KROHNE

 7.02239.22.00

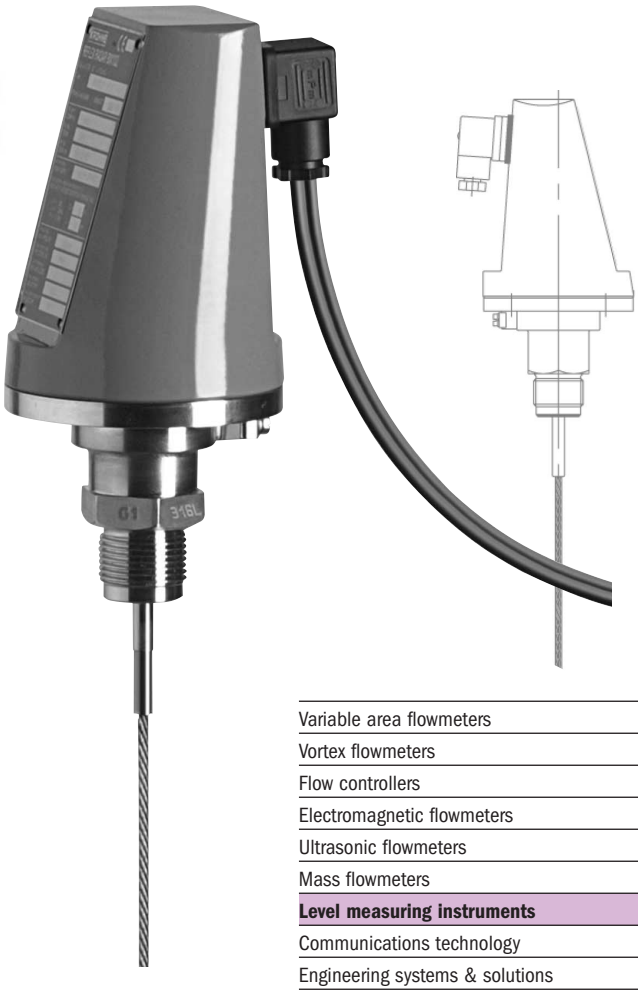
GR

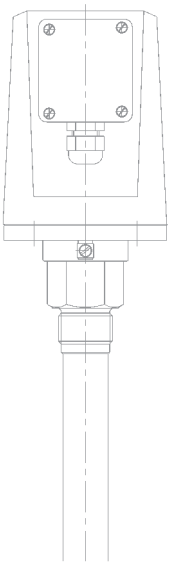
Supplementary Installation and Operating Instructions

BM 102 MICROFLEX

KEMA 00 ATEX 1101X

2-WIRE

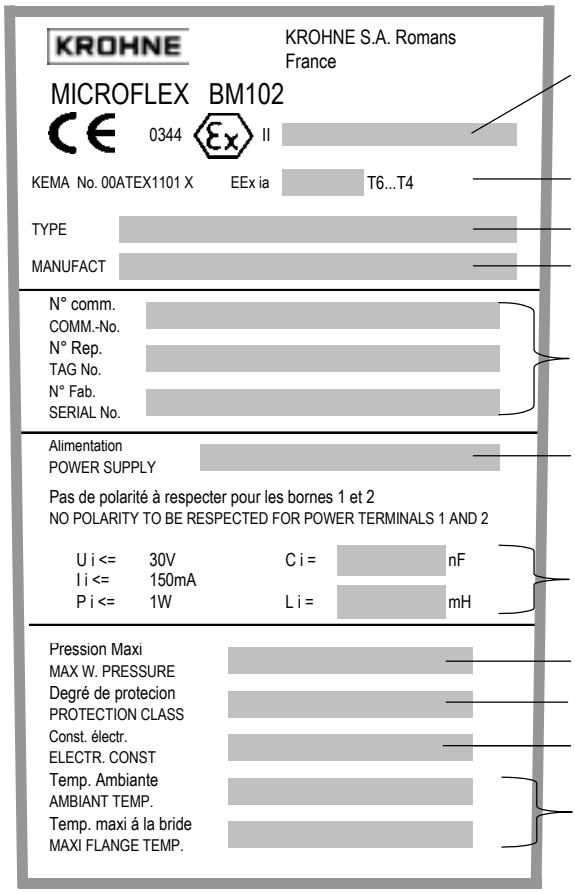




Contents

Nameplate

The BM 102 level gauge is identified by the following nameplate.



Types of protection used in the device; approved Gas Group and Temperature Classes
EEx ia IIC T6…T3 or EEx ia IIB T6…T3

Approved Category:
Ex II 1/2 D T 100°C or Ex II 1 G

Full type code

Date of manufacture

Not relevant to safety

Rated voltage for the device

Maximum device safety values

Maximum pressure of device flange but ≤ 40 bar

Device protection class

Electrical primary constant

Maximum ambient and flange temperatures

Range of application

The BM 102 MICROFLEX level gauge is designed solely for measuring the distance, level and volume of liquids, solids and particulate materials. The device can be operated on storage and process tanks and also on still pipes and reference vessels.

Product liability and warranty

Responsibility for suitability and intended use of these level gauges rests solely with the user.

Improper installation and operation of our devices may lead to loss of warranty.

In addition, the “General conditions of sale“, forming the basis of the purchasing contract, are applicable.

General safety information

These Supplementary Instructions may only be used in conjunction with the standard Installation and Operating Instructions for the BM 102 level gauge. If you do not have these standard Instructions, please contact your nearest KROHNE office.

Special regulations are applicable to the use of equipment in hazardous locations, and these are described in these Supplementary Instructions (supplied only with “Ex” devices).

The information given in these Instructions contains only the data relevant to explosion protection. The technical details given in the standard Installation and Operating Instructions apply unchanged unless excluded or superseded by these Supplementary Instructions.

Standards / Approvals

In compliance with European Directive 94/9 EC (ATEX 100a), the level gauges described in these Supplementary Instructions are, in conformity with European Standards EN 50014, EN 50020 and EN 50284, certified for use in hazardous locations by the KEMA certification body under **KEMA 00 ATEX 1101 X.**

It is absolutely necessary that the details contained in this approval certificate, together with its boundary conditions, are observed.

The level gauges of the BM 102 series are suitable for use in explosive atmospheres of all flammable substances of Gas Groups IIA, IIB und IIC (with the exception of the cases named in these Supplementary Instructions) and for applications requiring Category 1G, 1/2G, 1/2D, 2G or 2D equipment.

Assembly, installation, start-up and maintenance may only be carried out by **"personnel trained in explosion protection"!**

1 Main safety-relevant characteristics

1.1 Approved categories

Plastic-coated probes may **not** be used in connection with Gas Group **IIC** substances.

1.1.1 1 G

The BM 102 level gauges are installed in areas requiring Category 1 G equipment. The devices are suitable for use in explosive atmospheres of all flammable substances of Gas Groups IIA, IIB and IIC.

1.1.2 1/2 G and 1/2 D

The signal converter is installed in hazardous locations requiring Category 2 G or 2 D equipment. The probe is installed in hazardous locations requiring Category 1 G or 1 D equipment. The devices are suitable for use in explosive atmospheres of all flammable substances of Gas Groups IIA, IIB and IIC.

Devices with plastic-coated probes may not be used for applications requiring Category 1/2 D equipment, unless effective measures have been taken to avoid electrostatic discharge.

1.1.3 2 G and 2 D

BM 102 devices are installed in locations requiring Category 2 G or 2 D equipment. The devices are suitable for use in explosive atmospheres of all flammable substances of Gas Groups IIA, IIB and IIC.

Devices with plastic-coated probes may not be used for applications requiring Category 2 D equipment, unless effective measures have been taken to avoid electrostatic discharge.

