

IDEM's range of Explosion Proof Safety switches have been developed to satisfy the latest IECEx, ATEX and U.L. standards.

They are pre-wired utilising IDEM's certified internal switch to satisfy the hazardous conditions found within the petro-chemical, pharmaceutical, food processing and packaging industries.

FEATURES:

- SAFETY SWITCHES FOR USE IN HAZARDOUS AREAS
- GAS AND DUST
- HIGH STRENGTH PLASTIC, DIE CAST OR STAINLESS STEEL 316

LIMIT SWITCHES



HLM-EX



HLM-SS-EX

TONGUE INTERLOCK SWITCHES



KP-EX



KM-EX



K-SS-EX



KM-SS-EX

SAFETY ROPE PULL SWITCHES



GLHL-EX



GLHD-EX



GLHR-EX



GLS-EX



GLHL-SS-EX



GLHD-SS-EX



GLHR-SS-EX



GLS-EX

All switches contain pre-wired internal switch type LS-EX to provide 2NC 2NO contacts with electrical protection in hazardous areas.

- Positive break contacts to EN60947-5-1



8 wire : 250V.ac/dc 2.5A.
Electrical Ratings: B300 (pilot duty)

APPLICATION:

Interlock and Emergency Stop Safety Switches for use in hazardous areas - positively operated contacts or high life non contact dry reed switching. For use in hazardous areas IECEx and ATEX IIC T6. (Gas and Dust).

Designed for petro-chemical, pharmaceutical and food processing and packaging applications where explosive atmospheres exist.

IDEM explosion proof safety interlock switches are designed to fit to the leading edge of sliding, hinged or lift off machine guards to provide safe electrical switching within explosion risk environments like petro-chemical, pharmaceutical, food production and packaging. IDEM explosion proof rope pull switches are designed to provide protection to conveyors used in hazardous areas like beverage production and chemical handling.

ATEX / IECEx Limit Switches – Type LS-EX

Datasheet

Ex d IIC T6 (-20°C ≤ Ta ≤ +60°C) Gb
 Ex tb IIIC T85°C (-20°C ≤ Ta ≤ +60°C) Db IP65



Type: LS-EX
 Part No. 920__ _



Operation:

All LS-EX Explosion Proof Limit Switches are designed to conform to EN60079-0, IEC60079-1 and EN60079-31. They have a mechanical operating rod, which provides a switching action when depressed. They can be used for position monitoring and provide a positive switching action.

SPECIFIC CONDITIONS OF USE:

1. THE INTEGRAL CABLE AND OPERATING ROD SHALL BOTH BE SUITABLY PROTECTED FROM PHYSICAL DAMAGE AND ABRASION. THE INTEGRAL CABLE IS TO BE TERMINATED IN A SUITABLE TERMINAL FACILITY.
2. THE SWITCHES ARE INTENDED FOR USE ON FIXED INSTALLATIONS AND IF NOT MOUNTED DIRECT TO EARTHED METALWORK ARE TO BE PROTECTED FROM ELECTROSTATIC RISKS (RUBBING AND CHARGED AIR FLOWS ETC).
3. THESE SWITCHES ARE SEALED UNITS AND NOT USER SERVICEABLE.

THE MAXIMUM SWITCHING CURRENT SHOULD BE OBSERVED FOR 4 WIRE AND 8 WIRE VERSIONS.

THE MOUNTING HOLES ARE NOT TO BE ENLARGED.

Switching frequency 1.0 Hz maximum
 Body Material Nylon PA66
 Enclosure Protection IP65
 Mechanical Life Expectancy 1,000,000 switchings
 Electrical Life Expectancy Tested to 1,000,000 cycles at 24V. 0.2A

Certification Standards

IEC 60079-0 (EN60079-0)
 IEC 60079-1 (EN60079-1)
 IEC 60079-31 (EN60079-31)

Certificate No's:

EC Type Certificate Number:
 IEC Certificate Number:

Baseefa11ATEX0267X
 IECEx BAS11.0133X

Classification

ATEX Zones 1,21,2,22

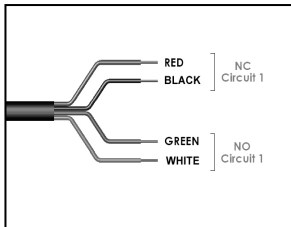


Ex d IIC T6 (-20°C ≤ Ta ≤ +60°C) Gb,
 Ex tb IIIC T85°C (-20°C ≤ Ta ≤ +60°C) Db IP65

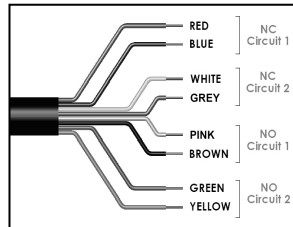
4 wire versions: 250V.ac/dc 4.0A.
 8 wire versions: 250V.ac/dc 2.5A.

Wiring:

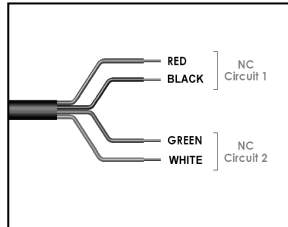
1 NC 1 NO



2 NC 2 NO



2 NC



EU Declaration of Conformity

Manufacturer: IDEM SAFETY SWITCHES Ltd., WN2 4HR UK



The following products conform to the Essential Health and Safety Requirements of the following European Directives:

Directive for Equipment intended for use in potentially explosive atmospheres: 2014/34/EU

Devices: Limit Switches

Ex d IIC T6 (-20°C ≤ Ta ≤ +60°C) Gb
 Ex tb IIIC T85°C (-20°C ≤ Ta ≤ +60°C) Db IP65

Types LS-EX

Harmonised Standards:

EN60079-0:2011 (This standard has been compared with EN60079-0:2018 and there are no significant changes which affect the equipment).
 EN60079-1:2007 (This standard has been compared with EN60079-1:2014 and there are no significant changes which affect the equipment).
 EN60079-31:2009 (This standard has been compared with EN60079-31:2014 and there are no significant changes which affect the equipment).

EC Type Certificate Number: Baseefa11ATEX0267X (plus supplements) Date: 04/04/2012 Certified Body: SGS Fimko Oy, FI-00380 Helsinki, Finland (Notified Body Number 0598).

Materials used in the manufacture of these products are RoHS2 compliant in accordance with Directives: 2011/65/EU (RoHS2) until 21st July 2019 and 2015/863 (RoHS3) from 22nd July 2019.

M. Mohtasham Managing Director 1st January 2021

Dwg. 920560-EX Iss.12

ATEX / IECEx Limit Switches – Type LS-EX

INFORMATION WITH REGARD TO CLAUSE 30 UL60079-0 AND CSA C22.2 No 60079-0 AND CLAUSE 21, UL 60079-1:

IMPORTANT: ONLY RELEVANT FOR DEVICES MARKED:

IMPORTANT : SEULEMENT PERTINENT POUR LES DISPOSITIFS MARQUÉS :



LOOK FOR MARKING ON DEVICE
REGARDEZ LE MARQUAGE SUR L'APPAREIL

LIST OF STANDARDS:

UL 60079-0, 6th Edition
UL 60079-1, 7th Edition
CSA C22.2 No. 60079-0, 2015
CSA C22.2 No. 60079-1, 2016
UL 508, 17th Edition
CSA-C22.2 No. 14-13, 12th Edition

USR, for use in Class I, Zone 1, AEx db IIC Hazardous Locations.

CNR, for use in Class I, Zone 1, Ex db IIC Hazardous Locations.

Electrical Ratings: B300 (pilot duty)

4 wire versions: 250V.ac/dc 4.0A.

8 wire versions: 250V.ac/dc 2.5A.



Special conditions of use:

Switches are intended for use on Fixed Installations.

If not mounted direct to earthed metalwork they are to be protected from electrostatic risks (rubbing and charged air flows).

Switches must be housed in an end use enclosure that facilitates wiring methods in accordance with Article 505.15 of NFPA 70 and Article 18-102 of C22.1-15.

Flame paths are not to be repaired.

Intended for ambient temperature range of -20°C to +60°C.

Non-metallic materials assessed for service temperature of 80°C.



Conditions particulières d'utilisation:

Les commutateurs sont destinés à être utilisés sur les installations fixes.

Si non monté directement à la terre métallique ils doivent être protégés contre les risques électrostatiques (frottement et chargés des flux d'air).

Les commutateurs doivent être logés dans une enceinte d'utilisation finale qui facilite les méthodes de câblage conformément à l'article 70 de la NFPA 505.15 / Article 18-102 (C22.1-15) .

