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 TUR 24.0001X**

Certificate history:
Issue 0 (2024-09-11)

Status: **Current**

Issue No: 1

Date of Issue: 2024-12-12

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

Equipment: **Transmitter Liquiline CM42B**

Optional accessory:

Type of Protection: **Ex i**

Marking: Ex ia IIC T6/T4 Ga
-20 °C ≤ Ta ≤ +50/60 °C

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

Position: **Assigned certifier**

Signature:
(for printed version)

Date:
(for printed version)

2024-12-12

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:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

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Certificate No.: **IECEx TUR 24.0001X**

Date of issue: 2024-12-12 Issue No: 1

Manufacturer: **Endress+Hauser Conducta GmbH+Co. KG**
Dieselstr. 24
70839 Gerlingen
Germany

Manufacturing locations:

Endress+Hauser Conducta, Inc.
4123 E. La Palma Ave.
Anaheim, CA 92807, USA
United States of America

Endress+Hauser Analytical Instruments(Suzhou) Co.,LTD.
No.31 JiangTianLiLu
Suzhou Industrial Park 215126
China

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 60079-11:2023 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/TUR/ExTR24.0001/01

Quality Assessment Reports:

DE/BVS/QAR06.0005/15 DE/TUR/QAR13.0004/05 DE/TUR/QAR14.0002/06

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

The loop-powered field measuring instrument (transmitter) Liquiline CM42B is used for liquid analysis in all areas of process engineering. The transmitter can be installed in hazardous gas atmospheres of up to zone 0.

Transmitter Liquiline	
(x)CM42B-aabbccddeeff(g)	
x	"Manufacturer" (not ex relevant) not used -> E+H-labelled version x = O -> OEM/label partner-labelled version
aa	Order option certification (not ex relevant) such as ATEX marking, IECEx marking, CSA marking, …
bb	Sensor 11 Memosens 21 pH/ORP analogue 22 Conductive conductivity analogue 23 Inductive conductivity analogue
cc	Output AA 1 x 4…20 mA, HART AB 2 x 4…20 mA
dd	Enclosure 11 Plastics 12 Stainless steel 21 Rail mount
ee	Cable glands AA M20x1.5 AB NPT ½" (with adaptor) AC G ½" (with adaptor)
ff	Other options (not ex relevant)
g	Optional = one or more characters determining optional features, e.g. test or other certificates/ declarations (not ex relevant)

Electrical data:

Please see the attachment.

Environmental data:

Please see the attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The plastic enclosure version has a high risk of electrostatic discharge. The instructions of the user manual must be observed.
2. For the verification of intrinsically safe circuits according to EN/IEC 60079-14, the internal Ci needs to be taken into consideration and should be added to the total sum of concentrated capacitance.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Not Ex-relevant hardware changes.

Annex:

Attachment IECEx TUR 24.0001X_01.pdf

Attachment to Certificate
IECEx TUR 24.0001X
Issue 01

Device: Transmitter Liquiline
Type: (x)CM42B-aabbccddeeff(g)

Manufacturer: Endress+Hauser Conducta GmbH+Co. KG

Address: Dieselstrasse 24
70839 Gerlingen
Germany

Ratings:

Entity parameters for electrical connections:

Input parameters of current output 1 and 2 (terminals 33, 34)	**Maximum values**
Ui	30 V
Ii	100 mA
Pi	750 mW
Li	30 µH
Ci (output 1)	15.2 nF
Ci (output 2)	7.9 nF

IO parameters of CDI (internal) Interface (CDI interface is only for service use-case.)	**Maximum values**
Ui	7 V
Ii	600 mA
Pi	Internally limited
Li	Negligible
Ci	0 µF
Uo	8 V
Io	85 mA
Po	140mW
Co	8.4 µF
Lo	4 mH

Output parameters of digital sensor interface (Memosens) (terminals 87, 88, 97, 98)	**Maximum values**
U_{tr} (Trapezoidal output characteristic)	6.3 V
Uo	5 V
Io	100 mA
Po	120 mW
Li	Negligible
Ci	15.6 µF
Lo	3.5 mH
Co	100 µF

In addition to the table above, it is allowed to connect intrinsically safe certified MEMOSENS cables xYK10 and xYK20 according to IECEx BVS 11.0052X and the fixed cable MEMOSENS sensor CLS50D according to IECEx BVS 14.0004X to the digital sensor interface (Memosens).

Output parameters VSPH1/ pH/ ORP module (Terminals: 11, 12, 13, 14, 16, 17, 18, 20, 21, 22)	**Maximum values**
Uo	5 V
Io	30 mA
Po	37.5 mW
Li	Negligible
Ci	1 µF
Lo	30 mH
Co	100 µF

Output parameters VSLI1/ Cond. i module (field wiring terminals: 11, 12, 13, 15, 16, 17, 18, 20)	**Maximum values**
Uo	7.6 V
Io	95 mA
Po	100 mW
Li	Negligible
Ci	480 nF
Lo	3.5 mH
Co	10.4 µF

Output parameters VSLC1/ Cond. C module (field wiring terminals: 11, 12, 13, 19, 20)	**Maximum values**
Uo	8.2 V
Io	30 mA
Po	38 mW
Li	Negligible
Ci	0 nF
Lo	30 mH
Co	7.6 µF

Environmental data:

T class	Ambient temperature
T6	-20 °C ≤ Ta ≤ +50 °C
T4	-20 °C ≤ Ta ≤ +60 °C