



Prüf- und Zertifizierungsstelle

ZELM Ex



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

(2) Equipment and Protective Systems Intended for Use in  
Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-TYPE-EXAMINATION CERTIFICATE Number:

**ZELM 99 ATEX 0018 X**

(4) Equipment: **Head transmitter JUMO dTRANS T01 Type 956555/...**

(5) Manufacturer: **M. K. Juchheim GmbH & Co.**

(6) Address: **Moltkestraße 13-31, D-36039 Fulda**

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

(8) The Prüf- und Zertifizierungsstelle ZELM Ex, notified body No. 0820 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 the confidential report ZELM Ex 0079919025.

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

**EN 50 014: 1997**

**EN 50 020: 1994**

**EN 50 284: 1999**

**EN 1127-1: 1997**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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



II 1 G EEx ia IIC T6

Zertifizierungsstelle ZELM Ex

Braunschweig, April 4, 2000

Dipl.-Ing. Harald Zelm



Sheet 1/3

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## SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0018 X**

(15) Description of equipment

The head transmitter JUMO dTRANS T01 Type 956555/... is used for the measurement and signal conversion of resistance thermometers, thermocouples, resistance-type sensors and voltage sensors in a 4...20 mA current loop. The current input loop and signal output are freely scalable via an interface. The measured value registration is realized by A/D conversion. The registered data are evaluated via a D/A converter as a measurement signal in the 4...20 mA current loop. The available galvanical isolation is a function isolation between sensor circuit and supply circuit.

The head transmitter can be used in the hazardous location. The head transmitter is to be installed in a way which guarantees protection IP 20 according to EN 60529 at least for all connectors as well.

The ambient temperature ranges depending on the temperature class are to be taken from the following table.

Lower ambient temperature limit	Upper ambient temperature limit	temperature class
-40 °C	+55 °C	T 6
-40 °C	+70 °C	T 5
-40 °C	+85 °C	T 4

### Electrical data

Supply circuit  
[terminals 1(+) and 2 (-)]

type of protection Intrinsic Safety EEx ia IIC  
for connection to an intrinsically safe circuit with the following maximum values:

$$\begin{aligned}U_i &= 30 \text{ V} \\I_i &= 100 \text{ mA} \\P_i &= 750 \text{ mW}\end{aligned}$$

effective internal capacitance and effective internal inductance are negligibly small.

Setup circuit

only for a short-time connection of a standard personal computer to suitable connection.  
maximum r.m.s a.c. or d.c. voltage  $U_m = 30 \text{ V}$ .



Prüf- und Zertifizierungsstelle

ZELM Ex



**Schedule to EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0018 X**

Sensor circuit  
(terminals 3, 4, 5 and 6)

type of protection Intrinsic Safety EEx ia IIC resp. EEx ia IIB

maximum values:

$$\begin{aligned}U_o &= 9,6 \text{ V} \\I_o &= 4,5 \text{ mA} \\P_o &= 11 \text{ mW}\end{aligned}$$

(linear output characteristic)

**IIC resp. IIB**

maximum external inductance: 4,5 mH 8,5 mH

maximum external capacitance: 709 nF 1300 nF

The supply circuit and the sensor circuit are to be considered in a combined manner to be galvanic with each other. The technical function of isolation remains.

(16) Report No.

ZELM Ex 0079919025

(17) Special conditions for safe use

The configuration via the setup circuit is only permitted in nonhazardous locations. In this case, none of the connections may be laid into the hazardous location.

The head transmitter is to be installed in a way which guarantees protection IP 20 according to EN 60529 at least for all connectors as well.

The head transmitter is to be installed in such a way, that no electrostatic charge is possible.

The instruction manual has to be observed, in particular with regard to the consideration of lesser ambient temperatures during the application in accordance with category 1.

