



QPS Evaluation Services Inc



(1) EU-Type Examination Certificate

(2) **Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014**

(3) EU-Type Examination Certificate Number: **QPS 22ATEX5002X** Issue Number: 1

(4) Product: LED Luminaires Model:
 1. Killark's VM4L/VMLX/VMLXC...iE Series
 2. Chalmit's EN2C / ECXC...LE Series

See Annex for the detail of Models, and Temperature classification

(5) Manufacturer:
 1. Killark - A Division of Hubbell Inc. (Delaware)
 2. Chalmit-A Division of HUBBELL Ltd. (UK)

(6) Address:
 1. 2112 Fenton Logistics Park Blvd.
 Fenton, Missouri 63026, United States of America.
 2. 388 HILLINGTON ROAD, GLASGOW, UK G52 4BL

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

(8) QPS Evaluation Services Inc. 81 Kelfield St., Units 7-9, Toronto, ON M9W 5A3, Canada, Notified Body Number 2900, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product 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 confidential test report number ATX1728-4
 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

(9)

EN IEC 60079-0 : 2018

EN IEC 60079-31 : 2014

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive 2014/34/EU article 13 apply to the manufacturing process and supply of this product. These are separately certified and not covered by this certificate.

(12) The marking of the product shall include the following:



II 2 D

Ex tb IIIC T135 Db, IP66

Date of certification: 07 November 2023

Rob Kohuch
 Certification Manager
 QPS Evaluation Services Inc.



EU-Type Examination Certificate without signature shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by QPS Evaluation Service Inc. The SCC Accreditation Symbol is an official symbol of the accreditation body and notifying authority, used under license.

QPS Inc. 81 Kelfield St., Units 7-9, Toronto, ON M9W 5A3 Tel: 416-241-8857
 www.qps.ca



(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate QPS 22ATEX5002X**

Issue No. 1

(15) **Description and Electrical data**

The LED luminaires Killark's model VM4L / VMLX, VMLXC Series and Chalmit's model EC2N / EXEC have rated inputs of 100 thru 277 Volt, and 378-480 Vac 50/60Hz and 12-24 Vdc or 105 thru 250 VDC. The LED luminaires with battery backup Killark's model (...iE) and Chalmit's model (...LE) series LED luminaires are rated inputs 100 thru 277 Volt, 50/60 Hz and 378-480 Vac 50/60Hz. The VM series luminaires is intended to install in the permanent location where moisture, dirt, duct, and hazardous condition atmospheres present. The luminaire enclosure comprises of Mounting Splice Boxes, LED tank assembly, Reflector and Optic. An optional wired guard, Battery Backup and dome reflector can be attached to the LED Tank Assembly

Type identification: LED Luminaires Models.

1. Killark's VM4L/VMLX/VMLX/VMLXC
2. Chalmit's EC2N / ECXC

(16) **Report Number: ATX1728-4**

(17) **Specific conditions of use:**

- Read Installation, Operation and Maintenance Manual first.
- Do not open when energized.
- Do not open when an explosive atmosphere is present.
- The Luminaire shall only be installed where there is a low risk of mechanical damage.

(18) **Essential Health and Safety Requirements**

Met by compliance with the requirements mentioned in item 9.

(19) **Remarks and additional information:**

Note: An * is included before the title of documents that are new or revised.

(20) **Certificate history**

Issue 0 - 2022/04/30; Initial certificate.

Issue 1 - 2023/11/07;

- 1) Additional LED chip types
- 2) 347-480 transformer in combination with battery backup.
- 3) VMLXC tank to mount to Crouse Hinds CM2, CM3, TWM2 and TWM3 mounts.
- 4) Maximum wattage for PC Globe increased to 250W.
- 5) Additional drivers
- 6) Inclusion of Chalmit nomenclature

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Annex**1. Nomenclature for VM4L / (for Killark) and EC2N (for Chalmit brands)**

