



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 11ATEX3241X** Issue: **2**

4 Equipment: **iTB and iSTB Terminal Boxes**

5 Applicant: **Index Enclosures Ltd**

6 Address: **Montpelier Business Park
Leacon Road
Ashford
Kent TN23 4FG**

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of 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 intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012 EN 60079-7:2007 EN 60079-11:2012 EN 60079-31:2014
EN 60079-0:2006 (when fitted with CMP cable glands under Sira 06ATEX1097X)

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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 and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2 G
Ex e IIC T* Gb
(-*°C to +*°C)
* See Table 3



II 1 G
Ex ia IIC T* Ga
(-*°C to +*°C)



II 2 D
Ex tb IIIC T*°C Db IP66
(-*°C to +*°C)

Project Number 70012708

C Ellaby
Deputy Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

**Sira 11ATEX3241X
Issue 2**

13 DESCRIPTION OF EQUIPMENT

iTB Range

The iTB Terminal Boxes are fabricated from painted mild steel or stainless steel. The enclosures consist of a body and hinged lid complete with silicone gaskets. The body may be supplied with gland plates on up to four side faces. Inside the enclosure are studs for the subsequent mounting of components. The lid is secured to the body by, depending on the size of enclosure, two, three or four hinges and from two to five, M6 screws and inserts. The enclosure has internal M6 earth studs on the lid and an internal/external M10 earth stud is provided in the main enclosure body.

The enclosure sizes range from 230 x 150 x 130 mm to 1,200 x 1,000 x 300 mm and been tested and meet an ingress protection level of at least IP66. Inside the enclosure, a combination of the following terminal types may be fitted:

- Weidmüller type WDU Kema 98ATEX1683U, Kema 01ATEX2186U and Kema 98ATEX1686U coded Ex e II.
- Weidmüller type SAK and EK Kema 97ATEX1798U coded Ex e II.
- Phoenix type UK Kema 98ATEX1651U, Kema 06ATEX0119U and Kema 98ATEX1786U coded Ex e II.
- Phoenix type UT Kema 04ATEX2048U coded Ex e II.
- Phoenix type USLKG Kema 99ATEX4487U, Kema 96ATEX4370U and Kema 97ATEX1622U coded Ex e II.

The combination of terminals is subject to a maximum dissipated power as listed in Table 1, and the maximum dissipated power is calculated using the method described in EN 60079-0:2007 Annex E.2.:

Table 1: Maximum dissipated power ratings			
Enclosure size (mm)			Maximum dissipated power (Watts)
Height	Width	Depth	
230	150	130	11.34
300	200	150	15.96
300	300	150	19.14
500	400	150	30.21
600	400	200	35.05
750	500	200	44.38
900	600	200	53.81
1000	800	200	64.27
1200	800	300	73.71
1200	1000	300	79.98

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iSTB Range

The iSTB Terminal Boxes are fabricated from painted mild steel or stainless steel. The enclosures consist of a body and bolted cover complete with silicone gaskets. The body may be supplied with gland plates on up to four side faces. Inside the enclosure are studs for the subsequent mounting of components. The cover is secured to the body by four M6 screws and inserts. The enclosure has internal, M6 earth studs on the lid and an internal/external, M6 earth stud is provided in the main enclosure body.

The enclosure sizes range from 100 x 100 x 60 mm to 600 x 600 x 300 mm and have been tested and meet an ingress protection level of at least IP66. Inside the enclosure, a combination of the following terminal types may be fitted:

- Weidmüller type WDU Kema 98ATEX1683U, Kema 01ATEX2186U and Kema 98ATEX1686U coded Ex e II.
- Weidmüller type SAK and EK Kema 97ATEX1798U coded Ex e II.
- Phoenix type UK Kema 98ATEX1651U, Kema 06ATEX0119U and Kema 98ATEX1786U coded Ex e II.
- Phoenix type UT Kema 04ATEX2048U coded Ex e II.
- Phoenix type USLKG Kema 99ATEX4487U, Kema 96ATEX4370U and Kema 97ATEX1622U coded Ex e II.

The combination of terminals is subject to a maximum dissipated power as listed in Table 2, and the maximum dissipated power is calculated using the method described in EN 60079-0:2007 Annex E.2.:

Table 2: Maximum dissipated power ratings			
Enclosure size (mm)			Maximum dissipated power (Watts)
Height	Width	Depth	
100	100	80	3.80
120	120	80	5.14
150	150	90	7.42
190	190	100	10.43
160	380	120	18.04
250	250	120	15.05
250	400	150	21.54
380	380	220	26.11
600	400	220	35.35
600	600	300	43.14

Variation 1 - This variation introduced the following change:

- The option of using a quarter turn lock on the iTB enclosures as an alternative to M6 fasteners was approved.
- The marking is amended to reflect the reduced ambient temperature associated with the above change.



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Variation 2 - This variation introduced the following change:

- i. Following appropriate assessment to demonstrate compliance with the latest harmonised standards, EN 60079-0:2009, EN 60079-11:2007 and EN 60079-31:2009 were replaced by EN 60079-0:2012 EN 60079-11:2012 EN 60079-31:2014.
- ii. The use of Weidmuller WPE terminals certified under KEMA 98ATEX1683U and KEMA 98ATEX1686U was recognised.
- iii. The temperature markings for applicable to the enclosure taking into account the various components and equipment options that are permitted to be installed.

