



Mining And Surface Certification (Pty) Ltd

2015/021934/07

THIS CERTIFICATE IS ISSUED AS AN I.A. CERTIFICATE IN TERMS OF THE MINE HEALTH AND SAFETY ACT, ACT NO 29 OF 1996 (AND REGULATIONS), THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993) AND REGULATION 17 OF THE ELECTRICAL MACHINERY REGULATIONS

IA CERTIFICATE	MASC M/25-2181X	Issue	0
Issue Date	23 February 2026	Expiry Date	23 February 2036
Applicant	KonNx Africa (Pty) Ltd, 5 Brighton Rd, Bramley View, Gauteng, South Africa		
Manufacturer	KonNx Africa (Pty) Ltd, 5 Brighton Rd, Bramley View, Gauteng, South Africa		
Description (See "Annex A" below)			
Equipment	300A/425A 650V/1000V Restrained Coupler	Type	Restrained Coupler Refer to "ANNEX A" for applicable type
Photo			
MARKING: <i>Must be additionally applied to the equipment</i>	Applicant / Manufacturer Type Ex Marking IA Number Rating	KonNx Africa (Pty) Ltd, As applicable "Type" Ex db I Mb MASC M/25-2181X As per description below	
WARNING(S)	"DO NOT SEPARATE WHEN ENERGIZED"		
Compliance:			
The equipment as described above and in report MASC 25-2181 has been allocated the rating <u>Explosion Protected as above</u> utilizing the principals in the following SANS Standards:			
<ul style="list-style-type: none"> SANS 60079-0: 2019 General requirements SANS 60079-1: 2015 Explosive Atmospheres – Part 1: Equipment protection by flameproof enclosures "d" SANS 1489-1: 2016 Electrical connectors in Group I and Group II hazardous locations Part 1: General Requirements for Group I hazardous areas SANS 1489-2: 2023 Electrical connectors in Group I and Group II hazardous locations Part 2: Restrained type plugs and sockets for Group I hazardous areas ARP 0108: 2018 Regulatory requirements for explosion protected apparatus 			
Conditions:			
<ul style="list-style-type: none"> This certificate covers only a national implementation of above standards for use in South African industry. It is up to the manufacturer to ensure that the product complies to all relevant standards for the application. This document will not be supported by MASC outside the borders of South Africa and may not be used for other/international certification purposes. This certificate may only be reproduced in full, is not transferable and remains the property of the issuing body. This certificate only covers the sample submitted and does not cover production units. According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved markscheme or batch testing by an accredited test laboratory). 			
Specific conditions of use:		Conditions of manufacture:	
• See "ANNEX A" below		• See "ANNEX A" below	
W. Haywood TECHNICAL SPECIALIST		M. Erasmus TECHNICAL SPECIALIST	



Apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:
SANS 10086 requirements;
Any conditions mentioned in the above certificate;
Any relevant requirements of the MHS Act;
Any restrictions and conditions enforced by the chief inspector of mines, principal inspector (Group I equipment) or chief inspector of factories (Group II equipment).

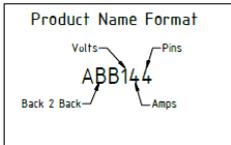
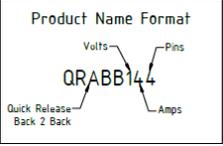


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Mining And Surface Certification (Pty) Ltd
Unit 5 Lelyta Park, 45 Jurg Avenue, Hennospark, Ext 87
Centurion 0157

