

BUREAU VERITAS
Certification



Certificate of Conformity

AWARDED TO APPLICANT

APPLETON GROUP – ATX

EIN, 35 RUE ANDRÉ DUROUCHEZ
80084 – AMIENS CEDEX 2 – FRANCE

MANUFACTURER: S.C. EMERSON S.R.L. BU
STR. EMERSON NR. 4 – RO - 400641 CLUJ NAPOCA - ROMANIA

Bureau Veritas Certification certifies that the Product in the scope of supply specified below has been evaluated and found to comply with the requirements of the reference documents.

Documents of Reference

ORDINANCE N° 179 FROM INMETRO, ISSUED IN MAY 18TH 2010,
ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-7:2018, ABNT NBR IEC 60079-7:2018,
ABNT NBR IEC 60079-31:2014 and ABNT NBR IEC 60529:2017.
CERTIFICATE ISSUED BASED ON THE MANUFACTURER EVALUATION OF QUALITY
MANAGEMENT SYSTEM AND PRODUCT TESTS MODEL

Scope of Supply

LED LUMINAIRE
MODEL: MERCMASTER GENERATION 3 MLG AND MERCMASTER LOW PROFILE
MLLED AND MLT
MARKING: ACCORDING PAGE N° 07

Initial date of this Certificate: **MAY 19TH 2020.**

Certificate valid until: **MAY 18TH 2023.**

This Certificate of Conformity was issued according to the certification model 5 and is valid only accompanied by pages 1 to 7. The validity of this Certificate is linked to carrying out assessments maintenance and treatment of possible non-conformity in accordance with the Bureau Veritas Certification guidelines and in the specific Inmetro Ordinances (RAC).

To check the updated condition of regularity of this Certificate must be obtained from the product database and Certificate Services on Inmetro site.

Product Certification Contract: **BR.2822864 e BR.3722152**

Certificate since: **MAY 19TH 2020.**

INMETRO Certificate Number: **BVC20.3821-X**

Vagner Valentino
Coordenador Técnico de Certificação de Produto



**BUREAU
VERITAS**
2007141539001

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3° andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br



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SPECIFICATION:

Mercmaster LED Generation 3 Luminaires (MLG, MLGX) and Mercmaster LED Low Profile Luminaires (MLLED, MLT) 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 120-277 VAC, 50/60 Hz, 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 |
| 20,000 | MLGX1 |
| 24,000 | MLGX5 |

| Mercmaster LED Low Profile Luminaires (MLLED, MLT) | |
|---|---------------------|
| Nominal Lumens | Model Number |
| 3000 | MLLED2 |
| 4000 | MLLED3 |
| 5000 | MLLED4 |
| 3500 | MLTL3 |
| 4500 | MLTL4 |
| 5500 | MLTL5 |

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Mercmaster LED Series Luminaires:

Generation 3, Little Primo, Big Primo – MLG:

Catalogue number MLG may be followed by A, C, R, S, T or W, followed by L3, L5, L7, L9, H9, H1, H3, H6, X1 or X5, may be followed by 2, 3, 4, 5 or 6 followed by C, M, N, R or W, may be followed by D, G or P, may be followed by 1, 3, 5 or W, followed by BU, optionally may be followed by A.

Mercmaster LED Low Profile Luminaires – MLLED:

Cat. No. MLLED, may be followed by A, C, R, S, T or W, 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 or G5, followed by BU.

Mercmaster LED LT Luminaires – MLT:

Cat. No. MLT, may be followed by A, C, R, S, T or W, followed by L3, L4 or L5, may be followed by 2, 3, 4, 5 or 6, followed by C, M, N, R or W, followed by D, G or P, followed by 1, 3, 5 or W, followed by BU.

Rating:

Mercmaster LED Generation 3 Luminaires with driver:

- 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)

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Ambient Temperature ranges:

Mercmaster LED Generation 3 Luminaires – Little Primo:

| Ambient Temperature | EPL | Model Number/Driver Output | | | |
|---|------------------|----------------------------|-------------------------|-------------------------|-------------------------|
| | | MLG*L3**** BU/550 mA | MLG*L5**** BU/860 mA | MLG*L7**** BU/390 mA | MLG*L9**** BU/480 mA |
| $-40\text{ °C} \leq T_a \leq +40\text{ °C}$ | EPL Gc | T6 | T5 | T6 | T5 |
| $-40\text{ °C} \leq T_a \leq +55\text{ °C}$ | | T5 | T4 | T5 | T4 |
| $-40\text{ °C} \leq T_a \leq +65\text{ °C}^1$ | | T4 | T4 | T4 | T4 |
| $-40\text{ °C} \leq T_a \leq +70\text{ °C}^1$ | | | | T4 | |
| $-40\text{ °C} \leq T_a \leq +40\text{ °C}$ | EPL Db, Dc | T81°C | T81°C | T81°C | T81°C |
| $-40\text{ °C} \leq T_a \leq +55\text{ °C}$ | | T88°C | T88°C | T88°C | T88°C |
| $-40\text{ °C} \leq T_a \leq +65\text{ °C}^1$ | | T94°C | T94°C | T94°C | T94°C |
| $-40\text{ °C} \leq T_a \leq +70\text{ °C}^1$ | | | | T99 °C | |

Mercmaster LED Generation 3 Luminaires – Big Primo:

| Ambient Temperature | EPL | Model Number/Driver Output | | | |
|---|------------------|----------------------------|-------------------------|-------------------------|-------------------------|
| | | MLG*H9**** BU/480 mA | MLG*H1**** BU/595 mA | MLG*H3**** BU/720 mA | MLG*H6**** BU/900 mA |
| $-40\text{ °C} \leq T_a \leq +40\text{ °C}$ | EPL Gc | T4 | T4 | T4 | T3 |
| $-40\text{ °C} \leq T_a \leq +55\text{ °C}$ | | T4 | T3 | T3 | T3 |
| $-40\text{ °C} \leq T_a \leq +65\text{ °C}^1$ | | T4 | T3 | T3 | T3 |
| $-40\text{ °C} \leq T_a \leq +70\text{ °C}^1$ | | T3 | T3 | | |
| $-40\text{ °C} \leq T_a \leq +40\text{ °C}$ | EPL Db, Dc | T61°C | T64°C | T66°C | T71°C |
| $-40\text{ °C} \leq T_a \leq +55\text{ °C}$ | | T74°C | T77°C | T79°C | T84°C |
| $-40\text{ °C} \leq T_a \leq +65\text{ °C}^1$ | | T83°C | T83°C | T86°C | T95°C |
| $-40\text{ °C} \leq T_a \leq +70\text{ °C}^1$ | | T88 ° | T88 °C | | |

Mercmaster LED Generation 3 Luminaires – Big Primo (MLGX):

| Ambient Temperature | EPL | Model Number/Driver Output | |
|---|--------|----------------------------|--------------------------|
| | | MLG*X1**** BU/1040 mA | MLG*X5**** BU/1300 mA |
| $-40\text{ °C} \leq T_a \leq +40\text{ °C}$ | EPL Gc | T3 | T3 |
| $-40\text{ °C} \leq T_a \leq +55\text{ °C}$ | | T3 | T3 |
| $-40\text{ °C} \leq T_a \leq +60\text{ °C}^1$ | | T3 | |
| $-40\text{ °C} \leq T_a \leq +40\text{ °C}$ | EPL | T82°C | T92°C |
| $-40\text{ °C} \leq T_a \leq +55\text{ °C}$ | Db, | T102°C | T104°C |
| $-40\text{ °C} \leq T_a \leq +60\text{ °C}^1$ | Dc | T102°C | |

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¹ - For MLG*L7, MLG*L9, MLG*H9, MLG*H1, MLG*H3, MLG*H6 with voltage range of 125 VDC to 169 VDC operating temperature range is -40 °C to +55 °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 Gc | T5 | T4 | T4 |
| -40 °C ≤ T _a ≤ +55 °C | | T5 | T4 | T4 |
| -40 °C ≤ T _a ≤ +65 °C | | T4 | T4 | T4 |
| -40 °C ≤ T _a ≤ +40 °C | EPL Db, Dc | T66°C | T66°C | T66°C |
| -40 °C ≤ T _a ≤ +55 °C | | T79°C | T79°C | T79°C |
| -40 °C ≤ T _a ≤ +65 °C | | T88°C | T88°C | T88°C |

Mercmaster LED Low Profile Luminaire MLT:

| Ambient Temperature | EPL | Model Number/Driver Output | | |
|----------------------------------|---------------|----------------------------|------------------------|------------------------|
| | | MLT*L3****BU 780 mA | MLT*L4****BU 780 mA | MLT*L5****BU 780 mA |
| -40 °C ≤ T _a ≤ +40 °C | EPL Gc | T4 | T4 | T4 |
| -40 °C ≤ T _a ≤ +55 °C | | T4 | T4 | T4 |
| -40 °C ≤ T _a ≤ +65 °C | | T4 | T4 | T4 |
| -40 °C ≤ T _a ≤ +40 °C | EPL Db, Dc | T82°C | T82°C | T82°C |
| -40 °C ≤ T _a ≤ +55 °C | | T82°C | T82°C | T82°C |
| -40 °C ≤ T _a ≤ +65 °C | | T82°C | T82°C | T82°C |

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TECHNICAL DOCUMENTATION:

- Certificate of Conformity n° IECEx SIR 17.0085X (Issue 3) of 2019/02/08;
- Certificate of Conformity n° IECEx SIR 17.0085X (Issue 4) of 2020/04/03;
- Test Report Intertek n° GB/ITS/ExTR17.0265/00 of February/2018;
- Test Report Intertek n° GB/ITS/ExTR18.0195/00 of October/2018;
- Test Report Intertek n° GB/ITS/ExTR19.0023/00 of Dezember/2018;
- Test Report SIRA n° GB/SIR/ExTR20.0069/00 of 2019/10/30;
- Analysis Report (RA) n° 006/2020 of 2020/07/13;
- Factory Inspection Date: 2019/06/28;
- Manual in Portuguese.

| DRAWING | DESCRIPTION | REV. | DATE |
|-------------|---|------|------------|
| 299707454 | ZONE 2 RATED LED DRIVER (50W - BU VERSION) | 03 | 07/31/2017 |
| 299707455 | ZONE 2 RATED LED DRIVER (100W - BU VERSION) | 03 | 07/31/2017 |
| 299707456 | ZONE 2 RATED LED DRIVER (150W - BU VERSION) | 03 | 07/31/2017 |
| 503712 | THREADED PLUG - SQUARE RECESS | C | 10/31/2016 |
| 607646 | MERCMaster LED GLASS GLOBE | F | 08/31/2017 |
| 609233 | LOWPRO 1.5 - PCB ASSEMBLY 22 LED STD | K | 01/16/2018 |
| 609235 | MMLLEDG3 - PCB ASSEMBLY 36 LED STD | K | 01/16/2018 |
| 609236 | MMLLEDG3 - PCB ASSEMBLY 51 LED STD | K | 01/12/2018 |
| 618250 | MERCMaster LOW PROFILE 1.5 IEC CERTIFICATION DRAWING | K | 01/25/2018 |
| 618251 | MERCMaster LED GEN 3.0 LITTLE PRIMO IEC CERTIFICATION DRAWING | L | 01/25/2018 |
| 618252 | MERCMaster LED GEN 3.0 BIG PRIMO IEC CERTIFICATION DRAWING | L | 01/25/2018 |
| MLG_Inmetro | INMETRO LABEL FOR MLG | 00 | 05/20/2018 |



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MARKING:

Ex ec IIC T*(according tables) Gc

Ex tb IIIC T*(according tables) Db

Ex tc IIIC T*(according tables) Dc

T_a(according tables)

IP66

OBSERVATIONS:

1. The letter “X” after the certificate number indicates the following conditions for safe use:

Potential Electrostatic Charging Hazard – Use a damp cloth for maintenance and cleaning purposes on the equipment. Refer to the Installation Manual for more information.

2. This Certificate is valid only for products with the same model and type as the tested prototype. Any modification in the project, as well as the use of components apart from those defined by the technical documentation, without previous authorization from Bureau Veritas Certification, will invalidate this Certificate.
3. Routine Dielectric Strength testing of the LED luminaires per IEC 60079-7:2015, Clause 7.1 is applicable. Dielectric strength shall be verified by test at the following test voltage and maintained for at least 1min without dielectric breakdown occurring. Alternatively, a test shall be carried out at 1.2 times the test voltage, but maintained for at least 100ms.
4. Where the equipment incorporates certified components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate





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5. The LED Luminaire shall have, on their outer surface and in a visible place, the Conformity Mark and the technical characteristics thereof, according to the specifications of the Standard ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-7 / ABNT NBR IEC 60079-31 / ABNT NBR IEC 60529 and Conformity Assessment Requirements, attached to INMETRO Ordinance 179, published on May 18, 2010. This marking must be legible and durable, possible chemical corrosion.
6. The LED Luminaire must have, fixed in a visible place and in a durable way, the following warning:

“WARNING – DO NOT OPEN WHILE ENERGIZED”
**“WARNING – DO NOT OPEN WHEN AN EXPLOSIVE DUST
ATMOSPHERE MAY BE PRESENT”**
**“WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD –
SEE INSTRUCTIONS – CLEAN ONLY WITH A MOIST CLOTH”**
**“WARNING – USE ONLY POWER SUPPLY CABLES SUITABLE FOR
TEMPERATURE OF 90 ° C ”**
“SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS”
7. It is the responsibility of the user to ensure that the products are installed in compliance with the relevant Standards for Electrical Installations in Explosive Atmospheres and the manufacturer's recommendations.
8. The activities of installation, inspection, maintenance, repair, overhaul and recovery of equipment are the responsibility of users and must be implemented in accordance with the requirements of current technical standards and the manufacturer's recommendations.
9. The Manufacturer shall provide manual of installation and safe use written in Portuguese

| REVISIONS HISTORY | |
|-------------------|---|
| DATE OF ISSUE | DESCRIPTION |
| 2020/05/19 | Initial Issue |
| 2020/07/14 | Update according to IECEx SIR 17.0085X/04 certificate of origin |

