



Translation

EC-Type Examination Certificate

(1)

(2)

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

(3)

BVS 09 ATEX E 010

(4)

Equipment: Weighing terminal type IND560x-*

(5)

Manufacturer: Mettler-Toledo (Changzhou) Measurement Technology Ltd

(6)

**Address: 111 West TaiHu Road, XinBei District
ChangZhou, JiangSu, 213125, PRC**

(7)

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

(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 09.2016 EG.

(9)

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

EN 60079-0:2006 General requirements

EN 61241-0:2006 General requirements

EN 60079-11:2007 Intrinsic safety 'i'

EN 61241-11:2006 Intrinsic safety 'iD'

EN 60079-28:2007 Optical radiation

(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 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 Ex ib IIC T4

II 2 D Ex ibD 21 IP65 T60°C

II 2 GD Ex op is IIC

additionally for inside
mounted Interface FO

DEKRA EXAM GmbH

Bochum, dated 12. March 2009

Signed: Simanski

Signed: Dr. Eickhoff

Certification body

Special services unit

(13)

Appendix to

(14)

EC-Type Examination Certificate

BVS 09 ATEX E 010

(15) 15.1 Subject and type

Weighing terminal type IND560x-*

Instead of the * in the complete denomination the word „HARSH” for the desk version or “PANEL” for the panel mount version will be included.

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 terminals are fixed in a metal enclosure (desk version type IND560x-HARSH) or an enclosure with a metallic front plate (panel mount version type IND560x-PANEL). In the front plate of the enclosure a keyboard and a display are mounted. For type IND560x-PANEL at the rear side of the enclosure terminals for the connection of the intrinsically safe circuits are fastened.

Inside the enclosure a main board, the display, one input/output module and a CL or FO interface are fastened.

For use of the terminal type IND560x-PANEL in Category 2D it is mounted in an enclosure meeting category 2D. In any case the sealing stated in the documentation is mounted between panel and enclosure.

15.3 Parameters

15.3.1 Power supply circuit (terminals Power supply)

15.3.1.1 Input P1 (terminals P1 – P2)

Voltage	Ui	DC	10.5	V
Current	Ii		74	mA
Power	Pi		0.78	W
Internal capacitance	Ci		240	nF
Internal inductance	Li			negligible

15.3.1.2 Input P3 (terminals P3 – P4)

Voltage	Ui	DC	5.9	V
Current	Ii		240	mA
Power	Pi		1.41	W
Internal capacitance	Ci		480	nF
Internal inductance	Li			negligible

15.3.1.3 Input P5 (terminals P5 – P4)

Voltage	Ui	DC	12.6	V
Current	Ii		92	mA
Leistung – power	Pi		1.16	W
Internal capacitance	Ci		360	nF
Internal inductance	Li			negligible

15.3.1.4	Input P6 (terminals P6 – P7)				
	Voltage	U _i	DC	8.7	V
	Current	I _i		133	mA
	Power	P _i		1.16	W
	Internal capacitance	C _i		130	nF
	Internal inductance	L _i			negligible
15.3.1.5	Input P8 (terminals P8 – P7)				
	Voltage	U _i	DC	12.6	V
	Current	I _i		42	mA
	Power	P _i		0.53	W
	Internal capacitance	C _i			negligible
	Internal inductance	L _i			negligible
15.3.1.6	Input P9 (terminals P9 – P7)				
	Voltage	U _i	DC	7.15	V
	Current	I _i		107	mA
	Power	P _i		0.77	W
	Internal capacitance	C _i		240	nF
	Internal inductance	L _i			negligible
15.3.2	Analog loadcell circuits SA1 to SA7 (terminals Analog scale)				
	Voltage	U _o	DC	5.88	V
	Current	I _o		133	mA
	Power	P _o		0.68	W
	External capacitance	C _o		0.2	μF
	External inductance	L _o		0.3	mH
15.3.3	Digital loadcell circuits SD1 to SD7 (– terminals Digital scale)				
15.3.3.1	Power supply output SD1 (terminals SD1 – SD3)				
	Voltage	U _o	DC	12.6	V
	Current	I _o		42	mA
	Power	P _o		0.53	W
	External capacitance C _o and external inductance L _o depend on the power supply connected to input P8 (terminals P8 – P7).				
15.3.3.2	Power supply output SD2 (terminals SD2 – SD3)				
	Voltage	U _o	DC	8.7	V
	Current	I _o		133	mA
	Power	P _o		1.16	W
	External capacitance C _o and external inductance L _o depend on the power supply connected to input P6 (terminals P6 – P7) reduced by internal values in acc. with cl. 15.3.1.4.				
15.3.3.3	Power supply output SD7 (terminals SD7 – SD4)				
	Voltage	U _o	DC	12.6	V
	Current	I _o		92	mA
	Power	P _o		1.16	W
	External capacitance C _o and external inductance L _o depend on the power supply connected to input P5 (terminals P5 – P4) reduced by internal values in acc. with cl. 15.3.1.3.				
15.3.3.4	Loop circuits				
	Output SD5 (terminals SD5– SD4)				
	Voltage	U _o	DC	5.36	V
	Current	I _o		30	mA
	Power	P _o		40	mW
	External capacitance	C _o		100	nF
	External inductance	L _o		100	μH

