



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: **Baseefa05ATEX0011X**

4 Equipment or Protective System: **MODEL 646Y SERIES PRESSURE SWITCH**

5 This certificate is held by: **CUSTOM CONTROL SENSORS INCORPORATED**

6 Address: **21111 Plummer Street, Chatsworth, California 91311, USA**

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 (2001) Ltd., 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. 05(C)0035

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

**EN 60079-0: 2004                      EN 60079-1: 2004                      EN 50281-1-1: 1998 + Amendment 1**

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 2 GD Ex d IIC T85°C (T<sub>amb</sub> -34°C to +71°C) or T100°C (T<sub>amb</sub> -34°C to +86°C)**

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

Baseefa Customer Reference No. 0253

Project File No. 05/0035

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

**Baseefa**

Rockhead Business Park, Staden Lane,  
Buxton, Derbyshire SK17 9RZ  
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601  
e-mail [info@baseefa.com](mailto:info@baseefa.com) web site [www.baseefa.com](http://www.baseefa.com)  
Baseefa is a trading name of Baseefa (2001) Ltd  
Registered in England No. 4305578 at the above address

**R S SINCLAIR**

**DIRECTOR**  
On behalf of  
Baseefa (2001) Ltd.



Or e) VACUUM PRESSURE SWITCHES

646VEY      646VEMY  
646VEAY     646VEAMY  
646VEFY     646VEFMY

With a system pressure of 500 p.s.i. maximum.

Or f) TEMPERATURE SWITCHES

646TEY  
646TEMY  
646TUEY  
646TUEMY

With a system pressure of 1250 p.s.i. maximum.

**16 Report Number**

Baseefa Certification Report No 05(C)0035

**17 Special Condition for Safe Use**

The integral cabling shall be suitably mechanically protected and terminated in a suitable junction or terminal facility.

**18 Essential Health and Safety Requirements**

As follows, in addition to those covered by the standards at item 9.

Clause	Subject	Compliance
1.2.1	Design and construction	Report 05(C)0035

**19 Drawings and Documents**

Number	Issue	Date	Description
646**Y sheet 1	L	01/05	General Arrangement
646**Y sheet 2	L	11/04	General Arrangement
646**Y sheet 3	L	11/04	Switch Housing Detail
646**Y sheet 4	L	11/04	General Arrangement
646**Y sheet 5	L	11/04	Alternative Inlet Arrangements
646**Y sheet 6	L	11/04	Alternative Inlet Arrangements
646 **Y sheet 7	L	01/05	Parts List
646**Y sheet 8	L	11/04	Switch Housing Detail
38-11	D	6/95	Strap



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## Schedule

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Certificate Number Baseefa05ATEX0011X

### 15 Description of Equipment or Protective System

A Model 646Y Series Pressure Switch rated up to 15A at 125, 250 or 480 volts a.c. 50 or 60Hz, or up to 125 volts d.c., 1A and a process system pressure of 7500 p.s.i. maximum, comprising an electrical assembly and a pressure actuator arrangement.

The electrical assembly comprises a sealed steel cylindrical enclosure housing a single pole double throw micro-switch which is operated by an actuator arm through a wobblephragm in the enclosure wall and with integral cabling potted into the cable entry provided with a male thread form. The enclosure body is reinforced with a stainless steel strap secured with a nut and bolt around its periphery.

The pressure actuator arrangement comprises an aluminium rectangular enclosure housing a range scale and set point adjustment assembly with an aluminium pressure port and a pressure plate assembly incorporating a film diaphragm and 'O' rings.

The equipment provides ingress protection to IP66 and IP67 in accordance with EN 60529: 1991.

The model reference for the equipment includes provision to add, as a suffix, various letters and numbers denoting the range and type of switch.

The Model 646Y Series Pressure Switch comprises the switch types listed below together with their respective model numbers:

a) GAUGE PRESSURE SWITCHES

646GEY	646GEFY
646GEMY	646GEFMY
646GEAY	646GBEY
646GEAMY	646GBEMY

With a system pressure of 3000 p.s.i. maximum.

Or b) PISTON PRESSURE SWITCHES (for hydraulic systems)

646PEY	646PEMY
646PEAY	646PEAMY
646PEFY	646PEFMY

With a hydraulic system pressure of 7500 p.s.i. maximum.

Or c) GAUGE PRESSURE SWITCHES

646GZEY	646GZEFY
646GZEMY	646GZEMFY

With a system pressure of 5000 p.s.i. maximum.

Or d) DIFFERENTIAL PRESSURE SWITCHES

646DZEY
646DZEMY

With a system pressure of 400 p.s.i. maximum and a differential pressure of 75 p.s.i. maximum.



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

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

3 Supplementary EC - Type Examination Certificate Number: **Baseefa05ATEX0011X/1**

4 Equipment or Protective System: **MODEL 646Y SERIES PRESSURE SWITCH**

5 Manufacturer: **CUSTOM CONTROL SENSORS INCORPORATED**

6 Address: **21111 Plummer Street, Chatsworth, California 91311, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. **Baseefa05ATEX0011X** to apply to equipment or protective systems 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.

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

Baseefa Customer Reference No. **0253**

Project File No. **05/0408**

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

A handwritten signature in blue ink, appearing to read "R S Sinclair".

