EC Type Examination Certificate

No.: EX5 99 07 19183 029 X

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in accordance with Annex III of Council Directive No. 94/9/EC for equipment and protective systems intended for use in potentially explosive atmospheres (ATEX) for

HIMA Paul Hildebrandt GmbH + Co KG
Albert-Bassermann-Straße 28

68782 Brühl

Product:	**Automation devices, safety-related** **type H**
Model:	**H 4011** **H 4012**
Parameters:	see appendix (two pages)
	The sign „X" behind the No. of EC Type Examination Certificate is an indication for particular requirements in safety application: see appendix

The above mentioned product meets the provisions of the Directive.

This certificate is issued on the basis of the product provided for testing and certification and on its technical documentation. The detailed results of the test and the provided technical documentation are listed in

Test report no.: 10049741

This certificate pertains only to the sample product submitted to TÜV PRODUCT SERVICE for testing. Therefore this certificate has no specified period of validity.

Released with the above mentioned certificate number by the Certification Body of TÜV PRODUCT SERVICE.

Department:	PS-IQSE / jb
Date:	08.07.1999

TÜV PRODUCT SERVICE GMBH is a Notified Body in accordance with Council Directive 94/9/EC for equipment and protective systems intended for use in potentially explosive atmospheres with the identification number 0123.

TÜV PRODUCT SERVICE GMBH · Zertifizierstelle · Ridlerstrasse 31 · D-80339 München

Appendix 1 to EC Type Examination Certificate
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1 Electrical data

1.1 Input port (intrinsically safe)
(Terminals 13 / 14)

The intrinsically safe input is isolated up to a peak value of 375V to the other terminals.

Voltage, U_0	crest value DC 9 V
Current, I_0	crest value DC 11 mA
Power, P_o	crest value 25 mW
internal capacitor, C_i	negligible
internal inductance, L_i	negligible

The permissible ratings for max. capacitor and inductance for one and for two parallel input ports are listed in the following tables.

1.1.1 Input port group IIC

max. connectable capacitor	C_0 (L_0 = 0) = 8 µF
max. connectable inductance	L_0 (C_0 = 0) = 0,3 H
max. connectable capacitor (two parallel input ports)	C_0 (L_0 = 0) = 8 µF
max. connectable inductance (two parallel input ports)	L_0 (C_0 = 0) = 0,07H

1.1.2 Input port group IIB

max. connectable capacitor	C_0 (L_0 = 0) = 80 µF
max. connectable inductance	L_0 (C_0 = 0) = 1 H
max. connectable capacitor (two parallel input ports)	C_0 (L_0 = 0) = 80 µF
max. connectable inductance (two parallel input ports)	L_0 (C_0 = 0) = 0,28 H

1.2 Output ports (non-intrinsically safe)

1.2.1 Voltage output (Terminals 3 / 4)

Voltage	crest value 33 V
Current	crest value 40 mA

1.2.2 Relay contact (Terminals 5 / 6 / 7, only model H 4012)

Voltage	crest value 30 V
Current	crest value 1 A
Power	crest value 30 W/VA

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1.3 Power supply (Terminals 1 / 2) (nonintrinsically safe)

Nominal voltage	DC 24 V
Voltage	crest value DC 30 V
Absolute maximum voltage to not affect the intrinsic safety U_m	crest value 250V

2 Identifying marking

The legible and durable marking must include the following option list:

- Name and address of the factory
- the year of manufacture
- the identifier Ex II (1)G [EEx ia] IIC

3 Routine testing

The execution of routine testing is required in accordance with clause 24 of EN 50014: 1992 (VDE 0170 / 0171 part 1).

4 Conditions for safety application

- Installation of the component H 4011 and H 4012 only outside an atmosphere capable of explosion.
- The specified ambient temperature is: T_{amb} = -25...+60°C
- Requirement: A clearance of at least 50mm between terminals, wiring and adjacent components of intrinsically and non-intrinsically safe circuits is required.
- Admissible are two parallel-connected input ports of H 4011 and H4012 with interconnection between terminal 13 and 14 of both components.

Munich, July 8th 1999

TÜV Product Service GmbH PS-IQSE

Notified Body

J. Blum

Dipl.-Ing. J. Blum