

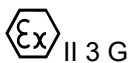


Type Examination Certificate CML 15ATEX4101X Issue 2

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **WM4L/VM4L Series LED Luminaires**
- 3 Manufacturer **Killark, a Division of Hubbell Inc. (Delaware)**
- 4 Address 3940 Martin Luther King
Drive
St Louis
MO 63113
USA
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of equipment intended for use in potentially explosive atmospheres given in Annex II of Directive 2014/34/EU.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of certification (affecting correct installation or safe use). These are specified in Section 14.
- 8 This Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Annex VIII apply to the manufacture of the equipment or component.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN 60079-0:2012 + A11:2013 EN 60079-15:2010
- 10 The equipment shall be marked with the following:



II 3 G

Ex nA IIC T* Gc

Ta = -40°C to +40/55°C

* T4 or T140°C depending on model, power rating and ambient temperature



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11 Description

The WM4L/VM4L series luminaire LED lighting units are intended to be installed in a permanent location where moisture, dirt, dust, and hazardous atmospheres are present. The luminaires comprise an aluminium mounting splice box, LED tank assembly with glass globe, reflector and optics. An optional wire guard and dome reflector can be attached to the LED tank assembly.

The luminaires are rated at 100-277 VAC, 50/60 Hz or 105-250 VDC.

The following model numbers are covered by this certificate,

WM4L/VM4L a bbb cc dd e f gg h

Where,

WM4L/VM4L: Series

a: Heatsink Type:

B – bulb

C – concave

bbb: Rated Light Wattage:

130 or **17** – 130 Watts

105 or **14** – 105 Watts

100 – 100 Watts

090 or **12** – 90 Watts

080 – 80 Watts

070 – 70 Watts

065 or **9** – 65 Watts

055 – 55 Watts

050 or **7** – 50 Watts

040 or **6** – 40 Watts

cc: Battery Backup:

blank – no battery backup

E2 – battery backup

dd: Input Voltage:

30 - 100-277 Vac

34 - 105-250 Vdc

e: Mounting Type:

A - Pendant

B - Wall Bracket

C - Cone Top

D - Stanchion 25°

X - Ceiling

S - Stanchion Straight 90°

f: Conduit Entry:

2 - 3/4" NPT (A,B,C,X)

3 - 1" NPT (A,B,C,X)

4 - 1 1/4" NPT (D,S)

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- 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)

gg: 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 (VZRGF 12)

h: Guard:

- G** = Guard
- N** = No Guard

Standard version (no battery backup): The following temperature classes, maximum surface temperatures and supply wire temperature apply,

Ambient Temp			-40°C to +40°C			-40°C to +55°C			-40°C to +65°C		
Model	LED Wattage	LED Type	II C Gc	III C Db	Supply Wire Temp °C	II C Gc	III C Db	Supply Wire Temp °C	II C Gc	III C Db	Supply Wire Temp °C
WM4L/VM4L(B/C)(130/17) **	130	D/E/F	T4	83	75	T140°C	83	90	-	-	-
WM4L/VM4L(B/C)(105/14) **	105	C/F	T4	83	75	T140°C	83	90	-	-	-
WM4L/VM4L(B/C)105**	105	C/F	T4	83	75	T140°C	83	90	-	-	-
WM4L/VM4L(B/C)100**	100	D/E/F	T4	83	75	T4	83	90	-	-	-
WM4L/VM4L(B/C)(090/12) **	90	D/E/F	T4	83	75	T4	83	90	-	-	-
WM4L/VM4L(B/C)080**	80	C/F	T4	83	75	T4	83	90	-	-	-
WM4L/VM4L(B/C)070**	70	D/E/F	T4	83	75	T4	83	90	-	-	-
WM4L/VM4L(B/C)(065/9)* *	65	C/F	T4	83	75	T4	83	90	T4	82	90



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Ambient Temp			-40°C to +40°C			-40°C to +55°C			-40°C to +65°C		
Model	LED Wattage	LED Type	IIC Gc	IIIC Db	Supply Wire Temp °C	IIC Gc	IIIC Db	Supply Wire Temp °C	IIC Gc	IIIC Db	Supply Wire Temp °C
WM4L/VM4L(B/C)055**	55	C/F	T4	83	75	T4	83	90	-	-	-
WM4L/VM4L(B/C)(050/7)*	50	D/E/F	T4	83	75	T4	83	90	-	-	-
WM4L/VM4L(B/C)(040/6)*	40	C/F	T4	83	75	T4	83	90	-	-	-

LED Types: C - Nichia white NVSW219B
D - Cree white XML
E - Cree white XML2
F - Cree white XP-L

