IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx BAS 12.0118X

Issue No: 1

Certificate history:
Issue No. 1 (2018-05-21)
Issue No. 0 (2014-01-21)

Status: **Current**

Date of Issue: **2018-05-21**

Applicant: **Synatel Instrumentation Limited**
Walsall Road, Norton Canes,
Cannock, Staffordshire
WS11 9TB
United Kingdom

Equipment: **Type 30mm Range of sensors**

Optional accessory:

Type of Protection: **Encapsulation**

Marking:

When fitted with 84°C (optional), 102°C & 104°C Thermal Fuses:
Ex ma IIC T4 Ga
Ex ma IIIC T_{200} 110°C Da IP66
Tamb -15°C to +50°C

When fitted with 84°C Thermal Fuses:
Ex ma IIC T5 Ga
Ex ma IIIC T_{200} 90°C Da IP66
Tamb -15°C to +50°C

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Technical Manager

Signature:
(for printed version)

M POWNEY
Certification Manager

Date: 22/5/18

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.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom

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Manufacturer:	**Synatel Instrumentation Limited** Walsall Road, Norton Canes Cannock, Staffordshire WS11 9TB **United Kingdom**	

Additional Manufacturing location(s):

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 apparatus 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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-18 : 2014 Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"

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

GB/BAS/ExTR12.0278/00 GB/BAS/ExTR18.0073/00

Quality Assessment Report:

GB/BAS/QAR06.0065/07

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The 30mm Range of Sensors consist of:

CxxxTxxAI	Series of 30mm capacitance proximity switches.
IxxxxTxxAI	Series of 30mm inductive proximity switches.
PUxxTxxAI	Series of 30mm speedswitches

Alternative Type Designation for Braime:

BSxxxxxAI	Series of 30mm capacitance proximity switches.
P300xxxAI	Series of 30mm inductive proximity switches
M300xxxAI	Series of 30mm speedswitches

The 30mm Range of Sensors are self-contained sensors with a variety of different functions and circuit options contained within a 30mm diameter x 93mm long black plastic moulded enclosure. The enclosure is encapsulated using epoxy resin. The product type is identified in the series and code on the label. The outer surface of the tubular enclosure is threaded M30 x 1.5mm for a length of 70mm starting at the sensor end of the enclosure. Two plastic nuts are supplied to clamp the sensor in a suitable mounting bracket, or the sensor can be clamped direct to a surface by suitable clips. An integral 2 wire cable is provided for connection to a 24-240V DC or 24-240V AC supply. The sensors may act as a switch with a maximum switching capacity of 100mA in which case they must be connected in series with a suitable load with the same voltage rating as the supply being used, which typically would be a relay.

Alternatively the sensor may be a 10-30V DC, 1W, 4 wire DC version which contains an output with a switching capacity of 30V DC at 100mA.

Alternatively the sensor may be a 15-240V DC or 24-240V AC 2VA, 5 wire universal version which contains an output with a switching relay capacity of 60V AC/DC, 3A (non inductive).

Alternatively the sensor may be a 12-240V DC or 24-240V AC 1VA, 4 wire universal version which contains an isolated, AC/DC opto-isolator with a switching capacity of 50mA.

The maximum power supplied to the sensor circuit is controlled by a 63mA fuse and two parallel zener diodes rated at 12V. The normal operating voltage is 6.2V for the 2 wire universal circuit, 10V for the 4 wire DC circuit and 8V for the 4 wire circuit. The input supply is protected by a thermal fuse rated at 98 °C . The maximum power supplied to the 5 wire universal sensor circuit is controlled by a 50mA fuse with a normal operating voltage of 12V.

The 30mm Sensors have an Ingress Protection Rating equivalent to at least IP66.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The supply circuit shall be protected by a suitably rated fuse capable of interrupting a short circuit current of 1500 Amps.
2. The external connections shall meet the requirements for EPL Ga in accordance with EN 60079-26 and EPL Da in accordance with EN 60079-31.
3. Warning: Potential static ignition risk, clean only with a damp cloth.
4. The integral cable shall be terminated in a suitably certified enclosure or in the safe area.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 1.1

To allow the addition of various thermal fuses.

Variation 1.2

To confirm that the 30mm Range of Sensors covered by this certificate have been reviewed against the requirements of IEC 60079-0: 2011 and IEC 60079-18: 2014 in respect of the differences from IEC 60079-18: 2009, and comply with the requirements of the latest standard.

ExTR: **GB/BAS/ExTR18.0073/00**	File Reference: **14/0432**