Translation

(1) # EC-Type Examination Certificate

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

(3) ## DMT 01 ATEX E 151

(4) **Equipment:** **Concentration/Density-Transmitter Type DT 301*-***-***-****/****

(5) **Manufacturer:** **smar Equipamentos Industriais Ltda**

(6) **Address:** **BR 14160 -000 Sertaozinho-SP (Brazil)**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of Deutsche Montan Technologie GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council 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 test and assessment report BVS PP 01.2129 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 50014:1997+A1-A2	General requirements
EN 50020:1994	Intrinsic Safety "i"
EN 50284:1999	Category 1G
EN 50303:2000	Category M1

(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, examination and tests of the specified equipment in accordance to 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 shall include the following:

II 1/2G EEx ia IIC T4/T5/T6
I M1 EEx ia I

Deutsche Montan Technologie GmbH
Essen, dated 27. December 2001

Signed: Jockers
DMT-Certification body

Signed: Eickhoff
Head of special services unit

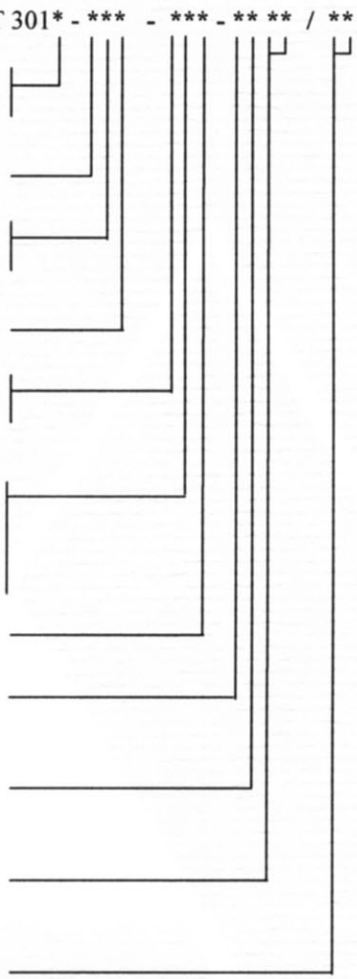
(13) Appendix to

(14) # EC-Type Examination Certificate

DMT 01 ATEX E 151

(15) 15.1 Subject and type

Concentration/Density Transmitter Type DT 301* - *** - *** - ** ** / **



Industrial model; general pur pose = I
Sanitary model; food /pharmaceutical purpos = S

Code number of measuring range

Code letter to specify mechanical details of pressure membrane

Code letter for fill fluid

Without LCD-display = 0
With LCD-display = 1

Electrical connection
1/2-14 NPT = 0
M20x1,5 = A
Pg 13,5 DIN = B

Code number for top- or side mounting

Code letter / number process connection
(version DT 301I: two letters / numbers)

Code letter for O-ring material
(DT 301Sversion DT 301S only)

Code letters for tank adapter
(version DT 301S only)

Code numbers letters specifying
details of the device (material of the enclosure)

15.2 Description

The Concentration-/Density-Transmitter type DT 301*-***-***-****/** is an intrinsically safe supplied differential pressure measuring device, designated for continuous measuring of liquid-media in hazardous areas requiring category 1/2G, 2G or M1 apparatus.

The Concentration-/Density-Transmitter comprises a tubular light alloy or stainless steel enclosure, which contain printed circuit boards with electronic components closed by means of screwed caps.

The light alloy enclosure shall be installed in hazardous areas requiring category 2G equipment.

The stainless steel enclosure shall be installed in hazardous areas requiring category 2G or M1 equipment.

The process connections shall be installed in the separation wall (wall of a vessel / pipe) separating areas from each other which require category 1G or category 2G equipment.

15.3 Parameters

15.3.1 Supply and signal circuit

for the connection to an intrinsically safe 4 to 20 mA current loop

Voltage	U_i	DC	28 V
Current	I_i		93 mA
Effective internal capacitance	C_i	≤	5 nF
Effective internal inductance	L_i		negligible

15.3.2 Maximum permissible power for certified intrinsically safe supply and signal circuits as a function of ambient temperature and temperature class

Max.ambient-temperature T_a	Temperature-class	Power P_i
85°C	T 4	700 mW
50°C	T 5	700 mW
55°C	T 5	650 mW
60°C	T 5	575 mW
65°C	T 5	500 mW
70°C	T 5	425 mW
40°C	T 6	575 mW

15.3.3 Ambient temperature range: $-40\,°C \leq T_a \leq +85°C$

(16) Test and assessment report
BVS PP 01.2129 EG as of 27.12.2001

(17) Special conditions for safe use
None

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

45307 Essen, 27.12.2001
BVS-Scha/Mi A 20000265

Deutsche Montan Technologie GmbH

DMT-Certification body

Head of special services unit