

(1) EU-TYPE EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 2014/34/EU**
- (3) EU-Type Examination Certificate Number

TÜV 18 ATEX 8168

Issue: 01

- (4) Equipment: **HIQuad Module F 3224A**
- (5) Manufacturer: **HIMA Paul Hildebrandt GmbH**
- (6) Address: **Albert-Bassermann-Str. 28
68782 Brühl, Germany**

- (7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle für Explosionsschutz of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 21 of the Council Directive 2014/34/EU of 26th February 2014, certifies this product which 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 atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report 557/Ex8168.01/18

- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN IEC 60079-0: 2018

EN 60079-11: 2012

- (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) This EU-Type Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.
- (12) The marking of the equipment shall include the following:



**II (1) G [Ex ia Ga] IIC
II (1) D [Ex ia Da]**

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2023-08-10

Dipl.-Ing. Christian Menrhoff

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(13) Annex

(14) **EU Type Examination Certificate**
TÜV 18 ATEX 8168 Issue: 01

(15) Description of equipment

15.1 Equipment and type:

HIQuad Module F 3224A

15.2 Description / Details of Change

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/IIIB

or

[Ex ia Da] IIIC/IIIB

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

single circuit:	parallel circuit:
U _o : 9 V	U _o : 9 V
I _o : 10 mA	I _o : 20 mA
P _o : 23 mW	P _o : 46 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

Details of Change:

- Standard update to EN IEC 60079-0: 2018
- Hardware changes of the connectors

(16) Test-Report No. 557/Ex8168.01/18

(17) Special Conditions for safe use

None

(18) Basic Safety and Health Requirements

Covered by afore mentioned standard

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2023-08-10

Dipl.-Ing. Christian Mehrhoff



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