



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: **Baseefa05ATEX0111**

4 Equipment or Protective System: **Sovereign Series Pressure Switches**

5 Manufacturer: **Delta Controls Limited**

6 Address: **Island Farm Avenue, West Molesey, Surrey KT8 2UZ**

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)0307

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

EN 60079-0: 2004 EN 50020: 2002 EN 60079-26: 2004 EN 50281-1-1: 1999

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 EEx ia IIC T6(-25°C ≤ T_a ≤ +60°C) or T5(-60°C ≤ T_a ≤ +80°C)

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

Baseefa Customer Reference No. **0279**

Project File No. **05/0307**

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 web site 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.



13

Schedule

14

Certificate Number Baseefa05ATEX0111

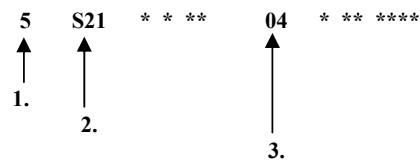
15 Description of Equipment or Protective System

The Sovereign Series Pressure Switches are designed to allow the switching of one or two internally mounted microswitches connected to intrinsically safe circuits, actuated by pressure being applied to a piston / lever / diaphragm assembly.

The apparatus comprises a pressure port containing the piston and diaphragm assembly connected externally to various process connections. The piston passes through a bushing arrangement into the main enclosure to actuate one or two microswitches. The above, together with screw terminals are mounted in either a zinc alloy or stainless steel enclosure.

The Sovereign Series Pressure Switches has a number of different models, the difference being the type and number of microswitches fitted and the process connection. The following models in the range have been assessed: -

Typical Model Number



1. Enclosure Type – 2 options:-

- 4 = IP66 Stainless Steel Enclosure
- 5 = IP66 Cast Zinc Alloy Enclosure

2. Pressure Switch Type – 6 Options:-

- S21 = Fixed Switching Differential Pressure Switch (Max. Working Pressure 155 Bar)
- S22 = Adjustable Switching Differential Pressure Switch (Max. Working Pressure 155 Bar. SPDT Models only)
- S24 = Fixed Switching Differential Pressure Switch (Max. Working Pressure 1,000 Bar)
- S31 = Fixed Switching Differential Pressure Difference Switch (Max. Working Pressure 110 Bar)
- S34 = Fixed Switching Differential Pressure Difference Switch (Max. Working Pressure 250 Bar)
- S71 = Fixed Switching Differential Vapour Pressure Temperature Switch

3. Switch Options – 7 Options:-

- 04 = Single Pole Double Throw (SPDT) gold alloy contacts for low voltage switching
- 05 = Double Pole Double Throw (DPDT) gold alloy contacts for low voltage switching
- 0G = Single Pole Double Throw (SPDT) Environmentally Sealed with gold contacts
- 0H = Double Pole Double Throw (DPDT) Environmentally Sealed with gold contacts
- H2 = Single Pole Double Throw (SPDT) Hermetically Sealed, gold plated silver contacts
- H3 = Two Single Pole Double Throw (SPDT) Hermetically Sealed, gold plated silver contacts (Simultaneous falling under pressure)
- H6 = Two Single Pole Double Throw (SPDT) Hermetically Sealed, gold plated silver contacts (Simultaneous rising under pressure)

* Denotes other parameters of the model number relating to the construction and settings options of the apparatus. The differences in these options do not have an effect on the intrinsic safety assessment



Each microswitch circuit has the following input parameters:-

$U_i = 30V$
 $I_i = 300mA$
 $C_i = 0$
 $L_i = 0$

16 Report Number

05(C)0307

17 Special Conditions for Safe Use

None

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	Sheet	Issue	Date	Description
14772	1	A	05/05/2005	'5' Sovereign Assembly EEx ia
14781	1	A	01/06/2005	Label EEx ia
14782	1	A	03/06/2005	'4' Sovereign Assembly EEx ia
14783	1	A	03/06/2005	Label SS EEx ia
14784	1	A	03/06/2005	Piston Actuator Pressures up to 1500 bar Type S24 (EEx ia Approval)
14785	1	A	03/06/2005	Variation to Piston Assembly Type S24 (EEx ia)
14786	1	A	03/06/2005	Variations to Pressure, Pressure Difference & Temperature Actuators