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

Certificate No.: **IECEx SIR 14.0054**

Certificate history:
Issue 3 (2020-02-26)
Issue 2 (2018-10-08)
Issue 1 (2016-11-18)
Issue 0 (2014-10-16)

Status: **Current**

Issue No: 4

Date of Issue: 2020-09-16

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

Equipment: **SJIC/SJICH/SJICN and USF Junction Boxes**

Optional accessory:

Type of Protection: **Increased Safety, Intrinsically Safe and Dust Protection by Enclosure**

Marking: Refer to the Annexe

Approved for issue on behalf of the IECEx Certification Body: **Neil Jones**

Position: **Certification Manager**

Signature: (for printed version) PP MHalliwell

Date: 2020-09-16

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 www.iecex.com or use of this QR Code.

Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

IECEx Certificate of Conformity

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

Additional manufacturing locations:

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 equipment 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 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/SIR/ExTR14.0247/01 GB/SIR/ExTR16.0286/00 GB/SIR/ExTR18.0171/00
GB/SIR/ExTR19.0168/00 GB/SIR/ExTR20.0158/00

Quality Assessment Report:

GB/SIR/QAR16.0021/04

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Type SJIC/SJICH and USF junction boxes utilises carbon Steel or stainless steel Grade 304 and 316 component enclosures certified under Sira 14ATEX3156U and IECEx SIR 14.0053U, coded Ex e IIC Gb and Ex tb IIIC db. The enclosures provide an ingress protection rating of IP66 and may optionally be powder coated.

The Type SJIC enclosures consist of a main body and a screw cover, the SJICH enclosures consist of a main body and a combination hinge/screw cover and the Type USF enclosures consist of a main body and a hinged lid secured by latch fasteners. Gland plates may be utilised within the side walls of each type of enclosure and mounting feet/brackets are provided.

The Type SJICN junction boxes comprise HKH series of increased safety “eb” and dust “tb” enclosures are made of a polymeric material with a gasket located in the cover as well as an o-ring in the ground lug assembly. These are component enclosures certified under IECEX UL 14.0013U and DEMKO 14ATEX 1399U. These enclosures are bolt down enclosures and can contain a variety of entries on the cover and sidewalls of the body.

Refer to the Annexe for additional Information.

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

Certificate No.: **IECEx SIR 14.0054** Page 4 of 4

Date of issue: 2020-09-16 Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
This issue, Issue 4, recognises the following change; refer to the certificate annex to view a comprehensive history:

1. To incorporate additional approved terminal blocks to certification.
2. Minor administrative corrections in certificate to reflect correct terminal block size and catalog logic.
3. Minor administrative amendment to insert ‘SJICN’ in product name/model.

Annex:

IECEx SIR 14.0054 Issue 4 Annexe.pdf

Marking

II 1 G
II 2 D
Ex ia IIC T6/T5/T4 Ga
Ex tb IIIC T80°C/T100°C/T130°C Db
or

II 2 G D
Ex eb IIC T6/T5/T4 Gb
Ex ib IIC T6/T5/T4 Gb
Ex tb IIIC T80°C/T100°C/T130°C Db
or
II 2 G D
Ex eb ib IIC T6/T5/T4 Gb
Ex tb IIIC T80°C/T100°C/T130°C Db

Ta = -#°C to +40°C (when marked with T6/T80°C)
Ta = -#°C to +55°C (when marked with T5/T100°C)
Ta = -#°C to +90°C (when marked with T4/T130°C)
# The minimum ambient temperature may be either -50°C, -45° or C -40°C, see Condition of Certification clause viii.

