Contact Blocks, Weidmuller WDU and WPE 2.5 and 4 Series, and ABB ZS4 Series must be mounted to provide a minimum of 10 mm clearance to any conductive surfaces.
- The Series HKH Pilot Lights must be mounted to provide a minimum clearance of 5.0 mm to any conductive surfaces.
- The Series HKH Contact Block and Pilot Lights can accommodate wire sizes from 22 AWG (0.5 mm²) to 12 AWG (4 mm²) solid and stranded and 10 AWG (4.0 mm²) stranded, with a maximum of two wires per terminal. Strip wire insulation 10 mm. Tighten terminal screws 15 in-lbs. (1.7 N-m).
- The Weidmuller WDU and WPE 4 Series and ABB ZS4 Series will accommodate wire sizes from 20 AWG (0.5 mm²) to 10 AWG (6 mm²) and Weidmuller WDU and WPE 2.5 Series will accommodate wire sizes from 20 AWG (0.5 mm²) to 12 AWG (4 mm²), with a maximum of two wires per terminal. Strip wire insulation 10 mm for Weidmuller terminals and 10.3 mm for ABB terminals. Tighten terminal screws 3.5 to 7 in-lbs. (0.4 to 0.8 N-m) for WDU and WPE 2.5 Series, 4.4 to 8 in-lbs. (0.5 to 1.0 N-m) for WDU and WPE 4 Series, and 5.3 in-lbs. (0.6 N-m) for ABB ZS4 Series.
- The Weidmuller Series WDU terminal blocks require an additional accessory (end section or circuit separator) when a jumper bar with "cut extremity" is used.
- The Weidmuller Series WDU and WPE and ABB Series ZS terminals can accommodate one or two solid or stranded Cu wires. When two wires are installed under a single terminal, they must be of the same type (STR or SOL) and of equal sizes.
- The Series HKH Polyamide Enclosure cover bolts should be torqued to 3 Nm to 4 Nm.
- The Series HKH Stainless Steel Enclosure cover bolts should be torqued to hand tight. Do not over-tighten.
- To maintain the IP66 rating or dust protection method "tb", all actuator/enclosure sealing gaskets must be installed in accordance with these installation instructions.
- These enclosures may be provided without cable glands/ conduit entries. When installing glands or entries, the cable glands/ conduit entries must be certified as increased safety or flameproof for protection type "tb" and have a minimum IP 66 rating.
- To assure the IP ratings are not compromised, Cable Gland and Conduit Entry holes must not exceed the maximum dimensions noted in the gland/ entry manufacturer's installation instructions.
- All unused wiring terminals shall be tightened.
- All conductors shall be suitable for the minimum ambient and maximum temperature achieved in service – use 90°C rated conductors (minimum) for T6 applications and use 105°C conductors (minimum) for T5 and T4 applications.
- Do not remove the tamper-proof screws or attempt to open or alter the Series HKH contact blocks.

Routine tests

None.

[16] Test Report No. (associated with this certificate issue)
US/UL/ExTR15.0063/03.

[17] Specific conditions of use:

- CZ0205 modules are intended to be installed as TS35*7.5 rail mounted or panel-mounted (mounting frame is screw-fixed to the enclosure cover). Dimensions of all models are 66mm x 66mm x 47.5mm.
- EXM Calotte covers must be installed per the manufacturer's instructions through the wall of a suitable UKEx certified enclosure. Note- mounting screw length is dependent upon enclosure wall thickness.
- The EXM Calotte viewing window frame presents a potential electrostatic hazard and shall be fitted to fixed installations only to allow it to comply with EN 60079-0: Clause 7.4.2 e) and Clause 7.4.3 d). The polymeric frame shall only be cleaned with a damp cloth and sited away from any static charging methods (i.e.: near forced air movement or where they can easily be rubbed by passers-by).
- The EXM Calotte viewing window is intended for use when Series CZ0205 meters are installed.
- The ammeter and voltmeter modules must be mounted in a suitable Ex enclosures and after installation must maintain the creepage and clearance distances as noted in IEC 60079-7, Clauses 4.3 and 4.4 and Table 1. (Series CZ0205 meters shall be mounted to provide a minimum clearance of 10mm and minimum creepage of 16mm.
- Tightening torque of the CZ0205 meter wiring terminals is 1.2 Nm and the EXM mounting frame screw is 1.1 Nm.