**IA CERTIFICATE: MASC M/25-2181X
Equipment: 300A/425A 650V/1000V Coupler**

ANNEX A

Description	Enclosure	Populated	Unpopulated																														
		General	<p>The coupler makes provision for three mains and one pilot to be connected to the internal contact pins which are fitted into the insulator assembly (barrel),</p> <p>The coupler is designed for an installation where a pilot controls circuit is in operation acting as an electrical interlock. The front and rear interface of the coupler are identical and is compatible with plug assemblies manufactured according to the same specification.</p> <p>The coupler consists of two main parts which are similar to an electrical socket. The two main parts are secured together and flanged with spigot joints back to back to retain the flameproof characteristics. The two main parts are secured together with 4 x M10 x 1.5 x 25 long SHCS (grade 8.8) fasteners.</p> <p>The following Type / Models are provided in the 300 series that comply to the requirements of SANS 1489-1 and SANS 1489-2:</p> <p>Table 1:</p> <table border="1"> <thead> <tr> <th>Model</th> <th>Volts</th> <th>Amps</th> </tr> </thead> <tbody> <tr> <td>ABB634</td> <td>650</td> <td>300</td> </tr> <tr> <td>ABB644</td> <td>650</td> <td>425</td> </tr> <tr> <td>ABB134</td> <td>1100</td> <td>300</td> </tr> <tr> <td>ABB144</td> <td>1100</td> <td>425</td> </tr> </tbody> </table>  <p>The following Type / Models are provided in the 300 series that do not form part to the requirements of SANS 1489-1 and SANS 1489-2 and only to SANS 60079-0 and SANS 60079-1:</p> <p>Table 2:</p> <table border="1"> <thead> <tr> <th>Model</th> <th>Volts</th> <th>Amps</th> </tr> </thead> <tbody> <tr> <td>QRABB634</td> <td>650</td> <td>300</td> </tr> <tr> <td>QRABB644</td> <td>650</td> <td>425</td> </tr> <tr> <td>QRABB134</td> <td>1100</td> <td>300</td> </tr> <tr> <td>QRABB144</td> <td>1100</td> <td>425</td> </tr> </tbody> </table> 	Model	Volts	Amps	ABB634	650	300	ABB644	650	425	ABB134	1100	300	ABB144	1100	425	Model	Volts	Amps	QRABB634	650	300	QRABB644	650	425	QRABB134	1100	300	QRABB144	1100	425
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Ratings	Refer to "Table 1" and "Table 2" above																																
Standard compliance	See "certificate" above																																
Warnings	See "certificate" above																																
Conditions of Certification:																																	
Specific conditions of use	<ul style="list-style-type: none"> The unit shall not remain / be energized when connected or disconnected. The coupler must be used with an approved plug according to the same specification / standards as listed in this certificate. The coupler is only permitted to be used in ambient temperatures ranging between -20°C to 40°C at the point of mounting. The coupler must not remain or become energized when not engaged. The units as listed in "Table 2" are only certified under SANS 60079-0 and SANS 60079-1 and not for SANS 1489-1 and SANS 1489-2. 																																
Conditions of manufacture	<ul style="list-style-type: none"> The labels with information / certification details as indicated in this certificate must be maintained on the enclosure, the label must be legible and indelible permanently fixed to the apparatus. It is a condition of certification that a copy of this certificate and instructions must be provided / made available with each assembly. 																																

Issue No	Description of Change
0	Original Issue

This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.

While every endeavour is made to ensure that a test / assessment / inspection is representative and accurately performed, and that a report / certificate is accurate in the quoted results and conclusions drawn from the test / assessment / inspection, MASC or its directors/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report / certificate issued pursuant to a test / assessment / inspection.

MASC takes no responsibility for any non-conformances, exclusions or any results / assessments / inspections not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer / applicant attests on his own responsibility that the equipment / installation has been designed and constructed in accordance with the applicable requirements of the relevant standards and documentation, that the routine verifications / routine tests have been correctly completed and the equipment / installation complies with the documentation and standard(s).

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Mining And Surface Certification (Pty) Ltd Reg No: 2015/021934/07
Directors: Roelof Viljoen & Francois du Toit
Unit #5, Lelyta Park, 45 Jurg Avenue, Hennospark Ext 87, Centurion, 0157
P.O. Box 14344, Clubview, 0014
Tel: 012 653 2959 ♦ Fax: 086 605 8568
e-mail: info@masc-ex.co.za



Our ref: 25-2181
Enquiries: M. Erasmus
Fax: 086 605 8568
Tel: (012) 653 2959
Date: 23 February 2026

KonNx Africa (Pty) Ltd.
5 Brighton Rd,
Bramley View,
Gauteng,
South Africa

MASC Report No: 25-2181

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300A/425A 650V/1000V RESTRAINED COUPLER

1. SUBJECT

The evaluation and verification of 300A/425A 650V/1100V Restrained Coupler for compliance with the relevant requirements of the following standards:

- **SANS 60079-0: 2019** Explosive atmospheres – Part 0: Equipment – General requirements
- **SANS 60079-1: 2015** Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures “d”
- **SANS 1489-1: 2016** Electrical connectors in Group I and Group II hazardous locations Part 1: General Requirements for Group I hazardous areas
- **SANS 1489-2: 2023** Electrical connectors in Group I and Group II hazardous locations Part 2: Restrained type plugs and sockets for Group I hazardous area
- **ARP 0108: 2018** Regulatory requirements for explosion protected apparatus

2. DESCRIPTION OF EQUIPMENT



The **coupler** makes provision for three mains and one pilot to be connected to the internal contact pins which are fitted into the insulator assembly (barrel),

The coupler is designed for an installation where a pilot controls circuit is in operation acting as an electrical interlock. The front and rear interface of the coupler are identical and is compatible with plug assemblies manufactured according to the same specification.

The coupler consists of two main parts which are similar to an electrical socket. The two main parts are secured together and flanged with spigot joints back to back to retain the flameproof characteristics. The two main parts are secured together with 4 x M10 x 1.5 x 25 long SHCS (grade 8.8) fasteners.

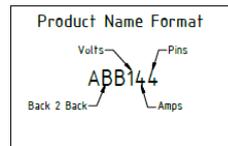
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The following Type / Models are provided in the 300 series that comply to the requirements of SANS 1489-1 and SANS 1489-2:

Table 1:

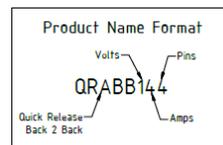
<u>Model</u>	<u>Volts</u>	<u>Amps</u>
ABB634	650	300
ABB644	650	425
ABB134	1100	300
ABB144	1100	425



The following Type / Models are provided in the 300 series that do not form part to the requirements of SANS 1489-1 and SANS 1489-2 and only to SANS 60079-0 and SANS 60079-1:

Table 2:

<u>Model</u>	<u>Volts</u>	<u>Amps</u>
QRABB634	650	300
QRABB644	650	425
QRABB134	1100	300
QRABB144	1100	425



3. DOCUMENTATION

Document No.	Document Title	Sheet	Issue	Date
ExAB2B300_1000	300 B2B SERIES INDEX	1 of 21	0	17/06/2025
ExAB2B300_1001	300 QR B2B SERIES INDEX	2 of 21	0	17/06/2025
ExAB2B300_1100	COMMON B2B BODY	3 of 21	0	17/06/2025
ExAB2B300_1101	PLUG AND B2B BODY ENGAGED	4 of 21	0	17/06/2025
ExAB2B300_1102	COMMON OPERATING MECHANISM	5 of 21	0	17/06/2025
ExAB2B300_1200	650V 300A 4 PIN	6 of 21	0	17/06/2025
ExAB2B300_1201	650V 425A 4 PIN	7 of 21	0	17/06/2025
ExAB2B300_1202	1100V 300A 4 PIN	8 of 21	0	17/06/2025
ExAB2B300_1203	1100V 425A 4 PIN	9 of 21	0	17/06/2025
ExAB2B300_1300	300 B2B O-RING SPECIFICATIONS	10 of 21	0	17/06/2025
ExAB2B300_1301	300 B2B CAVITY VOLUME MIN PLUG ENGAGEMENT	11 of 21	0	17/06/2025
ExAB2B300_1302	300 B2B PAWL SCREW DIMENSIONS	12 of 21	0	17/06/2025
ExAB2B300_1303	300 B2B PILOT ASSEMBLY	13 of 21	0	17/06/2025
ExAB2B300_1304	300 B2B PHASE ASSEMBLIES	14 of 21	0	17/06/2025
ExAB2B300_1305	300 B2B CAGE DIMENSIONS	15 of 21	0	17/06/2025
ExAB2B300_1306	COMMON 300 B2B QUICK RELEASE	16 of 21	0	17/06/2025
ExAB2B300_1307	MATERIAL SCHEDULE	17 of 21	0	17/06/2025
ExAB2B300_1308	PRODUCT MARKING LABEL	18 of 21	0	17/06/2025
ExAB2B300_1309	COMMON 300 B2B RATCHET RELEASE	19 of 21	0	17/06/2025
ExAB2B300_1310	300 B2B PIN LOCKOUT	20 of 21	0	17/06/2025
ExAB2B300_1311	FASTENER SCHEDULE	21 of 21	0	17/06/2025
Customer Copy				
ExAB2B300_C1000	300 B2B SERIES INDEX CUSTOMER COPY	1 of 7	0	17/06/2025
ExAB2B300_C1001	300 QR B2B SERIES INDEX CUSTOMER COPY	2 of 7	0	17/06/2025