(18) Essential Health and Safety Requirements

met by standards

Zertifizierungsstelle ZELM Ex

  
Dipl.-Ing. Harald Zelm



Braunschweig, April 4, 2000

Sheet 3/3

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## 1. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

to EC-type-examination Certificate

**ZELM 99 ATEX 0018 X**

(Translation)

Equipment: **Headtransmitter JUMO dTRANS T01 Type 956555/...**  
Manufacturer: **M. K. Juchheim GmbH & Co**  
Address: **Moltkestraße 13-31, D - 36039 Fulda**

### Description of supplement

Only the headtransmitter may be manufactured in future in accordance with the test documents listed in the test report ZELM Ex 0030112069. The changings concern the internal design of the headtransmitter.

The electrical data of the headtransmitter JUMO dTRANS T01 Type 956555/... remain unchanged.

Further the different versions and the marking and the ambient temperature range remains unchanged, in particular with regard to the consideration of lesser ambient temperatures during the application in accordance with category 1G.

### Report No.

ZELM Ex 0030112069

### Special conditions for safe use

The special conditions in accordance with EC-type-examination Certificate ZELM 99 ATEX 0018 X are maintained.

### Essential Health and Safety Requirements

met by standards

Zertifizierungsstelle ZELM Ex

Dipl.-Ing. Harald Zelm



Braunschweig, January 24, 2001

Sheet 1 / 1

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ZELM Ex



## 2. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

to EC-type-examination Certificate

**ZELM 99 ATEX 0018 X**

Equipment: **Headtransmitter JUMO dTRANS T01 Type 956555/...**  
Manufacturer: **M. K. Juchheim GmbH & Co.**  
Address: **Moltkestraße 13-31, D-36039 Fulda**

### Description of supplement

The 2. Supplement to EC-type-examination Certificate concern the change of the manufacturer name, the type designation and the modified constructions.

The manufacturer name is in the future:

Manufacturer: **JUMO GmbH & Co. KG**

The type designation is in the future alternative also:

Marking: **707015/...**

The address, the type of protection, the electrical and all other data remain unchanged and are also valid for this 2. Supplement.

The headtransmitter JUMO dTRANS T01 Type 956555/... may only be manufactured in future in accordance with this changes.

### Report No.

ZELM Ex 0150519364

### Special conditions for safe use

The special conditions of the EC-type-examination Certificate ZELM 99 ATEX 0018 X are valid further on.

### Essential Health and Safety Requirements

The essential Health and Safety Requirements are further met by concordance with the standards scheduled in the EC-Type-Examination Certificate.

Zertifizierungsstelle ZELM Ex

Dipl.-Ing. Harald Zelm



Braunschweig, 17.03.2005

Sheet 1 / 1

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ZELM Ex



### 3. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

to EC-type-examination Certificate

**ZELM 99 ATEX 0018 X**

Equipment: **Head transmitter JUMO dTRANS T01 Type (956555)/707015/...**  
Manufacturer: **JUMO GmbH & Co. KG**  
Address: **Moltkestraße 13-31, D-36039 Fulda**

#### Description of supplement

The 3. Supplement to EC-type-examination Certificate concerns the change of the address of the manufacturer and insignificant modifications of the inner construction.

Further, the agreement of the device with the current standards was checked and the marking of the device has been adapted correspondingly.

The address of the manufacturer is in the future:

Address: **Moritz-Juchheim-Straße 1, D-36039 Fulda**

The marking of the device is in the future:

**II 1G Ex ia IIC T6**

The type of protection, the electrical and all other data remain unchanged and are also valid for this 3. Supplement.

The head transmitter JUMO dTRANS T01 Type (956555)/707015/... may be manufactured in future also in accordance with this changes.

#### Report No.

ZELM Ex 0740817612

#### Special conditions for safe use

The special conditions of the EC-type-examination Certificate ZELM 99 ATEX 0018 X are valid further on.

#### Essential Health and Safety Requirements

Within the scope of this 3. Supplement the standards mentioned in the EC-Type examination Certificate have been adapted to the current issues of the standards.

