



Translation

**EC-Type Examination Certificate**

- (1)
- (2) **- Directive 94/9/EC -**  
**Equipment and protective systems intended for use**  
**in potentially explosive atmospheres**
- (3) **BVS 03 ATEX E 115 X**
- (4) **Equipment:** Weighing terminal type ID7sx
- (5) **Manufacturer:** Mettler-Toledo (Albstadt) GmbH
- (6) **Address:** D 72423 Albstadt
- (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 03.2080 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 50281-1-1:1998+A1 Dust explosion protection
- (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 2G EEx ib IIC T4**  
**II 2D IP 65 T 55 °C**

**Deutsche Montan Technologie GmbH**

Essen, dated 08. May 2003

Signed: Eickhoff

Signed: Wittler

DMT-Certification body

Head of special services unit

(13) Appendix to

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

**BVS 03 ATEX E 115 X**

(15) 15.1 Subject and type  
Weighing terminal type ID7sx

15.2 Description

The weighing terminal is used in potentially explosive atmospheres for input of parameters and in combination with weighing cells for recording and display of weight values.

The electrical components of the terminal are fixed in a metal enclosure. In the cover of the enclosure are a keyboard and a display mounted.

15.3 Parameters

15.3.1 Power supply circuit (terminals T1)

15.3.1.1 Input U3 (terminals T1.1 – T1.4)

Voltage	Ui	DC	8,7	V
Current	Ii		155	mA
Power	Pi		1,35	W
effective internal capacitance	Ci		negligible	
effective internal inductance	Li		0,1	mH

15.3.1.2 Input U4 (terminals T1.2 – T1.4)

Voltage	Ui	DC	10,5	V
Current	Ii		80	mA
Power	Pi		0,84	W
effective internal capacitance	Ci		100	nF
effective internal inductance	Li		0,01	mH

15.3.1.3 Input U5 (terminals T1.3 – T1.4)

Voltage	Ui	DC	6,4	V
Current	Ii		240	mA
Power	Pi		1,54	W
effective internal capacitance	Ci		negligible	
effective internal inductance	Li		0,01	mH

15.3.2 Loop circuits (terminals C1, C2 and C3)

Values for each circuit

15.3.2.1 Input TXD (terminals C\*.1 – C\*.2)

Voltage	Ui	DC	15	V
Current	Ii		24	mA
Power	Pi		0,36	W
effective internal capacitance	Ci		50	nF
effective internal inductance	Li		0,01	mH



15.3.2.2	Input RXD (terminals C*4 – C*3)				
	Voltage	U <sub>i</sub>	DC	15	V
	Current	I <sub>i</sub>		24	mA
	Power	P <sub>i</sub>		0,36	W
	effective internal capacitance	C <sub>i</sub>		50	nF
	effective internal inductance	L <sub>i</sub>		0,01	mH
15.3.3	Balance circuits (terminals S1 or S and W1 or W)				
15.3.3.1	Power supply circuits (terminals S1 or S), depending on the used weighing bridge				
	Input U2 (terminals S.1 – S.3 and S1.1 – S1.3)				
	Input U1 (terminals S.2 – S.3 and S1.2 – S1.3)				
	Electrical parameters depend on the used power supply.				
	Outputs from terminals S or S1 directly connected on terminals W or W1				
15.3.3.2	Loop circuits				
	Output TXD (terminals W.5 – W.3 and W1.5 – W1.3)				
	Voltage	U <sub>o</sub>	DC	10,5	V
	Current	I <sub>o</sub>		30	mA
	Power	P <sub>o</sub>		0,32	W
	max. external capacitance	C <sub>o</sub>		100	nF
	max. external inductance	L <sub>o</sub>		0,1	mH
	Output RXD (terminals W.6 – W.3 and W1.6 – W1.3)				
	Voltage	U <sub>o</sub>	DC	10,5	V
	Current	I <sub>o</sub>		30	mA
	Power	P <sub>o</sub>		0,32	W
	max. external capacitance	C <sub>o</sub>		100	nF
	max. external inductance	L <sub>o</sub>		0,1	mH
15.3.4	Digital input/output circuits				
15.3.4.1	Inputs IN1 (KL1-O – KL1-P), IN2 (KL1-M – KL1-N), IN3 (KL1-K – KL1-L), IN4 (KL1-I – KL1-J), IN5 (KL1-G – KL1-H), IN6 (KL1-E – KL1-F), IN7 (KL1-C – KL1-D) and IN8 (KL1-A – KL1-B)				
	Values for each input, floating opto coupler input circuits				
	Voltage	U <sub>i</sub>	DC	30	V
	Current	I <sub>i</sub>		50	mA
	Power	P <sub>i</sub>		0,375	W
	effective internal capacitance	C <sub>i</sub>		10	nF
	effective internal inductance	L <sub>i</sub>		0,01	mH
15.3.4.2	Outputs OUT1 (KL2-A – KL2-B), OUT2 (KL2-C – KL2-D), OUT3 (KL2-E – KL2-F), OUT4 (KL2-G – KL2-H), OUT5 (KL2-I – KL2-J), OUT6 (KL2-K – KL2-L), OUT7 (KL2-M – KL2-N) and OUT8 (KL2-O – KL2-P)				
	Values for each output, floating opto coupler output circuits				
	Voltage	U <sub>i</sub>	DC	15	V
	Current	I <sub>i</sub>		40	mA
	Power	P <sub>i</sub>		0,15	W
	effective internal capacitance	C <sub>i</sub>		10	nF
	effective internal inductance	L <sub>i</sub>		0,01	mH
15.3.5	Ambient temperature range	T <sub>a</sub>		-10 °C up to + 40 °C	
	maximum surface temperature T			55 °C	
15.3.6	Degrees of protection according to EN 60529				IP 6X

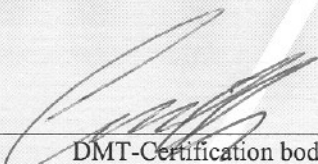
- (16) Test and assessment report  
BVS PP 03.2080 EG as of 08.05.2003
- (17) Special conditions for safe use  
The operating terminal shall only be used when electrostatic charging processes leading to propagating brush discharges are impossible.

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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, 08.05. 2003  
BVS-Schu/Mi A 20020266

**Deutsche Montan Technologie GmbH**



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DMT-Certification body



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Head of special services unit