Chemins de flamme ne doivent pas être réparés.

Destiné à une température ambiante comprise entre -20 ° C à + 60 ° C.

Les matériaux non-métalliques évalués pour la température de service de 80 ° C.

Original Instructions.

To request this data sheet in other languages please contact info@idemsafety.com
Um dieses Datenblatt in Deutscher Sprache wenden Sie sich bitte anfordern info@idemsafety.com
Pour obtenir cette fiche en Français, veuillez contacter info@idemsafety.com
Para solicitar esta hoja de datos en Español, por favor contacto con info@idemsafety.com

CERTIFICATE OF COMPLIANCE

Certificate Number 20170707-E358295
Report Reference E358295-20170206
Issue Date 2017-JULY-07


Issued to: IDEM SAFETY SWITCHES LTD
2 Ormside Close
Hindley Industrial Estate, Hindley Green
Wigan, WN2 4HR UNITED KINGDOM

This is to certify that representative samples of COMPONENT - AUXILIARY DEVICES FOR USE IN ZONE CLASSIFIED HAZARDOUS LOCATIONS
See Addendum Page.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: See Addendum Page.
Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: , may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number 20170707-E358295
Report Reference E358295-20170206
Issue Date 2017-JULY-07

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

USR, For use in Class I, Zone 1, AEx db IIC Hazardous Locations.

Limit Switch, Type LS-Ex, Model: 920, followed by 101, 102 or 103, followed by –Ex-, followed by XXI, Where XXI are alpha numeric characters (not affecting the type of protection). Quantity and configuration of XXI characters may vary.

CNR, For use in Ex db IIC Hazardous Locations.

Limit Switch, Type LS-Ex, Model: 920, followed by 101, 102 or 103, followed by –Ex-, followed by XXI, Where XXI are alpha numeric characters (not affecting the type of protection). Quantity and configuration of XXI characters may vary.

Standard(s) for Safety: UL 60079-0 & CAN/CSA-C22.2 No. 60079-0:15, Explosive atmospheres – Part 0: Equipment – General requirements
UL 60079-1 & CAN/CSA-C22.2 No. 60079-1:16, Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures “d”
UL 508 & CSA C22.2 NO. 14-13, Industrial Control Equipment



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>





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: **Baseefa11ATEX0267X**

4 Equipment or Protective System: **Type LS-Ex Switch Assembly**

5 Manufacturer: **IDEM Safety Switches Limited**

6 Address: **2 Ormside Close, Hindley Industrial Estate,
Hindley Green, Wigan, Lancs WN2 4HR**

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, 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. **GB/BAS/ExTR 11.0265/00**

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

**IEC 60079-0: 2011
EN 60079-1: 2007
EN 60079-31: 2009**

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 :

Ex II GD Ex d IIC T6 (-20°C ≤ Ta ≤ +60°C) Gb, Ex tb IIIC T85°C (-20°C ≤ Ta ≤ +60°C) Db IP65

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

Baseefa Customer Reference No. **6463**

Project File No. **10/0872**

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

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa

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 Ltd
Registered in England No. 4305578. Registered address as above.



13

Schedule

14

Certificate Number Baseefa11ATEX0267X

15 Description of Equipment or Protective System

The Model LS-Ex Switch Assembly comprises either a single or twin switch assembly mounted within a moulded external polyamide body. An operating rod is located on the top, passing through the body wall, an integral connection cable projects from the bottom of the enclosure and is sealed in position with an epoxy resin.

The switches are rated up to 250V a.c./d.c. with the single switch version (4 wire) rated at 4A, and the twin switch unit (8 wire) rated at 2.5A

16 Report Number

Baseefa Certification Report GB/BAS/ExTR 11.0265/00

17 Specific Conditions of Use

1. The integral cable and operating rod seal shall both be suitably protected from physical damage and abrasion. The integral cable is to be terminated in a suitable terminal facility.
2. The switches are intended for use on fixed installations and if not mounted directly to earthed metalwork are to be protected from electrostatic risks (rubbing and charged air flows etc).
3. The switches are sealed units and are not user serviceable.

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
920501-EX	1	1	15-03-12	General Assembly, Parts
920501-EX	2	1	15-03-12	General Assembly, Dimensions
920558-EX	-	1	15-03-12	Label

These drawings are common to IECEx BAS 11.0133X and are held with that certificate

1 **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**

3 Supplementary EU - Type **Baseefa11ATEX0267X/1**
Examination Certificate Number:

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016

4 Product: **Type LS-Ex Switch Assembly**

5 Manufacturer: **IDEM Safety Switches Limited**

6 Address: **2 Ormside Close, Hindley Industrial Estate, Hindley Green, Wigan,
Lancashire, WN2 4HR**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa11ATEX0267X to apply to products 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 SGS Baseefa, Notified Body number 1180, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that the product, as modified by this supplementary certificate, 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 Annex II to the Directive.

SGS Baseefa Customer Reference No. **6463**

Project File No. **18/0611**

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.sgs.com/SGSBaseefa/Terms-and-Conditions.aspx>. 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 baseefa@sgs.com web site www.sgs.co.uk/sgsbaseefa

Registered in England No. 4305578.

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



R S SINCLAIR

TECHNICAL MANAGER

On behalf of SGS Baseefa Limited

M POWNEY
Certification
Manager

13

Schedule

14

Certificate Number Baseefa11ATEX0267X/1

15 Description of the variation to the Product

Variation 1.1

To permit a minor label change not affecting the original assessment.

16 Report Number

GB/BAS/ExTR11.0265/01

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
920558-EX	-	2	17.09.18	Label LS-EX

This drawing is common to, and held on, IECEx BAS 11.0133X.



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX BAS 11.0133X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 2 Issue 1 (2018-09-27)
Date of Issue: 2018-10-09 Issue 0 (2012-04-04)
Applicant: **IDEM Safety Switches Limited**
2 Ormside Close
Hindley Industrial Estate
Hindley Green
Wigan, Lancashire
WN2 4HR
United Kingdom
Equipment: **Type LS-Ex Switch Assembly**
Optional accessory:
Type of Protection: **Flameproof & Dust Protection by Enclosure**
Marking: **Ex d IIC T6 Gb (-20°C ≤ Ta ≤ +60°C)**
Ex tb IIIC T85°C Db (-20°C ≤ Ta ≤ +60°C)
IP65

Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair

Position:

Technical Manager

Signature:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom





IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 11.0133X**

Page 2 of 4

Date of issue: 2018-10-09

Issue No: 2

Manufacturer: **IDEM Safety Switches Limited**
2 Ormside Close
Hindley Industrial Estate
Hindley Green
Wigan, Lancashire
WN2 4HR
United Kingdom

Additional
manufacturing
locations:

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 equipment 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

IEC 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1:2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

IEC 60079-31:2008 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
Edition:1

This Certificate **does not** indicate compliance with 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 Reports:

[GB/BAS/ExTR11.0265/00](#)

[GB/BAS/ExTR11.0265/01](#)

[GB/BAS/ExTR18.0251/00](#)

Quality Assessment Report:

[GB/BAS/QAR11.0015/07](#)



IECEx Certificate of Conformity

Certificate No.: **IECEx BAS 11.0133X**

Page 3 of 4

Date of issue: 2018-10-09

Issue No: 2

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Model LS-Ex Switch Assembly comprises either a single or twin switch assembly mounted within a moulded external polyamide body. An operating rod is located on the top, passing through the body wall, and an integral connection cable projects from the bottom of the enclosure and is sealed in position with an epoxy resin.

The switches are rated up to 250V a.c./d.c. with the single switch version (4 wire) rated at 4A, and the twin switch unit (8 wire) rated at 2.5A

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The integral cable and operating rod seal shall both be suitably protected from physical damage and abrasion. The integral cable is to be terminated in a suitable terminal facility.
2. The switches are intended for use on fixed installations and if not mounted directly to earthed metalwork are to be protected from electrostatic risks (rubbing & charged air flows etc).
3. The switches are sealed units and are not user serviceable



IECEx Certificate of Conformity

Certificate No.: **IECEx BAS 11.0133X**

Page 4 of 4

Date of issue: 2018-10-09

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 2.1

To allow for an additional marking label to be placed on the non-certified switch housing for ease of identification of the internal certified LS-Ex switch.

Variation 2.2

To allow minor correction to marking layout.

ExTR: **GB/BAS/ExTR018.0251/00**

File Reference: **18/0614**