1.2 Maximum safety-relevant values

The input terminals of the BM 102 level gauges are **not** safety-separated from ground. For that reason, only certified electrically isolated intrinsically safe equipment of ignition protection category EEx ia IIC may be connected. This requirement applies independent of the required Category and also if the device is not operated in the hazardous location.

The connected equipment may not exceed the following maximum safety values of the BM 102 devices:

Ui ≤ 30 V
Ii ≤ 150 mA
Pi ≤ 1.0 W

In addition, the inner self-inductance and self-capacitance of the BM 102

Co ≤ 10 nF
Lo ≤ 10 µH

must be included in the rating of the total inductance and total capacitance connected to the equipment. The calculated values may not exceed the values Co and Lo indicated on the supply equipment.

1.3 Allowable operating pressure

The maximum allowable operating pressure for BM 102 level gauges that are installed in locations requiring Category 2 G or 2 D equipment is dependent on the device flange, the flange material and the maximum operating temperature. The maximum upper limit approved for the device is 4000 kPa (PN40 flange). This upper limit applies e.g. to a stainless steel flange at ambient and process temperatures of 20°C (e.g. DN50, PN40). Higher pressure ratings, such as PN50, are not allowed.

For applications requiring Category 1 G, 1/2 G or 1/2 D equipment, atmospheric conditions must prevail inside the tank (operating pressure 80 -110 kPa).

1.4 Allowable temperatures

1.4.1 Process temperature

For applications requiring Category **1 G, 1/2 G** or **1/2 D** equipment, the following process temperatures are allowed as a function of the Temperature Class:

Temperature Class	Process temperature
T6	-20…+48°C
T5, T4, T3	-20…+60°C

For applications requiring Category **2 G** or **2 D** equipment, the following process temperatures are allowed as a function of the Temperature Class:

Temperature Class	Process temperature
T6	-30…+85°C
T5	-30…+100°C
T4, T3	-30…+135°C without extension
T3	-30…+200°C with distance piece (high temperature option)

1.4.2 Ambient temperature for the electronic equipment

For applications requiring Category **1 G** equipment, the following ambient temperatures are allowed as a function of the Temperature Class:

Temperature Class	Ambient temperature
T6	-20…+48°C
T5, T4, T3	-20…+60°C

For applications requiring Category **1/2 G, 1/2 D, 2 G** or **2 D** equipment, the following ambient temperatures are allowed as a function of the Temperature Class:

Temperature Class	Ambient temperature
T6, T5, T4, T3	-30…+60°C without extension and with a process temperature < 135°C
T3	-30…+55°C with extension ≥ 50mm and a process temperature < 200°C
	-30…+60°C with extension ≥ 100mm and a process temperature < 200°C

1.4.3 Surface temperature

For applications requiring Category **1/2 D** or **2 D** equipment,

- with a dust layer of ≤ 5 mm, and
- a process temperature of ≤ 200°C

the surface temperature of the housing is max. 100°C.

2 Installation

In accordance with current installation standards for hazardous locations (e.g. EN 60079-14 / VDE 0165), assembly and installation may only be carried out by specialist personnel who have received training in explosion protection.

The notes given in the Standard Installation and Operating Instructions and in these Supplementary Instructions and the EC Type Test Certificate shall be observed without fail.

In addition, when installing the BM 102 for applications requiring Category 1G equipment, make absolutely sure that there is no possibility of sparking due to blows or of any frictional stressing between the signal converter housing and other metal parts.

2.1 Probes

The various probe types shall be installed such that they cannot come into contact with the tank wall, and that, in consideration of internals and flow conditions in the tank, buckling or breakage of the probes can be ruled out with sufficient certainty.

2.2 Electrical connection

The electrical connection of the BM 102 level gauges is effected as described in the standard Instructions. The following additional points should be observed:

- Only certified intrinsically safe equipment may be connected to the supply terminals. Be aware of the permissible maximum values. This requirement also applies if the device is not operated in the hazardous location!

- The connecting cable for the intrinsically safe circuits is to be selected in accordance with the valid installation standard (e.g. EN 60079-14 / VDE 0165).

