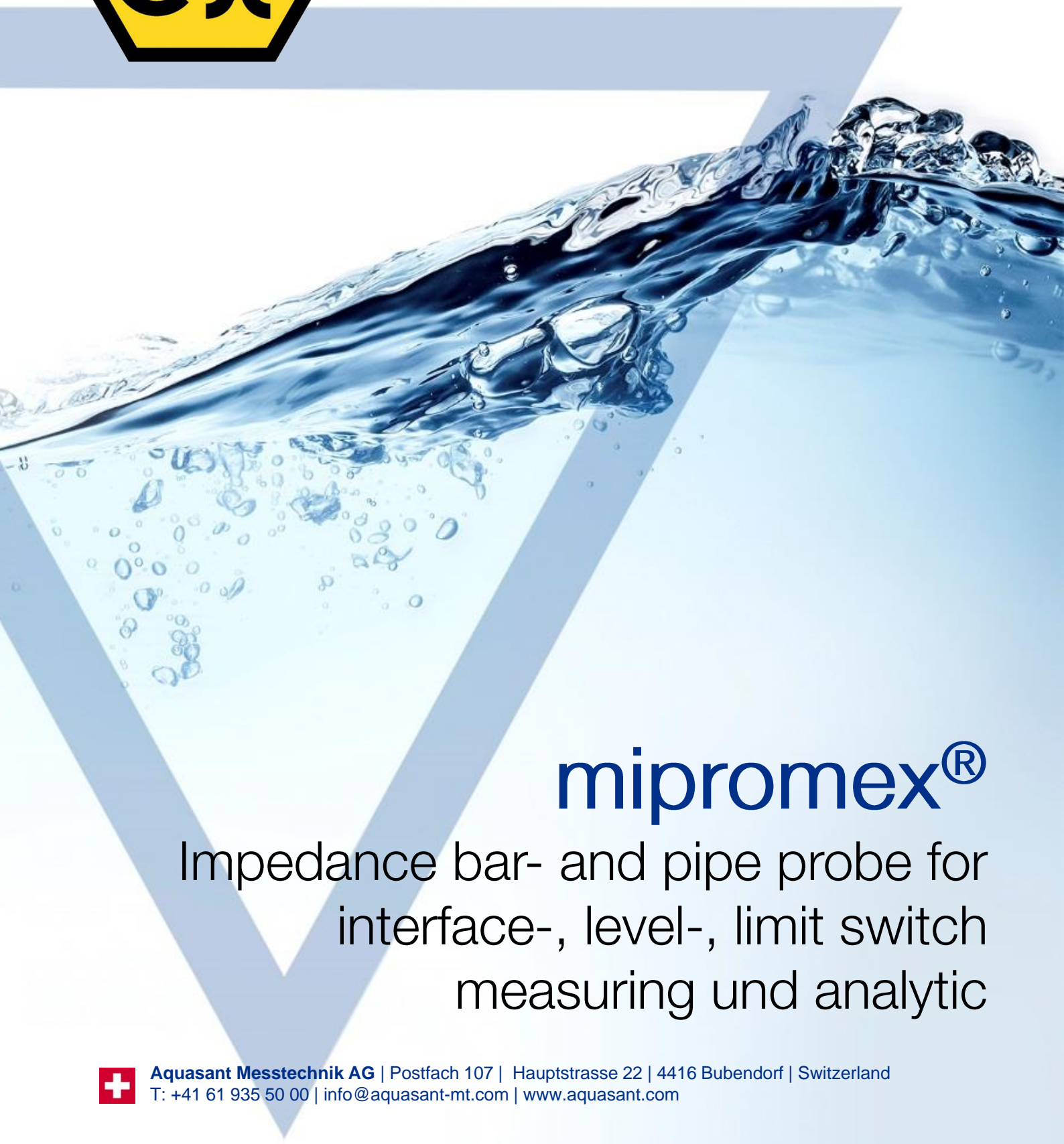


CERTIFICATE: ATEX / ISO



# mipromex<sup>®</sup>

Impedance bar- and pipe probe for  
interface-, level-, limit switch  
measuring und analytic







# CERTIFICATE

Certificate no. 6972

**aquasant** 

**Aquasant Messtechnik AG**  
Hauptstrasse 22  
CH-4416 Bubendorf

QS ZÜRICH AG certifies that the management system of the above mentioned company and location(s) has been evaluated and meets the requirements established by the following rules:

**ISO 9001: 2015**

The management system includes:

**Development, manufacturing and sales of measuring-, monitoring- and controlling-equipment for the chemical industry, the biotechnology, the food industry and the petrochemistry**

During the period of validity of this certificate, the management system of the company must always comply with the requirements of the certified standards.

