



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.: issue No.:

Status:

Date of Issue: **2009-12-03** Page 1 of 3

Applicant: **Compac Industries Ltd**
52 Wall Road, Penrose
Auckland 1061
New Zealand

Electrical Apparatus: **C4000 Dispenser Control Unit**
Optional accessory:

Type of Protection: **Ex IIA**

Marking: **Compac Industries**
C4000 Microprocessor Unit CI140
Ex ib IIA T4 Gb (-25 C < Ta < 80 C)
S. No. ...

Approved for issue on behalf of the IECEx Certification Body: Ujen Singh

Position: Quality & Certification Manager

Signature:
(for printed version)

Date:

03 DECEMBER 2009.

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:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





IECEX Certificate of Conformity

Certificate No.: IECEx TSA 09.0053X

Date of Issue: 2009-12-03

Issue No.: 0

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Manufacturer: **Compac Industries Ltd**
52 Wall Road, Penrose
Auckland 1061
New Zealand

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/ExTR09.0013/00

Quality Assessment Report:

AU/TSA/QAR08.0008/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The C4000 Microprocessor System (Schematic CI140) is the main component of the C4000 Dispenser control Unit. It is connected to the C4000 IS Power supply which is in a separately certified (IECEX TSA 08.0044X) flame proof enclosure, through J2A and J2B terminals. The Printer power supply (CI125) also situated in the separately certified flame proof box or in non-hazardous area as per enclosure drawing AP302-04. It is connected to the C4000 Microprocessor System via J14 terminal. The Microprocessor System can be mounted in two different enclosures SW052-14 or Box AP238 as per block diagram AP300.

There are two revisions (Issue E and F) of drawings of CI177 KG meter are included in this certificate.

The CI170 Generic Display board also has two revisions, schematic Issue A and D, PCB issue B and D are included in this certificate.

CONDITIONS OF CERTIFICATION: YES as shown below:

See annexe for the conditions of certification and the list of drawings.



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Drawing list pertaining to Issue 0 of this Certificate:

Document No.	Sheets	Document Title	Issue	Date
AP300	3	C4000 Block Diagram	P	2009/10/15
AP301	Sheet 1 of 23	C4000 Cabling	N	2008/09/18
AP301	Sheet 2 of 23	C4000 Cabling Power Supply to Microprocessor Cable	N	2008/09/18
AP301	Sheet 3 of 23	C4000 Cabling CI139 (with RS232 Option) to CI140	N	2008/09/18
AP301	Sheet 4 of 23	C4000 Cabling Gilbarco & RS232 I/F Connections	N	2008/09/18
AP301	Sheet 5 of 23	C4000 Cabling Miscellaneous Cables	N	2008/09/18
AP301	Sheet 6 of 23	C4000 Cabling Temperature & Display Cables	N	2008/09/18
AP301	Sheet 7 of 23	C4000 Cabling Generic Display Cable Display End	N	2008/09/18
AP301	Sheet 8 of 23	C4000 Cabling Generic Display Configurations	N	2008/09/18
AP301	Sheet 9 of 23	C4000 Cabling Cable for Single Hose. Channel 0	N	2008/09/18
AP301	Sheet 10 of 23	C4000 Cabling Generic Display Cable Channel 0	N	2008/09/18
AP301	Sheet 11 of 23	C4000 Cabling Generic Display Cable Channel 2	N	2008/09/18
AP301	Sheet 12 of 23	C4000 Cabling Commercial Display Loop Cable	N	2008/09/18
AP301	Sheet 13 of 23	C4000 Cabling Commercial Display Cable	N	2008/09/18
AP301	Sheet 14 of 23	C4000 Cabling Power output Terminals	N	2008/09/18
AP301	Sheet 15 of 23	C4000 Cabling Motor Wiring on 6 hose MPP	N	2008/09/18
AP301	Sheet 16 of 23	C4000 Cabling Motor Wiring on 6 hose MPD	N	2008/09/18
AP301	Sheet 17 of 23	C4000 Cabling	N	2008/09/18
AP301	Sheet 18 of 23	C4000 Cabling CNG Dispenser KG Meters	N	2008/09/18
AP301	Sheet 19 of 23	C4000 Cabling CNG Dispenser Dual KG Meters	N	2008/09/18
AP301	Sheet 20 of 23	C4000 Cabling CI139 (with Triscan Option) to CI140	N	2008/09/18