- The device must be incorporated in the equipotential bonding system of the hazardous location. This can be done by way of an appropriately conductive connection between the device flange system and the tank. Where connection to the equipotential bonding system is made via a separate conductor, this must be connected to the outer press-fitted U-clamp terminal on the signal converter flange.

3 (Initial) Start-up

Disconnect from power before starting work!

Check the following points before device start-up:

- Do probe, flange, gaskets and PTFE (included in all versions) have adequate corrosion resistance to the tank product?
- Do the data on the nameplate of the signal converter agree with your operating data?
- Check that the measuring device has been properly installed on the tank.
- Is the equipotential bonding system correctly connected?
- Is the separation barrier connected correctly?
- Are the screws of the terminal compartment cover / DIN plug connector tightened down?

Further start-up procedures are described in the standard Installation and Operating Instructions for the BM 102.

4 Operation

If parametrization of the device is required or necessary, this can be done using the HART interface and one of the available communication programs.

Make sure that the HART adapter required for communication is connected to the non-intrinsically safe side of the repeater power supply unit. It may not be connected into the intrinsically safe circuit between the repeater power supply unit and the BM 102.

5 Service / Maintenance

The device normally requires no maintenance when used for the intended purpose and for standard applications.

5.1 Signal converter

The signal converter electronic equipment is maintenance-free under normal operating conditions and when used for the intended purpose.

Within the scope of checks required to be carried out in hazardous locations to maintain systems in proper working order, the following visual inspections should be carried out at regular intervals:

- Check housing, cable entries and all incoming cables for signs of corrosion and damage.
- Check the tank connections for leakages

5.2 Probes

The probes have no maintenance requirement when used for the intended purpose and under normal operating conditions. However, heavy build-up of deposits on the probe can cause measurement deviations or faulty operation.

If the probe is dirty, clean according to the directions given in the standard Installation and Operating Instructions. When dismantling the probe, be aware of working conditions (e.g. check for presence of flammable liquid and/or explosive atmosphere in or around the tank, pressurized tank, etc.).

5.3 Replacement of complete device

Make sure that all process connections and the tank are non-pressurized.

In connection with environmentally critical process products, carefully decontaminate the wetted parts of the flange system after dismantling.

5.4 Maintenance

Maintenance work of a safety-relevant nature within the meaning of explosion protection may only be carried out by the manufacturer, his authorized representative or under the supervision of authorized inspectors.

Attachment 1 Statement of Conformity to ISO/IEC Guide 22

Wir : KROHNE SA
Usine des Ors
26103 ROMANS
France

erklären in alleiniger Verantwortung, daß das Produkt :

Füllstandmesser
BM102

auf das sich diese Erklärung bezieht, mit den folgenden Normen oder normativen Dokumenten übereinstimmt :

Niedrigspannung	NF EN 61010-1
EMV	EN 50081-1
	EN 50082-2
ATEX	EN 50014
	EN 50020
	EN 50284

gemäß den Bestimmungen der Richtlinien 89/336/EWG (Elektromagnetische Verträglichkeit), 73/23/EWG (Niederspannungsrichtlinie) und 94/9/EG (ATEX).

Romans, den 29. Oktober 2001

Christian Savary
Geschäftsleiter

We : KROHNE SA
Usine des Ors
26103 ROMANS
France

declare under our sole responsibility that the product :

Level Measuring Instrument
BM102

to which this declaration relates, is in conformity with the following standards or other normative documents :

Low tension	NF EN 61010-1
EMC	EN 50081-1
	EN 50082-2
ATEX	EN 50014
	EN 50020
	EN 50284

according to the provisions of Directives 89/336/EEC (Electromagnetic Compatibility), 73/23/EEC (Low Voltage Directive) and 94/9/EC (ATEX).