The essential health and safety requirements are still fulfilled by compliance with the following Standards:

EN 60079-0:2006

EN 60079-11:2007

EN 60079-26:2004

EN 1127-1:2007

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Braunschweig, May 06, 2008

  
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Sheet 1 / 1

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## 4. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

**ZELM ex**

to EC-type-examination Certificate

### ZELM 99 ATEX 0018 X

Equipment: **Head transmitter JUMO dTRANS T01 type (956555)/707015/...**  
Manufacturer: **JUMO GmbH & Co. KG**  
Address: **Moritz-Juchheim-Straße 1, D-36039 Fulda**

#### Description of supplement

Object of this 4. Supplement is the conversion to the new generation of Standards of the EN 60079-0 and the EN 60079-26. No changes on the equipment were made.

The marking, the type of protection, the electrical and all other data as well as the Special conditions for safe use according to the EC-type-examination Certificate ZELM 99 ATEX 0018 X remain unchanged and are also valid for this 4. Supplement.

The head transmitter JUMO dTRANS T01 type (956555)/707015/... may also be manufactured in future according to this 4. Supplement.

#### Report No.

ZELM Ex 0181113827

#### Essential Health and Safety Requirements

The Essential Health and Safety Requirements are still fulfilled by compliance with the following Standards:

**EN 60079-0:2009**

**EN 60079-11:2007**

**EN 60079-26:2007**

**EN 1127-1:2007**

Braunschweig, 2011-02-10

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# 5. Supplement

ZELM ex

(Supplement according to EC-Directive 94/9 Annex III letter 6)

## to EC-type-examination Certificate

### ZELM 99 ATEX 0018 X

Equipment: **Head transmitter JUMO dTRANS T01 type (956555)/707015/...**  
 Manufacturer: **JUMO GmbH & Co. KG**  
 Address: **Moritz-Juchheim-Straße 1, D-36039 Fulda**

#### Description of supplement

Within the scope of this 5. Supplement there was a changeover to a new casting compound and a safety-relevant diode is replaced in future by a successor type. These changes have a bearing on the ambient temperature range so that the maximum ambient temperature for the temperature class T4 has to be reduced. The ambient temperatures are in future:

Lower ambient temperature limit	Upper ambient temperature limit	Temperature class
-40°C	+55°C	T6
-40°C	+70°C	T5
-40°C	+75°C	T4

In Future the maximum temperature range for the use in category 1 under consideration of the reduction according to EN 1127-1:2007 will be marked on the type plate.

The electrical and all other data as well as the Special conditions for safe use according to the EC-type-examination Certificate ZELM 99 ATEX 0018 X inclusive the 1., 2., 3. and 4. Supplement remain unchanged and are also valid for this 5. Supplement.

The head transmitter JUMO dTRANS T01 type (956555)/707015/... may also be manufactured in future under consideration of this 5. Supplement.

#### Report No.

ZELM Ex 1461115915

#### Essential Health and Safety Requirements

The essential health and safety requirements are still fulfilled by compliance with the following Standards:

EN 60079-0:2009

EN 60079-11:2012

EN 60079-26:2007

EN 1127-1:2007

Braunschweig, 2012-06-05

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# 6. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

**ZELM ex**

to EC-type-examination Certificate

## ZELM 99 ATEX 0018 X

Equipment: **Head transmitter JUMO dTRANS T01 type (956555)/707015/...**  
Manufacturer: **JUMO GmbH & Co. KG**  
Address: **Moritz-Juchheim-Strasse 1, D-36039 Fulda**

### Description of supplement

The 6. Supplement concerns the consideration of minor modifications of the design of the equipment and the examination of the equipment for compliance to the applicable requirements of the current Standards.

The marking, the permissible ambient temperatures, the electrical and all further technical data as well as the Special conditions for safe use according to the EC-type-examination Certificate ZELM 99 ATEX 0018 X inclusive the 1., 2., 3., 4. and 5. Supplement remain unchanged and are valid also for this 6. Supplement.

The head transmitter JUMO dTRANS T01 type (956555)/707015/... may also be manufactured in future under consideration of this 6. Supplement.

### Report No.

ZELM Ex 10014131077

### Essential Health and Safety Requirements

The essential health and safety requirements are still fulfilled by compliance with the following Standards:

**EN 60079-0:2012  
+ A11:2013**

**EN 60079-11:2012**

**EN 60079-26:2007**

**EN 1127-1:2011**

Braunschweig, 2015-04-10

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Sheet 10

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