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 TUR 11.0007X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2011-06-30**	Page 1 of 3

Applicant: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70826 Gerlingen
Germany

Electrical Apparatus: **Liquiline M CM42-.I.....**
Optional accessory:

Type of Protection: **Intrinsic Safety - Ex i**

Marking: **Ex ib [ia Ga] IIC T6 Gb**
for -20 °C <= ta <= 50 °C
and
Ex ib [ia Ga] IIC T4 Gb
for -20 °C <= ta <= 55 °C

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Heinz Farke

Position: Deputy Head of ExCB

Signature:
(for printed version)

Date: 2011-06-30

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.

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

TÜVRheinland®

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2011-06-30** Issue No.: **0**

Manufacturer: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70826 Gerlingen
Germany

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 electrical 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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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:

DE/TUR/ExTR11.0007/00

Quality Assessment Report:

DE/BVS/QAR06.0005/03

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2011-06-30** Issue No.: **0**

Schedule

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

The Liquiline M CM42-.I..... is a measuring system for conductivity and/or pH-Value/Redox potential and dissolved Oxygen.
Ambient temperature:
-20 °C <= ta <= +50 °C for T6
and
-20 °C <= ta <= +55 °C for T4
For further decription and parameter see the annexed file.

CONDITIONS OF CERTIFICATION: YES as shown below:

Metal enclosures must be connected to the local equipotential bonding system at the point of installation.

Only sensors, intended to be used according to the user instruction, must be connected.
The rated values of input and output circuits has to be followed.

Annexe: CM 42 _DE_TUR_ExTR11_0007_00 Cover_Sheet_10618588Rev1annex (1).pdf

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 TUR 11.0007X	issue No.:1	Certificate history: Issue No. 1 (2014-2-6) Issue No. 0 (2011-6-30)
Status:	**Current**		
Date of Issue:	**2014-02-06**	Page 1 of 4	

Applicant: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70839 Gerlingen
Germany

Electrical Apparatus: **Transmitter Liquiline M type CM42 - *I* ** * *****
Optional accessory:

Type of Protection: **Intrinsic Safety - Ex i**

Marking: Ex ib [ia Ga] IIC T6 Gb
for -20 °C <= ta <= 50 °C
and
Ex ib [ia Ga] IIC T4 Gb
for -20 °C <= ta <= 55 °C

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Klauspeter Graffi

Position: Head of Certification Body

Signature:
(for printed version)

Date: 2014-02-06

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.

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

TÜVRheinland

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2014-02-06** Issue No.: **1**

Manufacturer: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70839 Gerlingen
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 electrical 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 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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:
DE/TUR/ExTR11.0007/00

Quality Assessment Report:

DE/BVS/QAR06.0005/03 DE/BVS/QAR06.0005/04 DE/BVS/QAR06.0005/05

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2014-02-06** Issue No.: **1**

Schedule

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

Object of this supplement is the introduction of the new type CM42-LI* ** * *****, the cancellation of the old type CM42-RI* ** * *****, increasing of the maximum input power P_i of the module FBIH1, as well as miscellaneous minor changes in the mechanical construction and the electronic design.
Moreover the compliance assessments to the standards IEC 60079-0:2011 and IEC 60079-11:2011 is part of this supplement.
For further decription and parameter see the annexed file.

CONDITIONS OF CERTIFICATION: YES as shown below:

Metal enclosures must be connected to the local equipotential bonding system at the point of installation.

Only sensors, intended to be used according to the user instruction, must be connected.
The rated values of input and output circuits has to be followed.

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2014-02-06** Issue No.: **1**

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

Object of this supplement is the introduction of the new type CM42-LI* ** * *****, the cancellation of the old type CM42-RI* ** * *****, increasing of the maximum input power P_i of the module FBIH1, as well as miscellaneous minor changes in the mechanical construction and the electronic design.

Moreover the compliance assessments to the standards IEC 60079-0:2011 and IEC 60079-11:2011 is part of this supplement.

Annex: DE-IECEx_TUR_11.0007X_01_Attachment_20140206.pdf

Attachment to to Certificate IECEx TUR 11.0007/01 X

Device: **Transmitter Liquiline M Typ CM42 - *I* ** * *****

Manufacturer: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik mbH + Co.KG**

Address: **Dieselstraße 24, 70839 Gerlingen Germany**

General product information:
Transmitter

Technical data

Liquiline M CM42 - **********

- Administrative Data (letters A to Z)
- Administrative Data (Numbers 0, 1 or 2)
- Housing / Enclosure Material
  - 0 = Plastic Material (PC)
  - 1 = Stainless Steel 1.4301
- Power/Communications Circuit
  - 0 = 4...20 mA, HART-Communication
  - 1 = 2x4...20 mA, 1x HART- Communication
  - 2 = Profibus PA
  - 3 = Foundation Fieldbus
  - 4 = 2x4...20 mA, SIL
- Administrative Data (letters A to Z)
- G = ATEX (1)2G
  I = IECEx (Ga)Gb
- Connecting Sensor Types:
  - A = No Module
  - C = Conductivity, conductive measurement (FSLC1 module)
  - I = Conductivity, inductive measurement (FSLI1 module)
  - P = pH / mV + Temperature (FSPH1 module)
  - L = Digital Sensor Inductive Conductivity, MEMOSENS (FSDG1 module)
  - M = Digital Sensor, MEMOSENS (FSDG1 module)
  - N = Digital Sensor ISFET, MEMOSENS (FSDG1 module)
  - O = Digital Sensor Dissolved Oxygen, MEMOSENS (FSDG1 module)
  - K = Digital Sensor Conductive Conductivity, MEMOSENS (FSDG1)

The transmitter Liquiline M type CM42-*I* ** * ***** is used to acquire different parameters in analytical measuring technology, such as for example pH value, electrolytical conductivity or dissolved oxygen. It consists either of a metallic enclosure (type CM42-*I* *1 * *****) or a plastic enclosure (type CM42-*G* *0 * *****), a display with operating elements, and terminals for external connection of the intrinsically safe circuits. For connection of the different intrinsically safe circuits several modules has to be used:

- For communication circuits the assemblies FBIH1 and FBPA1
- for the sensor circuits the modules FSPH1, FSLI1, FSLC1, and FSDG1.

1. Technical data

1.1 Electrical ratings

1.1.1 Communication circuits

1.1.1.1 Assembly FBIH1: 2 Current outputs with HART communication via output 1

Current output 1 in type of protection Ex ib IIC
Terminals: 133-134

Maximum input voltage	Ui	30 V
Maximum input current	Ii	100 mA
Maximum input power	Pi	800 mW
Effective internal capacitance	Ci	1.2 nF
Effective internal inductance	Li	29 µH

Current output 2 in type of protection Ex ib IIC
Terminals: 233-234

Maximum input voltage	Ui	30 V
Maximum input current	Ii	100 mA
Maximum input power	Pi	800 mW
Effective internal capacitance	Ci	0.2 nF
Effective internal inductance	Li	24 µH

1.1.1.2 Assembly FBPA1: Current output for connection to a field bus communication system according to the FISCO concept
Current output in type of protection Ex ib IIC
Terminals: 997-998

Maximum input voltage	Ui	17.5 V
Maximum input current	Ii	380 mA
Maximum input power	Pi	5.32 W
Effective internal capacitance	Ci	< 5 nF
Effective internal inductance	Li	<10 µH

1.1.2 Sensor circuits

1.1.2.1 Sensor modules FSPH1: Sensor input pH/ Redox and temperature
pH/ Redox sensor input and temperature in type of protection Ex ia IIC
Terminals: 317–320; 111-113

Maximum output voltage	Uo	10.08 V
Maximum output current	Io	4.1 mA
Maximum output power	Po	10.2 mW
Effective internal capacitance	Ci	28.9 nF
Effective internal inductance	Li	305 µH
Effective external capacitance	Co	250 nF
Effective external inductance	Lo	1 mH

pH-ISFET sensor input and temperature in type of protection Ex ia IIC

Terminals: 315–320; 111-113

Maximum output voltage	Uo	10.08 V
Maximum output current	Io	50.7 mA
Maximum output power	Po	128 mW
Effective internal capacitance	Ci	28.9 nF
Effective internal inductance	Li	305 µH
Effective external capacitance	Co	250 nF
Effective external inductance	Lo	1 mH

1.1.2.2 Sensor modules FSLI1: Sensor input for Inductive conductivity probe type CLS50 or type CLS54
Sensor input in type of protection Ex ia IIC
Terminals: 111-113, 215-218

Maximum output voltage	Uo	10.08 V	
Maximum output current	Io	64 mA	
Maximum output power	Po	128 mW	
Effective internal capacitance	Ci	62 nF	(only internally, not effective)
Effective internal inductance	Li	305 µH	(only internally, not effective)
Effective external capacitance	Co	1.8 µF	
Effective external inductance	Lo	0.1 mH	

1.1.2.3 Sensor modules FSLC1: Sensor input for certified inductive conductivity probe type CLS**Sensor input in type of protection Ex ia IIC
Terminals: 111-113, 219-222

Maximum output voltage	Uo	10.08 V
Maximum output current	Io	23 mA
Maximum output power	Po	57 mW
Effective internal capacitance	Ci	21 nF
Effective internal inductance	Li	305 µH
Effective external capacitance	Co	50 nF
Effective external inductance	Lo	300 µH

1.1.2.4 Sensor modules FSDG1: Sensor input for suitable and intrinsically safe certified MEMOSENS devices according to IECEx BVS 11.0052X (Memosens sensors), IECEx BVS 14.0004X (CLS50D sensor), IECEx BVS 12.0007 (Memocheck Sim)
Sensor input in type of protection Ex ia IIC
Terminals: 187-188, 197-198

Maximum output voltage	Uo	5.04 V	
Maximum output current	Io	80 mA	
Maximum output power	Po	112 mW	
Effective internal capacitance	Ci	12.4 µF	(only internally, not effective)
Effective internal inductance	Li	160.4 µH	(only internally, not effective)

1.2 Thermal ratings
Ambient temperature range

For temperature class T6	-20 °C ≤ Ta ≤ +50 °C
For temperature class T4	-20 °C ≤ Ta ≤ +55 °C

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 TUR 11.0007X issue No.:2	Certificate history: Issue No. 2 (2014-10-2) Issue No. 1 (2014-2-6) Issue No. 0 (2011-6-30)
Status:	**Current**	
Date of Issue:	**2014-10-02**	Page 1 of 4

Applicant: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70839 Gerlingen
Germany

Electrical Apparatus: **Transmitter Liquiline M type CM42 - *I* ** * *****
Optional accessory:

Type of Protection: **Intrinsic Safety - Ex i**

Marking: Ex ib [ia Ga] IIC T6/T4 Gb

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Klauspeter Graffi

Position: Head of Certification Body

Signature:
(for printed version)

Date: 2014-10-02

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 the Official IECEx Website.

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

TÜVRheinland

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2014-10-02** Issue No.: **2**

Manufacturer: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70839 Gerlingen
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 electrical 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 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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:
DE/TUR/ExTR11.0007/00 DE/TUR/ExTR11.0007/01 DE/TUR/ExTR11.0007/02

Quality Assessment Report:

DE/BVS/QAR06.0005/03 DE/BVS/QAR06.0005/04 DE/BVS/QAR06.0005/05
DE/BVS/QAR06.0005/06

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2014-10-02** Issue No.: **2**

Schedule

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

The assembly FBPA3 is a new part of the equipment as well, with the same function and external electrical parameters like assembly FBPA1.Minor changes to assembly type FBIH1 and type FSPH1.Beside this the ex-marking has been consolidated to one line.
For further decription and parameter see the annexed file.

