



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 04.0034X** Issue No.: **0**

Status: **Current**

Date of Issue: **2005-02-09** Page 1 of 3

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

Electrical Apparatus: **30mm Range of Sensors**
Optional accessory:

Type of Protection: **Dust protection by enclosure**

Marking: **IECEX BAS 04.0034X**
DIP A 20 T100°C -15°C ≤ ta ≤ +50°C


Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair

Position:

Managing Director

Signature:
(for printed version)


10-2-05

Date:

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:

Baseefa (2001) Ltd.

Health & Safety Laboratory Site
Buxton
Derbyshire
SK17 9JN
United Kingdom





IECEX Certificate of Conformity

Certificate No.: IECEx BAS 04.0034X

Date of Issue: 2005-02-09

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Page 2 of 3

Manufacturer: **Synatel Instrumentation Limited**
Norton Canes,
Cannock,
Staffordshire,
WS11 3TB
United Kingdom

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 manufacture'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 electrical 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 61241-1-1 : 1999
Edition: 2

Electrical apparatus for use in the presence of combustible dust - Part 1-1: Electrical apparatus protected by enclosures and surface temperature limitation - Specification for apparatus

*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

IECEX ATR:
UK/BAS/04/0490

File Reference:
04/0490



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Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

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 plastic moulded enclosure. The enclosure may be moulded in Clear or Opaque polymers.

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 plastic moulded enclosure. The enclosure may be moulded in Clear or Opaque polymers. 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 mounting bracket. 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 200mA 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 sensors may be a 10-30V DC, 1W, 4 wire version which contains an output with a switching capacity of 100mA.

Alternatively the sensors may be a 12-240V DC or 24-240V AC, 2VA, 5 wire version which contains an output with a switching relay capacity of 240V AC, 3A (non inductive).

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 circuit, 10V for the 4 wire circuit and 8.5V for the 5 wire circuit. The input supply is protected by a thermal fuse rated at 98°C.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. These sensors are not suitable for mounting where they will be exposed to direct sunlight unless fitted with an auxiliary metal shield completely protecting the plastic enclosure from UV exposure.
2. When the sensor is moulded in opaque polycarbonate or opaque polyamide, it is only suitable for use in areas with a low risk of impact. When the sensor is moulded in clear polycarbonate it is suitable for use in areas with normal risk of impact.
3. The integral cable must be terminated in a certified enclosure or safe area.



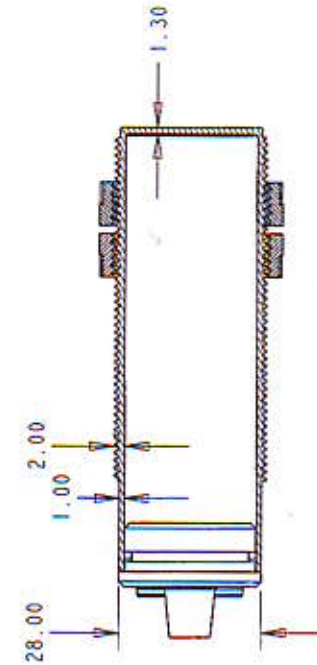
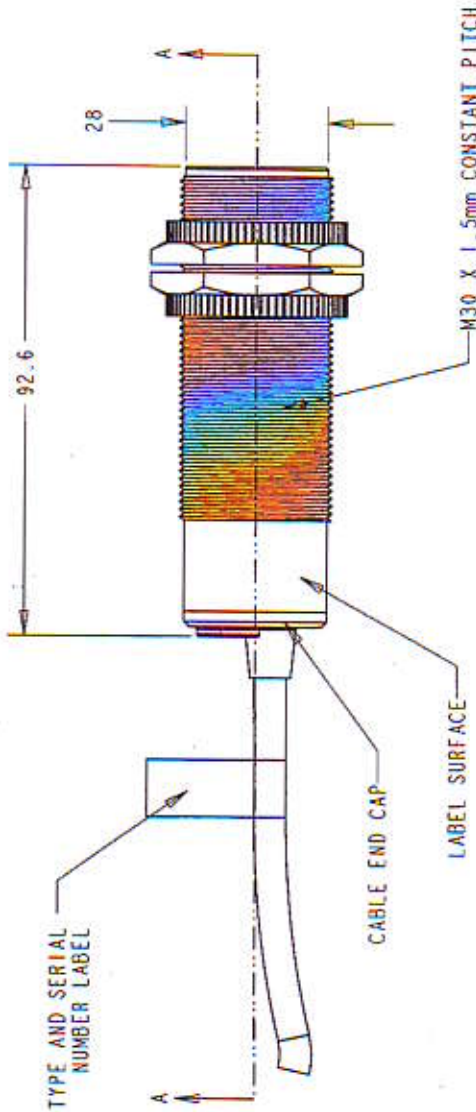
Annexe:

