[1] # EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in potentially explosive atmospheres - Directive 2014/34/EU**
Annex III - MODULE B: EU-TYPE EXAMINATION

[3] EU-type Examination Certificate number: **IMQ 17 ATEX 008 X**

[4] PRODUCT: **Load cells**
TYPE/SERIES: **TR, CM , DS, PR, OC, TC, AS, TS**

[5] MANUFACTURER: **Metior S.r.l.**

[6] ADDRESS: **Via Maspero, 5 – Varese (VA), 21100 - Italy**

[7] This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documents therein referred to.

[8] IMQ, notified body N° 0051, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in Report No.: **AT21-0068763-01_A**

[9] Compliance with Essential Health and Safety Requirements, except in respect of those listed at item 18 of the annex, has been assured by compliance with:

EN IEC 60079-0:2018; EN 60079-11:2012

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

[11] This EU - TYPE EXAMINATION CERTIFICATE 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 certificate.

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

II 1G	**Ex ia IIC T6/T5/T4 Ga**, and
II 2D	**Ex ia IIIC T85/T100/T135 °C Db**, or
II 2G	**Ex ib IIC T6/T5/T4 Gb**, and
II 2D	**Ex ib IIIC T85/T100/T135 °C Db**

This document is composed of 4 pages including 1 annex

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B.U. PRODUCT CONFORMITY ASSESSMENT
CERTIFICATION SECTOR – MANAGER

[13] # Annex

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[15] **Description of product:**

Load cells type TR, CM , DS, PR, OC, TC, AS, TS are used to converting a mechanical force into electrical signal by means of the strain gauges sensors that measure the mechanical deformation of a metal structure to which are applied.
The active parts (strain gauges sensors) are completely encapsulated by means of a compound cast.

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

The characteristics of the apparatus are codified according to the following schema:

[a]		[b]	[c]	[d]	[e]	[f]
■■		■■■■■	■	■	■■■	■■

Number of digits (■)

[a]	Load Cell Type:	TR	: Traction	
		CM	: Compression	
		DS	: Shelf	
		PR	: Axis	
		OC	: Off-Center	
		TC	: Traction / Compression	
		AS	: Flection	
		TS	: Torsion	
[b]	Enclosure Material:	17/04	: Stainless Steel	
		20.24	: Aluminum alloy	[1]
[c]	Cell enclosure protection	I	: Only encapsulated type	[2]
		S	: Encapsulated and welded cell	
[d]	Cable Type:	V	: 4 wires type cable	
		S	: 6 wires type cable	
[e]	Cable length:	001	: 1 meter or less	
		0xx	: xx meters (up to 50 meters)	
[f]	Minimum ambient temperature	10	: Suitable for use at -10 °C	
		25	: Suitable for use at -25 °C	
		30	: Suitable for use at -30 °C	

NOTE:

[1] Suitable only for use in zone 1, 2, 21 and 22;

[2] Suitable 1, 2, 21 and 22.

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[15.2] **Ratings:**

See safety ratings indicated below:

[15.3] **Safety Ratings:**

U_i	30	Vdc
I_i	500	mA
P_i	3,75W for T4/T135°C class; 2,50W for T5/T100°C class; 1,25W for T6/T85°C class;	
C_i	0,075	nF
l_i	0,8	µH

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

The load cells have temperature class:

- T6 and maximum surface temperature of T85 °C in an ambient temperature range of -30 °C ≤ Ta ≤ 70 °C and maximum power dissipation of 1,25 W

- T5 and maximum surface temperature of T100 °C in an ambient temperature range of -30 °C ≤ Ta ≤ 70 °C and maximum power dissipation of 2,50 W

- T4 and maximum surface temperature of T135 °C in an ambient temperature range of -30 °C ≤ Ta ≤ 70 °C and maximum power dissipation of 3,75 W

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

IP65 (EN 60529)

[15.6] **Warnings:**

None

[16] **Report:** AT21-0068763-01_A

[16.1] **Routine (factory) tests:**
The manufacturer shall carry out the routine test prescribed at clauses 27 of the EN 60079-0.
The manufacturer shall carry out a dielectric routine test at 500 V maintained for at least 60 seconds, on complete device, with a maximum leakage current of 5 mA.

[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 conditions, as clearly specified at clause 1, par. 2 of IEC 60079-0.
Installation and use in atmospheric and environmental conditions that are out of above

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mentioned intervals request 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 required by applicable standards that the certification body confirm suitability for the adverse conditions.
Load cells shall be installed according to EN 60079-14 standard.
Metal parts shall be grounded.

[17] **Special Condition of use (X):**

For level of protection Ga only stainless steel load cells with welded metal cover can be used.

[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.

ESHR 1.2.7 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 [9], the following are considered relevant to this product, and conformity is demonstrated in the report:
N/A

[19] **Descriptive documents:**

DL-AT21-0068763-01_A, rev.0, dated 2021-09-13

[20] **Certification Validity Conditions:**
The use of this Certificate is subject to the Certification Scheme and to the Regulation applicable to holders of IMQ Certificates.
The validity of this certificate 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**

October, 2017
- First issue

September, 2021
- Standard update: EN IEC 60079-0:2018
- Exclusion of the EPL Da