Battery backup version: The following temperature classes, maximum surface temperatures and supply wire temperature apply,

Ambient Temp			0°C to +40°C			0°C to +50°C		
Model	LED Wattage	LED Type	IIC Gc	IIIC Db	Supply Wire Temp °C	IIC Gc	IIIC Db	Supply Wire Temp °C
WM4L/VM4L(B/C)(065/9)E**	65	F	T4	83	75	T4	83	90
WM4L/VM4L(B/C)055E**	55	F	T4	83	75	T4	83	90
WM4L/VM4L(B/C)(050/7)E**	50	F	T4	83	75	T4	83	90
WM4L/VM4L(B/C)(040/6)E**	40	F	T4	83	75	T4	83	90

The KILLARK's VM series adapters are compatible for use with the WM4L/VM4L Series Luminaire. The VM Series fixture mount adapter model numbers VMCHVM, VMCHVM-DEEP, VMGEH2, VMHLDS, VMHPP2, VMM2LP, VMM3KP and SPL26748 are for use with specified fixture fitting in conjunction with WM4L/VM4L series luminaire.

- KILLARK Series VMCHVM fixture mount adaptors, model number VMCHVM and VMCHVM-deep for use with specified fixture fitting in conjunction with KILLARKS Series WM4L /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.

The VMCHVM fixture adaptors are for use with listed Crouse Hinds Fixtures; Cat. Nos. CM2, CM3, TWM2 and TWM3 Mounting Covers.

- KILLARK Series VM Fixture Mount adapters, Model Numbers. VMGEH2, VMHLDS, 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.

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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.

- The VM Series fixture adapter 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 adapttrs are for use with Holophane Series P2 (Petrolux II) Fixtures Mounting Covers (See table below) in conjunction with Series VM fixture fitting.

Killark VM Adapter 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)

The body of the adapter is constructed with 1/8 in. thick cast aluminium with a groove for a gasket.



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Variation 1

This variation introduces the following modifications:

- i. To update the certificate reference to the 2014/34/EU Directive
- ii. The addition of the WM4L series models
- iii. To allow alternative LED drivers to be utilised
- iv. To allow an alternative heatsink design to be used
- v. The addition of battery backup option
- vi. To allow an alternative LED type to be used
- vii. The addition of an alternative wiring and LED board scheme
- viii. The addition of the WM4L/VM4L(B/C)(065/9)** model for operation at an increased +65°C ambient temperature.
- ix. The description has been amended to incorporate the above modifications.

Variation 2

This variation introduces the following modifications:

- i. To allow compatible adapters to be used with the WM4L/VM4L Series Luminaires as accessories components. The VM fixture mount adapter model numbers VMCHVM, VMCHVM-DEEP, VMGEH2, VMHLDS, VMHPP2, VMM2LP, VMM3KP and SPL26748 for use with specified fixture fitting in conjunction with WM4L/VM4L series luminaires.

12 Certificate history and evaluation Reports

Issue	Date	Associated report	Notes
0	22 Dec 2015	R707A/00	Issue of prime certificate
1	17 May 2017	R1587A/00	Introduction of Variation 1
2	30 Apr 2018	R11689A/00	Introduction of Variation 2

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of manufacture

None

14 Special Conditions for Safe Use (Conditions of Certification)

The following conditions relate to safe installation and/or use of the equipment.

- 14.1 The luminaire shall only be installed where there is a low risk of mechanical damage

Certificate Annex



Certificate Number CML 15ATEX4101X
Equipment VM4L Series LED Luminaires
Manufacturer Killark, a Division of Hubbell Inc. (Delaware)

