



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx ULD 19.0014X

Issue No: 0

Certificate history:

[Issue No. 0 \(2019-06-14\)](#)

Status: **Current**

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Date of Issue: **2019-06-14**

Applicant: **Berrys Global Innovations Ltd.**  
Berrys Technologies Building  
141 Lichfield Road  
Birmingham, B6 5SP  
**United Kingdom**

Equipment: **Misfuel Identification and Avoidance System, Midas M2 – FIXED, Midas M2 - ELBOW  
and Midas M2 – COMPACT**

*Optional accessory:*

Type of Protection: **Flameproof "db", Intrinsic Safety "ia"**

Marking:

Ex db ia IIA T4 Gb

-25°C ≤ Ta ≤ +47°C

Approved for issue on behalf of the IECEx  
Certification Body:

Lucy Frieders

Position:

Staff Engineer

Signature:  
(for printed version)

Date:

2019-06-14

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](#).

Certificate issued by:

**UL International DEMKO A/S**  
Borupvang 5A,  
DK-2750 Ballerup  
Denmark





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Manufacturer: **Berrys Global Innovations Ltd.**  
Berrys Technologies Building  
141 Lichfield Road  
Birmingham, B6 5SP  
**United Kingdom**

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

## STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

## TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[DK/ULD/ExTR19.0014/00](#)

Quality Assessment Report:

[GB/SIR/QAR12.0025/07](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

MIDAS (Misfuel identification & avoidance system) is an intelligent valve system installed on refuelling facilities. The system prevents operators from delivering incorrect fuel to bulk fuel storage tanks. The valve can differentiate between different fuel types and if the fuel being delivered is correct the valve will open and allow the delivery to commence. If the fuel type is wrong the valve will remain closed and alarm audibly and visually to indicate the mistake. The Midas M2 is powered by battery or an internal generator driven by the flow of fluid. The battery is charged by the generator, or an external supply in a safe area only.

The Midas M2 has been designed to be used in a number formats:

1. MIDAS FIXED system: In this format the Midas valve would be attached to the fuel tank filling point as a permanent feature. The valve would then be calibrated to that particular tank and fuel delivered would be either accepted or rejected. Inlet and discharge fitting appropriate to the client/ gas station/ country would be bolted to the Midas body. This system is activated via a push button on the side of the unit. This system is identified as the MIDAS M2-FIXED
2. MIDAS COMPACT system: In this format the Midas is used as a portable system that could be stored on the road tanker or alternatively on the site. The Compact system is designed for sites which have "above ground" filling points. In most cases above ground filling points consists of pipework protruding above the ground level and normally terminate with a 45 ° elbow. the Compact system incorporates a female hose coupler adapter on the discharge side and a conventional male hose coupler adapter on the inlet side. In most instances these are 4" nominal bore, but in some countries, this could change dependent on local guidelines. The unit is activated via a push button on the side of the MIDAS. In conjunction with this portable application each filling point will need to have a passive RFID tag and retaining system attached to each filling point. This RFID tag will hold information about the storage tank, i.e. tank no, fuel type and other information such as gas station identification, address and other such detail. If the fuel from the road tanker matches the grade of fuel assigned to the filling point the delivery will continue as normal if the two do not match up the Midas will alert the driver to the mistake.
3. MIDAS ELBOW system: For some markets like the US market the filling point are below ground level in what's called a "spill bucket". The typical way to make a connection between the hose from the road tanker and the filling point inlet in the spill bucket would be to use what's known in the industry as a fuel delivery elbow. The inlet fitting attached to the top of the Midas would be in shape of an elbow. The fitting on the outlet of the Midas will be a straight length of tube with an industry standard female coupling fitting designed to connect to the filling point. This coupling would be activated by depressing a handle on the Midas which would in turn create a coupling effect between the discharge of the MIDAS and the inlet of the filling point in the spill bucket. The act of depressing this handle also activates an electronic switch which switches on the Midas system. In this embodiment the filling points on gas stations will need to have a passive RFID collar attached to each filling point. This RFID tag will hold information about the storage tank, i.e. tank no, fuel type and other information such as gas station identification, address and other such detail. If the fuel from the road tanker matches the grade of fuel assigned to the filling point the delivery will continue as normal if the two do not match up the Midas will alert the driver to the mistake.

All variants of the MIDAS M2 contain Bluetooth to allow communication to the equipment for programming and maintenance purposes.

**Please see Annex for additional information.**

### SPECIFIC CONDITIONS OF USE: YES as shown below:

The equipment is designed to be connected to an external process fluid. The process temperature is between -5°C and +30°C.

Use Fasteners with Yield Stress  $\geq$  A2-50.

RFID Tags to be used in conjunction with the equipment have not been assessed for use in Hazardous Locations.

Flamepaths are not intended to be Repaired.

The MIDAS M2 rechargeable battery must only be charged in a non-hazardous (safe) area. Charging must only be performed within an ambient temperature range of -15°C to +47°C. The metallic door frame must be refitted after charging.

**Annex:**



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[Annex to IECEx ULD 19.0014X Issue 0.pdf](#)



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## TYPE DESIGNATION

Nomenclature:

E.g. Midas M2-F-1-xx

Product :Midas M2-

Variants :

- F-(Fixed)
- C-(Compact)
- E-(Elbow)

Options:

- 1-(External aerial)
- 2-(Internal aerial)

Configurations

- xx – Two numeric characters 00-99 detailing connection types, not relevant to the Type of Protection

## PARAMETERS RELATING TO THE SAFETY

10.8V Battery, 3psi, Um 60V



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## MARKING

Marking has to be readable and indelible; it has to include the following indications:

Example of MIDAS M2 Marking Label



## ROUTINE TESTS

Routine tests according to IEC 60079-1, Ed 7, Clause 16 are not required, as the enclosures have been successfully tested at four times the reference pressure.