



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx KEM 08.0020

Issue No: 6

Certificate history:

Issue No. 6 (2017-11-23)

Issue No. 5 (2016-06-10)

Issue No. 4 (2010-10-18)

Issue No. 3 (2010-03-05)

Issue No. 2 (2009-11-07)

Issue No. 1 (2008-09-19)

Issue No. 0 (2008-07-15)

Status: **Current**

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Date of Issue: **2017-11-23**

Applicant: **Knick Elektronische Messgeräte GmbH & Co. KG**
Beuckestraße 22
14163 Berlin
Germany

Equipment: **Analyzing Unit Stratos® Pro Type A2..X-.-, A2..B-.-, A22*X and A23*X, A4..B, Stratos®
Evo Type A402B Stratos® MS Type A405B**

Optional accessory:

Type of Protection: **Ex ia, ib[ja], ib, ia tb, ic, ic[ja], ic tc nA, nA[jc], tc, tc[jc]**

Marking:

Ex ia IIC T4 Ga or Ex ib [ja Ga] IIC T4 Gb or Ex ia IIIC T 85 °C Da or Ex ib [ja Da] IIIC T85 °C Db or
Ex ia tb [ja IIIC Da] IIIA T85 °C Db or Ex ic IIC T4 Gc or Ex nA IIC T4 Gc or Ex ic IIIC T85 °C Dc or
Ex ic tc [ic IIIC] IIIB T85 °C Dc or Ex ia IIC T6/T4 Ga or Ex ib [ja Ga] IIC T6/T4 Gb or
Ex ic [ja Ga] IIC T6/T4 Gc or Ex ia IIIC T80 °C Da or Ex nA IIC T4 Gc or Ex tc IIIB T85 °C Dc or
Ex nA [jc] IIC T4 Gc or Ex tc [jc IIIC] IIIB T63 °C Dc (for marking per type see equipment section)

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

R. Schuller

Position:

Certification Manager

*Signature:
(for printed version)*

Date:

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

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





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Manufacturer: **Knick Elektronische Messgeräte GmbH & Co. KG**
Beuckestraße 22
14163 Berlin
Germany

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical 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/KEM/ExTR08.0017/04](#) [NL/KEM/ExTR08.0017/05](#)

Quality Assessment Report:

[DE/TUN/QAR06.0016/07](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The marking per type is:
Stratos® Pro Type A20.X-.-, Type A21.X-.-:
Ex ia IIC T4 Ga or Ex ib [ja Ga] IIC T4 Gb or
Ex ia IIIC T 85 °C Da or Ex ib [ja Da] IIIC T85 °C Db or
Ex ia tb [ja IIIC Da] IIIA T85°C Db
Stratos® Pro Type A2..B-.-:
Ex ic IIC T4 Gc or Ex nA IIC T4 Gc or
Ex ic IIIC T 85 °C Dc or Ex ic tc [jc IIIC] IIIB T85 °C Dc
Stratos® Pro Type A22*X and A23*X
Ex ia IIC T6/T4 Ga or Ex ib [ja Ga] IIC T6/T4 Gb or
Ex ic [ja Ga] IIC T6/T4 Gc or Ex ia IIIC T80 °C Da
Stratos® Pro Type A4..B:
Ex nA IIC T4 Gc or Ex tc IIIB T85°C Dc
Stratos® Evo Type A402B, Stratos® MS Type A405B:
Ex nA [jc] IIC T4 Gc or Ex tc [jc IIIC] IIIB T63°C Dc

SPECIFIC CONDITIONS OF USE: NO



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EQUIPMENT (continued):

Analyzing Unit Stratos® Pro Type A20.X-.-, Type A21.X-.-, Type A22.X, Type A23.X, Type A20.B-.-, Type A21.B-.-, Type A40.B-.-, Type A41.B-.-, Stratos® Evo Type A402B or Stratos® MS Type A405B is used to measure and process electrochemical quantities in liquids in explosive atmospheres. It consists of the front unit A2... or A4..., a measuring module MK- and an enclosure.

