

1 **EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa12ATEX0226X**

4 Equipment or Protective System: **30mm Range of Sensors**

5 Manufacturer: **Synatel Instrumentation Limited**

6 Address: **Walsall Road, Norton Canes, Cannock, Staffordshire, WS11 9TB**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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 confidential Report No. **GB/BAS/TR12.0278/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0: 2012 EN 60079-18: 2009

except in respect of those requirements listed at item 18 of the Schedule.

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 EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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

⊕ II 1GD Ex ma IIC T5 Ga Ex ma IIIC T100°C Da Tamb -15°C to +50°C

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **1057**

Project File No. **10/0653**

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R S SINCLAIR
GENERAL MANAGER
On behalf of SGS Baseefa Limited

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Schedule

14

Certificate Number Baseefa12ATEX0226X

15 Description of Equipment or Protective System

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.

16 Report Number

GB/BAS/TR12.0278/00

17 Specific Conditions of Use

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.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

| Number | Issue | Date | Description |
|---------------|--------------|-------------|------------------------------------|
| A4-15725A | 0 | 11/09/13 | Synatel 30mm series approval label |
| A4-15726A | 0 | 11/09/13 | Braime 30mm series approval label |
| A3-200797A | 0 | 18/12/13 | 30mm sensor protection details |
| A3-301234A | 0 | 10/09/12 | 30mm Enclosure ATEX/IECEX |
| A3-301266A | 0 | 16/01/13 | 30mm Enclosure ATEX/IECEX |
| A4-301308A | 0 | 15/08/13 | 30mm end cap |

All drawings are common to, and held on, IECEX BAS 12.0118X.