

TÜV NORD



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

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

(3) **Certificate Number** TÜV 06 ATEX 553026 X

(4) for the equipment: Load cells/dynamometers types C2S, C8S, TCE, TCETM, CBS, TS, TSA, T20, F1, FT1, FT1A, FT2

(5) of the manufacturer: AEP transducers s.r.l

(6) Address: Via Bottego 33/A
I-41010 Cognento MODENA

Order number: 8000 553026

Date of issue: 2006-10-04

(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. 06 YEX 553026.

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

EN 60079-0:2004

EN 50020:2002

IEC 61241-0:2004

IEC 61241-11:2005

(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:

Ex II 2 G Ex ib IIC Tx (see table) resp. II 2 D Ex ibD 21 Tx°C (see table)

TÜV NORD CERT GmbH, Langemarkstraße 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

Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Fon +49 (0)511 986 1455, Fax +49 (0)511 986 1590

This certificate may only be reproduced without any change, schedule included.
Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH

P17-F-011 06-06

page 1/3



(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 06 ATEX 553026 X**

(15) Description of equipment

The load cells/dynamometers according to the table mentioned below are used for the conversion of mechanical forces (tension and compression) into electrical signals via Wheatstone bridges.

The load cells/dynamometers may be operated in explosion hazardous areas for category 2G- resp. for 2D apparatus.

The permissible ambient temperature range is -20°C ... 60°C.

This certificate is valid for the following types of load cells/dynamometers:

| Type of load cells/dynamometers | Measurement of | Temperature class (gas atmospheres) | Temperature (dust atmospheres) |
|---------------------------------|-------------------------|-------------------------------------|--------------------------------|
| C2S, C8S | Compression | T5 | 115°C |
| TCE, TCETM | Compression and tension | T6 | 70°C |
| CBS | Compression | T5 | 115°C |
| TS, TSA, T20 | Compression and tension | T6 | 70°C |
| F1; FT1, FT1A; FT2 | Force via shear beam | T6 | 70°C |

Electrical data

Supply and signal circuits in type of protection Intrinsic Safety Ex ib IIC
 (Cable connection; only for connection to certified intrinsically safe circuits
 +AL, -AL, S+, S-) sum of maximum values:

$$U_i = 12 \text{ V}$$

$$I_i = 175 \text{ mA}$$

$$P_i = 525 \text{ mW}$$

characteristic line: linear

The effective internal capacitances and inductances in the load cells/dynamometers are negligibly small.

Parameters of the connected cable with a length of l_{cable} :

$$C_i = 200 \text{ nF/km} \times l_{\text{cable}}$$

$$L_i = 1 \text{ mH/km} \times l_{\text{cable}}$$

(16) The test documents are listed in the test report No. 06 YEX 553026.



Schedule EC-Type Examination Certificate No. TÜV 06 ATEX 553026 X

(17) Special conditions for safe use

1. The load cells/dynamometers are suitable for use for dust with a smouldering temperature greater than 200°C.
2. It has to be guaranteed, that potential equalization exists in the complete course of the cable line, internal and external of the explosion hazardous area.
3. The load cells/dynamometers are not marked with the ambient temperature. The maximum permissible ambient temperature is 60°C.

(18) Essential Health and Safety Requirements

no additional ones