

[1]

EU-TYPE EXAMINATION CERTIFICATE



[2]

Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

[3]

EU-Type Examination Certificate Number: **DEMKO 19 ATEX 2270X Rev. 2**

[4]

Product: **Intrinsically Safe Flow Switches**

[5]

Manufacturer: **Malema Engineering Corp.**

[6]

Address: **1060 S. Rogers Circle, Boca Raton, FL 33487 USA**

[7]

This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **US/UL/ExTR13.0068/04.**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-11:2012

Where additional criteria beyond those given here have been used, they are listed at item 18 in 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" listed under item 17 of this certificate.

[11]

This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.

[12]

The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):



II 1 G

Ex ia IIC T6...T3 Ga



II 1 D

Ex ia IIIC T80°C ... T150°C Da

Certification Manager

Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2019-11-14

Re-issued: 2024-01-30

Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com



Accredited by DANAK under registration number 7011 to certification of products.

Form-ULID-000217 (DCS:00-IC-F0056-1) – Issue 29.0

This certificate may only be reproduced in its entirety and without any change.

[13]

[14]

Schedule
EU-TYPE EXAMINATION CERTIFICATE No.
DEMKO 19 ATEX 2270X Rev. 2

[15]

Description of Product

The M-50X, M-60X, M-100X and M-200X Series flow switches are used to monitor increasing and decreasing flow. They utilize a single moving part which responds to fluid (liquid or gas) flowing within a system.

Temperature range:

-40°C to +145°C

Electrical data

Ui = 30 V, Ii = 0.5 A, Ci = 40 pF, Li = 4 µH, Pi = 0.7 W

Routine tests

Routine tests are not required.

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17]

Specific conditions of use:

- To ensure suitability for Group III, these switches shall be used with a cable fitting having an ATEX certificate with a minimum IP5X rating.
- Warning – Enclosure contains aluminum. Care must be taken to avoid ignition due to impact or friction.

[18]

Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

The trade name "Malema Sensors" will be used as the company identifier on the marking label.