



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.:	IECEx TSA 15.0004X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 2	Issue 1 (2016-08-11) Issue 0 (2015-07-14)
Date of Issue:	2023-09-22		
Applicant:	CMI Electrical Products Unit F3, 3 - 29 Birnie Avenue Lidcombe 2141 Australia		
Equipment:	Multi Purpose Plug 300A/425A 660V/1.1kV/3.3kV Restrained Plug - Becker Node		
Optional accessory:			
Type of Protection:	Ex d [ia]		
Marking:	CMI or M.I.P or Trade Mark, Multi Purpose Plug*.... Ex d [ia Ma] I Mb IP66, IECEx 15.0004X Serial Number _____ Type A 'DO NOT SEPARATE WHEN ENERGIZED' *Refer to Tables 1 & 2		

Approved for issue on behalf of the IECEx
Certification Body:

Debbie Wouters

Position:

Acting Quality & Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

22nd September 2023

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 www.iecex.com or use of this QR Code.



Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





IECEx Certificate of Conformity

Certificate No.: **IECEx TSA 15.0004X**

Page 2 of 4

Date of issue: 2023-09-22

Issue No: 2

Manufacturer: **CMI Electrical Products**
Unit F3, 3 - 29 Birnie Avenue
Lidcombe 2141
Australia

Manufacturing
locations:

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 60079-1:2007 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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/TSA/ExTR15.0002/00](#)

[AU/TSA/ExTR15.0002/01](#)

Quality Assessment Report:

[AU/TSA/QAR11.0009/08](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX TSA 15.0004X**

Page 3 of 4

Date of issue: 2023-09-22

Issue No: 2

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The CMI 300 A/425 A 660V/1100 V/3300 V Restrained Multi-Purpose Plug – Becker Node consists of a flameproof Ex d Group I certified empty enclosure under IECEx TSA 15.0003U and ANZEx 15.3001U, which is used to house a separately certified intrinsic safety device Becker Mining Node.

Type BMN-module, certified under IECEx INE 08.0003U and ANZEx 13.3025U.

Refer to the attached Annexe for details.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The CMI Multi purpose Plug 300 A/425 A, 660V/1100 V/3300 V Restrained Plug – Becker Node must be fitted to Restrained Receptacles and Restrained Receptacles with cable gland and bracket of 300A/425 A, 660 V/1100 V/3300 V range certified under IECEx scheme certificate IECEx TSA 13.0005X.
2. When the CMI Multi purpose Plug 300 A/425 A, 660V/1100 V/3300 V restrained plug– Becker Node is engaged with CMI receptacle, the assembly must be locked by jacking spindle or quick release locking mechanism. Further the plug is marked with the following text: "DO NOT SEPARATE WHEN ENERGISED".



IECEx Certificate of Conformity

Certificate No.: **IECEx TSA 15.0004X**

Page 4 of 4

Date of issue: 2023-09-22

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variations Permitted by Issue 2:

Applicant and Manufacturer address has been relocated to Unit F3, 3 - 29 Birnie Avenue, Lidcombe NSW 2141 Australia, previously 18-20 Railway Road, Meadowbank NSW 2114 Australia.

Annex:

[Annexe_IECEx TSA 15.0004X-2_1.pdf](#)



IECEx Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEx TSA 15.0004X	Issue No.:	2
------------------------------------	--------------------	-------------------	---

Equipment description continue

The CMI Multi-purpose plug fitted with Becker Mining Node Type BMN- consists of cylindrical plug casting body, which one side has unpopulated three power conducting (phase) sockets and one populated pilot circuit socket, and another side is attached with cylindrical phase condition body casting and closed by metallic dummy plug cap. The Becker mining Node Type BMN is fitted inside of the multi-purpose plug and retained on the wall of dummy cap by Silicone adhesive sealant. The Node module connects to Pilot continuity circuit and uses type of protection Ex ia. It can be supplied from the contractor module. Input parameters for Becker Node Type BMN-, terminal X100 are shown in Table 1.

Table 1

U_i (V)	I_i (mA)	P_i (W)	L_i (mH)	C_i (μF)
30.4	200	1.54 W	0	0

The multi-purpose plug must be fitted to the relevant 300 A/425 A, 660 V/1100 V/3300 V CMI restrained receptacle or restrained receptacle with cable gland and bracket or back to back receptacle, which are all provided with a jacking screw or quick release locking mechanism. When the receptacle is mounted to Ex d enclosure, the flanged joint between enclosure and receptacle must be in accordance with instruction TRP-2 to maintain the flameproof integrity of the assembly. The special fasteners and/or nuts used to assemble the plugs, receptacles and Ex d enclosure are of the minimum grade 4.6 (yield stress 240 MPa).

The restrained receptacle/plug range is used to monitor and supply power reticulation systems and mobile equipment such as Shuttle car, Continuous miner, Long walls, Drills rigs in mines. When the Multi purpose restrained Plug- Becker Node is coupled to the relevant CMI 300 A/425 A, 660 V/1100 V/3300 V restrained receptacle, the assembly can achieve degree of protection IP66.

Table 2 – Summary of Multi purpose plugs – Becker Node range

Catalogue Number	Description
AM311RB	300 A /1100 V, 4 pin Multi purpose plug c/w Becker Node
AM361RB	300 A / 660 V 4 pin Multi purpose plug c/w Becker Node
AM331SB	300 A /3300 V 4 pin Multi purpose plug c/w Becker Node
AM316RB	300 A/1100 V 6 pin Multi purpose plug c/w Becker Node
AM336RB	300 A/3300 V 6 pin Multi purpose plug c/w Becker Node
AM411RB	425 A 1100 V 4 pin Multi purpose plug c/w Becker Node
AM461RB	425 A /660 V 4 pin Multi purpose plug c/w Becker Node
AM416RB	425 A/ 1100 V 6 pin Multi purpose plug c/w Becker Node
AM436RB	425 A/ 3300 V 6 pin Multi purpose plug c/w Becker Node
AM431SB*	425 A/ 3300 V 4 pin Multi purpose plug c/w Becker Node

Certificate issued by:



TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753 Australia



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 15.0004X	Issue No.:	2
------------------------------------	--------------------	-------------------	---

Variations permitted by Issue 1 of this Certificate:

The following variations were introduced to the range and being assessed in this report:

1. Correction to previously listed ExTR number for Issue 0, was AU/TSA/ExTR05.0002/00, now AU/TSA/ExTR15.0002/00.
2. Add Model number AM431SB to previously certified schedule Table 2, as it was left out by error (marked with “*”).
3. Option of large plug body. Refer to Table 3 below for complete range.

Table 3 – Summary of Multi purpose plugs - Large Body

Catalogue Number	Description
AM311RLA	300A 1100 V 4 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM361RLA	300A 660 V 4 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM331SLA	300A 3300 V 4 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM316RLA	300A 1100 V 6 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM336RLA	300A 3300 V 6 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM411RLA	425A 1100 V 4 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM461RLA	425A 660 V 4 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM431SLA	425A 3300 V 4 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM416RLA	425A 1100 V 6 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AM436RLA	425A 3300 V 6 PIN MULTI PURPOSE PLUG c/w AMPCONTROL NODE & PH IND
AT311LR	300AMP 1100 VOLT 4 PIN MULTI PURPOSE PHASE IND
AT361LR	300AMP 660 VOLT 4 PIN MULTI PURPOSE PHASE IND
AT331LS	300AMP 3300 VOLT 4 PIN MULTI PURPOSE PHASE IND
AT316LR	300AMP 1100 VOLT 6 PIN MULTI PURPOSE PHASE IND
AT336LR	300AMP 3300 VOLT 6 PIN MULTI PURPOSE PHASE IND
AT411LR	425AMP 1100 VOLT 4 PIN MULTI PURPOSE PHASE IND
AT461LR	425AMP 660 VOLT 4 PIN MULTI PURPOSE PHASE IND
AT431LS	425AMP 3300 VOLT 4 PIN MULTI PURPOSE PHASE IND
AT416LR	425AMP 1100 VOLT 6 PIN MULTI PURPOSE PHASE IND
AT436LR	425AMP 3300 VOLT 6 PIN MULTI PURPOSE PHASE IND
AR311LR	300AMP 1100 VOLT 4 PIN DUMMY PLUG
AR361LR	300AMP 660 VOLT 4 PIN DUMMY PLUG
AR331LS	300AMP 3300 VOLT 4 PIN DUMMY PLUG

