



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx TSA 06.0035X issue No.: 2

Status: **Current**

Date of Issue: **2009-02-24** Page 1 of 4

Certificate history:
Issue No. 2 (2009-2-24)
Issue No. 1 (2007-11-30)
Issue No. 0 (2007-1-31)

Applicant: **CMG Pty Ltd**
19 Corporate Avenue
Rowville Victoria 3178
Australia

Electrical Apparatus: **Range of PPA/PPC induction motors frame size 80 to 400**
Optional accessory:

Type of Protection: **Ex e, nA, tD**

Marking: **CMG Three Phase Motor**
Duty: Type:
Ex e II T3 (Tamb 50 Deg C)
Ex nA II T3 (Tamb 60 Deg C)
Ex tD A21 IP66 T135 Deg C (Tamb 50 Deg C)
IECEx TSA 06.0035X
S/No:

Approved for issue on behalf of the IECEx
Certification Body: Ujen Singh

Position: Quality and Certification Manager

Signature:
(for printed version)

Date:


24.02.2009

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





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Manufacturer: **CMG Pty Ltd**
19 Corporate Avenue
Rowville Victoria 3178
Australia

Manufacturing location(s):
CMG Electric Motors NZ Ltd
303E / 315A Rosebank Road
Avondale, Auckland
New Zealand
CMG Electric Motors Asia Pacific Pte Ltd
69 Tech Park Crescent
Singapore 638073
Singapore

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-15 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 60079-7 : 2001 Edition: 3	Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety 'e'
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

AU/TSA/ExTR06.0048/00
AU/TSA/ExTR06.0049/00
AU/TSA/ExTR06.0050/00

Quality Assessment Report:

AU/TSA/QAR06.0012/00
AU/TSA/QAR07.0008/00
AU/TSA/QAR07.0008/01
AU/TSA/QAR07.0009/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The PPA/PPC range of squirrel cage induction motors is manufactured from cast iron and comprises a main body with a separate bolt-on terminal box. The motors are designed to operate on 3 phase, 100 V to 800 V for Ex e and 100 V to 1000 V for Ex nA and Ex tD, 40 Hz, 50 Hz or 60 Hz power systems. Motors may be supplied with auxiliary terminal boxes as required for the connection of optional anti-condensation heaters, RTD'S and thermistors. Motors are available as foot mounted, flange mounted or foot and flange mounted. The bearings have V-ring seals and the lid of the main terminal box has a nitrile rubber gasket seal, which gives the motors an IP rating of IP66. Electrical connection is made via a threaded entry in the main terminal box wall, designed to accommodate either a gland or conduit.

The drawings relating to these motors are listed in Annexure 1 of Issue 0.

The range of motors type designation PPA or PPC, with the output power allocation, are listed in Annexure 2 of Issue 0. PPA indicates allocation as per Australian Standards, while PPC indicates allocation as per Cenelec Standards. However, the motors for a particular frame size are identical in construction.

The equipment may include one or more of the options detailed in Annexure 3 of Issue 0..

CONDITIONS OF CERTIFICATION: YES as shown below:

1) It is a condition of safe use for Ex tD motors operated from a VVVF drive that the thermal protection devices be connected into the motor control circuit in such a manner as to disconnect the source of supply in order to prevent the nominated temperature class from being exceeded.

2) It is a condition of safe use for Ex nA motor operated from a VVVF drive that the following shall apply: a) The applied load shall be inside the limits specified by the loadability curve shown in drawing PPA151. The motors are suitable for operation with VACON brand variable frequency drive types or equivalent types as determined by test and / or calculation.

b) The thermal protection devices shall be connected into the motor control circuit in such a manner as to disconnect the source of supply in order to prevent the nominated temperature class from being exceeded.

3) It is a condition of safe use that on installation, if a cable gland is used, then this cable gland must be appropriately certified, and have an IP rating equivalent with the equipment rating.

4) It is a condition of safe use that if a shaft encoder or vibration sensor is fitted as an option it shall be appropriately certified for Zone 1, Group II, T3 for Exe or Zone 2 Group II, T3 for Ex nA or Ex tD A21, T135 °C for Ex tD.

5) It is a condition of manufacture that each Ex e motor shall have a dielectric strength test carried out in accordance with Clause 7 of IEC 60079-7:2001.

6) It is a condition of manufacture that each Ex nA motors shall have dielectric strength test carried out in accordance with Clause 34.2.1 of IEC60079-15: 2005.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Changes relating to Issue 2

1. Change to the address of CMG Electric Motors Asia Pacific Pte Ltd from 21 Tuas South Street 1 Singapore 638032 to CMG Electric Motors Asia Pacific Pte Ltd 69 Tech Park Crescent Singapore 638073.
2. Removal of the manufacturing location of Nanyang Explosion Protection Group Co. Ltd.

Conditions of certification relating to Issue 2.

All previous conditions still apply.

Drawings relating to Issue 2.

No changes have been made to the previously certified drawings.