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 DEK 12.0059**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2016-08-02) Issue 0 (2012-12-18)
Date of Issue:	2021-07-02		
Applicant:	**Knick Elektronische Messgeräte GmbH & Co. KG** Beuckestrasse 22 D-14163 Berlin **Germany**		
Equipment:	**Measuring System Type Portavo 90*X***		
Optional accessory:			
Type of Protection:	**Ex ia**		
Marking:	Ex ia IIC T4/T3 Ga		

Approved for issue on behalf of the IECEx Certification Body: **R. Schuller**

Position: **Certification Manager**

Signature: (for printed version)

Date: 2021-07-02

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:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands

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Manufacturer: **Knick Elektronische Messgeräte GmbH & Co. KG**
Beuckestrasse 22
D-14163 Berlin
Germany

Additional 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 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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:

NL/DEK/ExTR12.0061/02

Quality Assessment Report:

DE/TUN/QAR06.0016/10

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

The Measuring System Type Portavo 90*X* is a battery powered hand-held electrical equipment for pH, conductivity and temperature measurement for analog or digital sensors.
The USB interface is only for use outside of the explosion hazardous area.

The ambient temperature range and temperature class depends on the batteries used as follows:

Battery:	Ambient temperature range:	Temperature class:
Duracell MN1500	-10 ºC to +40 ºC	T4
Energizer E91	-10 ºC to +50 ºC	T3
Power One 4106	-10 ºC to +50 ºC	T3
Panasonic Pro Power LR6	-10 ºC to +50 ºC	T3

SPECIFIC CONDITIONS OF USE: NO

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Equipment (continued):

Electrical data

Supply	Only the following batteries may be used: Duracell MN1500 Energizer E91 Power One 4106 Panasonic Pro Power LR6					
	in type of protection intrinsic safety Ex ia IIC, with the following maximum values:					
	U_o(V)	I_o(mA)	P_o(mW)	C_o(µF)	L_o(mH)	
pH-Measuring circuit(MEAS)	4.1	0.1	0.1	100	1000	Linear characteristic
Temperature measurement circuit(TEMP1, TEMP2)	4.1	4.4	4.6	99	1000	Linear characteristic
pH / Temperature measurement circuit (MEAS, TEMP1, TEMP2)	7.2	4.4	4.6	13.3	1000	Linear characteristic
Conductivity measurement circuit(MEAS)	7.2	36	36.9	13.4	27	Linear characteristic
Conductivity / Temperature measurement circuit (MEAS, TEMP1, TEMP2)	7.2	40.6	41.7	13.3	22	Linear characteristic
Memosens interface circuit(MS and/or MEAS)	4.6	113	130	96	2.8	Linear characteristic
USB Interface(micro USB-B)	Um = 250 V					

Installation instructions

The instructions and the control drawing provided with the equipment shall be followed in detail to assure safe operation.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

1. Assessed per 60079-0 Ed. 7
2. Minor constructional changes