Output SD6 (terminals SD6 – SD4)

Voltage	U _o	DC	5.36	V
Current	I _o		30	mA
Power	P _o		40	mW
External capacitance	C _o		100	nF
External inductance	L _o		100	μH

15.3.4 Intrinsically safe interface circuit terminal COM 1 (RS232)

Values for each circuit

Voltage	U _i	DC	± 10	V
Internal capacitance	C _i			negligible
Internal inductance	L _i			negligible

Voltage	U _o	DC	± 5.36	V
Current	I _o		± 18.1	mA
Power	P _o		24.2	mW
External capacitance	C _o		100	nF
External inductance	L _o		100	μH

15.3.5 Intrinsically safe interface circuits COM 4 and COM 5

15.3.5.1 Option board CL, level of protection Ex ib IIC

Values for each circuit

Voltage	U _o	DC	5.36	V
Current	I _o		107	mA
Power	P _o		144	mW
External capacitance	C _o		600	nF
External inductance	L _o		400	μH

15.3.5.2 Option board FO, op is, FO-COM4 and FO-COM5

Value for each optical output

< 5 mW

15.3.6 Intrinsically safe IO circuits

15.3.6.1 Active input circuits (terminals Active IN: A-IN1, A-IN2, A-IN3 and A-IN4)

Values for each circuit

Voltage	U _o	DC	5.88	V
Current	I _o		2	mA
Power	P _o		2.94	mW
External capacitance	C _o		100	nF
External inductance	L _o		100	μH

15.3.6.2 Active output circuits (terminals Active OUT: A-OUT1, A-OUT2, A-OUT3, A-OUT4, A-OUT5 and A-OUT6)

Values for each circuit

Voltage	U _o	DC	12.6	V
Current	I _o		92	mA
Power	P _o		627	mW
External capacitance	C _o		100	nF
External inductance	L _o		400	μH

15.3.6.3 Passive output circuits (terminals Passive OUT: P-OUT1, P-OUT2, P-OUT3, P-OUT4, P-OUT5 and P-OUT6)

Values for each circuit

Voltage	U _i	DC	15	V
Current	I _i		40	mA
Power	P _i		150	mW
Internal capacitance	C _i		10	nF
Internal inductance	L _i		10	μH

15.3.6.4 Passive input circuits (terminals Passive IN: P-IN1, P-IN2, P-IN3 and P-IN4)

Values for each circuit

Voltage	U _i	DC	30	V
Current	I _i		50	mA
Power	P _i		375	mW
Internal capacitance	C _i		10	nF
Internal inductance	L _i		10	μH

15.3.7	Ambient temperature range	T _a	-10 °C up to +40 °C	
	Maximum surface temperature T		60 °C	
4.8	Degrees of protection according to EN 60529		IP 65	

(16) Test and assessment report

BVS PP 09.2016 EG as of 12.03.2009

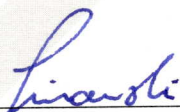
(17) Special conditions for safe use

None

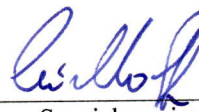
We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 12. March 2009
BVS-Schu / Her A 20080920

DEKRA EXAM GmbH



Certification body



Special services unit