



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 061 X**

(4) **Equipment:** **Fieldbus-Terminator Type BT 302**

(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 01.1043 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'

(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:

Ex II 2G EEx ia IIC T4
I M2 EEx ia I

Deutsche Montan Technologie GmbH

Essen, dated 22. Mai 2001

Signed: Dr. Jockers

DMT-Certification body

Signed: Dr. Wenzel

Head of special services unit

(13) Appendix to

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

DMT 01 ATEX E 061 X

(15) 15.1 Subject and type

Fieldbus-Terminator Type BT 302

15.2 Description

The Fieldbus-Terminator Type BT 302 is an intrinsically safe apparatus, designated for impedance termination of an intrinsically safe fieldbus-circuit installed in hazardous areas requiring category 2G or M2 equipment.

The Fieldbus-Terminator Type BT 302 comprises a panel mountable plastic enclosure containing components (a capacitor and resistors in series according to FISCO-Model) embedded in casting compound.

Terminals to connect the intrinsically safe fieldbus-circuit are arranged on the top side of the enclosure.

15.3 Parameters

Intrinsically safe fieldbus- supply and signal circuit (FISCO-Model)

Voltage	U_i	DC	24	V
Current	I_i		250	mA
Power	P_i		2000	mW
Impedance	Z_i	\geq	100	Ω

(16) Test and assessment report

BVS PP 01.1043 EG as of 22nd May, 2001

(17) Special conditions for safe use

- 17.1 The Fieldbus-Terminator type BT302 shall be installed in an enclosure providing degree of protection greater or equal to IP 20 according to EN 60529
- 17.2 Wiring shall satisfy the conditions of section 6.4.11 and section 7.6.e of EN 50020:1994
- 17.3 Terminals or connectors for the intrinsically safe fieldbus supply and signal circuit shall be arranged according to section 6.3.1 or 6.3.2 of EN 50020:1994 respectively
- 17.4 For Group I application interconnection of fieldbus-apparatus to an intrinsically safe electrical system shall be assessed in a System Certificate

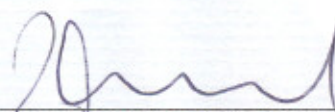
We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

45307 Essen, 22nd. May 2001
BVS-/Schä/rü A 9900196

Deutsche Montan Technologie GmbH



DMT-Certification body




Head of special services unit

Translation

(1) 1. Supplement to the EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use
in potentially explosive atmospheres - Directive 94/9/EC
Supplement accordant with Annex III number 6
- (3) No. of EC-Type Examination Certificate: **DMT 01 ATEX E 061 X**
- (4) Equipment: **Fieldbus-Terminator Type BT302**
- (5) Manufacturer: **smar Equipamentos Industriais Ltda.**
- (6) Address: **14170 -480 Sertaozinho-SP (Brazil)**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in
the appendix to this supplement.
- (8) The certification body of DEKRA EXAM 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 01.1043 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- | | |
|------------------|----------------------|
| EN 60079-0:2009 | General requirements |
| EN 60079-11:2007 | Intrinsic safety 'i' |
| EN 60079-27:2008 | FISCO Model |
- (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 appendix to this certificate.
- (11) This supplement to the 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 2G Ex ia IIC T4 Gb**
I M2 Ex ia I Mb

DEKRA EXAM GmbH
Bochum, dated 03.08.2011

Signed: Simanski

Certification body

Signed: Dr. Eickhoff

Special services unit

- (13) Appendix to
- (14) **1. Supplement to the EC-Type Examination Certificate**
DMT 01 ATEX E 061 X
- (15) 15.1 Subject and type

Fieldbus-Terminator Type BT302

15.2 Description

The Fieldbus Terminator can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report.

Electrical Parameters were subjected to revision according to table 1 of EN 60079-27:2008 (FISCO Model).

15.3 Parameters

Fieldbus circuit

Voltage	U_i	DC	24	V
Current	I_i		380	mA
Power	P_i		5.32	W
Impedance	Z_i	\geq	100	Ω

- (16) Test and assessment report

BVS PP 01.1043 EG as of 03.08.2011

- (17) Special conditions for safe use

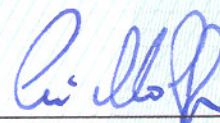
- 17.1 The Fieldbus-Terminator type BT302 shall be installed in an enclosure providing degree of protection IP greater or equal to IP 20 according to EN 60529.
- 17.2 Wiring shall satisfy the conditions of section 6.3.11 and clause 7.6.e of EN 60079-11:2007.
- 17.3 Terminals or connectors for the intrinsically safe fieldbus supply and signal circuit circuits shall be arranged according to clause 6.2.1 or 6.2.2 of EN 60079-11:2007 respectively.
- 17.4 An ambient temperature range of $-40\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$ applies to the Fieldbus-Terminator type BT302.
- 17.5 For Group I application interconnection of fieldbus-apparatus to an intrinsically safe electrical system shall be assessed in a System Certificate, if required in local installation rules.

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.

DEKRA EXAM GmbH
44809 Bochum, 03.08.2011
BVS-Scha/Sch A 20070681



Certification body



Special services unit