

[1]

TYPE EXAMINATION CERTIFICATE

[2] Product Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

[3] Type Examination Certificate Number: **DNV 10 ATEX 96564X** **Issue 2**

[4] Product: **Model 5100 HD Analyzer**

[5] Manufacturer: **AMETEK Process Instruments**

[6] Address: **150 Freeport Rd.
Pittsburgh, PA 15238
USA**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV Product Assurance AS certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential reports listed in item 16.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0: 2018, EN 60079-15: 2010, EN 60079-11:2012 and EN 60079-28:2015

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

[11] This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment and not to specific items of equipment subsequently manufactured

[12] The marking of the product shall include the following:

 **II 3 G Ex nA nC ic op pr IIC T3 Gc -20°C < Tamb < +50°C**

Date of issue:
2021-04-09

Asle Kaastad
For DNV Product Assurance AS
The Certificate has been digitally signed.
See www.dnv.com/digitalsignatures for info



[13] **Schedule**

[14] **Type Examination Certificate No:** DNV 10 ATEX 96564X Issue 2

[15] **Description of Product**

The AMETEK 5100 HD Analyzer is an IR (763-2334nm) single or dual laser-based instrument used to measure analyte concentration of certain gases of interest. The optics and sampling conditioning system is fully enclosed and can be configured for dual lasers and dual sample cells. Analog and digital I/O (alarms, Ethernet and Modbus) are provided. The analyzer is designed to be non-incendive so that it may be installed in Zone2 hazardous classified locations.

Type designation

9000-119-VE	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, AC POWERED
9000-118-VE	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, 24 VDC
9000-140-VE	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, AC POWERED
9000-141-VE	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, 24 VDC
95608WE	5100 HD, DUAL LASER, DIV 2/ZONE 2, AC POWERED
9000-111-VE	5100 HD, DUAL LASER, DIV 2/ZONE 2, 24 VDC
9000-131-VE	5100 HD, SINGLE LASER, DIV 2/ZONE 2, AC POWERED
9000-132-VE	5100 HD, SINGLE LASER, DIV 2/ZONE 2, 24 VDC

The following mechanical options are also covered by this cert:

- Heated sample line boot entry, consisting of fully welded flanges on the oven enclosure instead of compression fittings.
- Metric (6 mm) fittings on the oven enclosure instead of the standard 1/4" fittings.
- Use of a Herriott (long sample path) sample cell with any of the above analyzer configurations. The differences between the Herriott cells and standard fiber-coupled sample cells is mechanical only – consisting of an additional mirror and associated mechanical mounts. There are different Herriott cell configurations, based on the desired pathlength for a given application.

Electrical Data

120 Vac, 450 VA; 240Vac, 450 VA; 24 Vdc, 45 W

Degrees of protection (IP Code)

IP65

Ambient temperature:

-20°C to +50°C

Routine tests

Routine dielectric test required in accordance with IEC 60079-15:2010 Clause 23.2.1

[16] **Report No.:** 2012-3040

Project No.: PRJN-212494-2021-PA-USA

[17] **Specific Conditions of Use**

Installation of unit must be shaded to protect the window from direct sunlight and direct light from luminaires

[18] **Essential Health and Safety Requirements**

Met by compliance with the requirements mentioned in item 9.

[19] Drawings and documents

Number	Title	Rev.	Date
9700-101-VE	*5100 HD Analyzer Certification Drawing	O	2020-12-23
-	*5100 HD Technical File	F	2013-12-29
90709VE	*5100 HD Instruction Manual	R	-
9000-119-VE	Assembly 5100 HD Space Coupled	F	2013-05-22
9000-119-VE BOM	Bill of Materials by Reference Designator	G	2013-09-27
9000-118-VE	Assembly 5100 HD 24 VDC Space Coupled	E	2013-05-22
9000-118-VE BOM	Bill of Materials by Reference Designator	E	2013-09-27
9000-140-VE	Assembly 5100 HD 120V Space Coupled, CO	G	2013-08-13
9000-140-VE BOM	Bill of Materials by Reference Designator	G	2013-09-27
9000-141-VE	Assembly 5100 HD 24 VDC Space Coupled, CO	F	2013-05-01
9000-141-VE BOM	Bill of Materials by Reference Designator	F	2013-09-27
95608WE	5100 HD Analyzer, 120 VAC or 240VAC, GP& Class I, Div. 2 & Zone 2, Dual	P	2013-05-22
95608WE BOM	Bill of Materials by Reference Designator	P	2013-09-27
9000-111-VE	Assembly 5100 HD 24 VDC Dual Laser	G	2013-05-22
9000-111-VE BOM	Bill of Materials by Reference Designator	G	2013-09-27
9000-131-VE	5100 HD Analyzer, 120 VAC or 240VAC, GP& Class I, Div. 2 & Zone 2, Single	D	2013-05-22
9000-131-VE BOM	Bill of Materials by Reference Designator	D	2013-09-27
9000-132-VE	Assembly 5100 HD 24 VDC Single Laser	H	2013-05-22
9000-132-VE BOM	Bill of Materials by Reference Designator	H	2013-09-27

[20] Certificate History

Issue	Description	Issue date	Report no.
-	Original certificate	2012-02-24	2010-3040
1	Updated standard references and added ic and op is ratings	2013-11-26	2010-3040
2	Updates standards references and changed op is to op pr	2021-04-09	2010-3040 rev. 2

END OF CERTIFICATE