



# 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](http://www.iecex.com)

Certificate No.: IECEx BAS 11.0114X issue No.:1

Certificate history:  
Issue No. 1 (2012-10-2)  
Issue No. 0 (2011-11-1)

Status: **Current**

Date of Issue: 2012-10-02 Page 1 of 4

Applicant: **Mid-West Instrument**  
6500 Dobry Drive  
Sterling Heights  
MI 48138  
United States of America

Electrical Apparatus: **Model 220 Differential Pressure Switch**  
Optional accessory:

Type of Protection: **Flameproof and Dust**

Marking: **Ex d IIB+H2 T6 Gb, Ex tb IIIC T85°C Db IP6X (-40°C ≤ Ta ≤ +70°C)\***

\* See description for alternative Temperature Class and ambient combinations

Approved for issue on behalf of the IECEx  
Certification Body:

*RS* R S Sinclair *MPOWNEY*

Position: General Manager

Signature:  
(for printed version)

*MPOWNEY*  
\_\_\_\_\_  
3/10/12

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](http://www.iecex.com).

Certificate issued by:

**Baseefa**  
Rockhead Business Park  
Staden Lane  
Buxton  
Derbyshire  
SK17 9RZ  
United Kingdom





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Manufacturer: **Mid-West Instrument**  
6500 Dobry Drive  
Sterling Heights  
MI 48138  
**United States of America**

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 manufacturer'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:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*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*

Test Report:  
GB/BAS/ExTR11.0223/00

GB/BAS/ExTR12.0250/00

Quality Assessment Report:

GB/BAS/QAR11.0016/01



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The Model 220 Pressure Switch is for measuring differential pressure and comprises a pressure assembly and cover housing a single or double reed switch assembly and either a circuit board with a terminal strip interface or a single or double relay assembly with terminal strip interface. The switches, or switches, and pressure indication are magnetically coupled to a moving magnet inside the pressure assembly.

The cast body (pressure assembly) and cover are manufactured from aluminium with a maximum working pressure rating of up to 20.7MPa (3000psig). The body may optionally include a stainless steel insert to provide all stainless steel wetted parts. The cover is secured to the body with seven M5, stainless steel hexagon head captive screws.

Internal and external earth facilities are provided.

A ½" NPT cable entry hole is provided for the accommodation of a cable entry device, with or without the interposition of a flameproof thread adapter. The cable entry device, and thread adapter if fitted is to be suitable for the equipment, the cable and the conditions of use and shall be certified as Equipment (not a Component).

#### Variation 0.1

An alternative version with a maximum working pressure rating of up to 10.3MPa (1500psig). In this form the equipment is designated a Model 240 Pressure Switch.

#### Variation 0.2

The optional fitting of an external dial gauge assembly for the indication of differential pressure.

#### Variation 0.3

The optional replacement of the magnetic switches with an electronics unit having a 4-20mA proportional output. In this form the unit is designated a Transmitter Unit.

Further description can be found in the Certificate Annex

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The maximum gap permitted between the body and cover is less than the maximum permitted in the standard. Therefore it is the responsibility of the user of this equipment to ensure the maximum gap between the body and the cover is not greater than 0.038mm (0.0015").
2. The cover fasteners are of a non-standard production. For replacement purposes these fasteners shall be obtained from the unit manufacturer only.
3. The optional dial gauge may present a potential electrostatic charging hazard. Do not clean or rub when an explosive atmosphere may be present.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Variation 1.1

Alternative O ring materials

ExTR: **GB/BAS/ExTR12.0250/00**

File Reference: **12/0760**