



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 TRA 16.0005X Issue No: 0 Certificate history:
Issue No. 0 (2016-04-13)

Status: **Current** Page 1 of 3

Date of Issue: **2016-04-13**

Applicant: **Ampcontrol CSM Pty Ltd**
7 Billbrooke Close
Cameron Park
NSW 2285
Australia

Electrical Apparatus: **Communications Barrier (Models NB15AC & NB15AC Multi)**
Optional accessory:

Type of Protection: **Ex i (Intrinsic Safety)**

Marking: [Ex ia] I

Approved for issue on behalf of the IECEx
Certification Body:

James Bes

Position:

Certification Authority

Signature:
(for printed version)

Date:

2016/04/13

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](http://www.iecex.com).

Certificate issued by:

TUV Rheinland Australia Pty. Ltd
1/30 Kennington Drive
Tomago NSW 2322
Australia





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Manufacturer: **Ampcontrol CSM Pty Ltd**
7 Billbrooke Close
Cameron Park
NSW 2285
Australia

Additional Manufacturing
location(s):

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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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

*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/TRA/ExTR16.0011/00](#)

Quality Assessment Report:

[AU/TSA/QAR06.0007/07](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The communications barrier is a non-polarized shunt diode barrier with resistive limited output. It is an associated apparatus used for the transmission of communication signals between the hazardous and non-hazardous area. It has two models, the single channel NB15AC and the sixteen channel NB15AC Multi.

Refer to Annex for additional details.

CONDITIONS OF CERTIFICATION: YES as shown below:

Refer to Annex

Annex:

[IECEx TRA 16.0005-0 Certificate Annex.pdf](#)

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Annexe

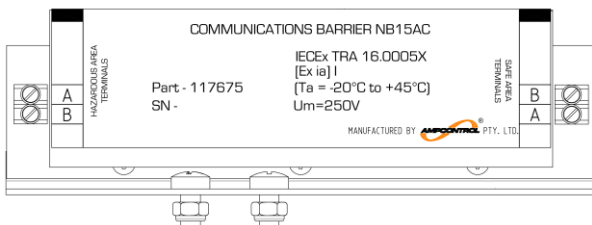


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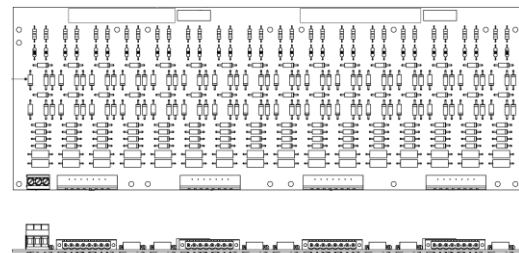
Description:

The communications barrier is a non-polarized shunt diode barrier with resistive limited output. It is an associated apparatus used for the transmission of communication signals between the hazardous and non-hazardous area. It has two models, the single channel NB15AC and the sixteen channel NB15AC Multi.

NB15AC Single Channel



NB15AC Multi Channel



The modules comprise of a printed circuit board upon which are mounted electronic components which provide voltage and current limitation via a triplicated arrangement of shunt voltage limiter circuits and series current limiting resistors respectively. Electrical connections are made either via screw terminal blocks or keyed ribbon cable connectors.

The single channel NB15AC has the electronic components completely encapsulated with the two terminals for external connections outside the encapsulant. The NB15AC Multi is supplied as an unencapsulated single printed circuit board that requires installation in an external IP20 enclosure.

The equipment is installed in a safe area.

Conditions of Certification pertaining to Issue 0 of this Certificate:

1. The ambient temperature range is -20°C to $+45^{\circ}\text{C}$.
2. The NB15AC Multi shall achieve a minimum of IP20 when installed.
3. The earth terminal of the NB15AC Single must be connected to a mains earth system via two (2) 5mm earthing bolts. These provide ongoing electrical safety and maintain the intrinsic safety and certification.
4. The J7 terminals of the NB15AC shall be connected to intrinsically safe earth by at least $2 \times 2.5\text{mm}^2$ or $3 \times 1.5\text{mm}^2$ connections.
5. The electrical parameters in the below table shall be taken into account during installation.

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Annexe



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All Models

Non-intrinsically safe terminals

Model	Connector	Maximum supply voltage U_m
NB15AC	J2	250V
NB15AC Multi	J1, J4	

Intrinsically safe terminals

Model	Circuit	Connector	U_o	I_o	C_o	L_o	L_o/R_o
NB15AC	-	J1 (Pin 1 to 2)	30V	66mA	2.2uF	93mH	200uH/ Ω
NB15AC Multi	1	J2 (Pin 1 to 2)					
	2	J2 (Pin 3 to 4)					
	3	J2 (Pin 5 to 6)					
	4	J2 (Pin 7 to 8)					
	5	J3 (Pin 1 to 2)					
	6	J3 (Pin 3 to 4)					
	7	J3 (Pin 5 to 6)					
	8	J3 (Pin 7 to 8)					
	9	J5 (Pin 1 to 2)					
	10	J5 (Pin 3 to 4)					
	11	J5 (Pin 5 to 6)					
	12	J5 (Pin 7 to 8)					
	13	J6 (Pin 1 to 2)					
	14	J6 (Pin 3 to 4)					
	15	J6 (Pin 5 to 6)					
16	J6 (Pin 7 to 8)						

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Annexe



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Drawing list pertaining to Issue 0 of this Certificate:

Manufacturer's Controlled Documents				
Title:	Drawing No.:	Rev. Level:	Number of sheets:	Date:
NB15AC Safety Barrier Assembly	NACZ014	8	1	2016-04-05
Safety Barrier (BOM)	NACB011	8	1	2016-03-29
NB15AC Safety Barrier PCB	NACP007	7	4	2016-03-29
NB15AC Safety Barrier Label	NACZ019	7	1	2016-04-05
NB15AC Safety Barrier Schematic	NACE050	8	1	2016-03-29
NB15AC Safety Multi Barrier Assembly	NACZ129	0	1	2016-04-05
Safety Multi Barrier (BOM)	NACB029	0	2	2016-04-01
NAC Multibarrier NB15AC Certification Labels	NACM202	1	1	2016-04-13
NB15AC Safety Multi Barrier (PCB)	NACP014	0	4	2016-04-01
NB15AC Safety Multi Barrier Schematic	NACE076	0	3	2016-04-01