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GOVERNMENT APPROVED TEST LABORATORY

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

IA CERTIFICATE (IMPORT)

Date Issued: **08 Jan 2026** Certificate Validity: **08 Jan 2029**

IA Certificate Validity: *In accordance with ARP 0108 and the National Code of Practice, import IA certificates has a validity period of three (3) years from the date of issue. The IA certificate's validity period depends on the validity of the international document that it is based upon, and it is invalided should the international certificate be cancelled or the product quality assurance or notification becomes invalid. Equipment imported under a valid IA certificate and handed over to the end user, the IA Certificate validity falls away and the Ex equipmentremains compliant with the relevant standards for its lifetime, provided the equipment is maintained in its original certified configuration. No modifications are allowed. Imported apparatus not sold by the IA certificate expiry date is deemed to not be covered by this IA Certificate and this IA Certificate shall undergo a renewal process. Renewal of this IA certificate is the responsibility of the IA Certificate Holder. The IA Certificate Holder must provide and maintain records to the end-user, of date of sale for traceability purposes.*

Certificate Number:	**S-XPL/15.1336 X** Issue Number: **3**
Equipment:	**Range of Junction Boxes**
Model / Type:	**ELAK-EX**
IA Certificate Holder:	**eltherm Production GmbH**
IA Certificate Holder Location:	**Ernst-Heinkel-Straße 6-10, 57299 Burbach, Germany**
Manufacturer:	**eltherm Production GmbH**
Manufacturer Location:	**Ernst-Heinkel-Straße 6-10, 57299 Burbach, Germany**
Serial No:	All serial numbers, imported between issued- and validity date and all serial numbers covered by either valid QAN or QAR.

Identified by Inspection Authority Number
S-XPL/15.1336 X

And as described in the Explolabs file number **XPL/16770/15.1336 Issue 3** is hereby certified "Explosion Protected (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of the South African National Standards.

SANS 60079-0: 2019 Ed 6 **IEC 60079-0: 2017 Ed 7**	Explosive atmospheres Part 0: Equipment — General requirements
SANS 60079-11: 2012 Ed 4 **IEC 60079-11: 2011 Ed 6**	Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"
SANS 60079-26: 2015 Ed 3 **IEC 60079-26: 2014 Ed 3**	Explosive atmospheres – Part 26: Equipment with equipment protection level (EPL) Ga
SANS 60079-28: 2016 Ed 2 **IEC 60079-28: 2015 Ed 2**	Explosive atmospheres Part 28: Protection of equipment and transmission systems using optical radiation
SANS 60079-31: 2014 Ed 2 **IEC 60079-31: 2013 Ed 2**	Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t"
SANS 60079-7: 2019 Ed 4 **IEC 60079-7:2015 Ed 5**	Explosive atmospheres Part 7: Equipment protection by increased safety "e"

This report supersedes all previous documents bearing the reference no XPL/16770/15.1336 Issue 2.

Risk of ignition provided:

Protection afforded	Equipment Protection Level (EPL) Group	Performance of protection	Conditions of operation	T class or Max Surface Temp (°C)
Very high	Ga Group II	Two independent means of protection or safe even when two faults occur independently of each other	Equipment remains functioning in zones 0, 1 and 2	See General
Very high	Da Group III		Equipment remains functioning in zones 20, 21 and 22	See General
High	Gb Group II	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 1 and 2	See General
High	Db Group III		Equipment remains functioning in zones 21 and 22	See General

1. GENERAL

The marking of the Range of Junction Boxes shall include the following:

Ex ia④IIC T①Ga Ex eb ③④ IIC T①Gb Ex ib ④ IIC T①Gb
Ex ta IIIC T②°C Da Ex tb IIIC T②°C Db Ex tb IIIC T②°C Db

①Temperature Class T4, T5, T6. See product description
②Maximum Surface Temperature T85°C, T100°C. See product description
③Marking to include db if fitted with flameproof connector
④When fitted with fibre optic cassette, marking to include either op is, op pr, op sh. See product description

The ELAK-Ex range of junction boxes are electrical or optical terminal boxes, utilising the Ex-Component certified glass reinforced polyester (GRP) enclosures covered by certificate number CML20ATEX3008U.