The enclosures may be fitted with combinations of suitably certified terminals mounted to DIN rails, which are then mounted to either mounting channels or a sub-panel secured to studs in the rear of the enclosure. The permitted terminal types are as follows:

Manufacturer	Type reference	Style	IECEx Certificate
Weidmüller	WDU	Screw	N/A
Weidmüller	WDU	Screw	IECEx SIR 05.0040U IECEx SIR 05.0039U IECEx ULD 05.0008U
Weidmüller	ZDU	Cage clamp	N/A
Weidmüller	ZDU	Cage clamp	IECEx ULD 05.0009U IECEx KEM 07.0061U IECEx KEM 06.0048U
Weidmüller	PDU	Spring (push in)	IECEx KEMA 06.0032U
Klemsan Elektrik	AVK	Screw	IECEx FTZU 10.0012U
Klemsan Elektrik	MVK	Screw	IECEx FTZU 10.0011U
Klemsan Elektrik	PIK	Screw	IECEx FTZU 10.0011U
Klemsan Elektrik	PUK	Screw	IECEx FTZU 10.0011U
Klemsan Elektrik	PYK	Cage clamp	IECEx FTZU 10.0011U
ABB	ZS	Screw	IECEx LCI 08.0031U
ABB	ZK	Cage clamp	IECEx LCI 13.0025U
WAGO	2001-****	Cage clamp	IECEx PTB 11.0093U
WAGO	2002-****	Cage clamp	IECEx PTB 03.004U
WAGO	2004-****	Cage clamp	IECEx PTB 05.0033U
WAGO	2006-****	Cage clamp	IECEx PTB 05.0014U
WAGO	2010-****	Cage clamp	IECEx PTB 06.0003U
WAGO	2016-****	Cage clamp	IECEx PTB 05.0015U
Phoenix	UKH	Screw	IECEx KEM 06.0029U IECEx KEM 06.0030U
Phoenix	UT	Screw	IECEx KEM 06.0027U IECEx KEM 06.0013U
Phoenix	PT	Push in	IECEx PTB 10.0021U IECEx KEM 10.0046U
Phoenix	ST	Cage clamp	IECEx KEM 06.0051U IECEx KEM 06.0050U IECEx KEM 06.0033U IECEX KEM 06.0043U
Phoenix	QT	Cage clamp	IECEx KEM 07.0015U IECEx KEM 07.0010U
Phoenix	UK	Screw	IECEx KEM 06.0034U IECEx KEM 06.0029U IECEX KEM 06.0035U

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Manufacturer	Type reference	Style	IECEx Certificate
Weidmuller	WDK and Accessories	Screw	IECEx ULD 15.0003U

When Weidmüller WDU 1.5 or WDU 2.5 type of terminals are fitted, they are limited to a maximum current of 15 A.

The total dissipated power for the junction box shall be calculated in accordance with IEC 60079-7 and EN 60079-7, Annex E, E.2. The total calculated dissipated power shall not exceed the figures given in Tables 1 and 2 below.

Table 1: SJIC/SJICH/SJICN Junction boxes:

Type Reference	Size			Ex e or Ex ia Screw Type Terminals	Ex e ia Cage Clamp Type Terminals
	Height (mm)	Width (mm)	Depth (mm)	Maximum Power Dissipation (W) T6/T80°C at Ta =+40°C T5/T95°C at Ta =+55°C T4/T130°C at Ta = +90°C	Maximum Power Dissipation (W) T6/T80°C at Ta =+40°C T5/T95°C at Ta =+55°C T4/T130°C at Ta = +90°C
SJICN*040403	85	80	76	2.0	1.0
SJIC/SJICH*040403	102	102	76	2.0	1.0
SJICN*060403	132	80	76	2.0	1.0
SJIC/SJICH*060403	152	102	76	2.0	1.0
SJIC/SJICH*040404	102	102	102	4.1	2.0
SJICN*080403	182	80	76	5.2	2.6
SJIC/SJICH*060404	152	102	102	5.2	2.6
SJICN*080503	192	115	76	6.1	3.0
SJICN*120503	279	115	76	8.4	4.2
SJIC/SJICH*100804	254	203	102	8.4	4.2
SJIC/SJICH*121005	305	254	127	8.4	4.2
SJIC/SJICH*060606	152	152	152	8.4	4.2
SJIC/SJICH*080606	203	152	152	10.5	5.2
SJIC/SJICH*080806	203	203	152	11.4	5.7
SJIC/SJICH*100806	254	203	152	12.2	6.1
SJIC/SJICH*101006	254	254	152	13.0	6.5
SJIC/SJICH*121006	305	254	152	14.0	7.0
SJIC/SJICH*121206	305	305	152	15.0	7.5
SJIC/SJICH*141206	356	305	152	16.0	8.0
SJIC/SJICH*161406	406	356	152	18.0	9.0