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Document No.	Sheets	Document Title	Issue	Date
AP301	Sheet 21 of 23	C4000 Cabling CI139 (with RS485 Option) to CI140	N	2008/09/18
AP301	Sheet 22 of 23	C4000 Cabling Triscan & RS485 I/F Connections	N	2008/09/18
AP301	Sheet 23 of 23	C4000 Cabling Preset Connections	N	2008/09/18
AP302	1	C4000 Enclosures-Printer Power Supply	E	2009/09/30
AP336	2	Wiring Looms- Encoder Multiplex PCB Link Cable	A	2005/08/04
AP327	1	Misc C4000 Components	D	2009/10/21
AP238	1	Depot Register Box C4000 Electronics PCB Assembly	F	2009/09/03
AP349	1	Electrical Approvals Generic Display Enclosure	B	2009/10/19
AP351	1	Card Reader - Omron V3B - Encapsulation	A	2009/10/05
SW052	Sheet 2	Electrical Approvals PT Board	C	2009/09/07
SW052	Sheet 3	Electrical Approvals CWIT	B	2009/09/07
SW052	Sheet 5	Electrical Approvals Preset Box	C	2009/09/07
SW052	Sheet 6	Electrical Approvals KG Meter	B	2005/07/04
SW052	Sheet 7	Electrical Approvals Com Meter Encoder Assembly	B	2008/10/22
SW052	Sheet 14	Electrical Approvals C4000 Processor Box	B	2009/01/16
SW107	Sheet 8	Rotary Encoder Rotary Encoder Assembly	A	2006/06/29
AP343	Sheet 1	C4000 Dispenser Control Unit Labelling Microprocessor Unit (CI140)	B	2009/11/18
AP343	Sheet 2	C4000 Dispenser Control Unit Labelling Temperature /Pressure Unit	B	2009/11/18
AP343	Sheet 3	C4000 Dispenser Control Unit Labelling KG Meter	B	2009/11/18
AP343	Sheet 4	C4000 Dispenser Control Unit Labelling COM Series Meters	B	2009/11/18
AP343	Sheet 5	C4000 Dispenser Control Unit Labelling Optical Encoder	B	2009/11/18
AP343	Sheet 6	C4000 Dispenser Control Unit Labelling CWIT & CWIT Aerial	B	2009/11/18
AP343	Sheet 7	C4000 Dispenser Control Unit Labelling Generic & Commeric Displays	B	2009/11/18
AP343	Sheet 8	C4000 Dispenser Control Unit Labelling Printer Power Supply	B	2009/11/18
		CI125 Receipt Printer Power Supply		
CI125	Sheet 1 of 4	Receipt Printer Power Supply (<i>Schematic</i>)	F1	2009/05/12
CI125	Sheet 2 of 4	Receipt Printer Power Supply Top Overlay	F	2008/09/25
CI125	Sheet 3 of 4	Receipt Printer Power Supply Top Layer	F	2008/09/25
CI125	Sheet 4 of 4	Receipt Printer Power Supply Bottom Layer	F	2008/09/25
CI125P	1	C4000 Microprocessor System (<i>Bill of Materials</i>)	F1	2009/05/12

