IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx TPS 23.0053X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2024-12-03		
Applicant:	**SEITRON S.p.A.** Via del Commercio, 9/11 Mussolente (VI) 36065 **Italy**		
Equipment:	**Personal Monitor gas detector, type: Series PMxxx**		
Optional accessory:			
Type of Protection:	**Flameproof enclosures “da” or "db", Intrinsic safety ”ia"**		
Marking:	Ex da ia IIC T4 Ga (PM with LEL sensor VQ548MP2-DS) Ex db ia IIC T4 Gb (PM with LEL sensor 4P75) Ex ia IIC T4 Ga (PM without LEL sensor)		

Approved for issue on behalf of the IECEx Certification Body: **Ing. Kristof De Gersem, MSc.**

Position: **Technical Certifier**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

TÜV SÜD Product Service GmbH
Ridlerstr. 65
D-80339 Munich
Germany

Product Service

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Date of issue: 2024-12-03 Issue No: 0

Manufacturer: **SEITRON S.p.A.**
Via del Commercio, 9/11
Mussolente (VI) 36065
Italy

Manufacturing locations:

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2023 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

This Certificate **does not** indicate compliance with 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/TPS/ExTR23.0068/00

Quality Assessment Report:

IT/IMQ/QAR24.0003/00

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

PMxxx is a series of portable personal monitor safety gas detectors capable to recognize combustible gases, toxic gases and oxygen concentration.

The device is available in two main configurations PM2 and PM4, they differ from each other in the number of gas sensors that can be installed.

The electronic board is protected by intrinsic safety protection method type “ia”, the integrated LEL gas sensors are protected by flameproof enclosure “da” or “db”.

The marking of PM with integrated LEL gas sensors can be EPL Ga (suitable for installation in zone 0,1,2) or EPL Gb (suitable for installation in zone 1,2) depending on the marking of component gas sensor installed in the device (“da” or “db” respectively).

The Ex marking of PM without LEL gas sensors is EPL Ga only with intrinsically safe protection method “ia”.

The unit is powered by a rechargeable non-removable lithium-ion battery.

The electronic unit it is contained in an anti-static plastic shell integrating a keyboard interface (two buttons) and a graphic display. Four contact terminals are used for battery charge and data-transfer. Battery charging and data communication shall be done in the non-hazardous area, exclusively using the charge communication interface docking station (accessories apparatus) SEITRON type AMDS01.

The unit can be used in hazardous environment in conjunction with the accessories AMGC01 or AMGC02 which serve as gas applicators, as well as with the accessories AMAF01 or AMAF02 which serve as additional filter against dusts to be used in dirty environments.

The equipment performance testing and evaluation according to IEC 60079-29-1 is not part of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment is intended to be used in ambient temperatures range from -20°C to +55°C
- Charge and data communication shall be performed only in non-hazardous area by the appropriated SEITRON accessories model AMDS01
- The equipment shall exclusively be used with the battery pack provided with the device. Battery pack replacement is permitted only by service centers authorized by SEITRON and certified according to the IEC 60079-19 standard. Battery pack replacement is not permitted by end user

Annex:

Annex to CoC IECEx TPS 23.0053X.pdf

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Annex to certificate: IECEx TPS 23.0053X Issue No:0
Applicant: SEITRON S.p.A
Via del Commercio, 9/11 Mussolente (VI) 36065, Italy
Apparatus: Personal Monitor gas detector
Type(s): Series PMxxx

Model designation:

PM2	Personal Monitor with 2 Sensors					
	Z	O_2 sensor (Long Life)				**S1 position**
	G	O_2 sensor (Galvanic)				
	X	No sensor installed in this position				
		L	LEL sensor (VQ548MP2-DS)			**S2 position**
		R	LEL sensor (4P75)			
		C	CO sensor			
		H	H_2S sensor			
		N	NO sensor			
		B	NO_2 sensor			
		S	SO_2 sensor			
		Y	H_2 sensor			
		K	Cl_2 sensor			
		A	NH_3 sensor			
		D	CO + H_2S sensor (dual)			
		X	No sensor installed in this position			
			0	Without Bluetooth module		
			1	With Bluetooth module		
				-----	Non Ex related characters	
					SE	Branding Seitron

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Apparatus: Personal Monitor gas detector
Type(s): Series PMxxx

PM4	Personal Monitor with 4 Sensors					
	Z	O_2 sensor (Long Life)				**S1 position**
	G	O_2 sensor (Galvanic)				
	X	No sensor installed in this position				
		L	LEL sensor (VQ548MP2-DS)			**S2 position**
		R	LEL sensor (4P75)			
		X	No sensor installed in this position			
			C	CO sensor		**S3 position**
			H	H_2S sensor		
			B	NO_2 sensor		
			S	SO_2 sensor		
			Y	H_2 sensor		
			K	CL_2 sensor		
			A	NH_3 sensor		
			N	NO sensor		
			X	No sensor installed in this position		
				C	CO sensor	**S4 position**
				H	H_2S sensor	
				B	NO_2 sensor	
				S	SO_2 sensor	
				Y	H_2 sensor	
				K	CL_2 sensor	

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Apparatus: Personal Monitor gas detector
Type(s): Series PMxxx

				A	NH_3 sensor			
				D	CO + H2S sensor (dual)			
				X	No sensor installed in this position			
					0	Without Bluetooth module		
					1	With Bluetooth module		
						--	Non Ex related characters	
							SE	Branding Seitron

Rated characteristics PMxxx series:

Power Supply	Internal rechargeable Li-Ion 3.7V, 2200mAh
Operating temperature	-20°C … +55°C
Storage temperature	-20°C … +55°C
Operating and storage relative humidity	5% .. 90% RH (non condensing)
Alarms signals	nr.1 Buzzer nr.1 Vibration motor nr.3 LEDs
Display	Graphic display 180x128 with backlight
Communication modules	Bluetooth 5.0 Low energy
Enclosure materials	Transparent PC shell with TPE over molding surface resistance $<10^9$ Ω
Enclosure degree of protection	IP67 (as per IEC 60529)
External interfaces	Battery charge and data communication by nr.4 gold galvanized brass contacts.
Gas detected	Flammable gases (CH4, C3H8 and other CxHy) O_2, CO, NO, NO_2, SO_2, H_2, H_2S, NH_3, CL_2, CO+H_2S (LEL , VOL, PPM)

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Apparatus: Personal Monitor gas detector
Type(s): Series PMxxx

Rated characteristics AMDS01:

Power Supply	5V d.c. USB type C
Operative temperature	-20°C … +55°C
Storage temperature	-20°C … +55°C
Operative and storage relative humidity	5% .. 90% RH (non condensing)
Power supply output charger	5.9 V d.c. 500mA
Communication	Standard USB type
Interface	Battery charge output and data communication by nr.4 gold galvanized brass contacts.

Safety parameters:

AMDS01 charge/communication interface accessories apparatus

Max. input voltage at non-intrinsically safe connection: Um = 60 V d.c.

Max. input prospective current at non-intrinsically safe connection: PSCC = 35A

Warning label:

Gas detector:

WARNING: CHARGE ONLY IN SAFE AREA

WARNING: USE ONLY CHARGER/COMMUNICATION INTERFACE SEITRON AMDS01

Battery pack:

WARNING: Replace only with Seitron code AMPB010000SE

And an additional warning to avoid replacement by end user:

WARNING: BATTERY REPLACEMENT IS NOT PERMITTED BY END USER AND IS ONLY PERMITTED BY SERVICE CENTERS AUTHORIZED BY SEITRON

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