Certificate issued by:



TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753 Australia



IECEx Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEx TSA 15.0004X	Issue No.:	2
------------------------------------	--------------------	-------------------	---

Table 3 – Summary of Multi purpose plugs - Large Body (continued)

Catalogue Number	Description
AR316LR	300AMP 1100 VOLT 6 PIN DUMMY PLUG
AR336LR	300AMP 3300 VOLT 6 PIN DUMMY PLUG
AR411LR	425AMP 1100 VOLT 4 PIN DUMMY PLUG
AR461LR	425AMP 660 VOLT 4 PIN DUMMY PLUG
AR431LS	425AMP 3300 VOLT 4 PIN DUMMY PLUG
AR416LR	425AMP 1100 VOLT 6 PIN DUMMY PLUG
AR436LR	425AMP 3300 VOLT 6 PIN DUMMY PLUG
AM311RLB	300A 1100 V 4 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM361RLB	300A 660 V 4 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM331SLB	300A 3300 V 4 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM316RLB	300A 1100 V 6 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM336RLB	300A 3300 V 6 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM411RLB	425A 1100 V 4 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM461RLB	425A 660 V 4 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM431SLB	425A 3300 V 4 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM416RLB	425A 1100 V 6 PIN MULTI PURPOSE PLUG c/w BECKER NODE
AM436RLB	425A 3300 V 6 PIN MULTI PURPOSE PLUG c/w BECKER NODE

4. Option to install Ampcontrol Node RTX, which was certified under IECEx ITA 12.0032X. The Node module connects to Pilot continuity circuit and uses type of protection Ex ia. Input parameters are:

Table 4

U_i	L_i	C_i
28 V	Negligible	18.8 nF

5. Option to install CMI phase indicator. It is connected to the phase sockets and provides indication of power and phase sequence (rotation). Input parameters are:

Table 5

U_m	Power
660 / 1100 / 3300 V	8 W

6. Option to install Ampcontrol Node RTX together with CMI phase indicator,
 7. Option of integral viewing on the end cap, and
 8. General update of previously certified drawing No. F-580-1, Part List revised only.

Certificate issued by:



TestSafe Australia
 919 Londonderry Road
 Londonderry NSW 2753 Australia



IECEx Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEx TSA 15.0004X	Issue No.:	2
------------------------------------	--------------------	-------------------	---

Drawings Relating to Issue 2:

Document / Drawing No.	Page/s	Title	Revision Level	Date (yyyy-mm-dd)
F-580-1	1	300/425 A 660/1100/3300 V Restrained Multi-Purpose Plug W/Becker Node	B	2016-08-04
F-580-2	1	300/425A 660/1100/3300V Large Restrained Empty MPP	C	2016-06-08
F-580-3	1	300/425A 660/1100/3300V Large Restrained MPP W/RTX-PH IND	C	2016-06-08
F-580-4	1	300/425A 660/1100/3300V Large Restrained Dummy Plug	C	2016-06-08
F-580-5	1	300/425A 660/1100/3300V Large Restrained MPP W/PH IND	C	2016-06-08
F-580-6	1	300/425A 660/1100/3300V Large Restrained MPP W/Becker Node	C	2016-06-08

Note: An * is included before the title of documents that are new or revised.

Certificate issued by:

	TestSafe Australia 919 Londonderry Road Londonderry NSW 2753 Australia
---	---