The front unit includes an electronic circuit SA-2CL or SA-2BUS or SA-4CL or HiPO with the connection terminals and a slot for the measuring module, a backlit LCD and a keypad.

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 as display and as an analog output value (4 - 20 mA current signal with or without HART) or BUS communication.

The Analyzers are provided with one or two isolated control inputs, Stratos® Pro Type A4..B, Stratos® Evo Type A402B, Stratos® MS Type A405B additional with relay contacts.

Stratos® Pro Type A2..X-.- and Stratos® Pro Type A2..B-.- are supplied via the output signal loop. Stratos® Pro Types A22*X and A23*X are supplied via a BUS system.

Stratos® Pro Type A4..B-.-, Stratos® Evo Type A402B and Stratos® MS Type A405B are supplied by mains.

The Analyzing Unit Stratos® Pro Type A2...-.- or Stratos® Pro/Evo/MS Type A4...-.- consists of the main unit and one of the measuring or interface module as shown in the attachment.

Electrical data

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

Installation instructions

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



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Update with minor change of electronics

Annex:

[NL_KEM_08.0020 Issue 6 Attachment.pdf](#)

Attachment to: IECEx KEM 08.0020 Issue 6

Applicant's name: Knick Elektronische Messgeräte GmbH & Co. KG

Test item: Analyzing Unit Stratos® Pro Type A2..X-.-, A2..B-.-, A22*X and A23*X, A4.. B-.-, Stratos® Evo Type A402B Stratos® MS Type A405B



The Analyzing Unit Stratos® Pro Type A2...-.- or Stratos® Pro/Evo/MS Type A4...-.- consists of the following main unit and one of the measuring or interface modules:

Unit / Module:	Description:	Type of protection:	Ambient temperature range:	Control drawing:
SA_2CL	Main circuitry	Ex ia IIC T4 Ex ib [ia] IIC T4 Ex ia IIIC T85 °C Ex ib [ia] IIIC T85 °C Ex ia tb [ia IIIC] IIIA T85 °C Ex ic IIC T4 Ex nA IIC T4 Ex ic IIIC T85 °C Ex ic tc [ic IIIC] IIIB T85 °C	T4 and T85°C: -20 °C to +65 °C	212.002-100
SA-2BUS	Main circuitry	Ex ia IIC T6/T4 Ex ib [ia] IIC T6/T4 Ex ic [ia] IIC T6/T4 Ex ia IIIC T80 °C FISCO Field Device	T6: -20 °C to +50 °C T4 and T80°C: -20 °C to +65 °C	212.002-100
SA-4CL	Main circuitry	Ex nA IIC T4 Ex tc IIIB T85 °C	T4 and T85°C: -20 °C to +55 °C:	212.002-100
HiPo	Main circuitry	Ex nA IIC T4 Ex nA [ic] IIC T4 Ex tc [ic IIIC] IIIB T63 °C	T4: -20 °C to +55 °C T63°C: -20 °C to +43 °C	212.002-100
MK-PH	pH-Measurement Module	Ex ia IIC, Ex ia IIIC, Ex nA IIC	-20 °C to +65 °C or as defined for the main unit	212.002-110
MK-OXY	Oxygen Concentration Measurement Module	Ex ia IIC, Ex ia IIIC, Ex nA IIC	-20 °C to +65 °C or as defined for the main unit	212.002-120
MK-COND	Conductivity Measurement Module	Ex ia IIC, Ex ia IIIC, Ex nA IIC	-20 °C to +65 °C or as defined for the main unit	212.002-130
MK-CONDI	Inductive Conductivity Measurement Module	Ex ia IIC, Ex ia IIIC, Ex nA IIC	-20 °C to +65 °C or as defined for the main unit	212.002-140
MK-MS	Terminal card Module	Ex nA IIC	-20 °C to +65 °C or as defined for the main unit	212.002-100

The maximum temperature of the enclosure Txx °C is referred to the maximum ambient temperature of the main unit and is applicable to a maximum dust layer thickness of 5 mm.