



British Approvals Service for Electrical
Equipment in Flammable Atmospheres



1 **Certificate of Conformity**

2. **BAS No Ex 96D2419**

3. This certificate is issued for the electrical apparatus.:

BA405C SETPOINT STATION

4. manufactured and submitted for certification by:

BEKA ASSOCIATES
of Hitchin, Herts SG5 2DA

5. This electrical apparatus and any acceptable variation thereto is specified in the Schedule to this Certificate and the documents therein referred to.

6. BASEEFA being an approved Certification Body in accordance with Article 14 of the Council Directive of the European Communities of 18 December 1975 (76/117/EEC) certifies that the apparatus has been found to comply with harmonised European Standards

EN 50 014 (1977) + Amendments A1 to A5
EN 50 020 (1977) + Amendments A1 to A5

and has successfully met the examination and test requirements as recorded in confidential Report No 96(C)0541 (ERA Report Ref 3627/802), dated November 1996.

7. The apparatus marking shall include the code

EEx ia IIC T5
($T_{amb} = -40^{\circ}\text{C}$ to 60°C)



File No: **EECS 0121/02/014**

Sheet 1/4

VKV4/C3129

I M CLEARE
DIRECTOR EECS
22 November 1996

This certificate is issued under NACCB accreditation No. 020



Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire, SK17 9JN, United Kingdom
Tel: 0298 26211 Fax: 0298 79514 Telex: 668113 RLSD G





**British Approvals Service for Electrical
Equipment in Flammable Atmospheres**

Certificate of Conformity BAS No Ex 96D2419

8. The manufacturer of the electrical apparatus referred to in this certificate, has the responsibility to ensure that the apparatus conforms to the specification laid down in the Schedule to this certificate and has satisfied routine verifications and tests specified therein.

9. This apparatus may be marked with the Distinctive Community Mark specified in Annex II to the Commission Directive of 16 January 1984 (Doc 84/47/EEC). A facsimile of this mark is printed on sheet 1 of this certificate.

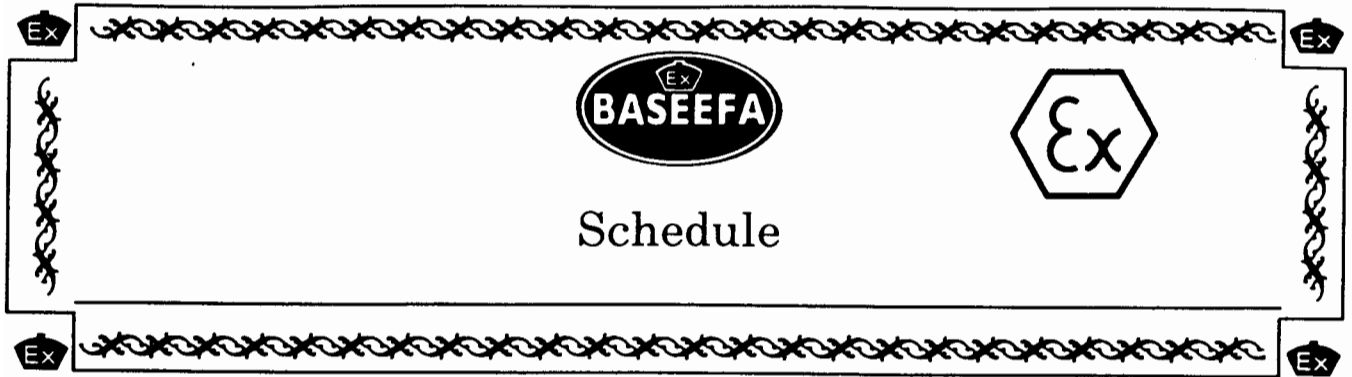
Sheet 2/4

This certificate is granted subject to conditions applicable to the Approval Service, it does not necessarily indicate that the apparatus may lawfully be used in particular industries or circumstances.



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Certificate of Conformity BAS No Ex 96D2419

APPARATUS

The BA405C SETPOINT STATION is a two wire panel mounting apparatus designed to be connected in a 4/20 mA loop and for the current flowing in the loop to be adjusted manually in the process area.

The BA405C Setpoint Station may optionally be fitted with a 3½ digit indicator board to display the adjustment in engineering units.

The BA405C may additionally be fitted with an optional back light board.

The BA405C comprises a setpoint station board, a terminal board or optional 3½ digit indicator main board and a display board, and an optional back light board, all housed within a metallic enclosure.

The enclosure provides a Degree of Protection of at least IP20.

Intrinsic safety is assured by limitation of voltage, current and power, limitation of capacitance, suppression of inductance and infallible segregation.