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ENCLOSURE APPROVED IN CONJUNCTION WITH CIRCUIT DIAGRAM A3-200444



UK/GAS/04/0490
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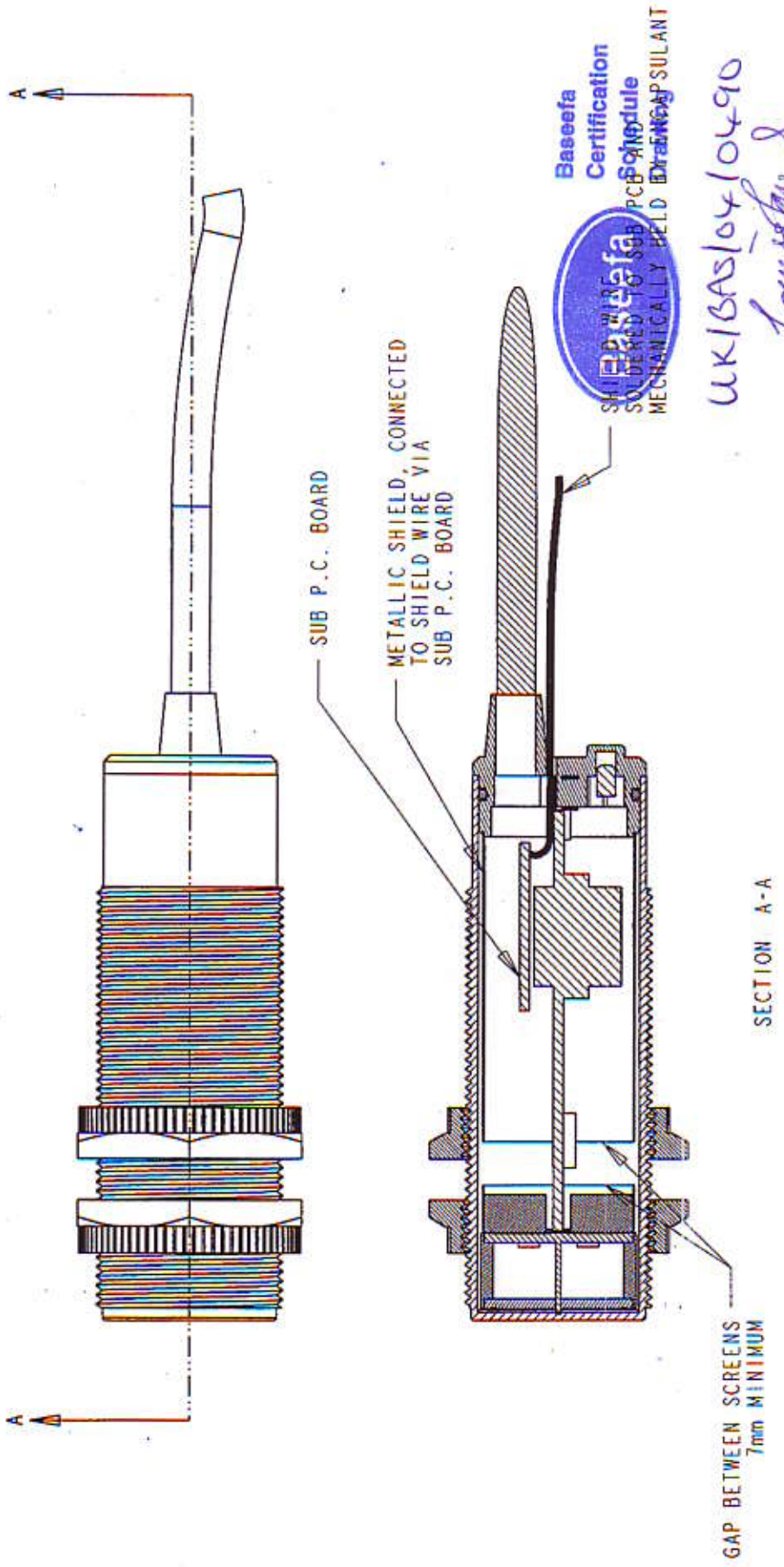


