

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

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

**David Price** 

Certificate No.: **IECEX TRA 16.0014X** Page 1 of 5

Issue No: 3 Status: Current

2023-09-18 Date of Issue:

Applicant: **CMI Electrical Products** 

Unit F3

29 Birnie Avenue Lidcombe NSW 2141

**Australia** 

300/425A (Body Size C) 3.3kV/6.6kV Range of Cable Coupling Devices Equipment:

Optional accessory: Gland Adaptor Assembly

Type of Protection: **Flameproof** 

Marking: Ex db I Mb

IP66

Approved for issue on behalf of the IECEx

Certification Body:

Position: **Certification Authority** 

Signature:

(for printed version)

2023-09-18 (for printed version)

This certificate and schedule may only be reproduced in full.

This certificate is not transferable and remains the property of the issuing body.
 The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate history: Issue 2 (2019-12-12)

Issue 1 (2018-01-24) Issue 0 (2017-03-18)

Certificate issued by:

**Ex Testing and Certification Pty Ltd** 1/30 Kennington Drive Tomago NSW 2322 Australia





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Manufacturer: CMI Electrical Products

Unit F3

29 Birnie Avenue Lidcombe NSW 2141

Australia

Manufacturing CMI Electrical Products

locations: Unit F3

29 Birnie Avenue Lidcombe NSW 2141

Australia

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 equipment 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 60079-0:2011 Explosive atmospheres - Part 0: General requirements

Edition:6.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition:7.0

This Certificate **does not** indicate compliance with 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 Reports:

AU/ExTC/ExTR19.0046/00 AU/TRA/ExTR16.0019/00 AU/TRA/ExTR17.0017/00

**Quality Assessment Report:** 

AU/TSA/QAR11.0009/09



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#### **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Bolted Range of Cable Coupling Devices are manufactured from stainless steel 303 grade or high tensile brass type C86500. The range has an electrical rating of 3.3/6.6 kV AC 300/425 A. The equipment is intended for and may only be used in restricted earth fault AC power supply circuits. The equipment is manufactured by CMI Electrical Products which also trade as Minto Industrial Products (M.I.P).

There are four types of coupler assemblies in the range the AA37, AB37, AA47 & AB47, all of which may be fitted with a pilot diode, which is installed in the end cover, to provide termination of the pilot circuit. The coupler and adaptor/end cover are retained by four M12 screws and nuts. The complete assembly of the Adaptor and Coupler has an IP66 rating as assessed to the requirements of IEC60529.

The coupler body is common to all assemblies and has three power conducting (phase) sockets, one pilot circuit socket and two optional auxiliary sockets. The body of the couplers are a solid metallic construction with Teflon insulators for the phase and pilot circuits. When the coupler is not mated to a plug it shall be fitted with the end blanking cover F-4716@.

Refer to Annex for more details.

SPECIFIC CONDITIONS OF USE: YES as shown below: Refer to Annex for details.



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

Refer to the Annex for Details



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Additional information:

ExTC Job: 23028

Annex:

IECEx TRA 16.0014X-3 Certificate Annex - Final.pdf



## Annexe



**Annexe for Certificate No.:** 

**IECEX TRA 16.0014X** 

Issue No.:

3

#### **Description (Cont'd from Certificate):**

The AA37 and AA47 incorporates an adaptor for assembly with the No.2 to No.5 cable glands certified under IECEx TSA 13.0009U.

The AB37 and AB47 are intended for use with a flameproof enclosure by using an adaptor box for attachment of the coupler body to a mating flamepath on a separately certified flameproof enclosure. The special fasteners used to assemble the coupler equipment and for fitment to the flameproof enclosure shall be minimum grade 4.6 Mild Steel (Yield stress 240 MPa) or for Stainless Steel A\*-70 (Yield stress 450 MPa).

The electrical equipment has been designed to AS/NZS 1300:2009 (incorporating amendment No.1) and has been tested for Short Circuit Impulse Withstand and HV tests as per AS/NZS 1300:2009 (incorporating amendment No.1).



AA47 Model (Glanded)



AB47 Model (Flange Mounted)



## **Annexe**



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#### **Conditions of Certification pertaining to Issue 0 of this Certificate:**

 The flange flamepath used to assemble the adaptor to a flameproof enclosure shall be of minimum width 12.5mm and maximum gap 0.4mm and a surface roughness Ra of 6.3µm or better.

#### **Drawing list pertaining to Issue 0 of this Certificate:**

Manufacturer's Documents						
Title:	Drawing No.:	Pages	Rev. Level:	Date:		
425A 3.3/6.6KV BOLTED	F-181	1	J	2016-12-20		



## **Annexe**



Annexe for Certificate No.: IECEx TRA 16.0014X Issue No.: 3

#### Variations permitted by Issue 1 of this certificate:

- The insulators & insulator retaining plates may be machined with hexagonal features to stop the
  rotation of the insulators during installation of the sockets and cable.
   The original insulators and insulator retaining plate design may still be manufactured under the
  drawings listed in Issue 0 of this certificate.
- 2. Modification of drawing to allow for O-ring groove on flange adaptor.
- 3. The removal of ANZEx certification number from the marking label.