For updated amendments within the scope of certification of the present certificate, please refer to

<http://www.quality-service.ch/>



First certification date:

01.03.1996

Date of issue:

25.05.2021

Expiration date:

01.07.2024

Subject to successful surveillance audit

**QS ZÜRICH AG**

P.O. Box 6335

CH-8050 Zürich

[info@quality-service.ch](mailto:info@quality-service.ch)



  
Management







1 **PRODUCTION/PRODUCT QUALITY ASSURANCE NOTIFICATION**

2 **Equipment and protective systems intended for use in potentially explosive atmospheres Directive 2014/34/EU**

Conformity to Type based on Quality Assurance of the Production Process/Product Quality Assurance

3 Notification No. **KIWA 19ATEXQ1234**

4 Equipment, protective system or components as listed:

Controllers and sensors for Impedance measuring technique of parting, threshold, level;  
Electro-optical fluid overfill protection;  
Electro-optical turbidity measurement;  
Treshold conductivity sensor technique;  
Radar level measurement

Flameproof Enclosures (d)  
Increased Safety (e)  
Non-electrical equipment (h)  
Intrinsic Safety (i)  
Encapsulation (m)  
Optical Radiation (op is)  
Dust Ignition Protection by Enclosure (t)

5 Manufacturer or  
Authorised Representative:

**Aquasant Messtechnik AG**  
Hauptstr. 22  
4416 Bubendorf  
Switzerland

6 Manufacturing locations: As above

7 CSA Group Netherlands B.V., notified body number 2813 in accordance with Article 17 of the Council Directive 2014/34/EU, notifies that the manufacturer has a quality system which complies with the requirements of Annexes IV & VII of Directive 2014/34/EU.

8 This notification is based upon Report No. 80135863 issued on 22 July 2022. This notification can be withdrawn if the manufacturer no longer satisfies the requirements of Annexes IV/VII. Results of periodical assessment of the quality system form part of this notification.

9 According to Article 16 [3] of Directive 2014/34/EU the CE marking shall be followed by the identification number 2813 of CSA Group Netherlands B.V., as the Notified Body involved in the production control stage.

Date of Initial Certification: 06 November 2019

Date of Issue: 18 August 2022

Date of Expiry: 24 October 2025

Michelle Halliwell

On behalf of CSA Group Netherlands B.V.



Notification No. **KIWA 19ATEXQ1234**

This certificate remains valid subject to the company maintaining its system to the required standards, which will be monitored by CSA. The use of this certificate, marks and logos are subject to the Regulations Applicable to Holders of CSA Group Netherlands BV certificates  
CSA Group Netherlands B.V. Utrechtseweg 310, Building B42, 6812AR, Netherlands

## EU DECLARATION OF CONFORMITY

en



<b>Manufacturer:</b>	Aquasant Messtechnik AG, Hauptstrasse 22, 4416 Bubendorf, Switzerland
<b>Brand:</b>	<b>aquasant®</b>
<b>Notified body:</b>	N° 2813, CSA Group Netherlands B.V.
<b>Description:</b>	The microprocessor control unit «mipromex®» is used for power supply and evaluation of measuring pulses which are transmitted from the impedance measuring probe as a sum signal.

We hereby declare under our sole responsibility that the products:

**Product**

Inspection certificate number  
Notified body

Control units «mipromex» M\*\* \*\*\*\* \*

SEV 22 ATEX 0592  
N° 1258 | Eurofins E&E

comply with the following European guidelines under the harmonised standards or normative documents:

ATEX RL 2014/34/EU	EN 1127-1:2019 EN 60079-0:2018 EN 60079-11:2012
Low Voltage Directive 2014/35/EU	--
EMV RL 2014/30/EU	EN61000 EN 61326
RoHS RL 2011/65/EU	EN IEC 63000:2018

The standards listed may deviate from those in the type examination certificate. In this case Aquasant Messtechnik AG declares that the product complies with the updated standards and that the basic safety and health requirements are met.