- NOTES
- 30mm THREADED BODY (054-003) MOULDED IN NOPLA KE931 RESIN (KOLON INDUSTRIES)
ALTERNATIVE:- BAYER MAKROLON GRADE 6557 CLEAR OR BAYER MAKROLON GRADE 2858 CLEAR OR WITH 1% BLACK UNIVERSAL MASTERBATCH
ALTERNATIVE:- GRILON POLYAMIDE 66/6 GRADE TS V0 GRILON POLYAMIDE 66/6 GRADE TSS/2 FA WITH 1% BLACK UNIVERSAL MASTERBATCH
 - CABLE END CAP MOULDED IN CLEAR MAKROLON GRADE 6557
 - WHEN ASSEMBLED WITH ELECTRONICS THE UNIT IS FILLED WITH EPOXY RESIN TYPE ALCHEMIX EP470/H82 (ALCHEMIE LTD.) ALLOWED TO CURE FOR 12HRS THEN "TOPPED" LEVEL TO REAR OF END CAP.
 - ENSURE LABEL SURFACE IS CLEAN AND FREE FROM GREASE BEFORE FITTING LABEL
 - FIT TYPE/SERIAL No. LABEL TO CABLE

FILE	SUFFIX	Mod	ISSUE 1	ISSUE 2	ISSUE 3	ISSUE 4	ISSUE 5	ISSUE 6	ISSUE 7	THIRD ANGLE DIMENSIONS IN MILLIMETRES SCALE 1000	DESCRIPTION
											30mm ENCLOSURE APPROVAL (EC)
											DRAWN BY R.A.S.
											DATE 08-10-04
											APPROVED <i>[Signature]</i>

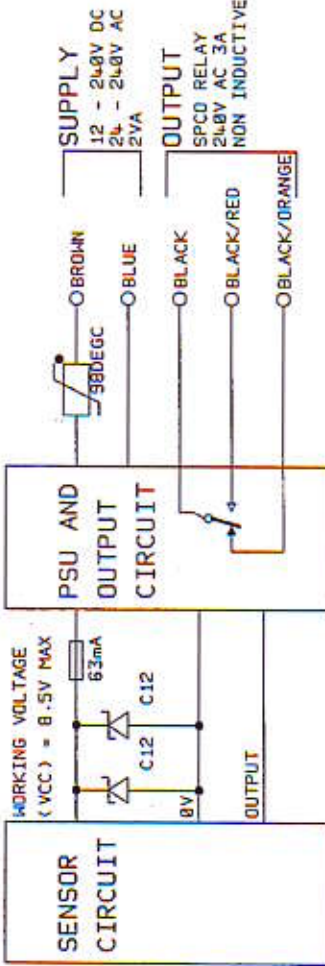
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REFER TO A3-300534

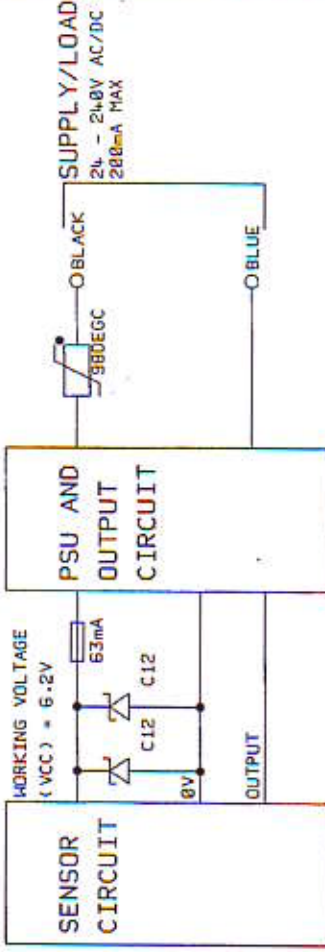


FILE	SUFFIX	Mod	ISSUE 1	ISSUE 2	ISSUE 3	ISSUE 4	ISSUE 5	ISSUE 6	ISSUE 7	ISSUE	THIRD ANGLE	DESCRIPTION
											1000	C-ITZ, BS-2V10 APPROVAL (IEC)
											RA	DRAWN BY R.A.S.
											RA	DATE 8-10-04
												APPROVED