Romans, October 29th, 2001

Christian Savary
General Manager

Nous : KROHNE SA
Usine des Ors
26103 ROMANS
France

déclarons sous notre seule responsabilité que le produit :

Transmetteur de niveau
BM102

auquel se réfère cette déclaration, est conforme aux normes ou autres documents normatifs :

Basse tension	NF EN 61010-1
CEM	EN 50081-1
	EN 50082-2
ATEX	EN 50014
	EN 50020
	EN 50284

conformément aux dispositions des directives 89/336/CEE (Compatibilité Electromagnétique), 73/23/CEE (Basse Tension) et 94/9/CE (ATEX).

Romans, le 29 octobre 2001

Christian Savary
Directeur Général

Attachment 2 EC Type Test Certificate KEMA 00ATEX1101 X

KEMA
REGISTERED QUALITY

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(2) Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 00ATEX1101 X**

(4) Equipment or protective system: **Reflex Radar Level Transmitter Model BM 102**

(5) Manufacturer: **Krohne S.A.**

(6) Address: **Usine des Ors, 26103 ROMANS CEDEX, France**

(7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA, notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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. 2005657.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014 : 1997 EN 50020 : 1994 EN 50284 : 1999

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

(12) The marking of the equipment or protective system shall include the following:

Ex **II 1 G or II 1/2 D T 100 °C**

EEx ia IIC T6 ... T3 or EEx ia IIB T6 ... T3

Arnhem, 20 October 2000
by order of the Board of Directors of N.V. KEMA

L.M.J. Vries
Certification Manager

* This Certificate may only be reproduced in its entirety and without any change

KEMA Registered Quality B.V.
Utrechtseweg 310, 6812 AR Arnhem, The Netherlands
P.O. box 9035, 6800 ET Arnhem, The Netherlands
Telephone +31 26 3 56 34 28, Telefax +31 26 3 52 58 00

ACCREDITED BY THE DUTCH COUNCIL FOR ACCREDITATION

KEMA
REGISTERED QUALITY

(1) **EG-Baumusterprüfbescheinigung**

(2) Gerät oder Schutzsystem zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - Richtlinie 94/9/EC

(3) Prüfbescheinigung nach EG-Standard Nummer: **KEMA 00ATEX1101 X**

(4) Gerät oder Schutzsystem: **TDR-Füllstandmessgerät , Modell BM 102**

(5) Hersteller: **KROHNE SA**

(6) Anschrift: **Usine des Ors, 26103 ROMANS CEDEX, Frankreich**

(7) Die Bauart dieses Geräts sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

(8) KEMA bescheinigt, nach Mitteilung als benannte Stelle Nr. 0344 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaft 94/9/EC vom 23. März 1994 die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.

Die Prüf- und Testergebnisse sind in dem vertraulichen Bericht Nr. 2005657 festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:

EN 50014 : 1997 EN 50020 : 1994 EN 50284 : 1999

(10) Falls das Zeichen "X" hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Bau des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes.

(12) Die Kennzeichnung des Gerätes oder Schutzsystems muss die folgende Angaben enthalten:

Ex **II 1G oder II 1/2D T 100° C**

EEx ia IIC T6 ... T3 oder EEx ia IIB T6 ... T3

Arnhem, am 20. Oktober 2000
per Anordnung des Vorstands der N.V. KEMA

{Unterschrift}
L.M.J. Vries
Bescheinigungsbeauftragter

* Diese Bescheinigung darf nur vollständig und unverändert reproduziert werden.

Dies ist eine interne Übersetzung

KEMA

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 00ATEX1101 X**

(15) **Description**
Reflex Radar Level Transmitter Model BM 102 Type VF03 4… and Type SF03 9..., consisting of an enclosure containing the electronics circuit and a passive probe, is used to measure the level or the volume of a fluid or solid process medium inside a vessel or tank. The distance to the surface of the process medium is determined by the reflexion time of an electro-magnetic pulse, transmitted in the probe system. The measured pulse delay is converted into an 4 … 20 mA current signal.

There are variations in the probe type, material and length, in the process connection, in the mounting of the transmitter and in the electrical connections.
Depending on the process temperature, an extension tube between the enclosure and the process connection is present.

