

- (2)Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – Directive 2014/34/EU
- EC Certificate of Conformity Number: (3)

TPS 19 ATEX 018013 016 X Rev. 00

(4)Equipment:

Density and Sound Velocity Sensor

Type: L-Com 5500 HAS Ex d

Manufacturer: (5)

Anton Paar GmbH

(6)Address: Anton-Paar-Straße 20

8054 Graz Austria

- This equipment and any acceptable variation thereto are specified in the schedule to this (7)certificate and the documents therein referred to.
- TÜV SÜD Product Service as notified body No. 0123 according to article 17 of the (8)Directive 2014/34/EU of the European Parliament and the Council of the European Union certifies that this equipment 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 atmospheres, given in Annex II of the Directive.

The examination and test results are recorded in the confidential TB 713157039 Rev 00.

(9)Compliance with the Essential Health and Safety Requirements has been assured by the following standards:

EN 60079-0:2012/A11:2013

EN 60079-1:2014

- (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.
- This Type Examination Certificate relates only to the design and the construction of the (11)specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture and supply of this equipment.
- The marking of the equipment shall include the following: (12)



Office of certification of explosion protection Ridlerstraße 65, 80339 München

München, 13.05.2019

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(13)

(14) EU-Type Examination Certificate TPS 19 ATEX 018013 016 X Rev. 00

Schedule

(15) <u>Description of equipment:</u>

The L-Com 5500 HAS Ex d Sensor is a explosion-proof combination of density and sound sensor in one instrument for measuring 3-component mixtures. The sensor consists of the density sensor L-Dens 7500 with a piezoelectrically excited U-tube and an additional sound velocity module.

The density and sound velocity values are calculated directly by the sensor electronics. The L-Com 5500 with digital signal processing can be optionally equipped with the Pico 3000 transmitter and Pico 3000 HMI.

The sensor is suitable for monitoring and controlling liquid media / chemical mixtures.

Type Classification / Marking

Model	Variation		Marking and Values		
	Pico 3000 HMI				
	without	with	with		
L-Com 5500 HAS Ex d	x			Ex-marking	(Ex) II 2G Ex db IIB T4/T5 Gb
				Temperatures and temperature class	Ta= -25°C until 65°C - Tp= -25°C until 95 °C T5 -25°C until 125°C T4
			5	Maximum process pressure:	50 bar
				Power data :	24 Vdc ± 20%, max. 5 W
L-Com 5500 HAS NPT Ex d	х			Ex-marking	(Ex) II 2G Ex db IIB T4/T5 Gb
				Temperatures and temperature class	Ta= -25°C until 65°C - Tp= -25°C until 95 °C T5 -25°C until 125°C T4
				Maximum process pressure:	50 bar
				Power data :	24 Vdc ± 20%, max. 5 W
L-Com 5500 HAS Ex d		×		Ex-marking	€x II 2G Ex db IIB T4/T5 Gb
				Temperatures and temperature class	Ta= -25°C until 55°C - Tp= -25°C until 95 °C T5 -25°C until 125°C T4
				Maximum process pressure:	50 bar
				Power data :	24 Vdc ± 20%, max. 8 W
L-Com 5500 HAS NPT Ex d		Х		Ex-marking	(II 2G Ex db IIB T4/T5 Gb

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9 ш

Model	Variation			Marking and Values	
	Pico 3000		НМІ		
	without	with	with		
				Temperatures and temperature class	Ta= -25°C until 55°C - Tp= -25°C until 95 °C T5 -25°C until 125°C T4
				Maximum process pressure:	50 bar
				Power data :	24 Vdc ± 20%, max. 8 W
L-Com 5500 HAS Ex d X X		Х	X	Ex-marking	(Ex) II 2G Ex db IIB T4/T5 Gb
				Temperatures and temperature class	Ta= -25°C until 55°C - Tp= -25°C until 95 °C T5 -25°C until 125°C T4
				Maximum process pressure:	50 bar
	Power data :	24 Vdc ± 20%, max. 8 W			
L-Com 5500 HAS NPT Ex d		Х	Х	Ex-marking	(EX) II 2G Ex db IIB T4/T5 Gb
				Temperatures and temperature class	Ta= -25°C until 55°C - Tp= -25°C until 95 °C T5 -25°C until 125°C T4
				Maximum process pressure:	50 bar
				Power data :	24 Vdc ± 20%, max. 8 W

Electrical Data:

Nominal Voltage:	24 Vdc ± 20% (Safety extra low voltage SELV)				
Nominal Power:	without Pico 3000	with Pico 3000			
	max. 5 W	max. 8 W			

Test report: TB 713157039 (16)

(17)Special conditions for safe use:

The specified ambient temperature range which deviates from the standard temperature range, -20°C ≤ T_{amb} < +55°C for variations with HMI and Pico 3000, -25°C ≤ T_{amb} < +55°C for variations without HMI and with Pico 3000 as well as -25°C ≤ T_{amb} < +65°C fort he variation without HMI and without Pico 3000.

According to EN 60079-1:2014 cl. 16.1.2, the following routine tests shall be carried out:

- Static overpressure test with 13 bar on all oscillator tubes or one of the inspection methods listed in EN 60079-1, Clause 16.3
- Hydrostatic overpressure test with 75 bar on all oscillator tubes

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For power cable, use only a cable whose thermal stability of its insulation is minimum 90°C.

For cable entrances use only already certified Ex d or Ex db cable glands suitable for application and rated for a minimum of 80°C.

Unused openings shall be closed by use of already certified Ex d or Ex db stopping plugs suitable for application and rated for a minimum of 80°C

(18) Essential health and safety requirements:

met by standards

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