**Bubendorf, 18.03.2022**



**Roger Inauen**  
Head Manufacturing



## DÉCLARATION DE CONFORMITÉ - UE



**Fabricant:** Aquasant Messtechnik AG, Hauptstrasse 22, 4416 Bubendorf, Switzerland  
**Marque:** aquasant®  
**Organisme notifié:** N° 2813, CSA Group Netherlands B.V.  
**Description:** L'appareil de commande à microprocesseur «mipromex®» sert à l'alimentation en courant et à l'évaluation des impulsions de mesure qui sont transmises par la sonde d'impédance sous forme de signal cumulé.

Nous, exclusivement responsable, déclarons que le produit

**Produit**

Numéro du certificat d'inspection  
Organisme notifié

Unità di controllo «mipromex» M\*\* \*\*\*\* \*

SEV 22 ATEX 0592  
N° 1258 | Eurofins E&E

est conforme aux directives européennes suivantes, sous les normes harmonisées ou aux documents normatifs:

ATEX RL 2014/34/EU	EN 1127-1:2019 EN 60079-0:2018 EN 60079-11:2012
Directive sur la basse tension 2014/35/EU	--
EMV RL 2014/30/EU	EN61000 EN 61326
RoHS RL 2011/65/EU	EN IEC 63000:2018

EN 61000 EN

Les normes indiquées peuvent différer de celles figurant dans le certificat d'examen de type. Dans ce cas, Aquasant Messtechnik AG affirme que le produit est conforme aux normes actualisées et que les exigences de sécurité et de santé sont respectées.

**Bubendorf, 18.03.2022**



**Roger Inauen**  
Head Manufacturing





## DICHIARAZIONE DI CONFORMITÀ DELL'UE

**Produttore:** Aquasant Messtechnik AG, Hauptstrasse 22, 4416 Bubendorf, Switzerland

**Marca:** aquasant®

**Organismo notificato:** N° 2813, CSA Group Netherlands B.V.

**Descrizione:** L'unità di controllo a microprocessore «mipromex®» è utilizzata per l'alimentazione e la valutazione degli impulsi di misura trasmessi dalla sonda di misurazione dell'impedenza come segnale di somma.

Dichiariamo in sola responsabilità che i prodotti:

### Prodotte

Numero del certificato di ispezione  
Organismo notificato

Unità di controllo «mipromex» M\*\* \*\*\*\* \*

SEV 22 ATEX 0592  
N° 1258 | Eurofins E&E

sono conformi alle seguenti direttive europee, norme armonizzate o documenti normativi:

ATEX RL 2014/34/EU	EN 1127-1:2019 EN 60079-0:2018 EN 60079-11:2012
Direttiva sulla bassa tensione 2014/35/EU	--
EMV RL 2014/30/EU	EN61000 EN 61326
RoHS RL 2011/65/EU	EN IEC 63000:2018

Le norme indicate possono differire da quelle del certificato di esame di tipo. In questo caso, Aquasant Messtechnik AG afferma che il prodotto è conforme alle norme aggiornate e che i criteri di sicurezza e salute sono rispettati.

**Bubendorf, 18.03.2022**



**Roger Inauen**  
Head Manufacturing







## DECLARACIÓN DE CONFORMIDAD DE LA UE

es

**Fabricante:** Aquasant Messtechnik AG, Hauptstrasse 22, 4416 Bubendorf, Switzerland

**Marca:** aquasant®

**Agencia designada:** N° 2813, CSA Group Netherlands B.V.

**Descripción:** La unidad de control por microprocesador «mipromex®» se utiliza para la alimentación y la evaluación de los impulsos de medición transmitidos por la sonda de medición de la impedancia como señal de suma.

Declaramos que, según nuestra responsabilidad, los productos:

**Producto**

Unidades de control «mipromex» M\*\* \*\*\*\* \*

Número del certificado de examen

SEV 22 ATEX 0592

Agencia designada

N° 1258 | Eurofins E&amp;E

cumplen con las siguientes directivas europeas, según las normas armonizadas o los documentos normativos:

ATEX RL 2014/34/EU	EN 1127-1:2019 EN 60079-0:2018 EN 60079-11:2012
Directiva de baja tensión 2014/35/EU	--
EMV RL 2014/30/EU	EN61000 EN 61326
RoHS RL 2011/65/EU	EN IEC 63000:2018

Las normas mencionadas pueden diferir de las que figuran en el certificado de examen de tipo. En este caso, Aquasant Messtechnik AG declara que el producto cumple las normas actualizadas y que se cumplen los criterios de seguridad y salud básicos.

