



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 06.0014X Issue No: 1 Certificate history:
Status: **Current** Page 1 of 5 [Issue No. 1 \(2011-03-07\)](#)
Date of Issue: **2011-03-07** [Issue No. 0 \(2006-05-22\)](#)

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

Electrical Apparatus: **Intrinsically Safe Power Supply CPS-A**
Optional accessory:

Type of Protection: **[Ex ia]**

Marking: Ampcontrol
Compact Power Supply
CPS-A
[Ex ia] I
IECEX TSA 06.0014X
Ampcontrol CSM (separate label)
S/N

*Approved for issue on behalf of the IECEx
Certification Body:*

Ujen Singh

Position:

Quality and Certification Manager

*Signature:
(for printed version)*

Date:

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





IECEx Certificate of Conformity

Certificate No: IECEx TSA 06.0014X Issue No: 1

Date of Issue: 2011-03-07 Page 2 of 5

Manufacturer: **Ampcontrol CSM Pty Ltd**
7 Billbrooke Close, Cameron Park
Newcastle 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 : 2004 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements

Edition:4.0

IEC 60079-11 : 2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition:5

*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/ExTR06.0021/00](#)

[AU/TSA/ExTR11.0002/00](#)

Quality Assessment Report:

[AU/TSA/QAR06.0007/04](#)



IECEx Certificate of Conformity

Certificate No: IECEx TSA 06.0014X

Issue No: 1

Date of Issue: 2011-03-07

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Intrinsically Safe Power Supply CPS-A is designed for use in underground coalmines. It is supplied from 110 V ac and provides an intrinsically safe output.

The enclosure is polycarbonate and has a dimension of 125 x 105 x 120 mm.

The power supply consists of two circuit boards. The input board contains switch mode power supplies, while the output board contains over voltage and over current protection circuits.

Depending on the selection of fuse rating for the main power supply output, transformer T1, and values of resistances R5, R12, R28, R29 and R62 the power supply may be configured to provide 12 V and 15 V output. The models are distinguished by the output voltage and current marking.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. It is a condition of manufacture that each infallible transformer shall be subjected to the tests of Clause 11.2 of IEC 60079.11 Standard for Routine Tests.

2.

It is a condition of safe use that the following parameters shall be taken into account during installation:

Maximum supply voltage U_m	132 V a.c.					
Output models	12 V / 2.4 A	12 V / 2 A	15 V / 1.5 A	15 V / 0.5 A	15 V / 0.47 A	
Maximum output voltage U_o	12.6 V	12.6 V	15.1 V	15.1 V	15.1 V	
Maximum output current I_o	2.4 A	2 A	1.5 A	0.51 A	0.469 A	
Maximum external capacitance C_o	10 uF	20 uF	20 uF	1 uF	2 uF	2 uF
Maximum external inductance L_o	74 uH	40 uH	95 uH	190 uH	450 uH	450 uH
Maximum external inductance and resistance ratio L_o/R_o	30 uH/Ohm	8 uH/Ohm	40 uH/Ohm	30 uH/Ohm	65 uH/Ohm	70 uH/Ohm



IECEX Certificate of Conformity

Certificate No: IECEx TSA 06.0014X

Issue No: 1

Date of Issue: 2011-03-07

Page 4 of 5

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

Refer annexe for the changes pertaining to issue 1 of this certificate.



IECEX Certificate of Conformity

Certificate No: IECEX TSA 06.0014X

Issue No: 1

Date of Issue: 2011-03-07

Page 5 of 5

Additional information:

The following documents were assessed in the course of preparing this certificate. The documents listed give a full and correct specification of the safety aspects of the electrical equipment.

Document No.	Document Title	Issue	Date
ISP1-Z-001	IS Power Supply - Input board	4	2005/06/30
ISP1-Z-002	IS Power Supply - Output Board	4	2005/06/30
ISP1-Z-003	IS Power Supply - Output Board	3	2005/06/30
ISP1-Z-004 3 sheets	(PCB Artwork Input Board)	1	2005/06/30
ISP1-Z-005 6 sheets	(PCB Artwork Output Board)	1	2005/06/30
ISP1-Z-006	ISP1 IS Power Supply Enclosure Assembly	0	2005/02/15
ISP1-Z-007	ISP1 Main Transformer Construction – 12V	1	2005/07/19
ISP1-Z-008	ISP1 Main Transformer Construction – 15V	1	2005/08/31
ISP1-Z-010	ISP1 Auxiliary Transformer Construction	1	2005/07/19
ISP1-Z-011	ISP1 DC-Inductor Construction	1	2005/08/29
ISP1-Z-012	ISP1 Marking (Labels)	2	2006/03/01

Annex:

[Annexe for IECEX TSA 06_0014X-1.pdf](#)



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 06.0014X	Issue No.:	1
------------------------------------	---------------------------	-------------------	----------

Variations Permitted by Issue 1 of this certificate:

Output Board:

The part R82, R83, R84, R85, R86, R87, C46, C47, C48 are added to the Output Board.

The values of R47, R49, R64 are changed on the Output Board.

The track work associated with S3, S1, S2 are changed on the Output Board.

The type of component Q1, Q2, Q3 is changed from SPP80N05S2L-07 to IPP80N06S2L-06 and new type FDP5800 is introduced.

The type of components U4, U5, U6 are changed from MCP602 to OPA2376.

Input Board:

The supply terminal is changed from 3-way to 4-way. Therefore the PCB artwork is changed to accommodate this 4-way terminal.

The facia of the enclosure is also changed due to above change. The label drawing is revised and the content is unchanged.

Address of the applicant and the manufacturer is changed in this issue of the certificate.

The above changes have been assessed in test report AU/TSA/ExTR11.0002/00 (32759).

Drawing list pertaining to Issue 1 of this Certificate:

Document No.	Sheets	Document Title	Issue	Date (yyyy/mm/dd)
ISP1-Z-012	1	ISP1 Marking (labels)	4	2011/02/28
ISP 1Z006	1	ISP1 IS Power Supply Enclosure Assembly	1	2011/02/23
		Output Board		
ISP1-Z-002	3	ISP CPS-A Output Schematic	10	2011/01/31
ISP1Z005	7	ISP Output Board PCB	4	2011/02/09
ISP1-Z-013	4	IS Power Supply Output Board BOM	10	2011/01/28
		Input Board		
ISP1-Z-001	2	ISP Input Board Schematic	9	2011/03/03
ISP1Z004	5	ISP Input Board PCB	2	2011/02/23
ISP1Z015	2	ISP Input Board BOM	9	2011/03/03

Certificate issued by:

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



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 06.0014X	Issue No.:	1
-----------------------------	--------------------	------------	---

Conditions of Certification pertaining to Issue 1 of this Certificate:

The conditions of manufacture and conditions of safe use remain unchanged from previous issue.

Certificate issued by:



TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753 Australia