CONDITIONS OF CERTIFICATION: YES as shown below:

Unchanged, see DE/TUR/ExTR11.0007/01

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 11.0007X

Date of Issue: **2014-10-02** Issue No.: **2**

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

The assembly FBPA3 is a new part of the equipment as well, with the same function and external electrical parameters like assembly FBPA1.Minor changes to assembly type FBIH1 and type FSPH1.Beside this the ex-marking has been consolidated to one line.

Annex: DE-IECEx_TUR_11.0007X_02_Attachment_20141002.pdf

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 TUR 11.0007X	Issue No: 3	Certificate history:
			Issue No. 3 (2015-10-09)
Status:	**Current**	Page 1 of 4	Issue No. 2 (2014-10-02)
			Issue No. 1 (2014-02-06)
Date of Issue:	**2015-10-09**		Issue No. 0 (2011-06-30)

Applicant: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70839 Gerlingen
Germany

Electrical Apparatus: **Transmitter Liquiline M type CM42 - *I* ** * *****
Optional accessory:

Type of Protection: **Intrinsic Safety - Ex i**

Marking: Ex ib [ia Ga] IIC T6/T4 Gb

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Klauspeter Graffi

Position: Head of Certification Body

Signature:
(for printed version)

Date: 2015-10-09

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.

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

TÜVRheinland®

IECEx Certificate of Conformity

Certificate No:	IECEx TUR 11.0007X	Issue No: 3
Date of Issue:	**2015-10-09**	Page 2 of 4

Manufacturer: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik GmbH & Co. KG**
Dieselstraße 24
70839 Gerlingen
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 electrical 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"

*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:

DE/TUR/ExTR11.0007/00 DE/TUR/ExTR11.0007/01 DE/TUR/ExTR11.0007/02
DE/TUR/ExTR11.0007/03

Quality Assessment Report:

DE/BVS/QAR06.0005/03 DE/BVS/QAR06.0005/04 DE/BVS/QAR06.0005/05
DE/BVS/QAR06.0005/06

IECEx Certificate of Conformity

Certificate No: IECEx TUR 11.0007X Issue No: 3

Date of Issue: **2015-10-09** Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Transmitter Liquiline M, Type: CM42-*I* ** * *****

CONDITIONS OF CERTIFICATION: YES as shown below:

Unchanged

IECEx Certificate of Conformity

Certificate No:	IECEx TUR 11.0007X	Issue No: 3
Date of Issue:	**2015-10-09**	Page 4 of 4

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

Subject of this supplement issue the certificate without an annex to IEC 60079-26 Ed.3.0, because the transmitter is an equipment with a single standardized Types of Protection (here Ex “ia”) and these equipment are not in scope of IEC 60079-26 Ed.3.0 anymore. Beside this, minor hardware changes which do not effect the type of protection have been done to the construction of the transmitter as well as editorial changes because of a new document structure.

Annex:

DE-IECEx_TUR_11.0007X_03_Attachment_2015-10-09.pdf

Attachment to to Certificate IECEx TUR 11.0007/03 X

Device: **Transmitter Liquiline M Typ CM42 - *I* ** * *****

Manufacturer: **Endress + Hauser Conducta Gesellschaft für Mess- und Regeltechnik mbH + Co.KG**

Address: **Dieselstraße 24, 70839 Gerlingen Germany**

General product information:

1. Transmitter Liquiline M type CM42-*I* ** * *****

Product Type Code:
Liquiline M CM42 - *** ** * ******

- Administrative Data (letters A to Z)
- Administrative Data (Numbers 0, 1 or 2)
- Housing / Enclosure Material
  - 0 = Plastic Material (PC)
  - 1 = Stainless Steel 1.4301
- Power/Communications Circuit
  - 0 = 4...20 mA, HART-Communication
  - 1 = 2x4...20 mA, 1x HART- Communication
  - 2 = Profibus PA (FBPA1)
  - 3 = Foundation Fieldbus (FBPA1)
  - 4 = 2x4...20 mA, SIL
  - 5 = Profibus PA (FBPA3)
  - 6 = Foundation Fieldbus (FBPA3)
- Administrative Data (letters A to Z)
- G = ATEX (1)2G
  E = ATEX (1)2G
  I = IECEx (Ga)Gb
- Connecting Sensor Types:
  - A = No Module
  - C = Conductivity, conductive measurement (FSLC1 module)
  - I = Conductivity, inductive measurement (FSLI1 module)
  - P = pH / mV + Temperature (FSPH1 module)
  - L = Digital Sensor Inductive Conductivity, MEMOSENS (FSDG1 module)
  - M = Digital Sensor, MEMOSENS (FSDG1 module)
  - N = Digital Sensor ISFET, MEMOSENS (FSDG1 module)
  - O = Digital Sensor Dissolved Oxygen, MEMOSENS (FSDG1 module)
  - K = Digital Sensor Conductive Conductivity, MEMOSENS (FSDG1)

Technical data

2. Description of change

Subject of this supplement issue the certificate without an annex to IEC 60079-26 Ed.3.0, because the transmitter is an equipment with a single standardized Types of Protection (here Ex “ia”) and these equipment are not in scope of IEC 60079-26 Ed.3.0 anymore.

Beside this, minor hardware changes which do not effect the type of protection have been done to the construction of the transmitter as well as editorial changes because of a new document structure.

3. Ratings

3.1 Electrical ratings

Unchanged

3.2 Thermal ratings

Unchanged

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 TUR 11.0007X	Issue No: 4	Certificate history:
Status:	**Current**	Page 1 of 4	Issue No. 4 (2016-12-14)
Date of Issue:	**2016-12-14**		Issue No. 3 (2015-10-09)
			Issue No. 2 (2014-10-02)
			Issue No. 1 (2014-02-06)
			Issue No. 0 (2011-06-30)

Applicant: **Endress+Hauser Conducta GmbH+Co. KG**
Dieselstraße 24
70839 Gerlingen
Germany

Equipment: **Transmitter Liquiline M type CM42-*I* ** * ***** or type OCM42-*I* ** * *****
Optional accessory:

Type of Protection: **Intrinsic Safety - Ex I**

Marking: Ex ib [ia Ga] IIC T6/T4 Gb

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Andreas Maschke

Position: Deputy Head of Certification Body

Signature:
(for printed version)

Date: 2016-12-14

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.

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

TÜVRheinland

IECEx Certificate of Conformity

Certificate No:	IECEx TUR 11.0007X	Issue No: 4
Date of Issue:	**2016-12-14**	Page 2 of 4

Manufacturer: **Endress+Hauser Conducta GmbH+Co. KG**
Dieselstraße 24
70839 Gerlingen
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 electrical 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"

*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:

DE/TUR/ExTR11.0007/04

Quality Assessment Report:

DE/BVS/QAR06.0005/07

IECEx Certificate of Conformity

Certificate No:	IECEx TUR 11.0007X	Issue No: 4
Date of Issue:	**2016-12-14**	Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Subject and type

Transmitter Liquiline M, Type: CM42-*I* ** * ***** or OCM42-*I* ** * *****

(For detailed type designation see attachment)

Technical data

Unchanged

CONDITIONS OF CERTIFICATION: YES as shown below:

Unchanged

IECEx Certificate of Conformity

Certificate No:	IECEx TUR 11.0007X	Issue No: 4
Date of Issue:	**2016-12-14**	Page 4 of 4

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

1. The Power/ Communications Circuit designator will be extended by the options 7 and 8. The hardware is identical to the Power/ Communication options 0 and 1, however HART-Communication is disabled by firmware settings.