Item	Detail																																	
Type identification	Series VM4L B 130 30 0 0 00 0 00 (Sample)																																	
	<table><tr><td>V4ML/EC2N</td><td>B</td><td>130</td><td>/E2</td><td>30</td><td>0</td><td>0</td><td>00</td><td>0</td><td>0</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr></table>	V4ML/EC2N	B	130	/E2	30	0	0	00	0	0	1	2	3	4	5	6	7	8	9	10													
	V4ML/EC2N	B	130	/E2	30	0	0	00	0	0																								
	1	2	3	4	5	6	7	8	9	10																								
	1: Housing Series <u>Killark's Model: VM4L.</u> or <u>Chalmit's Model: EC2N</u>																																	
	2: Type of heat sink: B : Bulb, or C : Concave (Killark's Only)																																	
	3: Rated light Wattage:																																	
	<table><tr><th>Killark's Rating option</th><th>Chalmit's rating option</th></tr><tr><td>18 or 130 = 130 Watts</td><td>16L</td></tr><tr><td>14 or 105 = 105 Watts</td><td>--</td></tr><tr><td>120 = 120 Watt</td><td>--</td></tr><tr><td>100 = 100 Watts</td><td>--</td></tr><tr><td>12 or 090 = 90 Watts</td><td>12L</td></tr><tr><td>080 = 80 Watts</td><td>--</td></tr><tr><td>070 = 70 Watts</td><td>--</td></tr><tr><td>9 or 065 = 65 Watts</td><td>09L</td></tr><tr><td>055 = 55 Watts</td><td>--</td></tr><tr><td>7 or 050 = 50 Watts</td><td>--</td></tr><tr><td>6 or 040 = 40 Watts</td><td>06L</td></tr></table>										Killark's Rating option	Chalmit's rating option	18 or 130 = 130 Watts	16L	14 or 105 = 105 Watts	--	120 = 120 Watt	--	100 = 100 Watts	--	12 or 090 = 90 Watts	12L	080 = 80 Watts	--	070 = 70 Watts	--	9 or 065 = 65 Watts	09L	055 = 55 Watts	--	7 or 050 = 50 Watts	--	6 or 040 = 40 Watts	06L
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055 = 55 Watts	--																																	
7 or 050 = 50 Watts	--																																	
6 or 040 = 40 Watts	06L																																	
4: Battery Backup model: (blank No backup Mode) / E2 – Battery Backup																																		
5: Input Voltage: Killark: 30 : 100-277 Vac, or 34: 105-250Vdc or Chalmit's: 'LE'. 100-277 Vac																																		
6: Mounting Type:																																		
A —Pendant B —Wall Bracket C —Cone Top D —Stanchion 25° X —Ceiling S —Stanchion Straight 90°																																		
7: Conduit Entry:																																		
<table><tr><td>2—3/4" NPT (A,B,C,X)</td><td>3—1" NPT (A,B,C,X)</td></tr><tr><td>4—1 1/4" NPT (D,S),</td><td>5—1 1/2" NPT (D,S)</td></tr><tr><td>6—3/4" NPT 5-Hub (X),</td><td>7 --1" NPT 5-Hub (X)</td></tr><tr><td>8—M20 4-Hub (X),</td><td>9 --M25 5-Hub (X)</td></tr></table>										2—3/4" NPT (A,B,C,X)	3—1" NPT (A,B,C,X)	4—1 1/4" NPT (D,S),	5—1 1/2" NPT (D,S)	6—3/4" NPT 5-Hub (X),	7 --1" NPT 5-Hub (X)	8—M20 4-Hub (X),	9 --M25 5-Hub (X)																	
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8—M20 4-Hub (X),	9 --M25 5-Hub (X)																																	
8: Optic:																																		
GL = Glass Globe (VMG25) GG = Globe and Guard R5 = Refractor type 5 (VMR255) R3 = Refractor type 3 (VMR253) R1 = Refractor type 1 (VMR251) ER = Enclosed Reflector (VMER40) S5 = 12" Spin top refractor type 5(VZRG4050) S2 = 12" Spin top refractor type 2(VMRG4020) GF – 12" Spin-top Flat Glass Optic (VZRGF12)																																		
9– Guard																																		
G = Guard, N = No Guard																																		

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	10- Options XXXX - Four-digit number referring to correlated color temperature and the color rendering Index. TURTLE -Amber colored LEDs primarily used to protect wildlife. PCAMBER -Amber colored LEDs that provide the amber color through Phosphor Coating.
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2. Temperature Classes for V4ML (for Killark) and EC2N (for Chalmit brands)