The junction boxes may be provided with cable entry holes. The holes may be located either through the side walls or the rear of the enclosure base. The holes may be provided with a metric parallel thread, or without thread (clearance hole). Suitably certified blanking plugs, reducers and adapters and breather drains may be fitted provided into the enclosure via threaded holes, provided they meet the minimum IP requirements marked on the enclosure.

Through the wall of the enclosure may be provided an internal or external or internal and external threaded earth stud of a minimum size of M6.

The ELAK-Ex range of junction boxes are fitted with an arrangement of suitably certified terminals.

The ELAK-Ex range of enclosures are available in the following sizes:

ELAK-Ex Enclosure	Type	Width	Height	Depth
		(mm)	(mm)	(mm)
ELAK-EX-1	B	80	75	55
ELAK-EX-2	B	110	75	55
ELAK-EX-16	B	160	75	55
ELAK-EX-19	B	190	75	55
ELAK-EX-19.5	B	190	75	75
ELAK-EX-23	A	230	75	55
ELAK-EX-4	B	122	120	90
ELAK-EX-5	B	220	120	90
ELAK-EX-Q	B	160	160	90
ELAK-EX-9	B	260	160	90
ELAK-EX-10	B	360	160	90
ELAK-EX-11	A	560	160	90
ELAK-EX-12	B	255	250	120
ELAK-EX-12.5	B	205	200	120
ELAK-EX-13	B	400	250	120
ELAK-EX-13.5	B	400	250	160
ELAK-EX-14	A	600	250	120
ELAK-EX-15	B	400	405	120
ELAK-EX-15.5	B	400	405	201

Table 1: ELAK-Ex Enclosure Sizes

Before the junction box is installed, its total dissipated power for the particular application will be calculated in accordance with IEC 60079-7 Ed 5:2015/ EN 60079-7:2015, Annex E, E.2 and will not exceed the values given in the tables below (junction boxes of size not specified in the tables may be manufactured subject to the maximum dissipated power being based on a smaller enclosure):

EPL Ga Gb Db						
ELAK-Ex ref.	Maximum Power Dissipation (W)					
	(*) T6/T85°C Ta+40°C (max.)	(*) T6/T85°C Ta+55°C (max.)	(*) T6/T85°C Ta+60°C (max.)	(*) T6/T85°C Ta+65°C (max.)	(*) T5/T100°C Ta+55°C (max.)	(*) T4/T100°C Ta+90°C (max.)
1	8.390	2.23	1.73	1.45	8.390	8.390
2	8.551	2.00	1.70	1.45	8.551	8.551
16	8.833	2.00	1.70	1.45	8.833	8.833
19	9.012	2.07	1.80	1.29	9.012	9.012
19.5	9.012	2.07	1.80	1.29	9.012	9.012
23	9.260	2.00	1.70	1.10	9.260	9.260
4	9.378	2.00	1.70	1.45	9.378	9.378
5	10.500	2.30	1.70	1.10	10.500	10.500
Q	10.348	2.00	1.70	1.10	10.348	10.348
9	11.933	2.30	1.70	1.10	11.933	11.933
10	13.793	4.50	3.29	2.10	13.793	13.793
11	18.338	6.68	5.20	4.00	18.338	18.338
12	15.474	2.30	1.70	1.10	15.474	15.474
12.5	15.474	2.30	1.70	1.10	15.474	15.474
13	20.867	5.20	4.00	3.00	20.867	20.867
13.5	20.867	5.20	4.00	3.00	20.867	20.867
14	30.384	7.97	6.59	4.79	30.384	30.384
15	31.350	8.26	6.00	4.40	31.350	31.350
15.5	31.350	8.26	6.00	4.40	31.350	31.350

Table 2: ELAK-Ex Range of Junction Boxes – Maximum Power Dissipation for EPL Ga Gb Db