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Table 2: USF Junction Boxes:

Type Reference	Size			Ex e or Ex ia Screw Type Terminals	Ex e ia Cage Clamp Type Terminals
	Height (mm)	Width (mm)	Depth (mm)	Maximum Power Dissipation (W) T6/T80°C at Ta =+40°C T5/T95°C at Ta =+55°C T4/T130°C at Ta = +90°C	Maximum Power Dissipation (W) T6/T80°C at Ta =+40°C T5/T95°C at Ta =+55°C T4/T130°C at Ta = +90°C
USF121206	314	314	152	15.0	7.5
USF161206	416	314	152	17.0	8.5
USF161606	416	416	152	19.0	9.5
USF162006	416	518	152	21.0	10.5
USF122006	314	518	152	19.0	9.5
USF201606	518	416	152	21.0	10.5
USF202006	518	518	152	24.3	12.1
USF241606	619	416	152	23.0	11.5
USF242006	619	518	152	24.5	12.1
USF242406	619	619	152	25.8	12.9
USF161208	416	314	203	20.6	10.3
USF161608	416	416	203	20.0	10.0
USF162008	416	518	203	23.0	11.5
USF201608	518	416	203	23.0	11.5
USF241608	619	416	203	26.0	13.0
USF202008	518	518	203	26.0	13.0
USF242408	619	619	203	31.5	25.7
USF302008	737	518	203	36.5	18.2
USF202408	518	619	203	31.5	15.7
USF242408	619	619	203	34.0	17.0
USF302408	737	619	203	39.0	19.5
USF362408	914	619	203	43.0	21.5
USF243008	619	737	203	48.1	24.0
USF303008	737	737	203	51.0	25.0
USF363008	914	737	203	23.5	11.7
USF363608	914	914	203	25.0	12.5
USF161210	416	314	254	26.0	13.0
USF161610	416	416	254	26.0	15.0
USF162010	416	518	254	30.0	16.5
USF201610	518	416	254	33.0	15.5
USF202010	518	518	254	31.0	15.5
USF202410	518	518	254	33.6	16.8
USF241610	619	416	254	34.0	17.0
USF242010	619	518	254	38.0	19.0
USF242410	619	619	254	36.0	19.0
USF243010	619	737	254	38.0	19.0
USF302010	737	518	254	40.0	20.0
USF302410	737	619	254	40.00	20.0
USF303010	737	737	254	44.0	22.0

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Type Reference	Size			Ex e or Ex ia Screw Type Terminals	Ex e ia Cage Clamp Type Terminals
	Height (mm)	Width (mm)	Depth (mm)	Maximum Power Dissipation (W) T6/T80°C at Ta =+40°C T5/T95°C at Ta =+55°C T4/T130°C at Ta = +90°C	Maximum Power Dissipation (W) T6/T80°C at Ta =+40°C T5/T95°C at Ta =+55°C T4/T130°C at Ta = +90°C
USF362410	914	518	254	46.0	23.0
USF363010	914	737	254	50.0	25.0
USF363610	914	914	254	46.0	23.0
USF423610	1076	914	254	45.0	22.5
USF482410	1229	619	254	45.0	22.5
USF483610	1229	914	254	52.0	26.0
USF603610	1534	914	254	52.0	25.0
USF202012	518	518	305	36.0	19.0
USF242012	619	518	305	38.0	19.0
USF302412	737	619	305	40.0	20.0
USF303012	737	737	305	46.0	23.0
USF362412	914	619	305	42.0	21.0
USF402412	1026	619	305	50.0	25.0
USF363012	914	737	305	46.0	23.0
USF363612	914	914	305	42.0	21.0
USF402412	1026	619	305	44.2	22.0
USF363012	914	737	305	46.0	23.0
USF363612	914	914	305	52.0	26.0
USF483612	1229	914	305	56.0	28.0
USF603612	1534	914	305	56.0	28.0
USF242416	619	619	406	42.0	21.0
USF363016	914	737	406	42.0	21.0
USF483616	1229	914	406	42.0	21.0
USF242420	619	619	508	57.3	28.6
USF302420	737	619	508	57.3	28.6
USF363020	914	737	508	57.3	28.6

Tables 1 to 2 represent the standard sizes of Junction Boxes and the Maximum Power Dissipation for each size. If non-standard size enclosures are produced that fall between the sizes listed in the table, the Maximum Power Dissipation of the next smaller standard size is to be applied. If non-standard size enclosures are produced that are larger than the largest size in the tables, up to the maximum size of enclosure allowed by the associated component certificate, the maximum Power Dissipation of the largest standard size in the table will be applied. Non-standard size enclosures smaller than the smallest standard size in the table are not covered by this certification.

Suitably certified cable entry, blanking plugs and/or breather drain devices may be fitted into the enclosure via the holes, provided they meet IP and ambient requirements marked on the enclosure.

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The catalogue numbers are as follows:

PRODUCT NOMENCLATURE – Series USF, SJIC, SJICN and SJICH Terminal Boxes:

USF	**121206**	**S**	**W**	**1**	**2**	**1**	**WF**	**1**	**XXXXXX**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

1. USF Series Constant
2. Size (length x width x depth, inches)
3. Enclosure Material
   Blank = Stainless Steel 316
   S = Stainless Steel 304
   C = Carbon Steel Painted
4. Terminal Manufacturer
   W = Wiedmuller
   P = Phoenix
   A = ABB
   G = WAGO
   K = Klemsan
5. Terminal Rows
   1 = 1
   2 = 2
   3 = 3
   4 = 4
   5 = 5
   6 = 6
   7 = 7
   8 = 8
6. Terminal Size ($mm^{2)}$
   1 = 1.5
   2 = 2.5
   3 = 3
   4 = 4
   5 = 5
   6 = 6
   10 = 10
   16 = 16
   35 = 35
   50 = 50
   70 = 70
   95 = 95
   125 = 125
   150 = 150
   185 = 185
   250 = 250
   300 = 300
7. Gland Plates
   Blank or 0 = None
   1 = BTM (bottom)
   2 = LHS (left hand side)
   3 = TOP (top)
   4 = RHS (right hand side)

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8. Fixing
   WF = Welded Feet
   Blank = Standard
9. Options
   Blank = No Options
   1 = Key Locking
   2 = Document Wallet
   3 = Tag label
   4 = Earth Wire
   5 = Continuous Hinge
10. XXXXXX – Additional numbers and letters may follow

SJIC	**4**	**040404**	**W**	**1**	**2**	**1**	**1**	**XXXXXX**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**

1. Series (Cover Style)
   SJIC – Screw Cover
   SJICH – Hinged Screw Cover
2. Enclosure Material
   Blank = Carbon Steel Painted
   4 = Stainless Steel 304
   6 = Stainless Steel 316
   N = Polymeric Enclosure (HKH Series)
3. Size (length x width x depth, inches)
4. Terminal Manufacturer
   W = Wiedmuller
   P = Phoenix
   A = ABB
   G = WAGO
   K = Klemsan
5. Terminal Rows
   1 = 1
   2 = 2
   3 = 3
   4 = 4
6. Terminal Size ($mm^{2)}$
   1 = 1.5
   2 = 2.5
   3 = 3
   4 = 4
   5 = 5
   6 = 6
   10 = 10
   16 = 16
   35 = 35
   50 = 50
   70 = 70
   95 = 95
   125 = 125
   150 = 150