Table 3			
Terminal type	Available ambient temperature ranges and temperature classes		
	T6 / T85°C j k	T5 / T100°C j k	T4 / 135°C j k
Phoenix UK 2.5 N only	-50°C to +40°C	-50°C to +55°C	-50°C to +65°C
Phoenix UK range (excl UK 2.5 N)	-50°C to +40°C	-50°C to +55°C	-50°C to +70°C
Phoenix USLKG	-50°C to +40°C	-50°C to +55°C	-50°C to +70°C
Phoenix UT range	-50°C to +40°C	-50°C to +55°C	-50°C to +70°C
Weidmuller SAK and EK range (PA66 insulation)	-50°C to +40°C	N/A	N/A
Weidmuller SAK and EK range (KrG insulation)	-50°C to +40°C	-50°C to +55°C	-50°C to +90°C
Weidmuller SAK and EK range (Wemid insulation)	-50°C to +40°C	-50°C to +55°C	-50°C to +60°C
Weidmuller WDU and WPE range	-50°C to +40°C	-50°C to +55°C	-50°C to +60°C
Weidmuller WDU 240 only	-50°C to +40°C	-50°C to +55°C	-50°C to +70°C

j The marked lower ambient temperature is limited to -40°C for enclosures which use quarter turn locks.

k The marked ambient range is limited to -20°C to +40°C for enclosures which use non-metallic CMP stopping plugs.

- iv. Minor modifications to the controlled drawings were approved.
- v. Drawings IEL00024 and IEL00025 were removed from the list of controlled drawings.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	3 November 2011	R24800A/00	The release of the prime certificate.
1	19 March 2014	R32162A/00	The introduction of Variation 1.
2	03 June 2015	R70012708B	The introduction of Variation 2.

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Issue 2

- 15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)
- 15.1 The user/installer shall install these Terminal Boxes taking into account any restrictions or special conditions for safe use that are applicable to the previously certified devices that are fitted in the Terminal Boxes.
- 15.2 To maintain the ingress protection of IP66, any cable entry device shall be certified Ex e and shall be suitably rated IP66 and suitable for the environment it is to be used in.
- 15.3 When the Terminal Boxes is installed in a dust explosive environment the user shall ensure that an accumulation of excessive dust layers on the enclosure is prevented.
- 16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)**
- The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.
- 17 **CONDITIONS OF CERTIFICATION**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 When the Terminal Boxes are equipped by the manufacturer with wired terminals, a routine electric strength test shall be conducted in accordance with EN 60079-7:2007 clause 6.1.
- 17.4 The maximum dissipated power in watts for each Terminal Box shall be calculated in accordance with EN 60079-7:2007, Annex E, E.2 and shall not exceed the value given in Tables 1 and 2 detailed in the product description.
- 17.5 The Terminal Boxes may also be manufactured to sizes not specified in the documentation provided that any given dimension is not larger than the respective dimension of the largest enclosure or smaller than the respective dimension of the smallest enclosure. The marked power rating shall be the power rating of the next smallest size of enclosure.
- 17.6 The manufacturer shall take all reasonable steps to ensure that the user/installer complies with the special conditions for certification associated with the Terminal Boxes, in addition, the manufacturer shall provide the user/installer with an appropriate copy of the certificate for each certified device that is fitted in the box.
- 17.7 The Enclosures used in the construction of these Junction Boxes shall be covered by Sira 11ATEX3142U.

Certificate Annexe

Certificate Number: Sira 11ATEX3214X
Equipment: iTB and iSTB Terminal Boxes
Applicant: Index Enclosures Ltd



Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
IEL00008	1 to 2	3	22 Sep 2011	Approved terminals
IEL00009	1 to 2	1	22 Sep 2011	Approved terminal accessories
IEL00010	1 of 1	1	22 Sep 2011	Power tables
IEL00013	1 of 1	4	18 Oct 2011	Certification label (Ex e terminals)
IEL00014	1 of 1	5	18 Oct 2011	Certification label (Ex i terminals)
IEL00015	1 of 1	1	22 Sep 2011	Terminal box assembly
IEL00016	1 to 2	1	22 Sep 2011	Cable glands
IEL00018	1 to 3	0	22 Sep 2011	Cable entry devices
IEL00019	1 of 1	0	22 Sep 2011	Cable entry devices
IEL00020	1 of 1	0	22 Sep 2011	Cable entry devices

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
iEL00024	1 of 1	0	06 Jan 14	iTB Enclosure Range Quarter Turn Lock General Arrangement
iEL00025	1 of 1	0	10 Feb 14	Quarter Turn Lock

Issue 2

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
IEL00008	1 to 2	4	08 Apr 15	Approved terminals
IEL00013	1 to 1	6	13 May 15	iTB/iSTB enclosure range certification label Ex e
IEL00014	1 to 1	6	13 May 15	iTB/iSTB enclosure range certification label Ex ia
IEL00015	1 to 1	4	13 May 15	iTB/iSTB terminal fitting methods
IEL00016	1 to 2	2	08 Apr 15	Approved glands type CMP
IEL00019	1 of 1	1	13 May 15	Approved type CMP adaptors
IEL00020	1 of 1	1	13 May 15	Approved type CMP reducers

The following drawings are removed from the list of controlled drawings:

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
IEL00024	1 of 1	0	06 Jan 14	iTB Enclosure Range Quarter Turn Lock General Arrangement
IEL00025	1 of 1	0	10 Feb 14	Quarter Turn Lock

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