[1] # EC-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **DEMKO 15 ATEX 1405 Rev. 0**

[4] Equipment or Protective System: **Flameproof and Increased Safety Control Station**

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

[6] Address: **3940 Martin Luther King Drive, St. Louis, MO 63113 USA**

[7] This equipment or protective system 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 equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems 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. **12NK02251-15ATEX1405**

[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 60079-7:2007 EN 60079-31:2014**

[10] If the sign "**X**" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system.
These are not covered by the certificate.

[12] The marking of the equipment or protective system shall include the following:

**II 2 G Ex de IIC T6...T4 Gb**

**II 2 D Ex tb IIIC T85°C …T135°C Db**

**Certification Manager**
Jan-Erik Storgaard

This is to certify that the sample(s) of the Equipment described herein ("Certified Equipment") 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 equipment 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 equipment. UL has not established Follow-Up Service or other surveillance of the equipment. The Manufacturer is solely and fully responsible for conformity of all equipment 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.

**Date of issue:** 2015-11-24

**Notified Body** UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com


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[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE No.**

**DEMKO 15 ATEX 1405 Rev. 0**

**Report: 12NK02251-15ATEX1405**

[15] Description of Equipment or protective system

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 |

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
xx - Letter-Digit or Letter-Letter indicating HKH Series Actuator(s) installed

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


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[13]

[14]

# Schedule
# EC-TYPE EXAMINATION CERTIFICATE No.
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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 |

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

| Enclosure Size | 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 | 12 | 16 | 6 | 2 $mm^2$ (14 AWG) | 10 A |
| 2a | 8 | 16 | 4 | 2 $mm^2$ (14 AWG) | 10 A |
| 1c | 6 | 8 | 3 | 2 $mm^2$ (14 AWG) | 10 A |
| 1b | 4 | 6 | 2 | 2 $mm^2$ (14 AWG) | 10 A |
| 1a | 2 | N/A | 1 | 4 $mm^2$ (12 AWG) | 20 A |

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 HKH Pilot Lights | Minimum Wire Size | Maximum Wattage Rating |
|---|---|---|---|
| 2c | 6 | 0.5 $mm^2$ (22 AWG) | 0.6 Watts |
| 2a | 4 | 0.5 $mm^2$ (22 AWG) | 0.6 Watts |
| 1c | 3 | 0.5 $mm^2$ (22 AWG) | 0.6 Watts |
| 1b | 2 | 0.5 $mm^2$ (22 AWG) | 0.6 Watts |
| 1a | 1 | 0.5 $mm^2$ (22 AWG) | 0.6 Watts |

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

| Enclosure Size | 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 | 12 | 16 | 6 | 4 $mm^2$ (12 AWG) | 20 A |
| 2a | 8 | 16 | 4 | 4 $mm^2$ (12 AWG) | 20 A |
| 1c | 6 | 8 | 3 | 4 $mm^2$ (12 AWG) | 20 A |
| 1b | 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


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[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE No.**

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**Report: 12NK02251-15ATEX1405**

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 $mm^2$) to 12 AWG (4 $mm^2$) solid and stranded and 10 AWG (4.0 $mm^2$) 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 $mm^2$) to 10 AWG (6 $mm^2$) and Weidmuller WDU and WPE 2.5 Series will accommodate wire sizes from 20 AWG (0.5 $mm^2$) to 12 AWG (4 $mm^2$), 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 to7 in-lbs (0.4 to 0.8 N-m) for WDU and WPE 2.5 Series, 4.4 to8 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 instuctions.
- 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.

Mounting instructions
Refer to “Instructions”.

Routine tests
N/A

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [ 8 ] on page 1 of this EC-Type Examination Certificate.

[17] Specific conditions of use:
N/A

[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 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.

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.


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