



## Operating Instructions

Conforming to 2014/34/EU Directive (ATEX)  
Annex VIII, group II, equipment category 3D

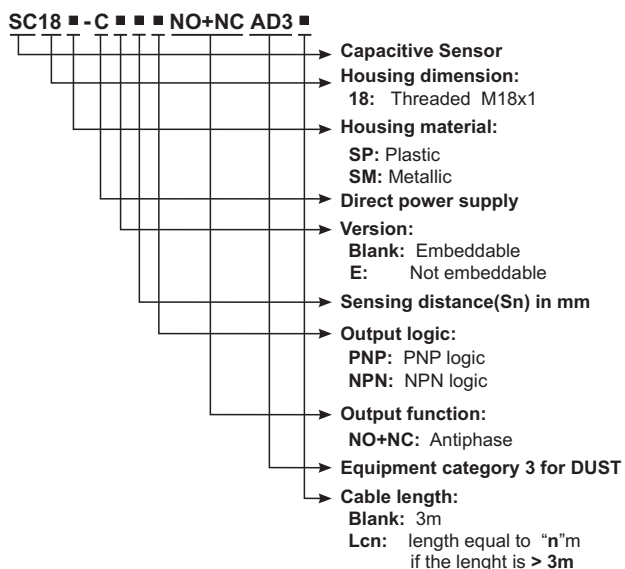
### 1. Introduction

This document should be read and understood in all its parts before proceeding with installation of the sensor. The Capacitive Sensors of the "SC18-C-NO+NC AD3" series, are suitable for use in potentially explosive atmospheres due to the presence of DUST.

### 2. Sensor identification

The sensors of this series are identified with a "Description" and a "Part number". The related decoding diagrams are those shown in paragraph 2.1 and 2.2.

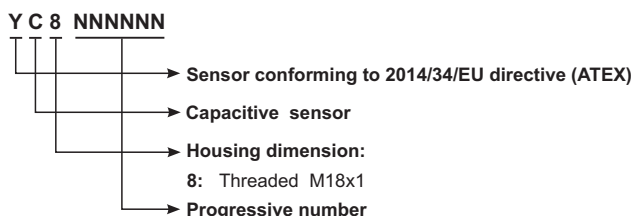
#### 2.1 Description diagram



ETC000343

F2028EX Rev. E

#### 2.2 Part number diagram



### 3. Proper use

This sensor can be used in hazardous area according to the classification:

Models	Group	Category	Method of protection	Explosion group	Max Surface Temperature	Ambient Temperature Ta
SC18-C-NO+NC AD3	II	3D	Ex tc	IIIC	T85°C	-25 ÷ +60°C

The requirements of the following standards are met:

EN60079-0:2012 + A11:2013 e EN60079-31:2014

### 4. Marking

Models	Marking	Atmosphere type
SC18-C-NO+NC AD3	II 3D Ex tc IIIC T85°C Dc X	DUST

X= Resistance to impact according to EN60079-0: E=4J

### 5. Installation and set up

The sensor must be installed, connected and activated only by specialized personnel. Such personnel must be familiar with the types of protection anti-ignition, the production rules and regulations in the potentially explosive area. The user is solely responsible for the choice and the use of the sensor suitable to the final application. Check whether the classification of the sensor is suitable for the application (see "Marking" to paragraph 4 and mark on the equipment).

### 6. Installation remark

When installing the sensor observe the following requirements:

- Adhere to the relevant national regulations and provisions, as well as their respective provisions of the AECO srl;
- In order to avoid electrostatic charging on the plastic parts and cable, clean the sensor with a wet cloth only;
- Always connect to earth the cable shield of the sensor;

- Protect, efficiently, the sensor cable against damage by meeting the requirements of the standard EN 60079-14;
- Avoid exposing the plastic parts, of the sensor, to the direct radiation with UV components (sunlight);
- Do not mount the unit in the dust flow;
- Avoid dust deposits on the sensor and its cable;
- Protect the sensitive part of the sensor against impact;
- For the wiring diagram and the electrical technical data please see the sensor mark and/or the technical data sheet. See also par. 8;
- The maximum ambient temperature permitted in the installation site must be in the range: **-25° ÷ +60°C**

### 7. Labelling

On each sensor is applied a product label as shown in fig.7.1:

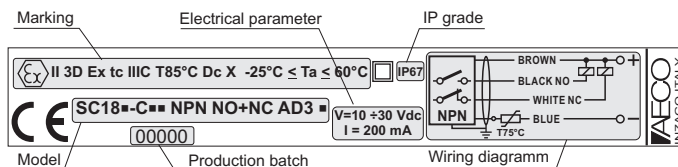


Fig. 7.1 - Product label

### 8. Wiring instructions

The figures 8.1 and 8.2 show the wiring diagrams for each group of models of the series.

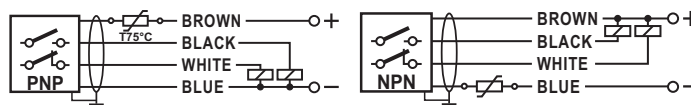


Fig. 8.1-Mod. SC18-C-PNP NO+NC AD3 Fig. 8.2-Mod. SC18-C-NPN NO+NC AD3

### 9. Instruction for sensing adjustment

Perform sensitivity adjustment with the sensor installed in its final installation position after covering approximately 70% of its sensitive part with the material to be detected. Then power on the sensor and make the following adjustments:

- If the LED is on, turn the trimmer P1 counterclockwise until it is turned off.

Then turn P1 clockwise until the LED turns on again.

- If the LED is off, turn the P1 trimmer clockwise until it is switched on.

Start the system and verify the correct activation of the sensor. If necessary, make small calibration adjustments until the desired adjustment is made.

#### Warning!

In the case in which the sensor is stayed in a metal seat, the latter will be connected to the ground.

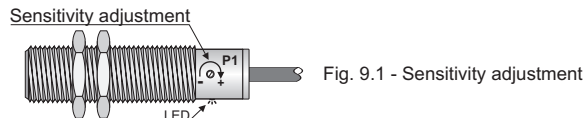


Fig. 9.1 - Sensitivity adjustment

### 10. Maintenance and Repair

The sensor does not need maintenance and should not be modified. In case of fault do not try to repair it, but contact the customer care of AECO srl.

If necessary can be requested at AECO srl or downloaded from the website [www.aecosensors.com](http://www.aecosensors.com) the following documents:

- Sensor Data Sheet;
- EU Declaration of Conformity;

### 11. EU Declaration of Conformity

**AECO**® **EU Declaration of Conformity**

We **AECO s.r.l.**

Via G. Leopardi 5, 20065 Inzago (MI), Italy

declare under our sole responsibility that the products

Product's name: **Capacitive sensors**  
Models: **SC18-C-NO+NC AD3**  
ATEX Marking: II 3D Ex tc IIIC T85°C Dc X -25°C ≤ Ta ≤ +60°C

to which this declaration relates, meet the requirements of the European directives

**2014/34/EU - ATEX Directive**

2014/30/EU - Electromagnetic compatibility directive

and are comply with the following harmonized standards

EN60079-0 : 2012+A11 : 2013 EN 61000-6-2 : 2005 EN 60947-5-2 : 2007  
EN 60079-31 : 2014 EN 61000-6-4 : 2007

Inzago: 2016.04.20

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