

(1) **EC-TYPE EXAMINATION CERTIFICATE**

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

(3) EC-Type Examination Certificate Number: **KEMA 02ATEX1092** Issue Number: **2**

(4) Equipment: **Barrier Model ISB with barrier factory numbers ISB05000 and ISB15000**

(5) Manufacturer: **Mettler-Toledo Inc.**

(6) Address: **1900 Polarisway, Columbus, OH 43240, U.S.A.**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC 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 confidential test report number 211875300/1.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006 EN 60079-11 : 2007 EN 61241-0 : 2006 EN 61241-11 : 2006

(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 according to the 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.

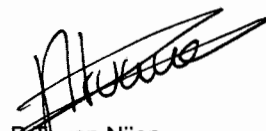
(12) The marking of the equipment shall include the following:



**II (2) G [Ex ib] IIC or
II (2) D [Ex ibD]**

This certificate is issued on September 22, 2008 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.



P. van Nijen
Certification Manager



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 02ATEX1092** Issue No. 2

(15) **Description**

The barriers Model ISB with barrier factory numbers ISB05000 and ISB15000 are an interface for intrinsically safe signal transmission and supply of a weighing system.

The barrier contains replaceable fuses.

The part of the barrier containing the intrinsically safe circuits, is protected by a construction providing a degree of ingress protection IP20. The other part of the barrier containing the replaceable fuses, has no ingress protection.

Ambient temperature range: -40 °C to +60 °C.

Electrical data

Barrier factory number ISB05000

Signal/supply circuit (black connector):
5 V; 200 mA; 1 W; $U_m = 253$ Vac.

Signal/supply circuit (blue connector):
In type of protection intrinsic safety Ex ib IIC, with the following maximum values (circuits combined):
 $U_o = 8,6$ V; $I_o = 300$ mA; $P_o = 340$ mW; $C_o = 6,2$ μ F; $L_o = 0,3$ mH.

Barrier factory number ISB15000

Signal/supply circuit (green connector):
15 V; 200 mA; 3 W; $U_m = 253$ Vac.

Signal/supply circuit (blue connector):
In type of protection intrinsic safety Ex ib IIC, with the following maximum values (circuits combined):
 $U_o = 17,3$ V; $I_o = 302$ mA; $P_o = 1$ W; $C_o = 353$ nF; $L_o = 150$ μ H.

Installation instructions

1. The earth connection of the barrier shall be connected to the potential equalising system in accordance with the applicable installation standard.
2. The barrier shall be installed outside the hazardous area, unless it is protected by an other type of protection and the combination is certified.
3. When a higher degree of ingress protection than IP20 is required, this has to be achieved by an additional enclosure which is suitable for the applicable environmental conditions.

Routine tests

A routine test shall be performed on each completed barrier per clause 11.1.1 of EN 60079-11.



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 02ATEX1092**

Issue No. 2

(16) **Test Report**

KEMA No. 211875300/1.

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 211875300/1.

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

(3) EC-Type Examination Certificate Number: **KEMA 02ATEX2091** Issue Number: **2**

(4) Equipment: **Barrier Model ISB with barrier factory numbers ISB05X000 and ISB15X000**

(5) Manufacturer: **Mettler-Toledo Inc.**

(6) Address: **1900 Polarisway, Columbus, OH 43240, U.S.A.**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC 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 confidential test report number 211875300/2.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006
EN 61241-0 : 2006

EN 60079-1 : 2007
EN 61241-1 : 2004

EN 60079-11 : 2007
EN 61241-11 : 2006

(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 according to the 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 d IIB+H₂ [ib] IIC T6 or
II 2 D Ex tD [ibD] A21 IP66 T85°C or
II 2D (2)G Ex tD [ib] IIC A21 IP66 T85°C

This certificate is issued on September 22, 2008 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.



P.T. van Nijen
Certification Manager





(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 02ATEX2091** Issue No. 2

(15) **Description**

The barriers Model ISB with factory numbers ISB05X000 and ISB15X000 consist of a safety barrier with factory number ISB05000 or ISB15000 respectively, mounted inside a flameproof enclosure.

The barriers are used as an interface for intrinsically safe signal transmission and supply of a weighing system.

Ambient temperature range: -10 °C to +60 °C.

Electrical data

Barrier factory number ISB05X000

Signal/supply circuit (black connector):
5 V; 200 mA; 1 W; $U_m = 253 \text{ Vac}$.

Signal/supply circuit (blue connector):
In type of protection intrinsic safety Ex ib IIC, with the following maximum values (circuits combined):
 $U_o = 8,6 \text{ V}$; $I_o = 300 \text{ mA}$; $P_o = 340 \text{ mW}$; $C_o = 6,2 \mu\text{F}$; $L_o = 0,3 \text{ mH}$.

Barrier factory number ISB15X000

Signal/supply circuit (green connector):
15 V; 200 mA; 3 W; $U_m = 253 \text{ Vac}$.

Signal/supply circuit (blue connector):
In type of protection intrinsic safety Ex ib IIC, with the following maximum values (circuits combined):
 $U_o = 17,3 \text{ V}$; $I_o = 302 \text{ mA}$; $P_o = 1 \text{ W}$; $C_o = 353 \text{ nF}$; $L_o = 150 \mu\text{H}$.

Installation instructions

1. The cable entry devices shall be in type of explosion protection flameproof enclosure "d" respectively "tD", suitable for the conditions of use and correctly installed.
2. Unused apertures shall be closed with suitable blanking elements.
3. The earth connection of the barrier shall be connected to the potential equalising system in accordance with the applicable installation standard.

(16) **Test Report**

KEMA No. 211875300/2.

(17) **Special conditions for safe use**

None.



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 02ATEX2091**

Issue No. 2

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 211875300/2.