

Translation

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



(2) Equipment and protective systems intended for use in potentially explosive atmospheres  
- Directive 94/9/EC



(3) EC-Type Examination Certificate Number

**TÜV 03 ATEX 2172**

(4) Equipment: Transducer type LOF 500 ...  
(5) Manufacturer: FAFNIR GmbH  
(6) Address: Bahrenfelder Strasse 19  
D-22765 Hamburg

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

(8) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), 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 the confidential report N° 03YEX550487-1.

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

**EN 50 014:1997**

**EN 50 020:1994**

(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 in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

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

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

TÜV NORD CERT GmbH & Co. KG  
Am TÜV 1  
30519 Hannover  
Tel.: +49 (0) 511 986-1455  
Fax: +49 (0) 511 986-1590

Head of the  
Certification Body

Hanover, 2005-07-07

(13)

## SCHEDULE

(14) **EC-Type Examination Certificate N° TÜV 03 ATEX 2172**

(15) Description of equipment

In connection with the respective level detector type LOF 1.1... Ex, the measuring transducer type LOF 500 ... transmits signals from gas and liquid tanks.

The measuring transducer type LOF 500 ... is installed in a housing; the type LOF 500 19" ... is designed as a plug-in printed circuit board.

### Electrical data

Supply circuit  
(connections d30 and d32,  
or d32 and z32  
or terminals 14 and 15)

$U = 24/110/230 \text{ V AC}, \pm 15 \%, 40 \dots 60 \text{ Hz},$   
approx. 4 or 8 VA  
or  
 $U = 24 \text{ V DC}, \pm 20 \%, \text{ approx. } 5 \text{ or } 10 \text{ W}$

Signal generator circuit  
(connections d2 and d4  
or d2 and z2  
or d8 and z8  
or terminals 1 and 2)

in the type of protection intrinsic safety EEx ia IIC

Maximum values:  $U_o = 15.8 \text{ V}$   
 $I_o = 26 \text{ mA}$   
 $R = 980 \Omega$   
 $P_o = 147 \text{ mW}$

Characteristic: trapezoidal

$C_i = 1.2 \text{ nF}$   
 $L_i$  negligibly small

The maximum permissible value pairs for the outer inductances ( $L_o$ ) and capacitances ( $C_o$ ) are shown in the following table:

$L_o$	1 mH	5 mH	10 mH
$C_o$	200 nF	150 nF	110 nF

Output circuits  
(connections d18, d20 and d22  
or d24, d26 and d28  
or d16, d18, d20, d22, d24  
and d26  
or terminals 6 to 11)

Alternating voltage  
 $\leq 250 \text{ V}$   
 $\leq 4 \text{ A}$   
 $\leq 500 \text{ VA}$   
 $\cos \varphi \geq 0.7$

Direct voltage  
 $\leq 250 \text{ V}$   
 $\leq 0.25 \text{ A}$   
 $\leq 50 \text{ W}$

The signal generator circuits are safely DC-isolated from the supply and output circuits up to a peak voltage value of 375 V.

Schedule EC-Type Examination Certificate N° TÜV 03 ATEX 2172

(16) The test documents are listed in the test report no. 03YEX550487-1.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones