Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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 2047

(4) Equipment: Pilot Valve Model 3964 - 1

(5) Manufacturer: SAMSON AG, Mess- und Regeltechnik

(6) Address: Weismüllerstrasse 3, 60314 Frankfurt am Main, Germany

(7) The design of this equipment and the various approved versions there of are specified in the schedule to this type examination certificate and the documents referred to therein

(8) The Physikalisch-Technische Bundesanstalt, notified body number 0102 according to 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 as specified in Annex II to the Directive.

The examination and test results are recorded in the confidential report **PTB Ex 98 - 28005**

(9) The essential health and safety requirements are satisfied 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 as specified in the schedule to this certificate.

(11) This EC Type Examination Certificate relates only to the design and examination of the specified equipment in compliance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment. These requirements are not covered by this Certificate.

(12) The marking of the equipment shall include the following:


II 2 G EEx ia II T6

Zertifizierungsstelle Explosionsschutz Braunschweig, 21.04.1998

By order
(Signature)
(Seal)

Dr. Ing. U. Johannsmeyer
Regierungsdirektor

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

(13) # Schedule

(14) **EC Type Examination Certificate Number PTB 98 ATEX 2047**

(15) **Description of Equipment**

The Model 3964-1 Pilot Valves consist of the Model 1079-22.. I/P Binary Converter Coil With Journal Bearing installed in a plastic enclosure. The coil has been certified under PTB-Number Ex-96.D.2130 U.

The pilot valves are intended for attachment to pneumatic switches and control valves of various manufacturers for constructing electro pneumatic control systems. They are used inside and outside of potentially explosive atmospheres.

Connection is made by means of plug connectors.

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

T6	-20 °C ... +60 °C
T5	-20 °C ... +70 °C
T4	-20 °C ... +80 °C

Electrical data
Input circuit ... Type of protection: Intrinsic safety EEx ia IIC

The maximum values for connection of a certified intrinsically safe circuit are specified in the table below:

Ui	25 V	27 V	28 V	30 V	32 V
Ii	150 mA	125 mA	115 mA	100 mA	90 mA

The effective internal capacitances and inductances are negligible.

(16) **Test report PTB Ex 98-28005**

(17) **Special conditions:** Inapplicable

(18) **Basic safety and health requirements:** In compliance with standards

Zertifizierungsstelle Explosionsschutz
By order

Braunschweig, 21.04.1998

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

(Seal)

[translation of German original]

[PTB logo and lettering] **Physikalisch-Technische Bundesanstalt**
Braunschweig and Berlin
National Metrology Institute

[Ex logo]

2nd ADDENDUM
according to Directive 94/9/EC, Annex III, Clause 6
to EC Type Examination Certificate PTB 98 ATEX 2047

Equipment:	Type 3964-1 Pilot Valve
Marking:	⟨Ex⟩ **II 2 G EEx ia IIC T6**
Manufacturer:	SAMSON AG, Mess- und Regeltechnik
Address:	Weismüllerstraße 3, 60314 Frankfurt, Germany

Description of additions and modifications

In the future, the Type 3964-1 Pilot Valve may also be manufactured and operated according to the documents listed in section 3 of this test report.

The modifications apply to the marking, electric data, and test specifications. No technical changes were made to the product.

Versions with different rated voltage: U_N = 6 V, U_N = 12 V or U_N = 24 V

The following table lists the relation between equipment type, type of protection, temperature class and permissible ambient temperature range:

Temperature class	Permissible ambient temperature range
T6	–45 °C to +60 °C
T5	–45 °C to +70 °C
T4	–45 °C to +80 °C

Electric data

Signal current circuit..... in type of protection Intrinsic Safety Ex ia IIC (+/–)

For connection to a certified intrinsically safe current circuit only

Max. values:

U_i = 32 V
I_i = 150 mA
L_i negligibly small
C_i negligibly small

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Braunschweig and Berlin
National Metrology Institute

[Ex logo]

2nd Addendum to EC Type Examination Certificate PTB 98 ATEX 2047

The future marking is as follows:

Ex II 2 G Ex ia IIC T6 Gb

Applied standards

EN 60079-0:2012 + A11:2013 **EN 60079-11:2012**

Test Report PTB Ex 16-25095

Certification Sector for Explosion Protection Braunschweig, 29 January 2016

[signature Johannsmeyer, round stamp with federal eagle logo and Physikalisch Technische Bundesanstalt 56 lettering]

Dr.-Ing. U. Johannsmeyer
Direktor und Professor [director and professor]