**Baseefa**

Rockhead Business Park, Staden Lane,  
Buxton, Derbyshire SK17 9RZ  
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601  
e-mail [info@baseefa.com](mailto:info@baseefa.com) web site [www.baseefa.com](http://www.baseefa.com)  
Baseefa is a trading name of Baseefa (2001) Ltd  
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**R S SINCLAIR**  
**DIRECTOR**  
On behalf of  
Baseefa (2001) Ltd.



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## Schedule

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Certificate Number Baseefa05ATEX0011X/1

### 15 Description of the variation to the Equipment or Protective System

#### Variation 1.1

Additional alternative 'O' ring material and additional alternative material for the wetted parts of the equipment as specified on the certificate schedule drawings.

### 16 Report Number

None.

### 17 Special Conditions for Safe Use

None additional to those listed previously

### 18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

### 19 Drawings and Documents

Number	Issue	Date	Description
646**Y Sheet 1	M	12/05	General Arrangement
646**Y Sheet 2	M	12/05	General Arrangement
646**Y Sheet 3	M	12/05	Switch Housing Detail
646**Y Sheet 4	M	12/05	General Arrangement
646**Y Sheet 5	M	12/05	Alternative Inlet Arrangements
646**Y Sheet 6	M	12/05	Alternative Inlet Arrangements
646**Y Sheet 7	M	12/05	Parts List
646**Y Sheet 8	M	12/05	Switch Housing Detail



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

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

3 Supplementary EC - Type Examination Certificate Number: **Baseefa05ATEX0011X/2**

4 Equipment or Protective System: **MODEL 646Y SERIES PRESSURE SWITCH**

5 Manufacturer: **CUSTOM CONTROL SENSORS INCORPORATED**

6 Address: **21111 Plummer Street, Chatsworth, California 91311, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. **Baseefa05ATEX0011X** to apply to equipment or protective systems 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.

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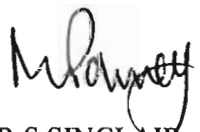
Baseefa Customer Reference No. **0253**

Project File No. **07/0075**

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**Baseefa**

Rockhead Business Park, Staden Lane,  
Buxton, Derbyshire SK17 9RZ  
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601  
e-mail [info@baseefa.com](mailto:info@baseefa.com) web site [www.baseefa.com](http://www.baseefa.com)  
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PP R S SINCLAIR  
DIRECTOR  
On behalf of  
Baseefa (2001) Ltd.



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## Schedule

14

Certificate Number Baseefa05ATEX0011X/2

15

**Description of the variation to the Equipment or Protective System**

### Variation 2.1

The addition of a double break electrical switch model.

16

**Report Number**

None

17

**Special Conditions for Safe Use**

None additional to those listed previously

18

**Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

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**Drawings and Documents**

Number	Issue	Date	Description
646**Y, Sheets 1 to 8 inclusive	M	11/05	Switch, Adjustable

1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

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

3 Supplementary EC - Type  
Examination Certificate Number: **Baseefa05ATEX0011X/3**

4 Equipment or Protective System: **Model 646Y Series Pressure Switch**

5 Manufacturer: **Custom Control Sensors Incorporated**

6 Address: **21111 Plummer Street, Chatsworth, California 91311, USA**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa05ATEX0011X to apply to equipment or protective systems 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.

8 Item 9 of the original Certificate is replaced by “Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2012 EN 60079-1:2007 EN 60079-31:2009**

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

9 The marking of the equipment has changed from the original Certificate and shall include the following:

**⊕ II 2 GD Ex d IIC T6 Gb (T<sub>amb</sub> -34°C to +71°C) or T5 Gb (T<sub>amb</sub> -34°C to +86°C)**

**Ex tb IIIC T85°C Db (T<sub>amb</sub> -34°C to +71°C) or T100°C Db (T<sub>amb</sub> -34°C to +86°C) IP67**

This certificate shall be held with the original certificate.

Baseefa Customer Reference No. **0253**

Project File No. **13/0378**

This document is issued by the Company subject to its General Conditions for Certification Services accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and the Supplementary Terms and Conditions accessible at <http://www.baseefa.com/terms-and-conditions.asp>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. It does not necessarily indicate that the equipment may be used in particular industries or circumstances. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, schedule included, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

**SGS Baseefa Limited**

Rockhead Business Park, Staden Lane,  
Buxton, Derbyshire SK17 9RZ

Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601

e-mail [info@baseefa.com](mailto:info@baseefa.com) web site [www.baseefa.com](http://www.baseefa.com)

Registered in England No. 4305578.

Registered address: Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN

  
**P R S SINCLAIR**  
GENERAL MANAGER

On behalf of SGS Baseefa Limited



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## Schedule

14

Certificate Number Baseefa05ATEX0011X/3

15 **Description of the variation to the Equipment or Protective System**

### Variation 3.1

To allow the manufacturer to increase the number of holes in the nameplate strap in order to add another, separate marking plate.

### Variation 3.2

To confirm that the equipment covered by this certificate has been reviewed against the requirements of EN 60079-0:2012, EN 60079-1:2007 and EN 60079-31:2009 in respect of the differences from the standards to which this certificate was issued; none of these differences affect this equipment, other than the code marking requirements which have been addressed.

16 **Report Number**

None

17 **Specific Conditions of Use**

None additional to those listed previously

18 **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 **Drawings and Documents**

Number	Sheet	Issue	Date	Description
38-11	1 of 1	E	01/05/13	GA drawing of strap assembly
646**Y	Sheets 1 to 8 inclusive	N	01/06/13	Switch, Adjustable