

[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: **DEMKO 06 ATEX 141334X**

[4] Equipment: **Universal 1- or 2-channel Programmable 2-wire Transmitter, TT 31 R**

[5] Manufacturer: **KROHNE MESSTECHNIK GMBH & CO KG**

[6] Address: **Ludwig-Krohne-Strasse 5, Duisburg, D-47508, Germany**

[7] This equipment or protective system and any acceptable variation there to is specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 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 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. 141334

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 50014: 1997 E incl. A1+A2, EN 50020: 2002 E, EN 50281-1-1:1998E+A1, EN 50284: 1999 E**

[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, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12] The marking of the equipment or protective system shall include the following:

 **II (1)GD [EEx ia] IIC**

On behalf of UL International Demko A/S

Herlev, 2006-12-19

Karina Christiansen  
Certification Manager

**UL International Demko A/S**

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Certificate: 06 ATEX 141334X

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## Schedule

[14]

### EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 06 ATEX 141334X

[15]

#### Description of Equipment or protective system

TT 31 R is a 2-channel, or 1-channel, isolated current loop transmitter intended for use in process industry. The input signal is either of resistance, current or voltage type. The output signal is standard 4-20 mA. Power to the transmitter is the same as the output. The transmitter is made for mounting on a standard DIN rail. It will be placed in non-hazardous area and the input is connected to hazardous area. Calibrate/ configure 'online' is possible if the input wiring is not connected to hazardous area and by use of an ATEX certified version of PC cable configuration cable.

#### Temperature range

**Ambient temperature range**

-20 °C to +60 °C

**Temperature class**

The transmitter is to be placed outside hazardous area.

Type variants comprised by the certificate:

TT 31 R 1-channel; Fixed connection; Ordering code VII2421LX010000

TT 31 R 1-channel; Plug-in connection; Ordering code VII2421LX020000

TT 31 R 2-channel; Fixed connection; Ordering code VII2422LX010000

TT 31 R 2-channel; Plug-in connection; Ordering code VII2422LX020000

The plug-in connections are coded so that they can't be connected in the wrong way.

#### Electrical data

Intrinsically safe specifications:

The equipment may be electrically connected (Ch1 Terminal 15-16 and Ch2 Terminal 25-26) via a non-Ex power supply.

$U_m$  : 250 V

Terminal 11-12-13-14 (Ch1) and Terminal 21-22-23-24 (Ch2) (Intrinsically safe sensor terminals)

$U_o$  : 15 V

$I_o$  : 13 mA

$L_o$  : 100 mH

$C_o$  : 550 nF

[16]

Report No.: Project Report No.: 141334-01

The scheduled drawings are listed in the document S-9620, rev A entitled "List of scheduled and related drawings" dated 2006-12-11.

**UL International Demko A/S**

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Certificate: 06 ATEX 141334X  
Report: 141334-01

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# Schedule

## EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 06 ATEX 141334X

[17] Special conditions for safe use:

- When calibrating/ configuring 'online' make sure the input wiring is not connected to hazardous area and always use the ATEX certified version of PC cable configuration cable, certificate 06 ATEX 141337X,.

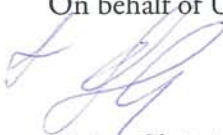
[18] Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

On behalf of UL International Demko A/S

Herlev, 2006-12-19

  
Karina Christiansen  
Certification Manager