Catalog Number	Rated Ambient Temp °C	LED Type	LED Watts	"ec" IIC	"td" IIC	Supply Wire Temp Deg C
				Globe/Refractor w/ Reflector		
VM4L(B/C)13030	40	D/E/G	130	T4	83°C	75
VM4L(B/C)13030	55	D/E/G	130	T140°C	83°C	90
VM4L(B/C)10530	40	C/F/G	105	T4	83°C	75
VM4L(B/C)10530	55	C/F/G	105	T140°C	83°C	90
VM4L(B/C)10534	40	C	105	T4	83°C	75
VM4L(B/C)10534	55	C	105	T140°C	83°C	90
VM4L(B/C)10030	40	D/E/F/G	100	T4	83°C	75
VM4L(B/C)10030	55	D/E/F/G	100	T4	83°C	90
VM4L(B/C)09030	40	D/E/G/H/I	90	T4	83°C	75
VM4L(B/C)09030	55	D/E/G/H/I	90	T4	83°C	90
VM4L(B/C)08030	40	C/G/H/I	80	T4	83°C	75
VM4L(B/C)08030	55	C/G/H/I	80	T4	83°C	90
VM4L(B/C)07030	40	D/E/G/H/I	70	T4	83°C	75
VM4L(B/C)07030	55	D/E/G/H/I	70	T4	83°C	90
VM4L(B/C)06530	40	D/E/G/H/I	65	T4	83°C	75
VM4L(B/C)06530	55	D/E/G/H/I	65	T4	83°C	90
VM4L(B/C)05530	40	C/D/E/G/H/I	55	T4	83°C	75
VM4L(B/C)05530	55	C/D/E/G/H/I	55	T4	83°C	90
VM4L(B/C)05030	40	D/E/G/H/I	50	T4	83°C	75
VM4L(B/C)05030	55	D/E/ G/H/I	50	T4	83°C	90
VM4L(B/C)04030	40	C/ G/H/I	40	T4	83°C	75
VM4L(B/C)04030	55	C/ G/H/I	40	T4	83°C	90

LED Types:

- A) Nichia, white, LED Model: NS9W153MT - (W = 3.675 Watts) (Rjs = 10 °C/W)
- B) Nichia, white, LED Model: NS9W153AMT - (W = 3.5 Watts) (Rjs = 10 °C/W)
- C) Nichia, white, LED Model: Nichia NVSW219B – (W = 2.19 Watts) (Rjs = 6 °C/W)
- D) Cree, white, LED Model: Cree XML – (W = 2.03 Watts) (Rjs = 2.5 °C/W)
- E) Cree, white, LED Model: Cree XML2– (W= 2.03 Watts) (Rjs = 2.5°C/W)
- F) Cree, white, LED Model: Cree XP-L- (W=2.03W) (Rjs = 2.1°C/W)
- G) Cree, white, LED Model: Cree XP-G3–(W = 2.0 W)(Rjs=3 °C/W)
- H) Cree, amber, LED Model: Cree XP-E2–(W = 1.8 W)(Rjs=7 °C/W) (TURTLE)
- I) Cree, PC Amber, LED Model: Cree XP-E2–(W = 2.3 W)(Rjs=9 °C/W) (PCAMBER)

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3. Compatible Adapter for VM4L/VMLX Series LED Luminaire.

Accessories	<p>Adapters for Ex ec IIC T140°C or T4 Gc , Ex tb IIIC T83°C Db . IP66</p> <p>The KILLARK's VM series is the compatible adapters that use with the VM4L Series Luminaire. The VM Series fixture mount adapter model number VMCHVM, VMCHVM-DEEP, VMGEH2, VMHLLDS, VMHPP2, VMM2LP, VMM3KP, SPL26748 and VMRS6470-12/13 for use with specified fixture fitting in conjunction with /VM4L series luminaire.</p> <ul style="list-style-type: none"> • KILLARK Series VMCHVM fixture mount adaptors, model number VMCHVM and VMCHVM-deep for use with specified fixture fitting in conjunction with KILLARKS Series VM4L series LED Luminaire. Rated input: 100-277 Vac or 105-250Vdc, with optional Backup mode. Output up to: 130 W max. May supplied with either Globe, Enclosed Reflector, or Refractor. For use with power supply wiring rated up to 90°C Max. <p>The VMCHVM fixture adaptors are for use on listed Crouse Hinds Fixtures Cat. Nos. CM2, CM3, TWM2 and TWM3 Mounting Covers.</p> <ul style="list-style-type: none"> • KILLARK Series VM Fixture Mount adaptors, Model Numbers. VMGEH2, VMHLLDS, VMHPP2, VMM2LP, VMM3KP, and SPL26748, for use with specified fixture fitting in conjunction with KILLARK Series VM fixtures, Rated input: 100-277 Vac or 105-250Vdc, with optional Backup mode. Output up to: 130 W max. May supplied with either Globe, Enclosed Reflector, or Refractor. For use with supply wiring rated up to 90°C Max. <ul style="list-style-type: none"> - The VM Series fixture Adaptor are for use on listed Crouse Hinds and Appleton Fixture Mounting Covers (See table below) in conjunction with Series VM fixture fitting. - The KILLARK's VMGEH2 fixture adaptors are for use with General Electric Series H2 Fixtures Mounting Covers (See table below) in conjunction with Series VM fixture fitting. - The KILLARK's VMHPP2 fixture adaptors are for use with Holophane Series P2 (Petrolux II) Fixtures Mounting Covers (See table below) in conjunction with Series VM fixture fitting. - The VM to STAHL adapter (Cat. VMRS6470-12/13) adapter is to be used with R. Stahl® 6470 Series.
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Accessories (Continuous)	Killark VM Adaptor Model	For Use with
	VMGEH2	GE® filtr-gard® H2; Using fixture mounts H2000-3C, H2000-4C, H2000-3F, H2000-4F, H2000-5J, H2000-6J, H2000-3P, H2000-4P, H2000-5S, H2000-6S, H2000-3W, H2000-4W, H2000-6P
	VMHLDS	Thomas and Betts® Hazlite® M2, M3; Hazbatt® 2, 3; Using fixture mounts HV1, VP2, VF2, VA2, VC2, Vb2, VS5 and VL5
	VMHPP2	Holophane® Petrolux® II or Petrolux®
	VMM2LP	Appleton® MercMaster® II Series; Using fixture mounts LPA-75/100, LPC-75/100, LPWB-75/100, LPS-125/150.
	VMM3KP	Appleton® MercMaster® III or MercMaster® LED Series; Using fixture mounts KPA-75/100/M20, KPCH-75-75/100/M20, KPC-75/100/M20, KPWB-75/100/M20, KPS-125/150, KPST-125/150.
	SPL26748	Holophane® Petrolux® II-Using Ceiling mounting cover(PETLCE)
	VMRS6470-12/13	Adapters are to be used with R. Stahl® 6470 Series. (VM to STAHL adapter)
	The adapter VM series has no effect on the temperature classification of the VM4L/VMLX/VMLXC series LED luminaire when used together.	