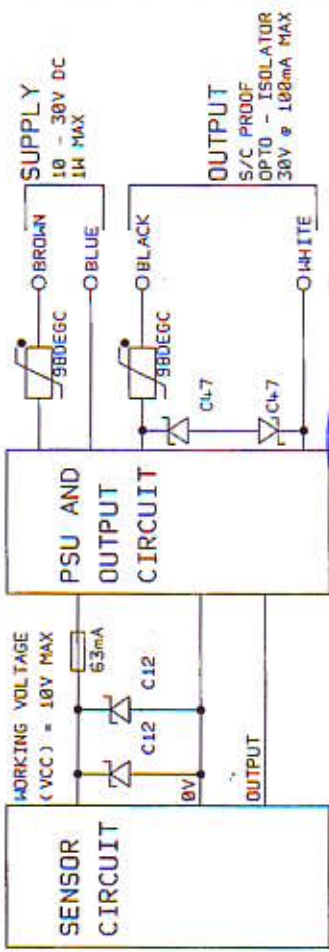
5 WIRE



2 WIRE



4 WIRE



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Drawing

WK/BAS 104/0490
Lawingford

SYNATEL INSTRUMENTATION LIMITED
CANNOCK, STAFFORDSHIRE.

ALL DIMENSIONS IN MILLIMETRES UNLESS STATED		THIRD ANGLE PROJECTION											
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FILE	SUPPLY	1	2	3	4	5	6	7	8	9	10	11	12
		ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE
TITLE: 30mm SENSOR PROTECTION DETAILS													
ENGINEER R.A. DRYAN V.T. DATE 22.10.04													
SCALE													
APPROVED <i>[Signature]</i>													

A3-200444A

SYNATEL INSTRUMENTATION LTD

A4-15170A

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Leeds, LS10 1JZ UK
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Fax: +44 (0) 113 243 5021
Web: www.braime.com

IECEX BAS 04.00034X **Ta100°C** **DIP** **DIP A20**
Tamb -15°C to +50°C **IP65** **200X**
II 1D T100°C **Baseefa03ATEX0674X**
1180



SYNATEL INSTRUMENTATION LTD. CANNOCK, ENGLAND WS11 9TB UK Tel: +44 (0) 1543 277003 web: www.synatel.co.uk

>MS0_JEC_ATEX_ID3



YEAR OF MANUFACTURE TO BE COMPLETED AFTER

MATERIAL :- C.I.L. SYSTEMS LTD.
METALISED POLYESTER
SELF ADHESIVE CIL 9200

UK/BAS/04/04/90
Laminated

FILE	SUFFIX	Mod	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	THIRD ANGLE	DESCRIPTION
			1	2	3	4	5	6	7			⊙	30mm IEC LABEL BRAIME GENERIC
												SCALE	DATE
												DRAWN BY	APPROVED
												R.A.S.	R.A.S.
												DRAWING SCALE	DATE
												R.A.	09-12-04

Handwritten signature

SYNATEL INSTRUMENTATION LTD

A4-15168A

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SYNATEL
INSTRUMENTATION LTD
CANNOCK, ENGLAND WS11 9TB
Tel: 01543 277003 web: www.synatel.co.uk

IECEX BAS 04.00034X TA100°C DIP DIP A20
Tamb -15°C to +50°C IP65 200X
ii 1D T100°C Baseefa03ATEX0673X
1180



>M30_IEC_ATEX_ID

MATERIAL :- C.I.L.L. SYSTEMS LTD
METALISED POLYESTER
SELF ADHESIVE CIL 9200



Baseefa
Certification
Schedule
Drawing

YEAR OF MANUFACTURE TO BE COMPLETED AFTER 20

UK/045/04/0490
Lauwighus

FILE	SUFFIX	Mod	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	THIRD ANGLE	DESCRIPTION
			1	2	3	4	5	6	7		⊙	30mm IEC LABEL SYNATEL GENERIC
											SCALE: DESAULTL	DATE
											DRAWING SCALE	APPROVED
											R.A.	DATE
											R.A.S.	09-12-04

SYNATEL INSTRUMENTATION LTD | **A4-15169A**

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IECEX BAS 04.00034X TA100°C DIP DIP A20
 Tamb -15°C to +50° IP65 200X

SYNATEL INSTRUMENTATION LTD. CANNOCK, ENGLAND WS11 9TB UK Tel: +44 (0) 1543 277003 web: www.synatel.co.uk

>M30_IEC_ATEX_ID2



*UK/BAS/04/0490
 Lawrie*

YEAR OF MANUFACTURE TO BE COMPLETED

MATERIAL :- C.I.L. SYSTEMS LTD.
 METALISED POLYESTER
 SELF ADHESIVE CIL 9200

FILE	SUFFIX	Mod	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	ISSUE	THIRD ANGLE	DESCRIPTION
			1	2	3	4	5	6	7		⊙	30mm IEC LABEL UNIVERSAL GEN
											SCALE: R.A.	DATE: 09-12-04
											DRAWN BY: R.A.S.	APPROVED: <i>[Signature]</i>