



Mining And Surface Certification Pty (Ltd)

2015/021934/07



Certificate No: MASC MS/15-0212X
Issue: 30 May 2018
Expire: 28 May 2025
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APPROVAL CERTIFICATE

(Revision 1: Update to No 1 CCG Ex d Box and Addition of No 1 CCG-SPG Ex d Box)

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT (INCORPORATION THE MINE HEALTH AND SAFETY ACT) AND REGULATION 9 (1) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

Ex – Type Examination

Certificate number: MASC MS/15-0212X
Equipment: Flameproof Enclosure: No 1 CCG Ex d Box and No 1 CCG-SPG Ex d Box
Serial No: (See "Conditions of Certification")
Applicant: CCG Cable Terminations
Address: 33-37 Forge Road,
Spartan Industrial Area,
Kempton Park,
1619

Manufacturer: CCG Cable Terminations
Address: 33-37 Forge Road,
Spartan Industrial Area,
Kempton Park,
1619

DESCRIPTION:

No 1 CCG Ex d Box:

The cast iron cylindrical junction box enclosure (approximately 154mm diameter and a height of 81 mm) consists of two parts, a base and a cover with a flanged joint. Four M6 x 20 LG Hex Socket Head cap screws (Stainless Steel, A2-70) are used to fasten the cover to the base.

The enclosure with internal volume 450ml has optionally four M20 / M25 x 1.5 (6H) gland entries equally spaced around the circumference of the base.

The junction box enclosures may be fitted with terminal blocks on a single rail or conductors may be internally connected by means of end connectors / insulated terminations.

The No 1 CCG-SPG Ex d box:

The cast iron cylindrical junction box enclosure consists of two parts, a base and a cover with a spigot joint. Four M6 x 20 LG Hex Socket Head cap screws (Stainless Steel, A2-70) are used to fasten the cover to the base.

The enclosure with internal volume of approximately 500ml has optionally four M20 / M25 x 1.5 (6H) gland entries equally spaced around the circumference of the base.

The junction box enclosures may be fitted with terminal blocks on a single rail or conductors may be internally connected by means of end connectors / insulated terminations.

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IA CERTIFICATE NUMBER: MASC MS/15-0212X
Flameproof Enclosure: **No 1 CCG Ex d Box and No 1 CCG-SPG Ex d Box**
(Revision 1)

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MARKING:

Type: No 1 CCG Ex d Box
Ex Classification: Ex db I Mb, Ex db IIC T6 Gb, Ex tb IIIC T85°C Db
IP Rating: IP 66/68
Ambient Temp: $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq 55^{\circ}\text{C}$
Certificate No: MASC MS/15-0212X
IECEX ICS 15.0005X
Rating: V** _____
Serial No: _____
Date: _____

WARNING: DO NOT OPEN WHEN ENERGIZED OR WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

** : According to minimum rated voltage of terminal blocks

Type: No 1 CCG-SPG Ex d Box
Ex Classification: Ex db I Mb, Ex db IIA T6 Gb, Ex db IIB T6 Gb, Ex db IIC T6 Gb., Ex db IIIC T85°C Db
IP Rating: IP 66/68
Ambient Temp: $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq 55^{\circ}\text{C}$
Certificate No: MASC MS/15-0212X
IECEX ICS 15.0005X
Rating: V** _____
Serial No: _____
Date: _____

WARNING: DO NOT OPEN WHEN ENERGIZED OR WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

** : According to minimum rated voltage of terminal blocks

COMPLIANCE:

The equipment as described above and in report(s) ZA/ICS/ExTR15.0005/00 and ZA/ICS/ExTR18.0004/00 is hereby certified “Explosion Protected” Ex db I Mb, Ex db IIC T6 Gb, Ex tb IIIC T85°C Db, IP 66/68, $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq 55^{\circ}\text{C}$ and Ex db I Mb, Ex db IIA T6 Gb, Ex db IIB T6 Gb, Ex db IIC T6 Gb., Ex db IIIC T85°C Db, IP 66/68, $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq 55^{\circ}\text{C}$ and is suitable for use in hazardous locations as stated below and as tested, assessed and inspected in accordance with the relevant requirements of SANS / IEC Standards:

The evaluation was conducted according to the requirements of:

- i) SANS (IEC) 60079-0: 2011 “Explosive atmospheres – Part 0: Equipment — General requirements”
- ii) SANS (IEC) 60079-1: 2015 “Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures ‘d’”
- iii) SANS (IEC) 60079-31: 2014 “Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosures ‘t’”

Location	Zone 1 & 2 Zone 21 & 22	Gas Surface / Mining Dust
Hazard Frequency	---	Intermittent as could occur under normal operating conditions in hazardous area
Environment	Group I Group IIA, IIB, IIC Group IIIC	Methane and coal dust Propane to Hydrogen / Acetylene Dust (Metallic & non-metallic)
Surface Temperature	T6	(T85°)
Service/Ambient Temperature	-20°C to 55°C	Ambient Temperature

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The use of apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:

- i) SANS 10086 requirements;
- ii) Any conditions mentioned in the above report;
- iii) Codes of Practice enforced in terms of Regulations 21.17.2 of Minerals Act, by Chief Inspector of Mines;
- iv) Any restrictions and conditions enforced by Chief Inspectors of Mines, Principal Inspector (Group I equipment) of Chief Inspector of Factories (Group II equipment);
- v) Any relevant requirements of the MHS Act or the OHS Act.

CONDITIONS OF MANUFACTURE

- A copy of the certificate must be made available to the end user.
- The equipment passed a four times hydraulic overpressure test. Therefore, no routine pressure testing is required.

SPECIAL CONDITIONS OF USE

- The cover may only be secured with fasteners as in the description.
- Some flamepaths are more restrictive than the minimum requirements in the standard. Information w.r.t. the flamepaths must be obtained from the manufacturer for consideration of maintenance / repair.
- Suitably certified glands / adaptors / plugs shall be used to maintain the flameproof / Ex tb (including the IP rating) characteristics as applicable.
- The nominal current (max continuous circuit current) per circuit in the junction box is limited by the size of the conductor and terminal block / connector ratings. The lower of the values in the table below and the maximum rated current of the terminal block / connector shall be used.

Conductor size	Current limitation
1.5 mm ²	15 A
2.5 mm ²	17 A
4 mm ²	20 A
6 mm ²	25 A

CONDITIONS OF CERTIFICATION:

- This approval covers all units sold from the date of this approval and covered by a valid QAR and/or South African Markscheme / Batch testing.
- The apparatus must be additionally marked in a clear, legible, visible and indelible manner with the marking details above.
- This document only covers the equipment with the design and materials as originally tested.



R Viljoen
TECHNICAL SPECIALIST

Mining And Surface Certification

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 is representative and accurately performed, and that a report is accurate in the quoted results and conclusions drawn from the test / assessment, MASC or its members/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 issued pursuant to a test / assessment.

MASC takes no responsibility for any non-conformances, exclusions or any results / assessments not in compliance with the standards. 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 routine tests have been successfully completed and the product complies with the documentation and standard(s).

This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practises.

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