Ambient temperature range of the transmitter enclosure -30 °C … +60 °C.
For the relation between ambient temperature, process temperature, temperature class and maximum surface temperature, refer to the Special conditions for safe use at (17).

Electrical data

Supply and output circuit …… in type of protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

U_i = 30 V
I_i = 150 mA
P_i = 1 W

The effective internal capacitance C_i = 10 nF, the effective internal inductance L_i = 10 µH.

(16) **Report**
KEMA No. 2005657

(17) **Special conditions for safe use**
1. When the probe of a Level Transmitter is coated with a non-conductive layer, this probe may only be installed in a hazardous area where equipment category 1 G is required, under restriction of the apparatus group to IIA or IIB. For the enclosure however, this restriction does not apply.
2. The use of a Level Transmitter with a sensor with a non-conductive layer is not allowed in a potentially explosive atmosphere caused by combustible dust, unless precautions are taken to prevent electrostatic discharges. This must be pointed out to the user by means of a warning.
3. The enclosure of the Level Transmitter may not be used in a potentially explosive atmosphere caused by combustible dust, requiring apparatus of equipment category 1 D.

KEMA
REGISTERED QUALITY

(13) **ANLAGE**

(14) **EG-Baumuster Prüfbescheinigung KEMA 00ATEX1101 X**

(15) **Beschreibung des Gerätes**
Das TDR-Füllstandmessgerät, Modell BM 102 Typ VF03 4... und Typ SF03 9... besteht aus einem Gehäuse, das die elektronische Schaltung und eine passive Sonde enthält. Das Gerät wird verwendet, um den Füllstand oder das Volumen eines flüssigen oder festen Prozessmediums in einem Gefäß oder Behälter zu messen. Der Abstand zur Oberfläche des Prozessmediums wird durch die Reflexionszeit eines elektromagnetischen Impulses, der in das Sondensystem gesendet wird, ermittelt. Die gemessene Impulsverzögerung wird in ein 4...20 mA-Signal umgewandelt.

Es gibt Abweichungen bei Sondentyp, Material und Länge, bei der Prozessverbindung, bei der Montage des Messgerätes sowie bei den elektrischen Anschlüssen.
In Abhängigkeit von der Prozesstemperatur wird ein Verlängerungsrohr zwischen dem Gehäuse und der Prozessverbindung installiert.

Der Bereich für die Umgebungstemperatur des Messumformers liegt bei -30° C ... +60° C.
Die Beziehung zwischen Umgebungstemperatur, Prozesstemperatur, Temperaturklasse und maximaler Oberflächentemperatur findet sich unter den Sonderbedingungen für den sicheren Einsatz unter (17).

Elektrische Daten

Speise- und Ausgangsschaltung ..... Schutz durch Eigensicherheit EEx ia IIC, nur für den Anschluss an einer nachweislich eigensicheren Schaltung, mit den folgenden maximalen Werten:

U_i = 30 V
I_i = 150 mA
P_i = 1 W

Effektive Eigenkapazität C_i = 10 nF
Effektive Eigeninduktivität L_i = 10 µH

(16) **Prüfbericht**
KEMA Nr. 2005657

(17) **Besondere Bedingungen**
1. Wenn die Sonde eines Füllstandmessgeräts mit einer nichtleitenden Beschichtung versehen ist, darf diese Sonde nur in einem Gefahrenbereich installiert werden, in dem Geräte der Kategorie 1 G vorgeschrieben sind, bei Beschränkung der Apparategruppe auf IIA oder IIB. Für das Gehäuse gilt diese Beschränkung jedoch nicht.
2. Der Einsatz eines Füllstandmessgeräts mit einer Sonde mit nichtleitender Beschichtung ist in einem explosionsgefährdeten Bereich, der durch brennbaren Staub entsteht, nicht zulässig, sofern nicht Vorsichtsmaßnahmen ergriffen werden, um elektrostatische Entladungen zu verhindern. Der Anwender muss durch einen Warnhinweis auf diesen Aspekt aufmerksam gemacht werden.
3. Das Gehäuse des Füllstandmessgeräts darf nicht in einem explosionsgefährdeten Bereich verwendet werden, der durch brennbaren Staub entsteht, und für den die Gerätekategorie 1 D vorgeschrieben ist.

