

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

Certificate No.: issue No.: Certificate history:

Status:

Date of Issue: Page 1 of 4

Applicant:
Helkenstraße 13
3714 Frutigen
Switzerland

Electrical Apparatus:
Optional accessory:

Type of Protection:

Marking:


Approved for issue on behalf of the IECEx
Certification Body:

H.-Ch. Simanski

Position:

Head of Certification Body

Signature:
(for printed version)



5/7/2011

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:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
DEKRA EXAM GmbH



IECEX Certificate of Conformity

Certificate No.: IECEx BVS 11.0018

Date of Issue: 2011-07-05

Issue No.: 0

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Manufacturer: **Wandfluh AG**
Helkenstraße 13
3714 Frutigen
Switzerland

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:

IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5

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

*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:

[DE/BVS/ExTR11.0070/00](#)

Quality Assessment Report:

[DE/PTB/QAR09.0002/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The solenoid, type MKY45/18x60-**-**-#* designed to Flameproof Enclosure "d" type of protection is used for valve operation. It consists of a steel enclosure and the coil. The coil body is made from plastics and forms part of the flameproof wall. Connection is made by direct cable entries.

Subject and type

Example for marking: MKY45/18x60 - G230 – L21 – M224 #2

Type code	solenoid type MKY45/18x60- ^{1 2_3 4_5} #*	
Type of use	mobile	M
Electrical connection	terminal box	K
Type of protection	flameproof enclosure	Y
Size	housing width	45
Inner coil	inside diameter x solenoid length in mm	18x60
1. Voltage type	DC	G
	AC	R
2. Voltage in V	if G:	12 to 230 DC
	if R:	24 to 230 AC
3. Rated power (W)	L + power	L9 – 21
4. Connection thread	M20x1.5 (standard variant)	no value
Cable gland	½" NPT	M187
5. Minimum ambient temperature	-25 °C (standard variant)	no value
	-40 °C	M224
6. Revision index	# + continuous number	#*
	* Not ex-relevant	

CONDITIONS OF CERTIFICATION: NO



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EQUIPMENT(continued):

Parameters

Rated voltage Rated power Ambient temperature

Standard variant

12 VDC \leq UN < 20 VDC	\leq 9 Watt	-25 °C ... +80 °C
12 VDC \leq UN < 20 VDC	\leq 12 Watt	-25 °C ... +70 °C
12 VDC \leq UN < 20 VDC	\leq 15 Watt	-25 °C ... +60 °C
12 VDC \leq UN < 20 VDC	\leq 18 Watt	-25 °C ... +50 °C
12 VDC \leq UN < 20 VDC	\leq 21 Watt	-25 °C ... +40 °C

20 – 230 VDC / 24 – 230 V VAC	\leq 9 Watt	-25 °C ... +90 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 12 Watt	-25 °C ... +80 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 15 Watt	-25 °C ... +70 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 18 Watt	-25 °C ... +60 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 21 Watt	-25 °C ... +50 °C

Variant M224

12 VDC \leq UN < 20 VDC	\leq 9 Watt	-40 °C ... +80 °C
12 VDC \leq UN < 20 VDC	\leq 12 Watt	-40 °C ... +70 °C
12 VDC \leq UN < 20 VDC	\leq 15 Watt	-40 °C ... +60 °C
12 VDC \leq UN < 20 VDC	\leq 18 Watt	-40 °C ... +50 °C
12 VDC \leq UN < 20 VDC	\leq 21 Watt	-40 °C ... +40 °C

20 – 230 VDC / 24 – 230 V VAC	\leq 9 Watt	-40 °C ... +90 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 12 Watt	-40 °C ... +80 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 15 Watt	-40 °C ... +70 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 18 Watt	-40 °C ... +60 °C
20 – 230 VDC / 24 – 230 V VAC	\leq 21 Watt	-40 °C ... +50 °C

Frequency 50 to 60Hz