



Translation

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

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

- (3) **BVS 03 ATEX E 163 X**

- (4) **Equipment: Transmitter type 2500**

- (5) **Manufacturer: Micro Motion, Inc.**

- (6) **Address: Boulder, Co. 80301, USA**

- (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 03.2107 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
EN 50014:1997+A1-A2 General requirements
EN 50020:2002 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:

 **II (2)G [EEEx ib] IIB/IIC**

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 18.06.2003

Signed: Dr. Jockers

EXAM-Certification body

Signed: Dr. Eickhoff

Head of special services unit

(13) Appendix to

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

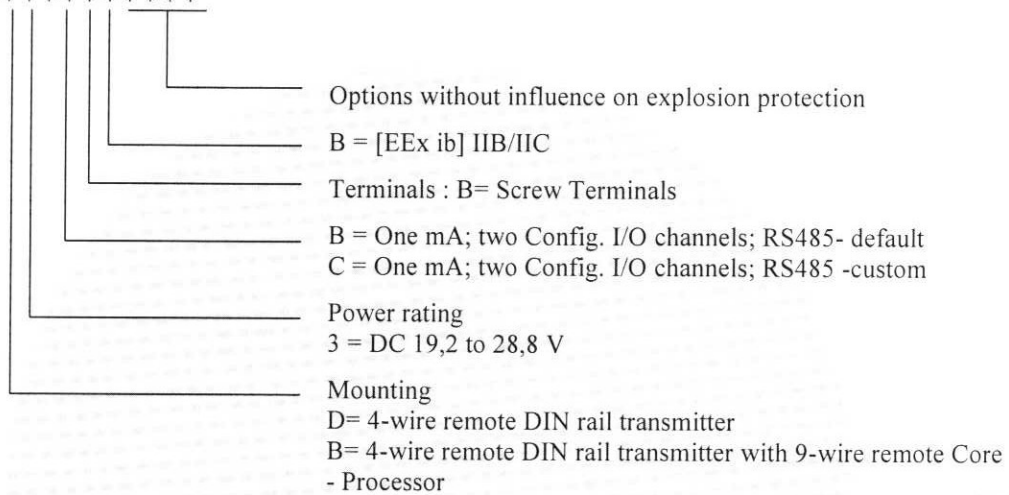
BVS 03 ATEX E 163 X

(15) 15.1 Subject and type

Transmitter type 2500*****B****

Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:

Type 2500 * * * * *



15.2 Description

The transmitter is, in combination with a sensor, used for measurement of mass flow and data transmission.

The electrical circuitry of the transmitter is mounted inside a plastic DIN rail enclosure.

Four terminals (terminals 1-4) provide an intrinsically safe barrier to the Micro Motion Core Processor. The remaining terminals are non-intrinsically safe inputs/outputs and input power. The intrinsically safe terminals are physically located on the opposite side of the DIN rail housing from the remaining terminals.

15.3 Parameters

15.3.1 mains circuit (terminals 11 – 14)

voltage		DC	19,2 - 28,8 V
max. voltage	U_m	DC	28,8 V

15.3.2 non-intrinsically safe power and signal circuits (terminals 21-24, 31-34)

max. voltage	U_m	DC	30 V
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15.3.3 intrinsically safe power and signal circuits (terminals 1 – 4)				
voltage	U_o	DC	17,22	V
current	I_o		0,484	A
rated value of the fuse			160	mA
power	P_o		2,05	W
internal resistance	R_i		35,6	Ω
for group IIC				
max. external capacitance	C_o		333	nF
max. external inductance	L_o		151	μ H
max. external inductance/resistance ratio	L_o/R_o		17,06	μ H/ Ω
for group IIB				
max. external capacitance	C_o		2,04	μ F
max. external inductance	L_o		607	μ H
max. external inductance/resistance ratio	L_o/R_o		68,2	μ H/ Ω
15.3.4 ambient temperature range		T_a	-40 °C up to +55 °C	

(16) Test and assessment report
BVS PP 03.2107 EG as of 18.06.2003

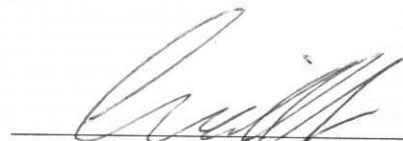
(17) Special conditions for safe use
When multiple Model 2500 transmitters are on a single DIN rail and the ambient temperature is above +45°C, the units need to be spaced at least 10 mm apart.

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.

44809 Bochum, 18.06.2003
BVS-Schu/Kw A 20030166

EXAM BBG Prüf- und Zertifizier GmbH
Fachstelle für Sicherheit elektrischer Betriebsmittel - BVS


EXAM-Certification body


Head of special services unit



Translation



1st Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate BVS 03 ATEX E 163 X

Equipment: Transmitter type *500*****B****

Manufacturer: Micro Motion, Inc.

Address: Boulder, Co. 80301, USA

Description

The transmitter can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report and the following variation is also available:

type 1500***B****.**

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997+A1-A2 General requirements

EN 50020:2002 Intrinsic safety 'i'

Test and assessment report

BVS PP 03.2107 EG as of 14.10.2003

Deutsche Montan Technologie GmbH

Bochum, dated 14. October 2003

signed: Jockers

Certification body

signed: Eickhoff

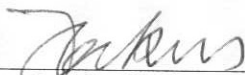
Special services unit

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In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 14.10.2003

BVS-Schu/Mi A 20030536

Deutsche Montan Technologie GmbH


Certification body


Special services unit