



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 17ATEX9365X** Issue: **3**

4 Equipment: **Mercmaster LED Generation 3 Luminaires and Mercmaster LED Low Profile Luminaires**

5 Applicant: **Appleton Group LLC**

6 Address: 9377 West Higgins Road
Rosemont
Illinois 60018
USA

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

8 Sira Certification Service, notified body number 0518 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment 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 the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/A11:2013 EN 60079-28:2015 EN 60079-31:2014

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2D

Ex op is tb IIIC T*°C Db * Refer to ambient range table

Refer to the Schedule for the Ambient Temperature range

Project Number 70203598

C Ellaby
Deputy Certification Manager

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

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Issue 3**

13 DESCRIPTION OF EQUIPMENT

Ratings:

Mercmaster LED Generation 3 Luminaires

- APMS050C135UD: Input: 120-277 VAC 50/60 Hz, 125-300 VDC, Output: 22-56 VDC at 0.45-1.35 A (50 W)
- APMS100C105UD: Input: 120-277 VAC 50/60 Hz, 125-300 VDC, Output: 57-150 VDC at 0.45-1.05 A (100 W)
- APMS150C105UD: Input: 120-277 VAC 50/60 Hz, 125-300 VDC, Output: 86-214 VDC at 0.45-1.05 A (150 W)

Mercmaster LED Low Profile Luminaires:

- APMS050C135UD: Input: 120-277 VAC 50/60 Hz, 125-300 VDC, Output: 22-56 VDC at 0.45-1.35 A (50 W)

Ambient Temperature ranges:

Ambient Temperature	EPL	Model Number/Driver Output			
		MLG*L3****BU/5 50 mA	MLG*L5****BU/8 60 mA	MLG*L7****BU/3 90 mA	MLG*L9****BU/4 80 mA
-40°C ≤ T _a ≤ +40°C	EPL Db	81°C	81°C	81°C	81°C
-40°C ≤ T _a ≤ +55°C		88°C	88°C	88°C	88°C
-40°C ≤ T _a ≤ +65°C ¹		94°C	94°C	94°C	94°C

Mercmaster LED Generation 3 Luminaires– Big Primo:

Ambient Temperature	EPL	Model Number/Driver Output			
		MLG*H9****BU/4 80 mA	MLG*H1****BU/5 95 mA	MLG*H3****BU/7 20 mA	MLG*H6****BU/9 00 mA
-40°C ≤ T _a ≤ +40°C	EPL Db	61°C	64°C	66°C	71°C
-40°C ≤ T _a ≤ +55°C		74°C	77°C	79°C	84°C
-40°C ≤ T _a ≤ +65°C ¹		83°C	83°C	86°C	95°C

Mercmaster LED Low Profile Luminaire:

Ambient Temperature	EPL	Model Number/Driver Output		
		MLLED*2****BU/720 mA	MLLED*3****BU/1000 mA	MLLED*4****BU/1300 mA
-40°C ≤ T _a ≤ +40°C	EPL Db	66°C	66°C	66°C
-40°C ≤ T _a ≤ +55°C		79°C	79°C	79°C
-40°C ≤ T _a ≤ +65°C		88°C	88°C	88°C

- 1. For MLG*L7, MLG*L9, MLG*H9, MLG*H1, MLG*H3 and MLG*H6 with voltage range of 125 VDC to 169 VDC operating temperature range is -40°C to +55°C.**



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Mercmaster LED Generation 3 Luminaires (MLG) and Mercmaster LED Low Profile Luminaires (MLLED) LED Luminaires are intended to be used in Zone 2, 21 & 22 classified hazardous locations. The LED Luminaires have metallic enclosures with joints containing gaskets and are suitable for indoor & outdoor use, down light, pole mounted & stanchion applications and are designed to operate within voltages 120 to 277V 50/60Hz, 125-300 VDC. They are offered with below lumen levels:

Mercmaster LED Generation 3 Luminaires (MLG)	
Nominal Lumens	Model Number
3500	MLGL3
5500	MLGL5
7500	MLGL7
9500	MLGL9
9500	MLGH9
11,500	MLGH1
13,500	MLGH3
16,000	MLGH6

Mercmaster LED Low Profile Luminaires (MLLED)	
Nominal Lumens	Model Number
3000	MLLED2
4000	MLLED3
5000	MLLED4

Mercmaster LED Generation 3 Luminaires – Little Primo:

Project Model Numbers

Mercmaster LED Series Luminaires:

Generation 3, Little Primo, Big Primo – MLG:

Catalogue number MLG may be followed by A, C, R, S, T, W, X or Y, followed by L3, L5, L7, L9, H9, H1, H3 or H6, may be followed by 2, 3, 4, 5 or 6 followed by C, N or W, may be followed by, P, D, G, may be followed by 1, 3, 5 or W, followed by BU.

