



# 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 BVS 09.0062 issue No.:1

Certificate history:  
Issue No. 1 (2011-1-12)  
Issue No. 0 (2009-12-8)

Status: **Current**

Date of Issue: **2011-01-12** Page 1 of 5

Applicant: **Endress+Hauser GmbH+Co. KG**  
Hauptstraße 1  
79690 Maulburg  
Germany

Electrical Apparatus: **WirelessHART-Adapter type SWA70-\*\*\*\*\***  
*Optional accessory:*

Type of Protection: **Intrinsic safety 'i', Equipment dust ignition protection by enclosure 't'**

Marking: **for SWA70-IE\*A\*\*\*\* Ex ia IIC T4 Gb**  
**for SWA70-I1\*B\*\*\*\* Ex ia IIC T4 Gb**  
**Ex tb [ia] IIIC T70°C IP6x Db**

*Approved for issue on behalf of the IECEx  
Certification Body:*

Dr. F. Eickhoff

*Position:*

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

Certificate issued by:

**DEKRA EXAM GmbH**  
Dinnendahlstrasse 9  
44809 Bochum  
Germany

 **DEKRA**  
DEKRA EXAM GmbH



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Manufacturer: **Endress+Hauser GmbH+Co. KG**  
Hauptstraße 1  
79690 Maulburg  
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 product 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 identifying documents, was found to comply with the following standards:

**IEC 60079-0 : 2007-10** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition: 5  
**IEC 60079-11 : 2006** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition: 5  
**IEC 60079-31 : 2008** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'  
Edition: 1

*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/ExTR09.0060/01](#)

##### Quality Assessment Report:

[DE/TUN/QAR06.0003/03](#)



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## Schedule

### EQUIPMENT:

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

#### Description

The WirelessHART-Adapter Type SWA70-\*\* is a battery powered interface module that connects HART and 4...20 mA devices to a WirelessHART network. The wireless Adapter transmits the information to a host application and operates with 2.4 GHz. As battery the battery type BU191 is used.

Permissible ambient temperature range of the WirelessHart-Adapter: -40 °C up to +60 °C.

#### Type designation

See Annex

### CONDITIONS OF CERTIFICATION: NO



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## EQUIPMENT(continued):

### Electrical data

1. adapter active intrinsically safe (terminal 1-2)	
voltage	$U_o$ 26 VDC
current	$I_o$ 98 mA
power	$P_o$ 631 mW
internal resistance	$R_i$ 266 $\Omega$
effective internal capacitance	$C_i$ 20 nF
effective internal inductance	$L_i$ 120 $\mu$ H
max. external capacitance	$C_o$ 80 nF
max. external inductance	$L_o$ 3.6 mH
2. adapter passive (terminal 2-3)	
voltage	$U_i$ 30 VDC
current	$I_i$ 100 mA
power	$P_i$ 3 W
effective internal capacitance	$C_i$ negligible
effective internal inductance	$L_i$ negligible
3. adapter passive/active; only HART communication (terminal 4-6)	
voltage	$U_o$ 6.7 VDC
current	$I_o$ 1.7 mA
power	$P_o$ 2.7 mW
voltage	$U_i$ 30 VDC
effective internal capacitance	$C_i$ negligible
effective internal inductance	$L_i$ negligible
max. external capacitance	$C_o$ 80 nF
max. external inductance	$L_o$ 3.6 mH
4. HF-output antenna	
transmissions frequency	2.4 GHz
output power (nominal)	10 mW
output power (under 2 faults) under the regulation of the IEC 60079-0	1.05 W
5. ambient temperature range	
-40 °C up to +60 °C	



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

The electronic circuit of the version SWA70-IE\*A\*\*\*\* has changed insignificant and the version type SWA70-I1\*B\*\*\*\* ha been added and with the EPL`s marked.