Compliance has been assessed in report AU/TRA/ExTR17.0017/00.

#### **Conditions of Certification pertaining to Issue 1 of this Certificate:**

No changes to conditions from previous Issue 0

#### **Drawing list pertaining to Issue 1 of this Certificate:**

#### **Manufacturer's Documents**

Title:	Drawing No.:	Pages	Rev. Level:	Date:
425A 3.3/6.6KV BOLTED COUPLER BODY SIZE "C"	F-181	1	K	2017-11-22
425A 3.3/6.6KV BOLTED ADAPTOR BODY SIZE "C"	F-182	1	М	2017-12-20
Instructions for Body Size C Bolted Range Inst. Body Size C - 1	Inst. Body Size C – 1	3	С	2017-11-01



### Annexe



Annexe for Certificate No.: IECEx TRA 16.0014X Issue No.: 3

#### Variations permitted by Issue 2 of this certificate:

Compliance were needed can be found in report AU/ExTC/ExTR19.0046/00.

Drawing changes as listed below:

Editorial change detail	Drawing No: F181 rev L	Drawing No: F182 rev N	Comments
Thread Clarified	Reduced earth strap fastener size from M10 x 1.5 to M8 x 1.25	Reduced earth strap fastener size from M10 x 1.5 to M8 x 1.25	Drawing error, sample originally had an M8 x 1.25 fastener. Assessment not required.
Pilot Bung Added	Pilot bung retained mechanically within any Pilot or Auxiliary bore, by the Retaining plate, which in turn, is attached to the casting	Pilot bung retained mechanically within any Pilot or Auxiliary bore, by the Retaining plate, which in turn, is attached to the casting	The bungs are placed in the auxiliary or pilot contacts when not in use. Assessment not required as they play no part in the Ex properties.
Earth strap added	Exponential Strap	Exponential Strap	Assessment not required.
Title block updated	Added brass version to label. Change 6.6kV to 6600 V.	Added brass version to label. Change 6.6kV to 6600 V.	Assessment of brass variant not required as it was previously assessed in report AU/TRA/ExTR17.0017/00.
Parts list updated	Edited and added a variety of parts dealing with the earth strap & pilot bung.	Edited and added a variety of parts dealing with the earth strap & pilot bung.	Assessment not required.
Rating details corrected	"6600 V" WAS "6.6KV BOLTED COUPLER" Brass variant added	"6600 V" WAS "6.6KV BOLTED ADAPTOR" Brass variant added	Assessment of brass variant not required as it was previously assessed in report AU/TRA/ExTR17.0017/00.
Pilot / Auxiliaries clarified	"1 x PILOT/ 2 x AUXILLARY CONTACT SOCKETS" was "3 PILOT CONTACT SOCKETS"	"1 x PILOT/ 2 x AUXILLARY CONTACT SOCKETS" was "3 PILOT CONTACT SOCKETS"	Assessment not required as it is only an editorial change
Removed Notes Reference	Removed "Refer Note 1 & 13 from earth strap fastener as it is not a special fastener	Removed "Refer Note 1 & 13 from earth strap fastener as it is not a special fastener	Assessment not required as it is only an editorial change
Clarified Pilot location	Added "pilot" position indicator	Added "pilot" position indicator	Assessment not required as it is only an editorial change

- The addition of two drawings to split the 300 Amp and 425 Amp variants of the plugs and receptacles.
   The only difference is that the 300 Amp version has smaller diameter pins and sockets which are tolerance as per AS/NZS 1300:2009
- The addition of bungs which are placed in the auxiliary or pilot contacts when not in use. Assessment not required as they do not affect the Ex properties of the receptacles.
- Reduction of the minimum yield strength of coupler fasteners from of 450 MPa down to 240 MPa.
- Change to the description to reflect this supplementary.



### **Annexe**



Annexe for Certificate No.: IECEx TRA 16.0014X Issue No.: 3

#### **Conditions of Certification pertaining to Issue 2 of this Certificate:**

No changes to conditions from previous Issue 0

#### **Drawing list pertaining to Issue 2 of this Certificate:**

#### **Manufacturer's Documents**

Title:	Drawing No.:	Pages	Rev. Level:	Date:
425A 3.3/6.6KV BOLTED COUPLER BODY SIZE "C"	F-181	1	L	2019-09-25
300A 3.3/6.6KV BOLTED COUPLER BODY SIZE "C"	F-181-3	1	Α	2019-11-08
425A 3.3/6.6KV BOLTED ADAPTOR BODY SIZE "C"	F-182	1	N	2019-09-25
300A 3.3/6.6KV BOLTED COUPLER BODY SIZE "C"	F-182-3	1	А	2019-11-08
Instructions for Body Size C Bolted Range Inst. Body Size C - 1	Inst. Body Size C – 1	3	D	2019-09-25

#### Variations permitted by Issue 3 of this certificate:

Change of Applicant and Manufacturer address to new facility.

### Specific Conditions of Use pertaining to Issue 3 of this Certificate:

No change to conditions from Issue 0 of the certificate.

#### **Drawing list pertaining to Issue 3 of this Certificate:**

No changes to drawings from previous issue of the certificate.