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.:	IECEx BVS 12.0001X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2012-01-30**	Page 1 of 3
Applicant:	**R. STAHL Schaltgeräte GmbH** Am Bahnhof 30 74638 Waldenburg **Germany**	
Electrical Apparatus: *Optional accessory:*	**Vibration Transducer Supply Unit type 9147/*0-99-10**	
Type of Protection:	**Equipment protection by intrinsic safety "i", Equipment protection by type of protection "n", Equipment with equipment protection level (EPL) Ga**	
Marking:	Ex nA [ia Ga] IIC T4 Gc and [Ex ia Da] IIIC and [Ex ia Ma] I or Ex nAc [ia] IIC T4 and [Ex ia] IIIC and [Ex ia] I	

Approved for issue on behalf of the IECEx Certification Body:	H.-Ch. Simanski
Position:	Head of Certification Body
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 the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

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Date of Issue: **2012-01-30** Issue No.: **0**

Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
Germany

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 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011-06 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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/ExTR12.0005/00

Quality Assessment Report:

DE/BVS/QAR10.0002/02

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0001X

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Schedule

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

Description

The Vibration Transducer Supply Unit type 9147/*0-99-10 is an associated apparatus per IEC 60079-11 as well as a non-sparking apparatus per IEC 60079-15. The intrinsically safe circuits are galvanically separated from each other, as from the non I.S. signal circuits and from the auxiliary power supply circuit.

The Vibration Transducer Supply Unit is used for the intrinsically safe operation of one or two vibration transducers. It is possible to operate a 2-wire acceleration sensor current-feed or voltage-feeded 3-wire eddy current transducers.

The device supplies the sensors and transmits its signal galvanically separated to the output.

Parameters

See Annex

Subject and Type

See Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

For use in Zone 2 the Vibration Transducer Supply Unit has to be mounted inside an enclosure which is in accordance with IEC 60079-15.

Annexe: BVS_12_0001X_R. Stahl_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 12.0001X**
Annex

Type Designation

Vibration Transducer Supply Unit type 9147 /		*	0	-	9	9	-	1	0
		a	b		c	d		e	f
Number of channels:									
	1								
	2								

Electrical parameters

Power input

(Terminal No. 7 (L+), 9 (L-) and pac-Bus connector V007/ 1 (+), 2 (-))

Nominal voltage:	U_N	=	24	V DC (18 ... 31.2 V DC)
Nominal current:	I_N	=	90	mA
Maximum safety voltage:	U_m	≤	253	V AC

Non I.S. Output signal circuits

Maximum safety voltage:	Um	≤	253	V AC

Type 9147/20-99-10

2 analogue outputs, voltage signal

Output 1: Terminal 1 and 2
Output 2: Terminal 5 and 6

Nominal voltage:	U_N	=	20	V
Nominal current:	I_N	=	2	mA

Type 9147/10-99-10

1 analogue output, voltage signal

Output 1: Terminal 1 and 2

Nominal voltage:	U_N	=	20	V
Nominal current:	I_N	=	10	mA

Certificate No.: **IECEx BVS 12.0001X**
Annex
Page 2 of 2

Intrinsically safe signal circuits

Intrinsically safe circuits with level of protection Ex ia for connection to passive intrinsically safe apparatus e.g. vibration transducers or acceleration sensors.

The intrinsically safe circuits may also be used in areas endangered by explosive dust atmospheres and be connected to apparatus certified accordingly.

Terminal No.: Channel 1: 12 (+com.), 11 (-Input), 10 (-PWR)
Channel 2: 14 (+com.), 15 (-Input), 13 (-PWR) at types 9147/**2**… only

The data is valid for channel 1 or channel 2.

Uo	=	26.3	V	
Io	=	88.3	mA	
Po	=	579	mW	(linear characteristic)
Ci	=	2.4	nF	
Li	≈	0	mH	

The following maximum values apply if concentrated inductances and capacitances are connected.

	IIC				IIB					IIA				
L_o [mH]	2.2	1.0	0.5	0.2	17	2	0.5	0.2	0.1	28	1	0.5	0.1	0.005
C_o [nF]	43	59	75	97	320	340	480	620	740	430	570	670	1000	2510

	I				
L_o [mH]	40	20	1	0.2	0.002
C_o [nF]	490	720	750	1100	3950

For explosive dust atmospheres the maximum allowed values for inductance and capacitance for gas group IIB apply.

Ambient temperature range
Any assembling position Ta -20 °C up to +70 °C