



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 KEM 08.0020	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 7	Issue 6 (2017-11-23)
Date of Issue:	2021-05-26		Issue 5 (2016-06-10)
Applicant:	Knick Elektronische Messgeräte GmbH & Co. KG Beuckestraße 22 14163 Berlin Germany		Issue 4 (2010-10-18)
Equipment:	Analyzing Units Stratos® Pro Types A201X..., A211X..., A201B..., A221X... and A231X... and Stratos® Multi Type E401X		Issue 3 (2010-03-05)
Optional accessory:			Issue 2 (2009-11-07)
Type of Protection:	Ex i and Ex e		Issue 1 (2008-09-19)
Marking:	Stratos® Pro Type A201X..., Type A211X... : Ex ia IIC T4 Ga or Ex ib [ia Ga] IIC T4 Gb or Ex ib [ia Da] IIIC T85 °C Db Stratos® Pro Type A201B... : Ex ic IIC T4 Gc or Ex ic IIIC T85 °C Dc Stratos® Pro Type A221X... and A231X... : Ex ia IIC T6...T4 Ga or Ex ib [ia Ga] IIC T6...T4 Gb or Ex ic [ia Ga] IIC T6...T4 Gc or Ex ib [ia Da] IIIC T80 °C Db Stratos® Multi Type E401X...: Ex ec [ia Ga] IIC T4 Gc		Issue 0 (2008-07-15)

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:

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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
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

IEC 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Reports:

[NL/DEK/ExTR20.0048/00](#)

[NL/KEM/ExTR08.0017/06](#)

Quality Assessment Report:

[DE/TUN/QAR06.0016/10](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Analyzing Units Stratos® Pro Types A201X..., A211X..., A201B..., A221X... and A231X... and Stratos® Multi Type E401X... are used to measure and process electrochemical quantities in liquids in explosive atmospheres.

They consist of a main unit and a measurement module MK-... in a single enclosure.

The main unit includes an electronic circuit with the connection terminals, a slot for one measurement module, a backlit LCD and a keypad. Stratos® Multi Type E401X... additionally has a connection for an optional memory card Type ZU1080-S-X-... .

After processing of the measurement signals from the connected detector (connected to the terminals on the respective module or via the Memosens interface or a current input) the measured values are available on the display, as an analog output value (4 - 20 mA current signal with or without HART) or on the bus communication.

The Stratos® Pro Analyzers are provided with one or two isolated control inputs.

Types A201X..., A211X... and A201B... are supplied via the output signal loop.

Types A221X... and A231X... are supplied via a FISCO bus system.

Analyzing Unit Stratos® Multi Type E401X... is provided with various isolated and non-isolated inputs, relay contacts and outputs.

Stratos® Multi Type E401X... is supplied via its supply terminals.

The Analyzing Units consist of the units and one measurement module as specified in the attachment.

Electrical data

For connection details and electrical data, refer to the control drawings of the Unit and Module.

Installation instructions

The instruction manual and the control drawings provided with the Unit or the Module shall be followed in detail to assure proper and safe operation.

SPECIFIC CONDITIONS OF USE: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

1. Introduction of Stratos® Multi Type E401X...
2. Assessed per 60079-0 Ed. 7
3. Removal of several models and types of protection from the scope
4. Minor constructional changes.

Annex:

[224235700-Annex1.pdf](#)

The Analyzing Units Stratos® Pro Types A201X..., A211X..., A201B..., A221X... and A231X... and Stratos® Multi Type E401X... consist of the following units and one measurement module:

Table 1: Stratos Family for sensors with EPL Ga or Da

Unit	Type	Type of protection	Ambient temperature range	Control drawing
Stratos Pro	A201X... A211X...	Ex ia IIC T4 Ga Ex ib [ia Ga] IIC T4 Gb Ex ib [ia Da] IIIC T85 °C Db	T4 and T85 °C: -20 °C to +65 °C	212.002-100
Stratos Pro	A221X... A231X...	Ex ia IIC T6...T4 Ga Ex ib [ia Ga] IIC T6...T4 Gb Ex ic [ia Ga] IIC T6...T4 Gc Ex ib [ia Da] IIIC T80 °C Db FISCO Field Device	T6: -20 °C to +50 °C T4 and T80 °C: -20 °C to +65 °C	212.002-100
Stratos Multi	E401X...	Ex ec [ia Ga] IIC T4 Gc	-20 °C to +55 °C	212.502-100
Memory card	ZU1080-S-X...	Ex ic IIC Gc	-20 °C to +55 °C or as defined for the main unit	212.502-100
Measurement module	Type	Type of protection	Ambient temperature range	Control drawing
PH	MK-PH 015X	Ex ia IIC Ga Ex ia IIIC Da	-20 °C to +65 °C or as defined for the main unit	212.002-110
OXY	MK-OXY 045X	Ex ia IIC Ga Ex ia IIIC Da	-20 °C to +65 °C or as defined for the main unit	212.002-120
COND	MK-COND 025X	Ex ia IIC Ga Ex ia IIIC Da	-20 °C to +65 °C or as defined for the main unit	212.002-130
CONDI	MK-CONDI 035X	Ex ia IIC Ga Ex ia IIIC Da	-20 °C to +65 °C or as defined for the main unit	212.002-140
MS	MK-MS 095X	Ex ia IIC Ga Ex ia IIIC Da	-20 °C to +65 °C or as defined for the main unit	212.002-150
The maximum surface temperature T _{xx} °C is referred to the enclosure of the main unit without a dust layer at the maximum ambient temperature.				

Table 2: Stratos Family for sensors with EPL Gc or Dc

Unit	Type	Type of protection	Ambient temperature range	Control drawing
Stratos Pro	A201B...	Ex ic IIC T4 Gc Ex ic IIIC T85 °C Dc	-20 °C to +65 °C	212.002-100
Measurement module	Type	Type of protection	Ambient temperature range	Control drawing
PH	MK-PH 015B	Ex ic IIC Gc Ex ic IIIC Dc	-20 °C to +65 °C or as defined for the main unit	212.002-110
OXY	MK-OXY 045B	Ex ic IIC Gc Ex ic IIIC Dc	-20 °C to +65 °C or as defined for the main unit	212.002-120
COND	MK-COND 025B	Ex ic IIC Gc Ex ic IIIC Dc	-20 °C to +65 °C or as defined for the main unit	212.002-130
CONDI	MK-CONDI 035B	Ex ic IIC Gc Ex ic IIIC Dc	-20 °C to +65 °C or as defined for the main unit	212.002-140
The maximum surface temperature T _{xx} °C is referred to the enclosure of the main unit without a dust layer at the maximum ambient temperature.				