EPL Da						
ELAK-Ex ref.	Maximum Power Dissipation (W)					
	T85°C Ta +40°C (max)	T85°C Ta +55°C (max)	T85°C Ta +60°C (max)	T85°C Ta +65°C (max)	T100°C Ta +55°C (max)	T100°C Ta +90°C (max)
1	4.195	1.115	0.865	0.725	4.195	4.195
2	4.2755	1	0.85	0.725	4.2755	4.2755
16	4.4165	1	0.85	0.725	4.4165	4.4165
19	4.506	1.035	0.9	0.645	4.506	4.506
19.5	4.506	1.035	0.9	0.645	4.506	4.506
23	4.63	1	0.85	0.55	4.63	4.63
4	4.689	1	0.85	0.725	4.689	4.689
5	5.25	1.15	0.85	0.55	5.25	5.25
Q	5.174	1	0.85	0.55	5.174	5.174
9	5.9665	1.15	0.85	0.55	5.9665	5.9665
10	6.8965	2.25	1.645	1.05	6.8965	6.8965
11	9.169	3.34	2.6	2	9.169	9.169
12	7.737	1.15	0.85	0.55	7.737	7.737
12.5	7.737	1.15	0.85	0.55	7.737	7.737
13	10.4335	2.6	2	1.5	10.4335	10.4335
13.5	10.4335	2.6	2	1.5	10.4335	10.4335
14	15.192	3.985	3295	2.395	15.192	15.192
15	15.675	4.13	3	2.2	15.675	15.675
15.5	15.675	4.13	3	2.2	15.675	15.675
Notes: The table above relate to the limiting temperature of the terminal insulation, refer to the 'Conditions of Manufacture'.						

Table 3: ELAK-Ex Range of Junction Boxes – Maximum Power Dissipation for EPL Da

Optional fibre optic jointing facilities may be fitted within the terminal compartment; these are installed on a non-metallic, splice tray either alone or alongside the existing terminals. The jointing facilities are intended for use with fibre optic equipment supplied from a power source that is certified as compliant with IEC / EN 60079-28:2015. For "op pr" or "op sh" applications, the ABTECH fibre optic cassette type FJC under certificate CML 17ATEX9035U/ IECEx CML 17.0020U are used.

Optical Power	
'op pr' applications	**'op is' applications**
T6/T85°C at a maximum ambient of ≤ 60°C	T6/T85ºC at a maximum ambient of ≤ 65°C or T4/T100ºC at a maximum ambient of ≤ 80°C
When 'op pr' is used with or without terminals, the splice case is limited to 100mW and a -40°C to 60°C ambient temperature.	When 'op is' is used with or without terminals. Fibre optic source is limited for all T classes to a maximum irradiance of 5 mW/mm^2 (surface area not exceeding 400 mm^2) Signal power is limited to 15 mW @T6 and 35 mW @T4.

Table 4: ELAK-Ex Range of Junction Boxes – Optical Power Limits for "op pr" and "op is" applications

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

ii. When the manufacturer has equipped the junction boxes with wiring to the terminals, a routine electric strength test shall be carried out in accordance with IEC 60079-7:2015 Clause 7.1

iii. All terminals will be installed in accordance with their certificate conditions and the relevant codes of practice/wiring regulations paying particular attention to the following:

- The maximum service temperature range.
- The minimum creepage and clearance distances shall be maintained.
- The rated voltages and currents may vary if cross-connection facilities are used.
- The reduction in rating of adjacent terminals shall be observed, where applicable.

The terminals fitted into the junction boxes shall also conform to the following requirements:

Temperature class/ Dust marking	Requirement
T6/T85°C	The terminals shall have an insulation limiting temperature of +100°C minimum.
T5/T100°C	The terminals shall have an insulation limiting temperature of +100°C minimum.
T4/T135°C	The terminals shall have an insulation limiting temperature of +130°C minimum.

iv. Suitably certified Ex e equipment such as breathing devices and blanks may be fitted to the enclosure providing the enclosure maintains compliance with IEC 60529 code IP65 or better.

v. The manufacturer will take all reasonable steps to ensure that the power dissipated by the Junction Box does not exceed the maximum value stipulated in the table detailed in the Description of Equipment, in addition, the manufacturer will supply all the relevant information that will enable the user/installer to calculate the dissipated power in Watts for each Junction Box in accordance with IEC 60079-7 Annex E, E2.

vi. When the junction boxes are used for intrinsically safe applications, a 3 mm separation distance between the enclosure is required, there shall also be a minimum of 6 mm between different intrinsically safe circuits.

vii. When trunking is fitted, it may be sited as required and the minimum creepage and clearance distances shall still be met

viii. Cable insulation shall be rated at 30°C greater than max operation ambient.

ix. If the enclosures are supplied fitted with blanking plugs, reducers, adapters or breather drains, the manufacturer shall ensure that the user/installer is provided with copies of the associated certificate for the fitted devices.
x. When the optional earth bar is fitted it shall allow for a size of conductor connection in accordance with Clause 15.3 of IEC 60079-0.

