



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 17.0002X

Issue No: 0

Certificate history:

Issue No. 0 (2017-10-20)

Status: **Current**

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Date of Issue: **2017-10-20**

Applicant: **Compac Industries Ltd**
52 Walls Rd,
Penrose Auckland
New Zealand

Equipment: **C5000 Power Supply**

Optional accessory:

Type of Protection: **Flameproof & Intrinsic Safety**

Marking:

Ex db [ib] IIA T4 Gb (-40°C ≤ Ta ≤ +65°C)

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


David Price

Position:

Certification Authority

*Signature:
(for printed version)*

Date:


2017-10-20

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:

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



TESTING & CERTIFICATION



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Date of Issue: 2017-10-20 Page 2 of 3
Manufacturer: **Compac Industries Ltd**
52 Walls Rd,
Penrose Auckland
New Zealand

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 60079-1 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0
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/EXTC/ExTR17.0001/00](#) [AU/TRA/ExTR17.0002/00](#)

Quality Assessment Report:

[AU/TSA/QAR08.0008/06](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The C5000 Power Supply is an Ex d [ib] IIA T4 equipment. The flameproof box contains:

- a power supply producing a 5V, 0.2A, 1W I.S. supply, a 9V, 1A I.S. supply, I.S. isolated RS485, and a 12V non-I.S. supply
- a processor board running off the 12V non-I.S. supply with USB, Ethernet, and SD card reader
- a Comms boards to interface to extra low voltage, non-I.S, forecourt pump communications
- a terminal board which has 7 low current (0.2A) triac outputs and terminals for field wiring of input mains, motors, solenoids or other mains driven equipment
- two high current (5A) triacs to drive up to two 1HP electric motors.

The flameproof enclosure is made of cast aluminium with a built in barrier gland and may be used with compac brass blanking plugs BA-PLUG-20E.



See annex for further details.

SPECIFIC CONDITIONS OF USE: YES as shown below:

See annex for details

Annex:

[IECEX_TRA_17.0002X_0 Annex.pdf](#)

<h1>IECEX Certificate of Conformity</h1>  <h2>Annexe</h2>		
Annexe for Certificate No.:	IECEX TRA 17.0002X	Issue No.: 0

Description:

(Continuation from main body of the certificate)

The mains terminal board (CI504), the processor board (CI500), the Communication board(CI501), and part of the power supply boards (CI505) are on the non-intrinsically safe side of the electronics, and the outputs from the power supply board (CI505) are intrinsically safe.

The flameproof box and its accessories provides the Ex d protection.

The mains supply is 110-240Vac 50/60Hz 2A (for the models fitted without motor triacs) or 15A (for the models fitted with motor triacs).

As far as the intrinsic safety is concerned the mains fuses (F2, F3) are on the terminal board (CI504). The Power Supply board CI505 is the “associated apparatus” that bridges between the non-intrinsically safe parts and the intrinsically safe outputs. This actually consists of 3 printed circuit boards piggy backed on top of one another. These boards are fitted under the processor and terminal board. This board provides a non-IS 12V 1A. It also provides intrinsically safe 9V supply output, a 5V supply output, and a RS485 connection brought out on a cable through a gland, with a plug with 8 pins.

Compliance for flameproof requirements is provided in AU/TRA/ExTR17.0002/00 and for intrinsic safety requirements in provided in AU/EXTC/ExTR17.0001/00.

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Annexe



Annexe for Certificate No.:

IECEX TRA 17.0002X

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Conditions of Certification pertaining to Issue 0 of this Certificate:

1. The U_m of 250Vac is applicable on the non-intrinsically safe connections, with a nominal voltage range of 110-240Vac.