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4. NOMENCLATURE for VMLX, *VMLXC Series for Killark

Example: Cat. No. VML 2 X 28 iE 30 F

VMLX / VMLXC	2	X	28	___/ iE	30	F	00	0	0	F
1	2	3	4	5	6	7	8	9	10	11

1: Series Designation-VMLX;*VMLXC (Series Constant) for Killark**2: Tank Size:**

1	Small	80W max Approx. 5000, 7000, 9000lm
2	Medium	140W max Approx. 12000, 15000, 18000lm
3	Large	250W max Approx. 23000, 28000lm

3: Fixture Lumen Output in 1000s of Lumens

28- Maximum 28,000 lumens which corresponds to 250 watts. Other lower wattage fixtures are follows.

'X--'	28	23	18	15	12	9	7	5	3
Watts	250	200	140	120	100	75	55	40	25
Lumens	28000	23000	18000	15000	12000	900	7000	5000	3000

4: Battery Backup model: (blank No backup Mode) / (80W) Size 1 and Size 2 tanks

iE05 500 Lumen
iE1 1000 Lumen

5: Voltage- Input Supply:

27 - 12-24 Vdc
30 - 120 thru 277 Vac, 50/60 Hz
33 - 347 thru 480 Vac, 50/60 Hz
34 - 105 thru 250 Vdc

6: Mounting Splice Box:

Blank - No Splice Box provided
A - Pendant (VMA2B, VMA3B)
B - Wall Bracket (VMB2B, VMB3B)
C - Cone Top (VMC2B, VMC3B)
D - Stanchion 25° (VMD4B, VMD5B)
X - Ceiling (VMX2B, VMX3B, VMX6B, VMX7B, VMX8B, VMX9B)
S - Stanchion Straight 90° (Straight) (VMS4B, VMS5B)
* VMLX-CH Adapter for VMLX mount to Crouse Hinds CM2, CM3, TWM2 and TWM3 mounts.

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7: Conduit Entry:

2—3/4" NPT (A,B,C,X)	3—1" NPT (A,B,C,X)
4—1 1/4" NPT (D,S),	5—1 1/2" NPT (D,S)
6—3/4" NPT 5-Hub (5 hubs)	7 --1" NPT 5-Hub (5 hubs)
8—M20 (Metric-4 hubs)	9 --M20 (Metric 5-Hubs)

8: Optic:

Blank	Type 5-No optics
5W	Type 5 wide (140W max)
T1	Type 1 (80W max)
T3	Type III (80W max)

9- Guard**G** = Guard, **N** = No Guard**10- Globe**

Blank	Glass
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11- Options

F	Single Fuse
FF -	Double Fuse
SP -	Added Surge Protector
Px -	Photocell factory installed (x = Factory Wired Voltage)
xH -	Optional Paint (i.e. RH = Red Housing)
YYZZ -	White LED Chromaticity where YY= correlated color temperature (CCT) minimum 3000K; ZZ = Color Rendering Index (CRI) maximum 95 (No value=Standard 5000K CCT 70 CRI minimum)
AMBER -	Amber colored LEDs primarily used to help protect marine wildlife
*PCAMBER	Phosphor Coated Amber LEDs
CISPR -	CE Marked driver
GREEN -	Green colored LEDs. Primarily used to help protect migratory birds.
HA -	High Ambient: bigger tank with lower wattage fixture for use in higher Ambient.
AR -	Angled Reflector
DR -	Dome Reflector

An * is included before the title of documents that are new or revised.

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5. NOMENCLATURE for ECXC/ (Chalmit brand)**Example: Catalog Number ECXC/18L/LE/EM/M25/WM/M**

Series Designation	Lumen Output	Emergency Mode	Options
1	2	3	4

1- Series Designation = ECXC/**2- Lumen Output (Approximate Lumens in Thousands)**

	18L/LE	15L/LE	12L/LE	9L/LE	7L/LE	5L/LE	3L/LE
Watts	140	120	100	75	55	40	25
Lumens	18000	15000	12000	900	7000	5000	3000

3- Battery Backup Model (blank no backup mode) / (80Wmax) Size 1 and Size 2 tanks

/EM	1000 Lumen in emergency mode – 90minutes
/EM/3H	500 Lumen in emergency mode – 3 hours

4- Options

/M25 = M25 Cable entries

/DC = 105-250Vdc

/WM = Wall mounted version (with 2xM20 and 2xM25 entries)

/ST = Stanchion mounted version

/PE = Pendant mounted version (for M25 conduit)

/3K = 3000K CCT

/4K = 4000K CCT

/AM = Amber colored LEDs. Primarily used to help protect marine wildlife.

/GR = Green colored LEDs. Primarily used to help protect migratory birds.

/PA = Amber colored LEDs that provide the amber color through Phosphor Coating

/HA = High Ambient: bigger tank with lower wattage fixture for use in higher Ambient

/P1 = Photocell factory installed for use with 120VAC supply

/P2 = Photocell factory installed for use with 208-277VAC supply

/AR = Angled Reflector

/DR = Dome Reflector

/W = Type V wide optic (140W max)

/M = Type I optic (80W max)

/AS = Type III optic (80W max)

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6. Operating Temperatures for model VMLX and *VMLXC for Killark and Model *ECXC for Chalmit brands.

*Maximum temperature for battery backup fixtures is 50°C

Catalog Number	Wattage	40 ° C Ambient			55 ° C Ambient			65 ° C Ambient		
		"ec" IIC	"tb" IIIC	Supply Wire Temp ° C	"ec" IIC	"tb" IIIC	Supply Wire Temp ° C	"ec" IIC	"tb" IIIC	Supply Wire Temp ° C
VML3X2830/33/34	250	T4	T135	90	T3	T135	90	--	--	--
VML3X2330/33/34	200	T4	T135	90	T3	T135	90	--	--	--
VML2X1830/33/34 ECXC/18L/LE	140	T4	T135	90	T4	T135	90	--	--	--
VML2X1530/33/34 ECXC/15L/LE	120	T4	T135	90	T4	T135	90	--	--	--
VML2X1230/33/34	100	T4	T135	90	T4	T135	90	--	--	--
VML3X1830/33/34 HA	140	T4	T135	90	T4	T135	90	T4	T135	90
VML3X1530/33/34 HA	120	T4	T135	90	T4	T135	90	T4	T135	90
VML3X1230/33/34 HA	100	T4	T135	90	T4	T135	90	T4	T135	90
VML1X930/33/34 ECXC/9L/LE	75	T4	T135	90	T4	T135	90	--	--	--
VML1X730/33/34 ECXC/7L/LE	55	T4	T135	90	T4	T135	90	--	--	--
VML1X530/33/34 ECXC/5L/LE	40	T4	T135	90	T4	T135	90	--	--	--
VML1X327/30/33/34 ECXC/3L/LE	25	T4	T135	90	T4	T135	90	--	--	--
VML2X930/33/34 HA ECXC/9L/LE/HA	75	T4	T135	90	T4	T135	90	T4	T135	90
VML2X730/33/34 HA ECXC/7L/LE/HA	55	T4	T135	90	T4	T135	90	T4	T135	90
VML2X530/33/34 HA ECXC/5L/LE/HA	40	T4	T135	90	T4	T135	90	T4	T135	90