The options use the same communication assembly FBIH1:

0 = 4...20mA, HART-Communication	7 = 4...20mA
1 = 2x4...20mA, HART-Communication	8 = 2x4...20mA

2. The alternative product designation root OCM42 will be introduced. No changes in HW or SW compared to CM42.

3. Additional sensor type designation "S"
The range of MEMOSENS sensors will be extended to measure dissolved oxygen (DO) using optical sensors. The CM42 interface remains the module FSDG1. No changes in hardware. The optical DO interface is denoted with "S" in the product order code:
S = Digital Sensor Dissolved Oxygen, Optical, MEMOSENS (FSDG1)

4. Changes with already have been documented in notification of change 557 / Ex 7459.04 / 13.

Annex:

IECEx TUR 11.0007X_N4_attachment.pdf

Attachment to Certificate
IECEx TUR 11.0007X
Revison 4

TÜVRheinland®
Precisely Right.

Equipment: **Transmitter Liquiline M type CM42-*I* ** * ***** or type OCM42-*I* ** * *****

Manufacturer: **Endress+Hauser Conducta GmbH+Co. KG**

Address: **Dieselstraße 24,**
70839 Gerlingen
Germany

General product information:

Liquiline M CM42 - *** ** * ******

Administrative Data (letters A to Z)

Administrative Data (Numbers 0, 1 or 2)

Housing / Enclosure Material
0 = Plastic Material (PC)
1 = Stainless Steel 1.4301

Power/Communications Circuit
0 = 4...20 mA, HART-Communication
1 = 2x4...20 mA, 1x HART- Communication
2 = Profibus PA (FBPA1)
3 = Foundation Fieldbus (FBPA1)
4 = 2x4...20 mA, SIL
5 = Profibus PA (FBPA3)
6 = Foundation Fieldbus (FBPA3)
7 = 4...20 mA
8 = 2x4...20 mA

Administrative Data (letters A to Z)

G = ATEX (1)2G
E = ATEX (1)2G
I = IECEx (Ga)Gb

Connecting Sensor Types:
A = No Module
C = Conductivity, conductive measurement (FSLC1 module)
I = Conductivity, inductive measurement (FSLI1 module)
P = pH / mV + Temperature (FSPH1 module)
L = Digital Sensor Inductive Conductivity, MEMOSENS (FSDG1 module)
M = Digital Sensor, MEMOSENS (FSDG1 module)
N = Digital Sensor ISFET, MEMOSENS (FSDG1 module)
O = Digital Sensor Dissolved Oxygen, MEMOSENS (FSDG1 module)
K = Digital Sensor Conductive Conductivity, MEMOSENS (FSDG1)
S = Digital Sensor Dissolved Oxygen, Optical, MEMOSENS (FSDG1)

Product Designation
OCM42 = Alternative product designation

Details of change:

1. The Power/ Communications Circuit designator will be extended by the options 7 and 8. The hardware is identical to the Power/ Communication options 0 and 1, however HART-Communication is disabled by firmware settings.

   The options use the same communication assembly FBIH1:

0 = 4...20mA, HART-Communication	7 = 4...20mA
1 = 2x4...20mA, HART-Communication	8 = 2x4...20mA

2. The alternative product designation root OCM42 will be introduced. No changes in HW or SW compared to CM42.
3. Additional sensor type designation "S"
   The range of MEMOSENS sensors will be extended to measure dissolved oxygen (DO) using optical sensors. The CM42 interface remains the module FSDG1. No changes in hardware. The optical DO interface is denoted with "S" in the product order code:
   S = Digital Sensor Dissolved Oxygen, Optical, MEMOSENS (FSDG1)
4. Changes with already have been documented in notification of change 557 / Ex 7459.04 / 13.

Technical data:

Unchanged

Specific Conditions of Use:

Unchanged