

Translation

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

**TÜV NORD**



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

(3) **Certificate Number** TÜV 08 ATEX 554171

(4) for the equipment: DMS measuring transmitter  
type DMS50Ex-1-\*\*-\*\*-AO-\*-00

(5) of the manufacturer: Martens Elektronik GmbH

(6) Address: Kiebitzhörn 18  
D-22885 Barsbüttel

Order number: 8000554171

Date of issue: 2008-03-04

- (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, notified body No. 0044 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 No. 08 203 554171.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:


**EN 60079-0:2006**

**EN 60079-11:2007**

**EN 61241-0:2006**

**EN 61241-11:2006**

- (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 [Ex ia] IIC/IIB resp. II (1) D [Ex iaD]

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

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(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 08 ATEX 554171**

(15) Description of equipment

The DMS measuring transmitter type DMS50Ex-1-\*\*-\*\*-AO-\*-00 is used for conversion of DMS load cells output signals into a standardized signal (0/4 ... 20 mA or 0/2 ... 10 V).  
The DMS cells are located in the explosion hazardous area.

The DMS measuring transmitter is also used for the safe galvanic separation of the intrinsically safe circuit and the non intrinsically safe circuits.

The maximum permissible ambient temperature is 55°C.

Electrical Data

Supply circuit ..... (Connections 11 and 13)	U = 230 V a. c. $\pm$ 10%, 50 ... 60Hz U = 115 V a. c. $\pm$ 10%, 50 ... 60Hz U = 24 V d. c. $\pm$ 15% S ca. 5VA U <sub>m</sub> = 253 V a. c. resp. 125 V d. c.
Relay contacts ..... (Connections 21, 22, 23; 25, 26, 27)	Maximum values: U = 250 V a. c., I = 2 A, S = 250 VA; $\cos \varphi \geq 0,3$ U = 300 V d. c., I = 2 A, P = 40 W
Bus connection ..... (9 pol. DSUB connector)	Modbus or Profibus DP for connection of apparatus with a supply voltage of max. 230V
Analog output ..... (Connections 17 and 18)	0/4 ... 20 mA or 0/2 ... 10 V for connection of apparatus with a supply voltage of max. 230V
Tara function, external ..... (Connections 15 and 16)	only for connection to a switch contact

Schedule EC-Type Examination Certificate No. TÜV 07 ATEX 553701

Input circuits ..... in type of protection Intrinsic Safety Ex ia IIC/IIB  
 (Connections 36, 37, 38, 46, 47, 48) Maximum values:  
 $U_o = 14.5 \text{ V}$   
 $I_o = 163 \text{ mA}$   
 $P_o = 590 \text{ mW}$   
 Characteristic line: linear  
 The effective internal capacitances and inductances are negligibly small.

Ex ia	IIC	IIB
max. permissible external inductance	1.5 mH	6.8 mH
max. permissible external capacitance	0.3 $\mu\text{F}$	1.1 $\mu\text{F}$

The maximum values of the table are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The intrinsically safe input circuit is safely galvanically separated from the non intrinsically safe circuits up to the peak crest value of the voltage of 375 V.

(16) Test documents are listed in the test report No. 08 203 554171.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones