[1]

TYPE EXAMINATION STATEMENT
CATEGORY 3 EQUIPMENT

[2] **Equipment intended for use in potentially explosive atmospheres**

[3] Type Examination Statement number: **IMQ 22 ATEX 023 X**

[4] PRODUCT: **Temperature sensor**
TYPE/SERIES: **87204827.00**

[5] MANUFACTURER: **AE.CAS. S.r.l.**

[6] ADDRESS: Via Novara 1 – Nova Milanese (MB) 20834 - Italy

[7] IMQ states that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive 2014/34/EU with reference to the requirements covered by the standards below defined.

[8] Compliance with EHSRs given in the Directive 2014/34/EU, except for those listed at item 17 of the annex, has been assured by compliance with the requirements of the following standard:

EN IEC 60079-0:2018; EN 60079-18:2015; EN 60079-18/A1:2017

[9] If the sign "X" is placed after the statement number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this statement

[10] This TYPE EXAMINATION STATEMENT relates only to the design and construction of the specified equipment. Further requirements of the Directive are **not covered** by this statement.

[11] The marking of the equipment shall include the following:

II 3G **Ex mc IIC T4 Gc**

This document is composed of 4 pages including 1 annex

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B.U. PRODUCT CONFORMITY ASSESSMENT
CERTIFICATION SECTOR – MANAGER

Mod. 3681/3

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO
PRD N° 005 B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
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[12] # ANNEX

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[14] **Description of product:**

The Temperature Sensor has the purpose of constantly monitoring the temperature of the fuel inside the tank.
Each assembly consists of a sensor element encapsulated within a steel probe by using a two-component resin. 2 cables come out of the sensor which must be connected with another wiring with a length of 15 meters.
The sensor will vary the value of its resistance (Negative Temperature Coefficient) in relation to the ambient temperature at which it is.
The power supply to the sensor must be supplied with a value of 10 Vdc and a series resistance of 1 kOhm.

[14.1] **Models/Series Identification:**

87204827.00

[14.2] **Ratings:**

Vn: 10 Vdc and series resistance of 1 kOhm

[14.3] **Safety Ratings:**

-

[14.4] **Ambient temperature and temperature classes:**

Ambient temperature: -50 °C to +120 °C
Temperature Class: T4

[14.5] **Degree of protection (IP code):**

IP65 according to EN 60529

[14.6] **Warnings: -**

[15] **Report:** AT21-0071355-01

[15.1] **Routine (factory) tests:**

The manufacturer shall carry out the routine test prescribed at clauses 27 of the EN 60079-0 and clause 9 of the EN 60079-18:
- §9.1 Visual inspection
- §9.2 Dielectric strength test: 500 V maintained for at least 60 seconds, on complete device, with a maximum leakage current of 5 mA..

[15.2] **Conformity with the documentation:**

The manufacturer shall carry out the verifications or tests necessary to ensure that the product complies with the documentation.

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Marking the equipment in accordance with Clause 29 of EN 60079-0, the manufacturer attests on his own responsibility that:

- the equipment has been constructed in accordance with the applicable requirements of the relevant standards in safety matters.

The routine verifications and routine tests in 28.1 of EN 60079-0 have been successfully completed with positive results.

[15.3] **Installation conditions:**

The equipment is foreseen to be installed in locations where there are environmental conditions, as specified at clause 1 of EN 60079-0. Installation and use at environmental conditions outside of above-mentioned intervals request special considerations and additional measures by the side of installer or user.
Installation of equipment shall be done according to EN 60079-14.
The supply voltage must not be out of the nominal tolerance of 10% of the rated voltage.
The ambient temperature must be within the range of -50°C to +120°C.
The sensor operator may be mounted in any position.
Sensor operator Surface temperature: the sensor operator is designed for the continuous duty 100% ED).
The sensor is manufactured for fixed installation only.
Before initial operation of the solenoid operator, make sure that the equipment meets the requirements of the EMC directive.

[16] Specific condition of use (X) / Schedule of limitations:

The sensor must be protected from solar or any artificial light.
Potential electrostatic charging hazard. In case of cleaning of the sensor use ONLY wet cloth.
The sensor must be installed on low risk impact zone, the sensor impact test was performed at low impact force 4 J.

[17] Essential Health and safety Requirements:

This Statement **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed in [8].
This Statement **does not** cover hazards coming from environmental conditions different from those clearly and precisely indicated and covered in clause 1 of EN 60079-0.

ESHR 1.2.7 to be fulfilled by manufacturer according Annex VIII of the Directive
ESHR 1.4 Not verified.
ESHR 1.5 Not verified.
ESHR 3 Not applied.

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at [8], the following are considered relevant to this equipment, and conformity is demonstrated in the report:
N/A

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[13] Type Examination Statement number: **IMQ 22 ATEX 023 X**

[18] Descriptive documents:

DL-AT21-0071355-01 rev.0, dated 2022-04-26.

[19] Certification Validity Conditions:

This Statement is subject to general rules for the issuing of products type certificates and to special requirement for equipment intended for use in potentially explosive atmospheres.
This Statement is issued according to product certification system 1a of EN ISO/IEC 17067; therefore, it does not imply any judgment on the production and it does not permit the use of a mark of conformity.
This statement does not replace the conformity assessment procedure, to be carried out by the Manufacturer, referred to in Annex VIII of Directive 2014/34/EU.

[20] Variations

Issue 0