Mercmaster LED Low Profile Luminaires – MLLED:

Cat. No. MLLED, may be followed by A, C, R, S, T, W, X or Y, followed by 2, 3, or 4, may be followed by 2, 3, 4, 5 or 6, followed by C, N or W, may be followed by P5, D5, G5, followed by BU.

Variation 1 - This variation introduced the following changes:

- i. The introduction of an additional manufacturing location: Emerson, Emerson Street No. 4, Parc Industrial Tetarom 2, Cluj Napoca, 400641, Romania, was recognized.
- ii. Assessment of minor drawing modifications, the correction of notes, which are included for clarification/correction only.

Variation 2 - This variation introduced the following changes:

- i. The introduction of an additional DC Input rating (125-169 VDC)
- ii. Minor modifications in nomenclature of the product.

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	15 February 2018	R70138055A	The release of the prime certificate.
1	30 August 2018	N/A	Certificate re-issued to correct a typographical error in the Ambient Temperature range tables.
2	22 October 2018	R70197567A	The introduction of Variation 1.
3	08 February 2019	R70203598A	The introduction of Variation 2.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 Mercmaster LED Series Luminaires with clear and diffused polycarbonate globes may generate ignition capable levels of electrostatic charge. When installing the equipment in a location where external conditions are conducive to the build-up of electrostatic charge on the plastic surface, the equipment shall only be cleaned with a damp cloth and the instructions in the manual followed.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF MANUFACTURE

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 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 CSA/Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.

17.4 In accordance with EN 60079-7:2015 clause 7.1, each manufactured sample of the equipment shall be subjected to an electric strength test using a test voltage of $2U+1000V$ rms for 60 seconds between input and ground wire. Alternatively, a voltage of 20% higher may be applied for 1s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

Certificate Annexe



Certificate Number: Sira 17ATEX9365X
Equipment: Mercmaster LED Generation 3 Luminaires and
Mercmaster LED Low Profile Luminaires
Applicant: Appleton Group LLC

Issue 0

Drawing no.	Sheets	Rev.	Date (Sira Stamp)	Description
503712	1 of 1	C	25 Jan 18	Threaded plug
607646	1 of 1	F	25 Jan 18	Glass globe lens
609233	1 of 1	K	25 Jan 18	Assembly drawing, PCB with 22 LEDs
609235	1 of 1	K	25 Jan 18	Assembly drawing, PCB with 36 LEDs
609236	1 of 1	K	25 Jan 18	Assembly drawing, PCB with 51 LEDs
618250	1 to 3	K	25 Jan 18	Assembly drawing, Mercmaster LED Low Profile Luminaires
618251	1 to 4	L	25 Jan 18	Assembly drawing, Mercmaster LED Generation 3 Luminaires, Little Primo
618252	1 to 4	L	25 Jan 18	Assembly drawing, Mercmaster LED Generation 3 Luminaires, Big Primo
663530	1 of 1	B	25 Jan 18	Label, Warning
663565	1 of 1	B	25 Jan 18	Label, Mercmaster LED Low Profile Luminaires
663566	1 of 1	A	25 Jan 18	Label, Ratings, Mercmaster LED Generation 3 Luminaires, Type I & III
663567	1 of 1	A	25 Jan 18	Label, Temperature, Mercmaster LED Generation 3 Luminaires, Type I & III
663568	1 of 1	A	25 Jan 18	Label, Temperature, Mercmaster LED Generation 3 Luminaires, Type V & V Wide
299707454	1 of 1	03	25 Jan 18	LED Driver drawing 50W
299707455	1 of 1	03	25 Jan 18	LED Driver drawing 100W
299707456	1 of 1	03	25 Jan 18	LED Driver drawing 150W
Mercmaster T-Code Chart	1 of 1	11.0	25 Jan 18	Temperatures and Temperature Codes for each model series and lumen output.

Issue 1 – No Drawings introduced this Issue.

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
663565	1 of 1	D	16 Oct 18	Label, Mercmaster LED Low Profile Luminaires
663566	1 of 1	B	16 Oct 18	Label, Ratings, Mercmaster LED Generation 3 Luminaires, Type I & III
663568	1 of 1	B	16 Oct 18	Label, Temperature, Mercmaster LED Generation 3 Luminaires, Type V & V Wide

Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
663567	1 of 1	B	18 Dec 18	MERCMaster LED, TEMPERATURE LABEL- IECEX/ATEX TYPE I & III
663568	1 of 1	C	18 Dec 18	MERCMaster LED, NAME PLATE TEMPERATURE LABEL, TYPE V&V WIDE --- IECEX/ATEX

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