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185 = 185
250 = 250
300 = 300

7. Gland Plates
   Blank or 0 = None
   1 = BTM (bottom)
   2 = LHS (left hand side)
   3 = TOP (top)
   4 = RHS (right hand side)
8. Options
   Blank = No Options
   1 = Key Locking
   2 = Document Wallet
   3 = Tag label
   4 = Earth Wire
9. XXXXXX – Additional numbers and letters may follow

Conditions Of Manufacture

i. As defined, the Junction Boxes may also be manufactured to sizes not specified in the documentation provided that any given dimension is not larger than the respective dimension of the largest enclosure or smaller than the respective dimension of the smallest enclosure. The marked power rating shall be the power rating of the next smallest size of enclosure.

ii. When terminals are installed the following shall be considered:

Temperature Classification/Surface Temperature	Minimum Service Temperature of Terminal
T6/T80°C	+80°C
T5/T95°C	+95°C
T4/T130°C Stainless enclosures ONLY	130°C Stainless Enclosures ONLY

iii. Suitably certified cable entry devices may be fitted into the enclosure via through holes provided they meet the minimum IP requirements marked on the enclosure.

iv. When the junction boxes are equipped by the manufacturer with wired terminals, a routine electric strength test shall be conducted in accordance with IEC 60079-7 and EN 60079-7 Clause 6.1.

v. The maximum dissipated power in watts, for each junction box, shall be calculated in accordance with IEC 60079-7 and EN 60079-7, Annex E, E.2 and shall not exceed the value given in the Tables 1 to 4 detailed in the product description.

vi. The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.

vii. The manufacturer must ensure compliance with the Special Conditions for Safe Use detailed on the terminal certificates. Copies of the terminal Certificates are to be supplied to the end user to ensure compliance on installation of wiring and cross-connectors (where applicable).

viii. When installing the following certified terminals, the ambient is to be marked accordingly:

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Terminal Certificate	Lower ambient
IECEX KEM 07.0015U IECEx KEM 07.0010U	-45°C

When Weidmüller WDU 1.5 or WDU 2.5 type of terminals are fitted, they are limited to a maximum current of 15A.

ix. When provided in non-metallic enclosures (series SJICN), the maximum ambient temperature is limited to +60°C and temperature classes are limited to T6/T5.

Full Certificate Change History

Issue 1 – this Issue introduced the following changes:

1. Updated marking for SJIC/SJICH and USF Junction Boxes.
2. ExTR GB/SIR/ExTR14.0247/01 replaces GB/SIR/ExTR14.0247/00.

Issue 2 – this Issue introduced the following changes:

1. Addition of small certified IECEx Polymeric Enclosures (Series HKH) to the SJIC Junction/ Terminal Box certificates. The description and conditions of manufacture were amended to reflect these changes.
2. The certificate for a component (terminal) used in the junction boxes was updated, and the conditions of manufacture were amended to reflect the changes.
3. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC60079 0:2011 Ed 6 and IEC 60079-7:2006 Ed 4 were replaced by IEC 60079-0:2017 Ed.7 and IEC 60079-7:2015/A1:2017 Ed.5. The markings have been updated in accordance with the latest standards.

Issue 3 – this Issue introduced the following change:

1. The certificate holders address was changed:

   From: 3940 Dr. Martin Luther King Drive Saint Louis Missouri 63113 USA
   To: 2112 Fenton Logistics Park Blvd., Fenton Missouri 63026 USA

Issue 4 – this Issue introduced the following change:

1. To incorporate additional approved terminal blocks to certification.
2. Minor administrative corrections in certificate to reflect correct terminal block size and catalog logic.
3. Minor administrative amendment to insert 'SJICN' in product name/model.

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