



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX IMQ 16.0014X	Page 1 of 4	<u>Certificate history:</u> Issue 0 (2016-07-29)
Status:	Current	Issue No: 1	
Date of Issue:	2022-03-29		
Applicant:	AECO S.r.l. via G. Leopardi, 5 I-20065 Inzago (MI) Italy		
Equipment:	Proximity Magnetic Sensors serie SMC-12		
Optional accessory:	Proximity sensors		
Type of Protection:	Ex ma; Ex mb		
Marking:	Ex ma IIC T6 Ga Ex ma IIIC T85°C Da Ex mb IIC T6 Gb Ex mb IIIC T85°C Db		

Approved for issue on behalf of the IECEx
Certification Body:

Mr. Mauro CASARI

Position:

IMQ ExCB Manager

Signature:
(for printed version)

Date:
(for printed version)

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.
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Certificate issued by:

Istituto Italiano del Marchio di Qualità S.p.A
Via Quintiliano 43
20138 Milano
Italy





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Manufacturer: **AECO S.r.l.**
via G. Leopardi, 5
I-20065 Inzago (MI)
Italy

Manufacturing
locations: **AECO S.r.l.**
via G. Leopardi, 5
I-20065 Inzago (MI)
Italy

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 equipment 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

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

This Certificate **does not** indicate compliance with 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:

[IT/IMQ/ExTR16.0014/01](#)

Quality Assessment Report:

[IT/CES/QAR13.0005/08](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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 the immediate 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.

Full identification and details in Annex to certificate.

Suitable for ambient temperature -25 ... 70 °C.

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

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 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.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1

Standard update.

Updated resin compound specifications.

Annex:

[IECEX IMQ 16.0014X issue No. 1 Annex_1.pdf](#)



General description

The magnetic sensors of the SMC-12 ■■■■■AGD■ series are proximity sensors that can detect the presence of objects on which is mounted a permanent magnet (magnetic field source), in the immediate 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.

Key code

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.
			R1	: Mod. ORD229 XX÷YY AT
			R2	: Mod. GC3823 XX÷YY AT
			R3	: Mod. GC3723 XX÷YY AT or Mod. GC
			R4	: Mod. GR100 XX÷YY AT
		NC Type Contacts:	R5	: Mod. GC2717 XX÷YY AT
			R6	: Mod. GC2314 XX÷YY AT
			R7	: Mod. MRPR3 XX÷YY AT
		S Type Contacts:	M1	: Mod. GC1523 XX÷YY AT
			M1	: Mod. GC3336 XX÷YY AT or Mod.
[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 Length:		Null	: Cable length "2m"
			LC2	: Cable length "2m" (models with cable
			LCn.n	: Length equal to "n.n" meter if the length
[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

Annex to: IECEx IMQ 16.0014X issue No. 1 Annex
Applicant: AECO S.r.l.
Apparatus: Proximity sensors
Series: SM



Conditions 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.

▪ **Installation conditions**

- Installation of equipment shall be done according to IEC 60079-14 Standard requirements.
- Metal parts shall be grounded.