



## TYPE EXAMINATION STATEMENT CATEGORY 3 EQUIPMENT

### Equipment intended for use in potentially explosive atmospheres - ATEX

Type Examination Statement number: **IMQ 19 ATEX 073 X**

PRODUCT: **Electronic termination board for associated apparatus**  
TYPE/SERIES: **TBE-D5008-TRI-\*\*\* and TBE-D5016-TRI-\*\*\***

MANUFACTURER: **G.M. International S.r.l.**

ADDRESS: **Via G. Mameli 53/55 -Villasanta - I-20852 (MB) Italy**

This equipment and any acceptable variation thereto are specified in the annex to this statement and the documents therein referred to.

IMQ states 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 2014/34/EU with reference to the requirements covered by the standards below defined.

The examination and test results are recorded in Report No.: **AT20-0053292-01**

Compliance with Essential Health and Safety Requirement given in the Directive, except for those listed at item 18 of the annex, has been assured by compliance with the requirements of the following standard:

**EN IEC 60079-0:2018; EN 60079-7:2015; EN IEC 60079-7:2015/A1:2018**

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

This TYPE EXAMINATION STATEMENT relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this statement.

The marking of the equipment or protective system shall include the following:



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

This document is composed of 5 pages including 1 annex

**B.U. PRODUCT CONFORMITY ASSESSMENT  
CERTIFICATION SECTOR – MANAGER**

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This Test Statement is the result of testing a sample of the product submitted, in accordance with the provisions of the specified Technical Specifications/Standards. It is issued according to product certification scheme type 1 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. Only full reproductions of this Statement are allowed without written permission of IMQ.

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[15] **Description of product:**

**TBE-D5008-TRI-\*\*\*** and **TBE-D5016-TRI-\*\*\*** termination boards are non-sparking, non-incendive electrical apparatus, designed as a 8 (TBE-D5008-TRI-\*\*\*) or 16 (TBE-D5016-TRI-\*\*\*) slot board ready to house up to 8 or 16 modules from D5000 or D6000 series, which are able to interface field devices that may be located in potentially explosive atmospheres with measuring and process control equipment located in non-explosive atmospheres, through customer dedicated connector. Housed modules are kept in place by plastic latching mechanism that mechanically secures each module to the board. It is suitable for installation on TH 35 DIN Rail according to EN/IEC 60715.

Different boards with the same configuration are dedicated to different system cards.

TBE-D5008-TRI-\*\*\* and TBE-D5016-TRI-\*\*\* termination boards can be located in non-explosive atmospheres or potentially explosive gas atmospheres.

Electrical connections are accommodated by plug-in removable terminal block and with customer dedicated connector.

Supply is 24 Vdc nominal (20 to 30 Vdc range), maximum power consumption according to mounted modules. Safety temperature limits are -40 to +70 °C.

This Equipment is an electronic PWB equipment, with connectors and terminals to plug / connect associated apparatus and which will be housed into an Ex Enclosure already certified. The Equipment has been evaluated applying the Annex H of IEC 60079-7 and include the pertinent Special Condition of Safe Use.

Transient protection has been provided on the PWB and it is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.

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

TBE-D5008-TRI-001	single termination board with 8 positions, up to 8 channels, for AO modules, with HART@ connector
TBE-D5016-TRI-001	single termination board with 16 positions, up to 32 channels, for AI modules, with HART@ connector
TBE-D5016-TRI-002	double termination board with 32 positions, up to 32 channels, for AI modules, with HART@ connector
TBE-D5016-TRI-003	single termination board with 16 positions, up to 32 channels, for AI modules, with HART@ connector
TBE-D5016-TRI-004	single termination board with 16 positions, up to 32 channels, for DI modules, without HART@ connector
TBE-D5016-TRI-005	double termination board with 32 positions, up to 32 channels, for DI modules, without HART@ connector
TBE-D5016-TRI-006	single termination board with 16 positions, up to 32 channels, for DI modules, without HART@ connector
TBE-D5016-TRI-007	single termination board with 16 positions, up to 16 channels, for DO modules, without HART@ connector
TBE-D5016-TRI-008	single termination board with 16 positions, up to 32 channels, for AI modules, with HART@ connector
TBE-D5016-TRI-009	single termination board with 16 positions, up to 32 channels, for DO

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	modules, without HART® connector
TBE-D5016-TRI-011	single termination board with 16 positions, up to 32 channels, for AI modules, with HART® connector
TBE-D5016-TRI-012	single termination board with 16 positions, up to 32 channels, for DI modules, without HART® connector

[15.2] **Ratings:**

Un 24 Vdc (20÷30Vdc)

[15.3] **Safety Ratings:** N/A

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

Rated ambient temperature: -40°C ÷ 70°C

Temperature Class: T4

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

IP00, additional degree of protection to provided by the enclosure according the Special Condition of Safe Use

[15.6] **Warnings:**

WARNING – DO NOT REMOVE OR REPLACE FUSE WHEN ENERGISED

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

The manufacturer shall carry out the routine test prescribed at clauses 27 of the EN 60079-0.

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

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

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.

[16.3] **Installation conditions:**

Above referred equipment is foreseen to be installed in locations where there are environmental

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conditions as clearly specified at clause 1, par. 2 of EN 60079-0.

Installation and use in atmospheric and environmental conditions that are out of above mentioned intervals require special considerations and additional measures by the side of installer or user.

These should be specified to the manufacturer by the user.

It is not a requirement of the applicable standards listed in [9] that the certification body confirm suitability for the adverse conditions. Installation of equipment shall be done according to EN 60079-14 standard requirements.

**Special Condition of use (X) / Schedule of limitations:**

[17] This Equipment is intended to be installed under controlled environments, as defined by Annex H or IEC EN 60079-7, in particular:

- the equipment shall only be used in an area of at least pollution degree 2, as defined in IEC EN 60664-1.
- the equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with IEC EN 60079-0.

[18] Essential Health and safety Requirements:

This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed in [9].

This Certificate **does not** cover hazards coming from environmental conditions different from those clearly and precisely indicated and covered in clause 1 of EN 60079-0.

Other ESHR of the Annex II of Directive which have not been verified:

ESHR 1.2.7 Protection against other hazards; according Art. 4. 13 of Directive 2014/34/EU, the procedure for the conformity assessment to cover such hazards if followed using Annex VIII of the Directive, by Manufacturer Declaration.

ESHR 1.4 Hazards arising from external effects;  
Manufacturer shall commissioning installation to electrician with adequate knowledge of explosion protection considering external effect; the manufacturer shall stipulate the qualifications required by personnel; covered by Manufacturer Declaration.

ESHR 1.5 Not applicable as there are no safety device nor the need to use them.

ESHR 3 Not applicable as this is an Equipment and not Protective System.

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at [9], the following are considered relevant to this product, and conformity is demonstrated in the report:  
None

[19] **Descriptive documents:** DL- AT20-0053292-01

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[20] **Certification Validity Conditions:**

The present Statement is not referred to IMQ certification activities as Notified Body according to 2014/34/EU Directive. The validity of this Statement is subject to the condition that the manufacturer complies with the results of the document review and of the pertinent requirement if any included, recorded in the relevant copy of documentation as per 19.

One copy of the mentioned documentation is kept in IMQ file.

[21] **Variations**

2020, November:

Series extended to a wider range of board, customized according the electronic modules which are expected to house.