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ExAB2B300_C1100	COMMON 300 B2B BODY CUSTOMER COPY	3 of 7	0	17/06/2025
ExAB2B300_C1101	PLUG AND B2B BODY ENGAGED CUSTOMER COPY	4 of 7	0	17/06/2025
ExAB2B300_C1306	COMMON 300 B2B QUICK RELEASE CUSTOMER COPY	5 of 7	0	17/06/2025
ExAB2B300_C1308	PRODUCT MARKING LABEL CUSTOMER COPY	6 of 7	0	17/06/2025
ExAB2B300_C1311	FASTENER SCHEDULE CUSTOMER COPY	7 of 7	0	17/06/2025

MASC lab notes and documentation is kept in the MASC **25-2181** project file.

4. METHOD OF EVALUATION

All tests were conducted with respect to SANS 60079-0, SANS 60079-1 and SANS 1489 part 1 and part 2 requirements.

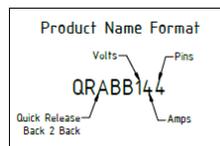
5. RESULTS OF EVALUATION

Nothing contrary to the relevant requirements of SANS 60079-0, SANS 60079-1 and SANS 1489 part 1 and part 2 was observed.

The following Type / Models are provided in the 300 series that do not form part to the requirements of SANS 1489-1 and SANS 1489-2 and only to SANS 60079-0 and SANS 60079-1:

Table 2:

<u>Model</u>	<u>Volts</u>	<u>Amps</u>
QRABB634	650	300
QRABB644	650	425
QRABB134	1100	300
QRABB144	1100	425



6. CONCLUSION

The 300 Series Coupler as described in Clause 2 of this report and in the condition as evaluated and examined is Explosion protected Ex db I Mb. It may be used in Zone 1, Gas Group I, hazardous areas underground in fiery mines (Methane and Coal Dust) maximum surface temperature 150°C according to SANS 60079-0, SANS 60079-1, SANS 1489-1 and SANS 1489-2.

It is suitable for use in hazardous areas in underground coal mines.

7. CONDITIONS OF ASSESSMENT

- Any alterations and / or modifications to the design or construction of the system, its components or exceeding their ratings will invalidate this test report.
- All serial numbers must be manufactured under an approved mark scheme or covered by a valid batch report.
- This report only covers the prototype as described in Clause 2.

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MASC Report No 25-2181

8. MARKING

The following marking must be applied to the equipment:

KonNx Africa (Pty) Ltd.	
Type:	As applicable "Type"
Ex Marking:	Ex db I Mb
IA Number:	MASC M/25-2181X
Serial Number:	As per "Conditions of Assessment"

"DO NOT SEPARATE WHEN ENERGIZED"

9. CONDITIONS OF CERTIFICATION**9.1 Special conditions of safe use (X)**

- The unit shall not remain / be energized when connected or disconnected.
- The coupler must be used with an approved plug according to the same specification / standards as listed in this certificate.
- The coupler is only permitted to be used in ambient temperatures ranging between -20°C to 40°C at the point of mounting.
- The coupler must not remain or become energized when not engaged.
- The units as listed in "Table 2" are only certified under SANS 60079-0 and SANS 60079-1 and not for SANS 1489-1 and SANS 1489-2.

9.2 Conditions of manufacture

- It is a condition of certification that a copy of this certificate and instructions must be provided / made available with each plug and socket assembly. The instructions should include the plug and socket, assembly, inspection, repair / maintenance requirements.
- According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory.)

10. VALIDITY OF THIS REPORT

This Test Report only covers the equipment and process as stated in this report. Any alterations and/or modifications to the design / repairs or construction of the enclosure(s), exceeding the rating or using it in a hazardous location other than those for which tested, will invalidate this report.

Yours faithfully

M. Erasmus
TECHNICAL SPECIALIST

W. Haywood
TECHNICAL SPECIALIST

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