[18] Conditions of certification:

Where ATEX certified Ex Components or Ex Equipment are used, it is the responsibility of the manufacturer to ensure that only Ex Components or Ex Equipment having equivalent UKEx certification are used after the permission to accept such ATEX certified Ex Component or Ex Equipment is withdrawn.


[19] Essential Health and Safety Requirements (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

Additional information

The HKH Series Control Station has in addition passed the tests for Ingress Protection to IP 66 and IP 67 (stainless steel outward flange only) in accordance with EN60529:1991+A1:2000+A2:2013.



The trademark  will be used as a company identifier on the marking label.

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in Annex III to UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

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[20] Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
HKH Assembly for DIN Rail and Panel Mount Size 1 (Sheet 1)	D-24587	B	-
HKH Assembly for DIN Rail and Panel Mount Size 2 (Sheet 2)	D-24587	B	-
Ratings Chart – HKH Series (Sheet 3)	D-24587	B	
HKH Assembly for DIN Rail and Panel Mount Size 1 Stainless Steel (Sheet 1)	D-24619	B	-
HKH Assembly for DIN Rail and Panel Mount Size 2 Stainless Steel (Sheet 2)	D-24619	B	-
HKH Complete Control Station Nameplate	B-24617	H	-
HKH Control Station IOM	Form No. K1466	ECO-3-029-21	-
HKH Control Station IOM Addendum	Form No. K1470	ERO-3-029-21	-

Details of Ex Components used:

UKEX Certified Ex Components/Equipment:

Description:	Manufacturer:	Part No.:	Certificates:	Standards:
Terminal Blocks	Weidmüller	WDU and WPE	UL21UKEX2114U Rev. 0	EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018

ATEX Certified Ex Components/Equipment:

Description:	Manufacturer:	Part No.:	Certificates:	Standards:
Contact Block	Killark	HKH Series	DEMKO 12 ATEX 1202251U Rev. 4	EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-7:2015
Stainless Steel Enclosures	Killark	HKH Series	DEMKO 14 ATEX 1323U Rev. 2	EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018 EN 60079-31:2014
Pilot Lights	Killark	HKH Series	DEMKO 14 ATEX 1337U Rev. 3	EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015+A1:2018
Polymeric Enclosures	Killark	HKH Series	DEMKO 14 ATEX 1399U Rev. 4	EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018 EN 60079-31:2014
Actuators, Pilot Light Lens Covers and Plugs	Killark	HKH Series	DEMKO 14 ATEX 1400U Rev. 4	EN 60079-0:2012+A11:2013 EN 60079-7:2015 EN 60079-31:2014
E-Stops	Killark	HKH Series	DEMKO 15 ATEX 1422U Rev. 5	EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015+A1:2018 EN 60079-31:2014
Terminal Blocks	ABB	ZS4 Series	LCIE 08 ATEX 0007U Rev. 4	EN 60079-0:2012 EN 60079-7:2007
Operation Heads	CZ Explosion-Proof Electric Appliances Co., LTD	CZ4000 Series	SIRA 15 ATEX 3333U Rev. 1	EN 60079-0:2012+A11:2013 EN 60079-7:2015 EN 60079-31:2014
Explosion-proof voltmeter and ammeter module	CZ Explosion-Proof Electric Appliances Co., LTD	CZ0205 Series	SIRA 14 ATEX 3169U Rev. 0	EN 60079-0:2012 EN 60079-7:2007 EN 60079-18:2009