

(1) TYPE EXAMINATION CERTIFICATE



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

TÜV 14 ATEX 7558 X

Issue: 00

- (4) Equipment: **Relays type H 4116, H 4134, H 4135A, H 4136, Switching amplifiers type H 4007, H 4011, H 4012, Analog repeater power supply type H 6200A, HART multiplexer type H 6210, Power supply filters type H 7013, H 7021, Power supply unit type PS 1000**
- (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 certification body for ex-protected products 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 equipment 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 / Ex 7558.00 / 14 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 60079-0: 2012+A11:2013 EN 60079-15: 2010**
- (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 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.



II 3G Ex nA nC IIC T4 Gc
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(see annex for assignment of marking to type)

TÜV Rheinland ExNB for explosion-protected equipment

Cologne, 2016-08-31

Dipl.-Ing. Geoffrey Stenzel

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This Type Examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the TÜV Rheinland Industrie Service GmbH, TÜV Rheinland Group Am Grauen Stein 51105 Köln
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(13)

Annex

(14)

Type Examination Certificate

TÜV 14 ATEX 7558 X

Issue: 00

(15)

Description of equipment

15.1 Subject and type

Relays type H 4116, H 4134, H 4135A, H 4136
 Switching amplifiers type H 4007, H 4011, H 4012
 Analog repeater type power supply H 6200A
 HART multiplexer type H 6210
 Power supply filters type H 7013, H 7021
 Power supply unit type PS 1000

15.2 Description

Equipment type	Directive marking	Standard marking
PS 1000	Ⓔ II 3G	Ex nA nC IIC T4 Gc
H 4007	Ⓔ II 3G	Ex nA IIC T4 Gc
H 4011	Ⓔ II 3G	Ex nA IIC T4 Gc
H 4012	Ⓔ II 3G	Ex nA nC IIC T4 Gc
H 4116	Ⓔ II 3G	Ex nC IIC T4 Gc
H 4134	Ⓔ II 3G	Ex nC IIC T4 Gc
H 4135A	Ⓔ II 3G	Ex nC IIC T4 Gc
H 4136	Ⓔ II 3G	Ex nC IIC T4 Gc
H 6200A	Ⓔ II 3G	Ex nA IIC T4 Gc
H 6210	Ⓔ II 3G	Ex nA IIC T4 Gc
H 7013	Ⓔ II 3G	Ex nA IIC T4 Gc
H 7021	Ⓔ II 3G	Ex nA IIC T4 Gc

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15.3 Technical Data

H Devices:

Device	T _{a,min}	T _{a,max}	U _n	Tolerance	Switching capacity
H 4007	-25	50	24 VDC	-15/+20%	
H 4011	-25	60	24 VDC	-15/+20%	
H 4012	-25	60	24 VDC	-15/+20%	
H 4116	-25	50	24 VDC	-15/+20%	250 VAC / 127 VDC
H 4134	-25	50	230 VAC	-15/+10%	250 VAC / 127 VDC
H 4135A	-25	60	24 VDC	-15/+20%	250 VAC / 220 VDC
H 4136	-25	60	48 VDC	-15/+20%	250 VAC / 127 VDC
H 6200A	0	60	24 VDC	-15/+20%	
H 6210	0	60	24 VDC	-15/+20%	
H 7013	-25	70	24 VDC	-15/+66%	
H 7021	-25	70	48 VDC	-15/+25%	

H devices are intended for top hat rail mounting.

PS 1000 variants:

Type	HW	Description
PS 1000/230 011	02	Coated power supply unit, input voltage 230/ 240 VAC, output voltage 24 VDC, output power 40 A
PS 1000/230 017	00	Power supply unit, wall mounted, coated, input voltage 230/ 240 VAC, output voltage 24 VDC, output power 40 A
PS 1000/115 011	03	Coated power supply unit, input voltage 120 VAC, output voltage 24 VDC, output power 40 A
PS 1000/115 017	00	Power supply unit, wall mounted, coated, input voltage 120 VAC, output voltage 24 VDC, output power 40 A

Ambient temperature for PS1000: 0°C < Ta < 60°C

(16) Test Report No. 557 / Ex 7558.00 / 14

The devices were assessed to meet the requirement of the EN 60079-0:2012 +A11:2013 and EN 60079-15:2010. The devices are intended to be mounted into an enclosure, which fulfil the IP54 requirements of the EN 60079-15. Therefore the requirements of this enclosure were not part of the assessment.

(17) Special Conditions for safe use

1. The H devices shall be supplied with a SELV or PELV supply only.
2. The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.
3. The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN 60079-15.

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4. The maximum allowed values for input (supply) voltages and output current depend on the distance between the top hat rail mounted devices of at least 5mm

	With distance		Without distance $T_a < 50^\circ\text{C}$		Without distance $T_a > 50^\circ\text{C}$	
	Input U_{\max}	Output I_{\max}	Input U_{\max}	Output I_{\max}	Input U_{\max}	Output I_{\max}
H 4116	$U_n+20\%$	4A	$U_n+20\%$	3A	-	-
H 4134	$U_n+10\%$	4A	$U_n+10\%$	4A	-	-
H 4135A	$U_n+20\%$	4A	$U_n+20\%$	3A	$U_n+20\%$	3A
H 4136	$U_n+20\%$	4A	$U_n+20\%$	3A	$U_n+10\%$	3A

5. The external enclosure for the power supplies PS1000 shall be capable for a power dissipation of 130W.

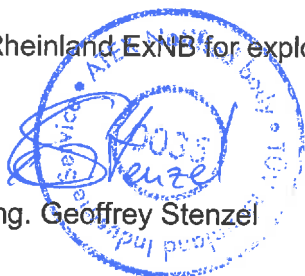
(18) Basic Safety and Health Requirements

Covered by afore mentioned standards.

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Cologne, 2016-08-31

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