Dies ist eine interne Übersetzung

KEMA

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 00ATEX1101 X**

Special conditions for safe use (continued)

4. Because the enclosure of the Level Transmitter is made of aluminium alloy, when used in an potentially explosive atmosphere requiring apparatus of equipment category 1 G, the transmitter must be installed so, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
5. Following tables show the relation between ambient temperature, process temperature and temperature class, depending on the presence of an extension tube:

Transmitter without extension tube:

Temperature class	Ambient temperature	Process temperature
T6	≤ 60 °C	≤ 85 °C
T5	≤ 60 °C	≤ 100 °C
T4	≤ 60 °C	≤ 135 °C

Transmitter with extension tube of 50 mm:

Temperature class	Ambient temperature	Process temperature
T3	≤ 55 °C	≤ 200 °C

Transmitter with extension tube of 100 mm:

Temperature class	Ambient temperature	Process temperature
T3	≤ 60 °C	≤ 200 °C

For use in a potentially explosive atmosphere caused by combustible dust, at a maximum process temperature of 200 °C and with a dust layer of maximum 5 mm, the maximum surface temperature of the enclosure is 100 °C.

(18) **Essential Health and Safety Requirements**

Essential Health and Safety Requirements not covered by the standards listed at (9)	
Clause	Subject
1.0.5	Marking
1.0.6 b) and d)	Instructions
2.1.2	Explosive atmospheres caused by air/dust mixtures
2.2.2	Explosive atmospheres caused by air/dust mixtures

These Essential Health and Safety Requirements are examined and positively judged. The results are laid down in the report listed at (16)

KEMA REGISTERED QUALITY

(13) **ANLAGE**

(14) **EG-Baumuster Prüfbescheinigung KEMA 00ATEX1101 X**

Sonderbedingungen für den sicheren Einsatz (Fortsetzung)

4. Da das Gehäuse des Füllstandmessgeräts aus einer Aluminiumlegierung gefertigt ist, muss das Messgerät bei Verwendung in einem explosionsgefährdetem Bereich, für den Apparate der Gerätekategorie 1 G vorgeschrieben sind, so installiert werden, dass selbst bei geringer Wahrscheinlichkeit des Eintretens, eine Entzündungsquelle aufgrund von Stoßeinwirkung oder Reibung zwischen dem Gehäuse und Eisen/Stahl ausgeschlossen wird.
5. Die folgenden Tabellen zeigen die Beziehung zwischen Umgebungstemperatur, Prozesstemperatur und Temperaturklasse, in Abhängigkeit von der Installation eines Verlängerungsrohrs:

Messgerät ohne Verlängerungsrohr:

Temperaturklasse	Umgebungstemperatur	Prozesstemperatur
T6	≤ 60° C	≤ 85° C
T5	≤ 60° C	≤ 100° C
T4	≤ 60° C	≤ 135° C

Messgerät mit Verlängerungsrohr von 50 mm:

Temperaturklasse	Umgebungstemperatur	Prozesstemperatur
T3	≤ 55° C	≤ 200° C

Messgerät mit Verlängerungsrohr von 100 mm:

Temperaturklasse	Umgebungstemperatur	Prozesstemperatur
T3	≤ 60° C	≤ 200° C

Für den Einsatz in einem explosionsgefährdetem Bereich, der durch brennbaren Staub verursacht wird, bei einer maximalen Prozesstemperatur von 200° C und einer Staubschicht von maximal 5 mm, beträgt die maximale Oberflächentemperatur des Gehäuses 100° C.