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No.	Sheets	Rev	CML Approved Date	Title
C-24483	1 of 2	1	22/12/015	Assembly, VM4LB Luminaire
C-24483	2 of 2	1	22/12/015	Assembly, VM4LB Luminaire
C-20797	1 of 2	D	22/12/015	Mount, Rigid Pendent Casting
C-20797	2 of 2	C	22/12/015	Mount, Rigid Pendent Casting
C-20799	1 of 3	D	22/12/015	Housing Casting VM/KH Series-7 ¾"Optic
C-20799	2 of 3	B	22/12/015	Housing Casting VM/KH Series-7 ¾"Optic
C-20799	3 of 3	C	22/12/015	Housing Casting VM/KH Series-7 ¾"Optic
B-14806	1 of 1	E	22/12/015	Gasket VM
C-20810	1 of 2	E	22/12/015	Mount, Ceiling, Casting VMX series
C20810	2 of 2	A	22/12/015	Mount, Ceiling, Casting VMX series
C-20822	1 of 2	C	22/12/015	Mount, Stanchion Casting
C-20822	2 of 2	B	22/12/015	Mount, Stanchion Casting
C-20823	1 of 1	C	22/12/015	Mount, Stanchion, Machining VMD-series
C-21398	1 of 2	A	22/12/015	Flex pendant splice box
C-21398	2 of 2	A	22/12/015	Flex pendant splice box
C-20828	1 of 3	B	22/12/015	Casting, Wall mount VMB Series
C-20828	2 of 3	B	22/12/015	Casting, Wall mount VMB Series
C-20828	3 of 3	B	22/12/015	Casting, Wall mount VMB Series
C-21459	1 of 1	A	22/12/015	APUN-TOP Refractor Assembly
C-20806	1 of 1	B	22/12/015	8"wire guard(Low)-VMAG25S(72/3"Optics)
D-21167	1 of 8	D	22/12/015	Globe – VMG25
D-21167	3 of 8	B	22/12/015	8"Optics, VM
B-14805	1 of 1	E	22/12/015	VM low Tank Globe Gasket
D-13423	1 of 1	F	22/12/015	12 in. Refractor guard
D-14759	1 of 2	F	22/12/015	Cone pendant splice box
D-14759	2 of 2	B	22/12/015	Cone pendant splice box
D-18237	1 of 2	F	22/12/015	Straight Stan. splice Box
D-18237	2 of 2	G	22/12/015	Straight Stan. splice Box
D15441	1 of 1	C	22/12/015	VMPA-17 30° Angle Plastic Reflectors

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Drawing No.	Sheets	Rev	CML Approved Date	Title
D-15442	1 of 1	B	22/12/015	VMPD-17 VM Dome Plastic Reflectors
C-19776	1 of 1	B	22/12/015	Reflector, Assy Sealed (VMER40)
C-22179	1 of 1	B	22/12/015	Bracket, Ballast Mounting VE4Q Series
C-22926	1 of 2	A	22/12/015	VM4L LED Mounting (Bulb)
C-22926	2 of 2	A	22/12/015	VM4L LED Mounting (Bulb)
C-23361	1 of 2	C	22/12/015	Heat Sink, Machined, VM4LC Series
C-23361	2 of 2	A	22/12/015	Heat Sink, Machined, VM4LC Series
B-23548	1 of 1	A	22/12/015	S/A Flat 12"Spintop VZRP12/VZRG12
C-23550	1 of 1	B	22/12/015	Housing, Machin, VM4LB & VM4LC
B-24635	1 of 1	B	22/12/015	NAMEPLATE, PRODUCT, IECEX, VM4L SERIES

Issue 1

Drawing No	Sheets	Rev	CML Approved date	Title
C - 25017	1 of 1	1	17/05/2017	Heat Sink, Mach. and Painted, VM4LB
C - 25042	1 of 1	2	17/05/2017	Heat Sink, Painted, VM4LC
B - 24635	1 of 4	B	17/05/2017	Nameplate, IECEX, ATEX VM4L, Non Emergency
B - 24635	2 of 4	B	17/05/2017	Nameplate, IECEX, ATEX VM4L, Emergency
B - 24635	3 of 4	B	17/05/2017	Nameplate, Product, IECEX, ATEX VM4L, Chalmite, Non Emergency
B - 24635	4 of 4	B	17/05/2017	Nameplate, Product, IECEX, ATEX VM4L, Chalmite, Emergency
24635AABM	1 to 3	-	17/05/2017	24635AABM Nameplate Data – Non Emergency 24635AABM Nameplate Data – Emergency

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Issue 2

Drawing No	Sheets	Rev	Issued date	CML Approved date	Title
E18131-3	1 of 1	F	2018-02-07	30 Apr 2018	18131 NAMETAG For VMCHVM
E22920-1	1 of 1	C	2018-02-07	30 Apr 2018	Label, VM adapter
E18466	1 of 1	C	2009-08-06	30 Apr 2018	VMCHVM Adapter (As Cast)
E18467-1	1 of 1	B	2009-08-06	30 Apr 2018	VMCHVM adapter
E23294	1 of 1	A	2011-11-07	30 Apr 2018	CVR BLST WALLPACK
E23302	1 of 1	A	2012-08-27	30 Apr 2018	VMCHVM Deep Adapter
E25166-1A	1 of 2	A	2016-07-22	30 Apr 2018	GE 2 to VM Adapter
E25166-2A	2 of 2	A	2016-07-22	30 Apr 2018	GE 2 to VM Adapter