Input output parameters that must be taken into account during interconnection with other intrinsically safe equipment:

C5000 Power Supply I.S. Cable connections:	
5V & RS485	Pins 1, 2, & 6 w.r.t. Pins 3, 4, 5, & 7
U_o	5.2V
I_o	192mA
P_o	1W
C_o	800uF
L_o	2.5mH
9V Output	Pin 8 w.r.t. Pins 3, 4, 5, & 7
U_o	9.6V
I_o	960mA
P_o	9.2W
C_o	15uF
L_o	27uH

2. The intrinsically safe output circuits are bonded to the metallic enclosure, and this must be taken into account when interconnecting in the system.
3. Some flamepaths are different from the standard and must be considered during maintenance / repair using the information supplied by the manufacturer.

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Annexe



Annexe for Certificate No.:

IECEX TRA 17.0002X

Issue No.:

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Drawing list pertaining to Issue 0 of this Certificate:

Manufacturer's Documents				
Title:	Drawing No.:	Pages	Rev. Level:	Date:
C5000 – Mains Transformer Build	AP388	1-2	A	5 Sep 2017
Installation & Safety Data for C5000 Power Supply	AP389	5	B	16 Oct 2017
C5000 Power Supply Label	AP390	1-2	B	29 Sep 2017
C5K Processor (Schematics)	CI500	1-7	B	3 May 2017
C5000 Processor (PCB layers)	CI500	8-13	B	4 May 2017
CP-C5K-Processor (BOM)	CI500P	1-3	B	3 May 2017
CI501 Comms Board 1 (Schematics)	CI501	1-3	A	28 Sep 2016
C5000 Comms Board 1 (PCB layers)	CI501	4-7	A	25 Sep 2017
C5000 Comms Option 1 (BOM)	CI501P	1	A	29 Sep 2016
C5000 Mains Terminal Board (Schematic – Connectors)	CI504	1 of 6	A	26 Sep 2016
C5000 Mains Terminal Board (Schematic – Triacs)	CI504	2 of 6	A	26 Sep 2016
C5000 Mains Terminal Board (PCB - Top Overlay)	CI504	3 of 6	A	6 Jul 2017
C5000 Mains Terminal Board (PCB - Top Layer)	CI504	4 of 6	A	6 Jul 2017
C5000 Mains Terminal Board (PCB - Bottom Layer)	CI504	5 of 6	A	6 Jul 2017
C5000 Mains Terminal Board (PCB - Bottom Overlay)	CI504	6 of 6	A	6 Jul 2017
CP-C5K-TERM (Terminal Board - PCB - Bill of Materials)	CI504P	1	A1	6 Jul 2017
C5000 Power Supply (Schematic – Overview)	CI505	1 of 9	C	25 Sep 2017
C5000 Power Supply (Schematic Mains to 12V)	CI505	2 of 9	C	25 Sep 2017

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Annexe



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Title:	Drawing No.:	Pages	Rev. Level:	Date:
C5000 Power Supply (Schematic 12V to 9V I.S.)	CI505	3 of 9	C	25 Sep 2017
C5000 Power Supply (Schematic - 12V to 5V I.S.)	CI505	4 of 9	C	25 Sep 2017
C5000 Power Supply (Schematic - Local and Isolated Comms)	CI505	5 of 9	C	25 Sep 2017
C5000 Power Supply (all layers)	CI505	6 to 9 of 9	C	5 Jul 2017
CP-C5K-PS (C5000 Power Supply Board - Bill of Materials)	CI505P	1-7	C	25 Sep 2017
Development C5000 Transformer Bobbin	PDM1432B	1-2	A	19 Sep 2016
C5000 Power Supply - C5000 Explosion Proof Box Flange Thread and Overall Dimensions xx	PDM1442C	1-3	B	21 Apr 2017
C5000 Power Supply - C5 Explosion Proof Box Lid	PDM1443B	1	A	21 Apr 2017
C5000 Power Supply - C5K FP Box IS Gland	PDM1444B	1	A	25 Sep 2017
C4000 Glands - Blanking Plug	SW050	8 only	G	19 Mar 2010