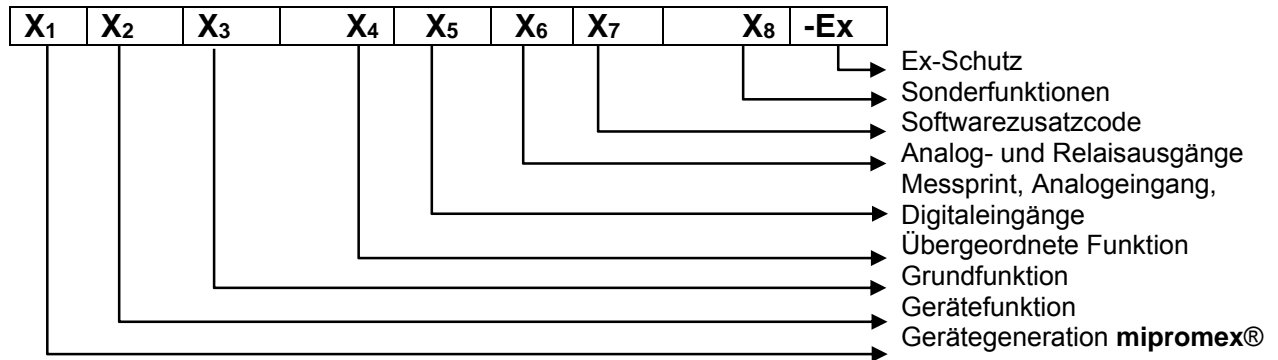
**Bubendorf, 18.03.2022**



**Roger Inauen**  
Head Manufacturing



# mipromex®-Typenschlüssel:



**X<sub>1</sub>** M = **mipromex®**

**X<sub>2</sub>** A = Analog I = Interface  
P = Product L = Level

**X<sub>3</sub>** C = Concentration M = Monitoring T = Transmitter  
R = Recognition Q = Quality S = Switch  
L = Level U = Universal

**X<sub>4</sub>** 1 = Grenzwert 4 = Analogausgang 7 =  
2 = Leermelder 5 = Universal neu 8 = Trennschicht  
3 = Vollmelder 6 = Füllstand 9 = Produkt (Qualität, Art, Konzentration)

X <sub>5</sub>	Messprint	MW von 2. Gerät	Analogeingang	Digitaleingänge
1	1			3
2	2			3
3	2	1 MW ab Rackbus		3
4	2	2 MW ab Rackbus		3
5	1		1	3
6	2		1	3

X <sub>6</sub>	Relais	OC	Analogausgang	DC-Wandler
0	2			
1		1/2	1	1
2		2	2	1
3	2		1	1
4		2	2	2
5	2		2	2
6	2		2	1
7		2		
8	2 intern		1	1
9	1		1	1

Ein DC-Wandler mit Potentialtrennung, Analogausgang gegenüber Speisespannung; Zwei DC-Wandler, zusätzlich Potentialtrennung, Analogausgänge gegeneinander

**X<sub>7</sub>** 0 = Standard - Software  
1 = 1. Erweiterung einer Standard - Software

**X<sub>8</sub>** - = ohne  
C = Controller Regler (Gerät mit Reglerfunktion) z.B. **MIL 8110 C** Trennschichtniveauregler  
P = Product compensation  
S = Segment

**Ex** Ex = mit Ex-Schutz nach ATEX II(2)G [Ex ia] IIC // II(2)D [Ex iaD]  
Exd = mit Ex D-Schutz nach ATEX II(2)GD [Ex d ia] IIC  
NEx = ohne Ex-Schutz auf Messprint




(1) **EU-Type Examination Certificate**

- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**
- (3) Certificate number: **SEV 22 ATEX 0592**
- (4) Product: Microprocessor Control Unit Mipromex®, Type: M\*\* \*\*\*\* \*-Ex
- (5) Manufacturer: Aquasant Messtechnik AG
- (6) Address: Hauptstrasse 22, 4416 Bubendorf, Switzerland
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
The examination and test results are recorded in confidential report no 22CH-00044.X01
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

**EN IEC 60079-0:2018**  
**EN 60079-11:2012**

Except in respect of those requirements listed at item 18 of the schedule.

