[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 12 ATEX 016 X**

[4] PRODUCT: **Proximity Sensors**
TYPE/SERIES: **SMC-12 serie**

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

[6] ADDRESS: **VIA GIACOMO LEOPARDI, 5 - 20065 INZAGO (MI) 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.: **AT21-0066180-01_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 60079-18:2015+A1:2017

[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 ma IIC T6 Ga**, and
II 1D	**Ex ma IIIC T85 °C Da**, or
II 2G	**Ex mb IIC T6 Gb**, and
II 2D	**Ex mb IIIC T85 °C Db**

THIS CERTIFICATE CANCELS AND REPLACES THE PREVIOUS ONE. IT INCLUDES 1 ANNEX.

FIRST ISSUE	2012/10/29
CURRENT ISSUE	2022/03/29
PREVIOUS ISSUE	2017/06/06
EXPIRING DATE	2032/03/28

B.U. PRODUCT CONFORMITY ASSESSMENT
CERTIFICATION SECTOR - MANAGER

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[13] # Annex

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[15] **Description of product:**

The magnetic sensors of the SMC-12 series are proximity sensors that can detect the presence of objects on which is mounted a permanent magnet (magnetic field source), in theimmediate vicinity of their "sensitive side", without which there is an actual physical contact. The distance within which these sensors detect objects is defined operating distance (or sensitive field) and it is indicated with "Sn". These are sensors with permanently connected cable, contained within a casing made of brass or steel.

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

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

[a1]	[a2]		[b]	[c]	[d]	[e]	[f]	[g]	[h]	[i]
■■	■	-	■■	■■	■■	■■	■■■■	■■■.■	■■■	■

Number of digits (■)

[a1]	Equipment		SM	: Magnetic Sensor
[a2]	Enclosure		C	: Cylindrical
[b]	Enclosure		12	: Threaded M12X1
[c]	Contact Function:		NO	: Normally open
			NC	: Normally closed
			S	: Changeover
[d]	Reed Contact Type:	NO Type Contacts:	Null	: Mod. ORD2211 XX÷YY AT or Mod. ORD229
			R1	: Mod. ORD229 XX÷YY AT
			R2	: Mod. GC3823 XX÷YY AT
			R3	: Mod. GC3723 XX÷YY ATor Mod. GC 3717
			R4	: Mod. GR100 XX÷YY AT
			R5	: Mod. GC2717 XX÷YY AT
			R6	: Mod. GC2314 XX÷YY AT
			R7	: Mod. MRPR3 XX÷YY AT
			M1	: Mod. GC1523 XX÷YY AT
		NC Type Contacts:	R1	: Mod. GC3336 XX÷YY AT or Mod. GC3436
			M1	: Mod. GC1917 XX÷YY AT
		S Type Contacts:	R1	: Mod. GC3336 XX÷YY AT or Mod. GC3436
			M1	: Mod. GC1917 XX÷YY AT
[e]	Enclosure Material:		Null	: Nickel plated brass
			SS	: Stainless Steel
[f]	Cable Type:		Null	: PVC/PVC
			PU	: PUR/PVC
			BC HF	: PUR/TPE Halogen free shielded
[g]	Cable Lenght:		Null	: Cable length ''2m''
			LC2	: Cable length ''2m'' (models with cable
			LCn.n	: Length equal to "n.n" meter if the length is
[h]	Explosive Atmosphere Type:		AG	: GAS explosion protected
			AD	: DUST explosion protected
			AGD	: GAS an DUST explosion protected
[i]	Equipment Category:		1	: Category 1
			2	: Category 2

[13] # Annex

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[15.2] **Ratings:**

- Un = 100 V; 150 V, 200 V; 230 V (AC or DC)
- In = 0,5 A; 1 A; 1,5 A
- Frequency: 50/60 Hz

[15.3] **Safety Ratings:**

None

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

The SM proximity sensors have temperature class T6 and maximum surface temperature of T85 °C in an ambient temperature range of -25 °C ≤ Ta ≤ 70 °C.

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

IP67

[15.6] **Warnings:**

None

[16] **Report:** AT21-0066180-01_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 routine test prescribed at clause 9.1 of the EN 60079-18 to sensor encapsulation.
The manufacturer shall carry out routine test prescribed at clause 9.2 of the EN 60079-18, at 1500V, on complete devices.

[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 EN 60079-0.
Installation and use in atmospheric and environmental conditions that are out of above-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 standard listed in [9] that the certification body confirm suitability for the adverse conditions.
Installation of equipment has to proceed according to EN 60079-14.
Metal parts shall be grounded.

[13] # Annex

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

- User shall protect the sensors by fuses, with a rated voltage according to relevant product instruction concerning installation and minimum breaking capacity of 1500 A.
- For level of protection "ma", two electrical protective devices (fuses) shall be installed in series; only one device is required for level of protection "mb".
- User shall protect the sensors without closing cap from exposition to light.

[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-AT21-0066180-01_A, rev.0, dated 2021-10-27

[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 2012:
First issue

April 2017:
- Standard update;
- New models has been introduced.

June 2017:
- Editorial changes.

March, 2022
- Standards update;

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PRD N° 005 B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

[13] # Annex

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- Updated resin compound specifications