

1 **UK-TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

- 3 UK-Type Examination Certificate Number: **BAS22UKEX0260X**
- 4 Product: **Pressure Switch Series S20**
- 5 Manufacturer: **Delta Mobrey Limited**
- 6 Address: **Hudson House, Albany Park, Camberley, Surrey, GU16 7PL, United Kingdom**
- 7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Baseefa, Approved Body number 1180, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in confidential Report No.

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

EN IEC 60079-0:2018 EN 60079-1: 2014 EN 60079-31: 2014 EN 60079-26: 2015

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 product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

II 2 GD Ex db IIC T* Gb (T_{amb} = *°C)
Ex tb IIC T*°C Db (T_{amb} = *°C) or

II 1/2 GD Ex db IIC T* Ga/Gb (T_{amb} = *°C) * - See schedule
Ex ta/tb IIC T*°C Da/Db (T_{amb} = *°C)

SGS Baseefa Customer Reference No. 0279

Project File No. 21/0515

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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

13

Schedule

14

Certificate Number BAS22UKEX0260X

15 Description of Product

A flameproof pressure switch, series S20, comprising a housing and threaded cover manufacturer in cast stainless steel, cast aluminium, gunmetal or cast iron with an integral spring and venting chamber to which is attached a pressure port. Pressure applied to the port moves a pushrod, which passes through a stainless steel, mild steel or brass brush, threaded into a wall of the enclosure, which actuates one or two internally mounted microswitches. The microswitches are each rated at 5A, 440Vac maximum. The pressure port comprises a piston and diaphragm assembly which can have a pressure rating up to 155 bar or a bellows assembly which can have a pressure rating up to 75 bar.

The enclosure base is provided with four holes for mounting purposes.

Both internal and external earthing facilities are provided.

Cable entry holes are provided as specified on the certified drawings for accommodation of suitable BASEEFA certified flameproof cable entry devices, with or without the interposition of a suitable BASEEFA certified cable flameproof thread adaptor. Unused entries are to be fitted with suitable BASEEFA certified flameproof stopping plugs.

Suitable flameproof cable entry devices, thread adaptors and stopping plugs certified as equipment (not a component) under an EU or UK Type Examination Certificate may be used in the manner specified above.

Ambient temperature range / Marking code:

The equipment excluding the 2S24 and 3S24 complies with the requirements of the following standards EN 60079-0, EN 60079-1 and EN 60079-31:

II 2 GD

Ex db IIC T* Gb (Ta = *)

Ex tb IIIC T*°C Db (Ta = *) * See below

O-ring Fitted	Temperature Classification	Dust Marking	Ambient Temperature Range
Fluorosilicone	T6	T85°C	-60°C to + 65°C
	T5	T100°C	-60°C to + 80°C
Nitrile	T6	T85°C	-30°C to + 65°C
	T5	T100°C	-30°C to + 80°C

The types 2S24 or 3S24, equipment types comply with EN 60079-0, EN 60079-1, EN 60079-31 and EN 60079-26 shall be marked as follows:

II 1/2 GD

Ex db IIC T* Ga/Gb (Ta = °C) * See below
Ex ta/tb IIIC T* Da/Db (Ta = °C)

O-ring Fitted	Temperature Classification	Dust Marking	Ambient Temperature Range
Fluorosilicone	T6	T85°C	-60°C to + 65°C
	T5	T100°C	-60°C to + 80°C
Nitrile	T6	T85°C	-30°C to + 65°C
	T5	T100°C	-30°C to + 80°C

VARIATION 0.1

Provision of an alternative pressure port to create: -

A FLAMEPROOF PRESSURE SWITCH TYPE S24 for pressure up to 1500 bar.

The S24 is permitted to be connected to a process system classified as Zone 0 as defined in EN 60079-10 when fitted with the 2S24 or 3S24 process head.

VARIATION 0.2

Provision of an alternative pressure port to create: -

A FLAMEPROOF DIFFERENTIAL PRESSURE SWITCH TYPE S30 for pressure up to 250 bar.

VARIATION 0.3

Provision of an alternative pressure port to create: -

A FLAMEPROOF DIFFERENTIAL PRESSURE SWITCH TYPE S70 for pressure up to 50 bar.

VARIATION 0.4

Optional alternative switch arrangement rated 1A at 48 Vdc.

VARIATION 0.5

Optional alternative switch arrangement rated 5A to 15A, 480V a.c.

When this option is invoked a warning is included on an external label stating ‘DO NOT OPEN WHEN EXPLOSIVE GAS ATMOSPHERE IS PRESENT.’

Additionally a label fitted externally to the apparatus warns the user that cabling suitable for a temperature of 91 °C for T6 version and 106 °C for the T5 version.

VARIATION 0.6

The optional addition of up to four end of line resistors, as detailed in table A below, connected across the terminals of the terminal block.

Table A

Power Rating of Resistor (Watts)	Minimum Value (ohms)	Maximum Power Dissipation (Watts)
0.25	7200	0.125
0.5	3600	0.25
1.00	1800	0.50
2.00	900	1.00

The addition of the end of line resistor is limited to a maximum working voltage of 30V d.c.

When this option is invoked, a warning is included on an external label stating DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT.

Additionally, a label fitted externally warns the user that cabling suitable for a temperature of 85 °C for the T5 version.

16 Report Number

Baseefa test report number 21(C)0515-03

17 Specific Conditions of Use

1. The flamepaths are not to be repaired.

Additional specific conditions of use which apply only to the Type 2S23 and the Type 2S24 versions of the Pressure Switch Series 20, when used in the boundary between an area requiring EPL Ga and an area requiring EPL Gb. The specific conditions of use are: -

2. The partition wall (the process diaphragm) is less than 1 mm thick and shall not be subject to environmental conditions that adversely affect the partition wall.
3. The unit shall be tested in such a way that the operational parameters (for example, pressure or temperature limits) stated by the manufacturer are verified.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product:

Clause	Subject
13	LVD type requirements
14	Overloading of equipment (protection relays, etc.)
21 (1)	External effects
21 (2)	Aggressive substances, etc.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
14581	1 of 1	I	08/03/2023	Wiring and Label Combinations
14778	1 of 1	E	27/04/2023	Wiring and label (S24 1/2 GD)

For full drawings see BAS01ATEX2113X.