(18) **Grundlegende Sicherheits- und Gesundheitsanforderungen**

Grundlegende Sicherheits- und Gesundheitsanforderungen, die nicht durch die unter (9) aufgeführten Normen erfasst werden.	
Klausel	Gegenstand
1.0.5	Kennzeichnung
1.0.6 b) und c)	Bedienungsanleitung
2.1.2	Explosionsfähige Atmosphären durch Luft/Staub-Gemische
2.2.2	Explosionsfähige Atmosphären durch Luft/Staub-Gemische

Diese grundlegenden Sicherheits- und Gesundheitsanforderungen wurden geprüft und positiv beurteilt. Die Ergebnisse sind in dem unter (16) genannten Bericht aufgeführt.

KEMA

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 00ATEX1101 X**

(19) **Test documentation**

		signed
1. Description (15 pages)	)	
	)	
2. Drawing No. F08208604 00	)	
F08208604 01	)	
F08208604 02	)	
F08208604 03	)	
F08208604 04	)	
F08208604 05	)	
F08208604 06	)	
F08208604 08	)	
F08208604 09	)	27.06.2000
F08208604 10	)	
F08208604 12	)	
F08208604 20 (3 sheets)	)	
F08208604 21	)	
F08208604 22	)	
F08208604 23 (2 sheets)	)	
F08208604 24	)	
F08208604 25	)	
F08208604 26	)	
F08208604 27	)	
F08208604 28	)	
F08208604 11		20.10.2000
3. Samples		

KEMA REGISTERED QUALITY

(13) **ANLAGE**

(14) **EG-Baumuster Prüfbescheinigung KEMA 00ATEX1101 X**

(19) **Prüfungsdokumentation**

		Unterschrift
1. Beschreibung (15 Seiten)	)	
	)	
2. Zeichnung Nr. F08208604 00	)	
F08208604 01	)	
F08208604 02	)	
F08208604 03	)	
F08208604 04	)	
F08208604 05	)	
F08208604 06	)	
F08208604 08	)	
F08208604 09	)	27.06.2000
F08208604 10	)	
F08208604 12	)	
F08208604 20 (3 Blätter)	)	
F08208604 21	)	
F08208604 22	)	
F08208604 23 (2 Blätter)	)	
F08208604 24	)	
F08208604 25	)	
F08208604 26	)	
F08208604 27	)	
F08208604 28	)	
F08208604 11	)	20.10.2000
3. Muster		

If you need to return a device for testing or repair to KROHNE

Your instrument has been carefully manufactured and tested. If installed and operated in accordance with these operating instructions, your instrument will rarely present any problems. Should you nevertheless need to return an instrument for checkout or repair, please pay strict attention to the following points:

Due to statutory regulations concerning protection of the environment and safeguarding the health and safety of our personnel, KROHNE may only handle, test and repair returned instruments that have been in contact with liquids if it is possible to do so without risk to personnel and environment.

This means that KROHNE can only service your instrument if it is accompanied by a certificate in line with the following model confirming that the instrument is safe to handle.

If the instrument has been operated with toxic, caustic, flammable or water-endangering liquids, you are kindly requested

- to check and ensure, if necessary by rinsing or neutralizing, that all cavities in the instrument are free from such dangerous substances.
  (Directions on how you can find out whether the primary head has to be opened and then flushed out or neutralized are obtainable from KROHNE on request.)

- to enclose a certificate with the instrument confirming that the instrument is safe to handle and stating the liquid used.

KROHNE regret that they cannot service your instrument unless it is accompanied by such a certificate.

S P E C I M E N certificate

Company: …….. Address: ……

Department: …….. Name: ……

Tel. No.: …….

The enclosed instrument

Type: ……

KROHNE Order No. or Series No ……...

has been operated with the following liquid: ……..

Because this liquid is
water-endangering * / toxic * / caustic * / flammable *
we have
– checked that all cavities in the instrument are free from such substances *
– flushed out and neutralized all cavities in the flowmeter *
(* delete if not applicable)
We confirm that there is **no** risk to man or environment through any residual liquid contained in the instrument.

Date: …….. Signature: ……..

Company stamp: