



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 TUR 18.0005 Issue No: 0 Certificate history:
Issue No. 0 (2018-09-03)

Status: Current Page 1 of 3

Date of Issue: 2018-09-03

Applicant: HIMA Paul Hildebrandt GmbH
Albert-Bassemann-Str. 28
68782 Brühl
Germany

Equipment: HIQuad module F 3224A
Optional accessory:

Type of Protection: [Ex ia]

Marking: [Ex ia Ga] IIC
[Ex ia Da] IIIC

Approved for issue on behalf of the IECEx
Certification Body:

Andreas Maschke

Position:

Deputy Head of Certification Body

Signature:
(for printed version)

Date:

2018-09-03

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:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany





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Manufacturer: HIMA Paul Hildebrandt GmbH
Albert-Bassemann-Str. 28
68782 Brühl
Germany

Additional 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 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 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*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/TUR/ExTR18.0005/00](#)

Quality Assessment Report:

[DE/PTB/QAR11.0008/03](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The module F 3224A is a 4 channel input module for intrinsically safe passive circuits (Ex) i.

The module is used as an associated apparatus to evaluate proximity switches (according to NAMUR) or contacts in intrinsically safe circuits (Ex)i.

The proximity switches or contacts can be installed in hazardous areas from zone 0 on.

SPECIFIC CONDITIONS OF USE: NO

Annex:

[IECEX TUR 18.0005_attachment.pdf](#)



Attachment to Certificate
IECEx TUR 18.0005
Revision 0



Device: HIQuad Module
Type: F 3224A

Manufacturer: HIMA Paul Hildebrandt GmbH

Address: Albert-Bassermann-Str. 28
68782 Brühl, Germany

Subject and type

HIQuad Module F 3224A

General product information

The module F 3224A is a 4 channel input module for intrinsically safe passive circuits (Ex) i.
The module is used as an associated apparatus to evaluate proximity switches (according to NAMUR) or contacts in intrinsically safe circuits (Ex) i.
The proximity switches or contacts can be installed in hazardous areas from zone 0 on.

Technical data

Ambient temperature: $T_a = 0^{\circ}\text{C} \dots + 60^{\circ}\text{C}$

Supply circuit UB1:

$U_n = 20 \dots 30\text{VDC}$

$U_m = 40\text{V}$

(terminal z2(L+), d2, d32(L-))

Supply circuit UB2:

$U_n = 4.5 \dots 5.5\text{VDC}$ (max. 6VDC)

$U_m = 40\text{V}$

(terminal z6, d6(V_{DD}), z30, d30(GND))

Intrinsically safe values for the control circuits,

type of protection

[Ex ia Ga] IIC/IIB

or

[Ex ia Da] IIIC/IIIB

circuit 1 (d2, d4), circuit 2 (d8, d10), circuit 3 (d20, d22), circuit 4 (d26, d28)

single circuit:

$U_o: 9\text{V}$

$I_o: 10\text{mA}$

$P_o: 23\text{mW}$

parallel circuit:

$U_o: 9\text{V}$

$I_o: 20\text{mA}$

$P_o: 46\text{mW}$



Maximum allowed external capacitance *or* inductance:

Ex ia / Ex ib	single circuit		parallel circuit	
	IIC	IIB/IIIC/IIIB	IIC	IIB/IIIC/IIIB
L _o	355 mH	1000 mH	88 mH	355 mH
C _o	4.9 μF	40 μF	4.9 μF	40 μF

Maximum allowed external capacitance *and* inductance (mixed consideration):

Ex ia / Ex ib	single circuit		parallel circuit	
	IIC	IIB/IIIC/IIIB	IIC	IIB/IIIC/IIIB
L _o	5 mH	5 mH	5 mH	5 mH
C _o	940 nF	4.9 μF	900 nF	4.8 μF