

[Federal logo]

## TRANSLATION

### (1) EC TYPE EXAMINATION CERTIFICATE

- (2) Equipment and Protective Systems Intended for Use  
in Potentially Explosive Atmospheres – **Directive 94/9/EC**



- (3) EC Type Examination Certificate Number

**PTB 98 ATEX 2114**

- (4) Equipment: Model 4746-2 and 4746-3 Limit Switches
- (5) Manufacturer: SAMSON AG
- (6) Address: Weismüllerstr. 3, D-60314 Frankfurt
- (7) This equipment and any acceptable variations thereof is specified in the schedule to this certificate and the documents referred to therein.
- (8) The Physikalisch-Technische Bundesanstalt, certified body number 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 specified in Annex II to the Directive.

The examination and test results are recorded in confidential report: **PTB Ex 98-28184**.

- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with

**EN 50014: 1997**      **EN 50020: 1994**

- (10) If the sign “X” is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) According to the Directive 94/9/EX, this EX TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.
- (12) The marking of the equipment shall include the following:



**II 2 G   EEx ia   IIC T6**

Zertifizierungsstelle Explosionsschutz  
By order

Braunschweig, 03.09.1998

(Signature)

(Seal)

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(13) **S c h e d u l e**

(14) **EC TYPE EXAMINATION CERTIFICATE No. PTB 98 ATEX 2114**

(15) **Description of Equipment**

The Model 4746-2 and 4746-3... Limit Switches serve for converting mechanical manipulated variables into electrical signals. Depending on the version, they are equipped with various types of limit contacts. They are intended for attachment to pneumatic, electrical or hydraulic actuators installed inside and outside of hazardous areas.

The Model 4746-2...and 4746-3... Limit Switches are passive two-terminal networks that may be connected to all certified intrinsically safe circuits, provided the permissible maximum values of  $U_i$ ,  $I_i$  and  $P_i$  are not exceeded.

Electrical connection is made by means of plugs and sockets or cable entries.

The relation between temperature classification and the permissible maximum ambient temperature range is specified in the table below:

Temperature class	Ambient temperature range
<b>T6</b>	-45 °C ... +60 °C
<b>T5</b>	-45 °C ... +70 °C
<b>T4</b>	-45 °C ... +80 °C

**Electrical data**

Contact circuits                      Type of protection: Intrinsic safety EEx ia IIC only for connection to a certified intrinsically safe circuits

(Terminals 41/42                      Models 4746-2.0., Model 4746-2.1., Model 4746-2.5. with inductive proximity switch.

**Maximum values:**                       $U_i$      =    16 V  
    $I_i$      =    52 mA  
    $P_i$      =    169 mW

Effective internal capacitance:                       $C_i$      =    60 nF  
Effective internal inductance:                       $L_i$      =    250  $\mu$ H

(Terminals 41/42/43                      Model 4746-3.2, Model 4746-3.6 with electric  
and 51/52/53                      micros witch

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**Maximum values:**

$$\begin{array}{lcl} U_i & = & 45 \text{ V} \\ P_i & = & 2 \text{ W} \end{array}$$

The effective internal capacitances and inductances are negligible.

(16) **Report PTB Ex 98-28184**

(17) **Special conditions for safe use**

Not applicable

(18) **Essential Health and Safety Requirements**

In compliance with standards

Zertifizierungsstelle Explosionsschutz  
By order

Braunschweig, 03.09.98

(Signature)

(seal)


Dr. Ing. U. Johannsmeyer  
Regierungsdirektor

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**TRANSLATION**  
**ADDENDUM No.: 1**

in compliance with Directive 94/9/EC Annex III Clause 6  
to the EC Type Examination Certificate PTB 98 ATEX 2114

**Equipment:** Model 4746-12.. and 4746-13.. Limit Switches

**Marking:**  II 2 G EEx ia IIC T6

**Manufacturer:** SAMSON AG

**Address:** Weismüllerstr. 3, D-60314 Frankfurt, Germany

**Description of the additions and modifications**

The model description code has been changed. The old and the new designation code numbers are shown in the table below:

Old	New
4746-2...	4746-12...
4746-3...	4746-13...

In future, also the Model SJ-3.5 Slot-type Proximity Switches manufactured by Pepperl & Fuchs approved under the Ex Type Examination Certificate PTB 99 ATEX 2219 X may be used.

The preceding models of the same name approved under the Certificate of Conformity PTB No. Ex-95.D-2195 X are permitted to be used until 20 June 2002.

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**Addendum No. 1 to the Ex Type Examination Certificate PTB 98 ATEX 2114**

**Electrical data**

**Models 4746-12..1/.2 with inductive proximity switch**

Inductive proximity switch  
(terminals 41/42 and 51/52)

Type of Protection: Intrinsic Safety EEx ia IIC  
only for connection to a certified intrinsically safe circuit

**Maximum values**

$U_i$	=	16 V
$I_i$	=	52 mA
$P_i$	=	169 mW
or		
$U_i$	=	16 V
$I_i$	=	25 mA
$P_i$	=	64 mW
$C_i$	=	50 nF
$L_i$	=	250 $\mu$ H

The correlation between temperature classification, permissible ambient temperature ranges, maximum short-circuit currents and power for evaluating instruments is shown in the table below:

Temperature class	Permissible ambient temperature range	$I_0 / P_0$
T6	-45 °C ... 45 °C	52 mA/169 mW
T5	-45 °C ... 60 °C	
T4	-45 °C ... 80 °C	
T6	-45 °C ... 60 °C	25 mA/64 mW
T5	-45 °C ... 80 °C	
T4	-45 °C ... 100 °C	

All the other electrical data and other data apply also to this Addendum No. 1.

Test report: **PTB EX 03-23049**

Zertifizierungsstelle Explosionsschutz

Braunschweig, 7 March 2003

By order

(Signature) (Seal)  
Dr. Ing. U. Johannsmeyer  
Regierungsdirektor

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