The maximum intrinsically safe input parameters are as follows:

Terminals 1 and 3

$$U_i = 30 \text{ V dc}$$

$$I_i = 200 \text{ mA dc}$$

$$P_i = 0.85 \text{ W}$$

The equivalent parameters are:

$$C_i = 0.04 \text{ } \mu\text{F}$$

$$L_i = 0.01 \text{ mH}$$



Schedule

Certificate of Conformity BAS No Ex 96D2419

Terminals 12 and 13

$$U_i = 28 \text{ V dc}$$

$$I_i = 159 \text{ mA dc}$$

$$P_i = 0.8 \text{ W}$$

The equivalent parameters are:

$$C_i = 0.03 \text{ } \mu\text{F}$$

$$L_i = 0.01 \text{ mH}$$

DRAWING

Number	Issue	Date	Description
CI405-11 Sheets 1 to 17	1	May 96	BA405C Certification Information

Ex

Ex

British Approvals Service for Electrical
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Certificate of Conformity - Variation

SUPPLEMENTARY CERTIFICATE BAS No. Ex 96D2419/1

This is to certify that Apparatus Certificate number:

Ex 96D2419

held by:

BEKA ASSOCIATES

of:

Hitchin, Herts, SG5 2DA

for the:

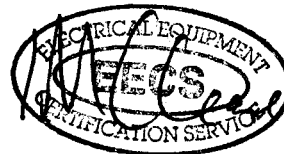
BA405C SETPOINT STATION

is hereby extended to apply to the apparatus designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This Supplementary Certificate shall be held with the original Certificate.

File No: EECS 0121/02/014

Sheet 1 of 2



This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances. Representation of equipment as "Certified" is valid only when the number of the prime certificate to which this certificate is a supplement is given on the relevant EECS Manufacturing Licence or Verification Certificate.

I M CLEARE
DIRECTOR
15 May 1997



Registration Number
020
The use of the Accreditation
Mark indicates accreditation in
respect of those activities
covered by the accreditation
certificate number 020.



Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire. SK17 9JN. United Kingdom
Tel: 01298 28000 Fax: 01298 28244

Ex

Ex

British Approvals Service for Electrical
Equipment in Flammable Atmospheres



Schedule

Supplementary Certificate BAS No. Ex 96D2419/1

VARIATION ONE

To permit

- (i) A number of minor changes to the drawings.
- (ii) The apparatus to have an alternative title, namely a PS105 Setpoint Station.

The intrinsic safety assessment is not impaired.

DRAWINGS

<u>Number</u>	<u>Issue</u>	<u>Date</u>	<u>Description</u>
CI405-11 Sheet 2 of 17	2	April 97	Modification record
CI405-11 Sheet 11 of 17	2	April 97	PCB details
CI405-11 Sheet 16 of 17	2	April 97	General assembly
CI405-11 Sheet 17 of 17	2	April 97	Label details

British Approvals Service for Electrical
Equipment in Flammable Atmospheres



Certificate of Conformity - Variation

SUPPLEMENTARY CERTIFICATE BAS No. Ex 96D2419/2

This is to certify that Apparatus Certificate number:

Ex 96D2419

held by:

BEKA ASSOCIATES

of:

Hitchin, Herts, SG5 2DA

for the:

BA405C SETPOINT STATION

is hereby extended to apply to the apparatus designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This Supplementary Certificate shall be held with the original Certificate.

File No: EECS 0121/02/014

Sheet 1 of 2

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**I M CLEARE
DIRECTOR**

17 June 1998



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Health and Safety Executive
Harpur Hill, Buxton, Derbyshire. SK17 9JN. United Kingdom
Tel: 01298 28000 Fax: 01298 28244



Registration Number
020
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British Approvals Service for Electrical
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Schedule

Supplementary Certificate BAS No. Ex 96D2419/2

VARIATION TWO

To permit minor changes that do not affect the intrinsic safety assessment.

DRAWINGS

<u>Number</u>	<u>Sheet</u>	<u>Issue</u>	<u>Date</u>	<u>Description</u>
CI405-11	2	3	Dec 97	Modification Record
CI405-11	6	3	Dec 97	3½ Digit Indicator Circuit Diagram
CI405-11	10	3	Dec 97	Back Light Circuit Diagram
CI405-11	16	3	Dec 97	General Assembly
CI405-11	17	3	Dec 97	Certification Label

British Approvals Service for Electrical
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Certificate of Conformity - Variation

SUPPLEMENTARY CERTIFICATE BAS No. Ex 96D2419/3

This is to certify that Apparatus Certificate number:

Ex 96D2419

held by:

BEKA ASSOCIATES

of

Hitchin, Herts, SG5 2DA

for the:

BA405C SETPOINT STATION

is hereby extended to apply to the apparatus designed and constructed in accordance with the specification set out in the Schedule of the said Certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This Supplementary Certificate shall be held with the original Certificate.

File No: EECS 0121/02/014

Sheet 1 of 2

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I M CLEARE
DIRECTOR
24 April 2001



Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire, SK17 9JN, United Kingdom
Tel: +44 (0)1298 28000 Fax: +44 (0)1298 28244
internet: www.baseefa.com e-mail: baseefa.info.eecs@hsl.gov.uk



British Approvals Service for Electrical
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Schedule

Supplementary Certificate BAS No. Ex 96D2419/3

VARIATION THREE

To permit minor changes that do not affect the intrinsic safety assessment,

DRAWINGS

<u>Number</u>	<u>Sheet</u>	<u>Issue</u>	<u>Date</u>	<u>Description</u>
CI405-11	2	4	APRIL.01	Modification Record
CI405-11	4	4	APRIL.01	Setpoint Station Circuit Diagram
CI405-11	11	4	APRIL.01	Track and Component Layout PC59