Based on the following documentation: IECEx CML 21.0061X Issue: 0

2. INSTALLATION INSTRUCTIONS

It is the IA Certificate Holder's responsibility to supply OEM installation instructions with each unit offered for sale as required by IEC/SANS 60079-0, clause 30.

The equipment shall be installed, operated, and maintained in accordance with the manufacturer's instructions and the applicable South African standards and regulations.

3. SPECIAL CONDITIONS FOR SAFE USE *(denoted by "X" after certificate number)*

When used in an EPL ta (Da) application, the power supply to the equipment is to be rated for a prospective short circuit current of not more than 10 kA.

When fitted with 'Ex op pr' splice case, the fibre cable outside the enclosure shall be installed such that mechanical damage is prevented, including where entering or exiting the increased safety enclosure.

When marked 'Ex op is', the fibre optic source supplying this equipment shall be suitably certified as compliant with EN 60079-28:2007 and provide an inherently safe optical source (op is), EPL Gb, subsequently the parameters in Table 4 of the description apply.

When marked 'Ex op pr', the fibre connectors contained within the increased safety enclosure must not be separated whilst energised if an explosive atmosphere may be present.

If not used, fibre ST connectors within the increased safety enclosure must have dust covers fitted.

All optical components used with the Fibre Optic Cassette shall be suitable for the ratings and service temperature range of the cassette.

When marked "op sh", the fibre optic source shall be suitably certified as compliant with IEC/EN 60079-28:2015 and provide an interlocked optical source (op sh).

4. CONDITIONS OF CERTIFICATION

This approval is granted based on the submitted documentation.

Any modifications or alterations to the equipment will invalidate this IA Certificate.

The Certificate Holder is responsible for maintaining accurate records of the equipment and this IA Certificate.

All production units must be covered by either a QAN (Quality Assurance Notification) or QAR (Quality Assurance Report).

Renewal: This IA certificate may be renewed under a valid Quality Assurance Notification (QAN) or Quality Assurance Report (QAR). Imported apparatus not sold by the IA certificate expiry date must undergo this renewal process. This condition remains the responsibility of the IA Certificate Holder. Renewal of this IA certificate is the responsibility of the IA Certificate Holder.

Renewal involves a document review, including:

- Verification of the latest ATEX/IECEx certificate.
- Confirmation of a valid QAN/QAR.

Certificate holders are responsible for submitting these documents.

5. MARKING

The equipment shall bear the manufacturer's original marking plate containing all relevant Ex-certification details (applicable under the ATEX Directive). The following (or similar) information shall be clearly and permanently marked on all units:

IA Certificate Holder : eltherm Production GmbH
Ex Rating : Refer to General
IA Certificate No : S-XPL/15.1336 X

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
ii) Any conditions mentioned in the above report;
iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
v) A revision certificate replaces all previous versions of the certificate.
vi) * - Only covers equipment Imported between the “Issued” and “Expire” dates.
vii) If and when your *QAN (Quality Assurance Notification) or QAR (Quality Assurance Report)* Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted, the existing IA Certification will then be cancelled. It is thus the Certificate Holder’s responsibility to always submit the updated and valid QAN/QAR certificate(s) to Explolabs (Pty) Ltd

Reviewed by:

CC Lourens
Technical Specialist
EXPLOLABS EXPLOSION PREVENTION SERVICES

This report/certificate shall not be reproduced except in full without the written approval of the company Explolabs (Pty) Ltd shall not be liable for any losses or damages sustained on account of any failure or omission to properly perform our duties in terms of any contract undertaken by us. This disclaimer is immutable and automatically incorporated in any contract undertaken by us; notwithstanding anything to the contrary, save for the express written waiver of our managing director. By marking the equipment in accordance with the documentation/standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and tests have been successfully completed and that the product complies with the documentation and standard(s). The contents of electronic reports/certificates cannot be guaranteed. Original certification documents will be kept on file at Explolabs (Pty) Ltd