- (10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate. The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- (11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- (12) The marking of the product shall include the following:

 II (1)G [Ex ia Ga] IIC  
II (1)D [Ex ia Da] IIIC

**Eurofins Electric & Electronic Product Testing AG**  
**Notified Body ATEX**

Martin Plüss  
Product Certification



(13)

## Appendix

(14)

EU-Type Examination Certificate no. SEV 22 ATEX 0592

(15) **General product information**

The microprocessor control unit Mipromex is used for the power supply and evaluation of measuring impulses which are transmitted from the impedance measuring probe as a sum signal.

Area of application:

The control unit is installed in the control cabinet in the control room (not in the Ex zone). In the chemical industry, for example, the device is used for signal evaluation from continuous interface, level, limit value regulation and product monitoring.

Functionality:

The product-enclosed electrode system of an interface, rod or tube probe, for example, changes the impedance as a function of the dielectric and electrically conductive properties of organic products and aqueous solutions. The measured impedance is converted as a total signal by the on-site measurement electronics "MTI" or "AMEI" directly into a digital standardized signal. The measured values in the normalized signal range are product-specific and characteristic of different products, such as those that occur when measuring the interface of two immiscible liquids. This product-specific measurement corresponds to a number in the range 0 to 3750. The physical impedance measurement of a product is thus represented as a numerical value, which is referred to as the pulse count.

Classification of installation and use:

stationary

Ingress protection:

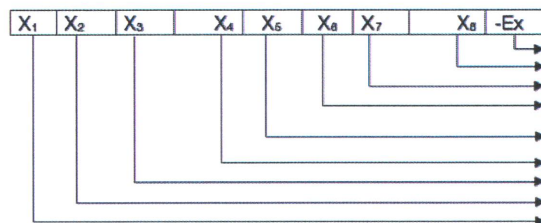
IP20

Rated ambient temperature range (°C):

-20 °C to +60 °C

**Type designation:**

mipromex®



X<sub>1</sub> M = mipromex®

X<sub>2</sub> A = Analogue, I = Interface, P = Product, L = Level

X<sub>3</sub> C = Concentration, M = Monitoring; T = Transmitter, R = Recognition, Q = Quality, S = Switch, L = Level, U = Universal

X<sub>4</sub> 1 = Limit, 2 = Empty indicator, 3 = Full indicator, 4 = Analog output, 5 = New universal, 6 = Fill level, 7 = N/A, 8 = Separation layer, 9 = Product (quality, type, concentration)



X <sub>5</sub>	Measurement PCB 1	Measurement PCB 1	Analogue inputs	Digital Inputs
1	1			3
2	2			3
3	2	1		3
4	2	2		3
5	1		1	3
6	2		1	3

X <sub>6</sub>	Relays	OC	Analogue outputs	DC converters
0	2			
1		½	1	1
2		2	2	1
3	2		1	1
4		2	2	2
5	2		1 passive	
6	2		2	1
7		2		
8	2 internal		1	1
9	1		1	1

X<sub>7</sub> 0 = standard software, 1 = first extension of standard software

X<sub>8</sub> - = without, C = Controller, P = Product compensation, S = Segment, L = LED backlight white

Ex Ex = with explosion protection

NEx = without explosion protection on measuring module

#### Rating:

Input parameters: Um: 36 V

Type of protection Intrinsic Safety Ex ia IIC.

Output parameters: U<sub>o</sub> ≤ 18.9 V  
 I<sub>o</sub> ≤ 49 mA  
 P<sub>o</sub> ≤ 231 mW  
 C<sub>i</sub> ≤ 7.4 nF  
 L<sub>i</sub> ≤ 0  
 Linear characteristic

C<sub>o</sub> ≤ 190 nF  
 L<sub>o</sub> ≤ 1 mH



(16) **Report number** 22CH-00044.X01

(17) **“Special conditions for safe use” / “Schedule of limitations”**  
None

(18) **Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(19) **Drawings and Documents**

See test report “Manufacturer’s Documents”



## Overview application mipromex<sup>®</sup> types MIQ/MIL/MLT/MAT/MLS/MPR

### Interface:

Batch-separation or continuous interfacial layer measurement, detection of two immiscible liquids.

### Level:

Level measurement for a wide range of applications (product-compensated for process level measurement); for organic to aqueous liquids, foams or powders

### Limit Switch:

Full / empty or level indicator for organic to aqueous liquids, foams or powders with very small bulk densities

### Process Analytic:

Product monitoring and identification, concentration and endpoint determination of organic chemical reactions