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Document No.	Sheets	Document Title	Issue	Date
CI144 Retail Back Light				
CI144	Sheet 1 of 3	Retail Back Light (<i>Schematic</i>)	B	1998/11/30
CI144	Sheet 2 of 3	Retail Back Light (C4000) Top Overlay	B	1998/11/29
CI144	Sheet 2 of 3	Retail Back Light (C4000) Bottom Layer	B	1998/11/29
CI144P	1	Generic Display (<i>Bill of Materials</i>)	B	2008/10/30
CI163 COM 125/250 Encoder				
CI-163	Sheet 1 of 4	COM 125/250 Encoder (<i>Schematic</i>)	C	2003/01/20
CI163	Sheet 2 of 4	COM 250 Encoder PCB Top Overlay	C	2003/01/20
CI163	Sheet 3 of 4	COM 250 Encoder PCB Top Layer	C	2003/01/20
CI163	Sheet 4 of 4	COM 250 Encoder PCB Bottom Layer	C	2003/01/20
CI163P	1	COM50 Encoder (<i>Bill Of Materials</i>)	C1	2009/11/04
-	1	Panasonic Thick Film Resistor	-	2008/07
CI140 C4000 Microprocessor System				
CI-140	Sheet 1 of 2	C4000 Microprocessor System (<i>Schematic</i>)	E1	2009/05/11
CI-140	Sheet 2 of 9	C4000 Microprocessor System (<i>Schematic</i>)	E	2004/02/05
CI-140	Sheet 3 of 9	C4000 MPU (<i>Top Overlay</i>)	E	2004/02/05
CI-140	Sheet 4 of 9	C4000 MPU (<i>Top Layer</i>)	E	2004/02/05
CI-140	Sheet 5 of 9	C4000 MPU (<i>Mid Layer 1</i>)	E	2004/02/05
CI-140	Sheet 6 of 9	C4000 MPU (<i>Internal Plane 1</i>)	E	2004/02/05
CI-140	Sheet 7 of 9	C4000 MPU (<i>Internal Plane 2</i>)	E	2004/02/05
CI-140	Sheet 8 of 9	C4000 MPU (<i>Mid Layer 2</i>)	E	2004/02/05
CI-140	Sheet 9 of 9	C4000 MPU (<i>Bottom Layer</i>)	E	2004/02/05
CI-140P	4	C4000 Microprocessor System (<i>Bill of Materials</i>)	E1	2009/11/04
CI111 Encoder				
CI111	Sheet 1 of 4	3 Channel Encoder (<i>Schematic</i>)	B	2003/05/08
CI111	Sheet 2 of 4	Encoder (<i>Top Overlay</i>)	B	2003/05/08
CI111	Sheet 3 of 4	Encoder (<i>Top Layer</i>)	B	2003/05/08
CI111	Sheet 4 of 4	Encoder (<i>Bottom Layer</i>)	B	2003/05/08
CI111P	1	Encoder PCB (<i>Bill of Materials</i>)	B	2003/05/07
CI180 COM 50 Smart Encoder				
CI-180	1	COM 50 Smart Encoder (<i>Schematic</i>)	C	2008/10/08
CI180	Sheet 2 of 4	COM50 Smart Encoder PCB Top Overlay	C	2009/01/20
CI180	Sheet 3 of 4	COM50 Smart Encoder PCB Top Layer	C	2009/01/20
CI180	Sheet 4 of 4	COM50 Smart Encoder PCB Bottom Layer	C	2009/01/20
CI180P	1	COM50 Smart Encoder PCB (<i>Bill of Materials</i>)	C1	2009/11/04
CI185 Encoder Multiplex PCB				
CI185	1	Encoder Multiplexer Board (<i>Schematic</i>)	B	2008/10/09
CI185P	1	Encoder Multiplex Board (<i>Bill of materials</i>)	B	2009/04/06
CI196				
CI196	1	Triscan Splitter	A	2009/01/20

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Document No.	Sheets	Document Title	Issue	Date
CI165 KG Meter Splitter PCB				
CI165	Sheet 2 of 4	KG Meter Splitter PCB Top Overlay	A	2009/04/02
CI165	Sheet 3 of 4	KG Meter Splitter PCB Top Layer	A	2009/04/02
CI165	Sheet 2 of 4	KG Meter Splitter PCB Bottom Layer	A	2009/04/02
CI177 KG Meter Power Board				
CI161	1	KG Meter Flexi –PCB (Flexible PCB)	B	2009/05/14
CI177	Sheet 1 of 4	KG Meter Power Board (schematic)	E	2008/10/07
CI177	Sheet 2	KG Meter Power PCB Top Overlay	E	2008/10/07
CI177	Sheet 3	KG Meter Power PCB Top Layer	E	2008/10/07
CI177	Sheet 4	KG Meter Power PCB Bottom Layer	E	2008/10/07
CI177P	4	KG80 KG Power Board (<i>Bill of Materials</i>)	E3	2009/06/19
CI177	Sheet 1 of 4	KG Meter Power Board	F	2009/05/14
CI177	Sheet 2	KG Meter Power PCB Top Overlay	F	2009/05/14
CI177	Sheet 3	KG Meter Power PCB Top Layer	F	2009/05/14
CI177	Sheet 4	KG Meter Power PCB Bottom Layer	F	2009/05/14
CI177P	3	KG80 KG Power Board (<i>Bill of Materials</i>)	F1	2009/06/19
CI176 KG Meter DSP Board				
CI176	Sheet 1 of 7	KG Meter DSP Board (<i>Schematic</i>)	D	2008/10/06
CI176	Sheet 2 of 7	KG Meter DSP Board (<i>Schematic</i>)	D	2008/10/06
CI176	Sheet 3 of 7	KG Meter DSP Board (<i>Schematic</i>)	D	2008/10/06
CI176P	1	KG80 DSP Board (<i>Bill of Materials</i>)	D1	-
CI123 Retail Display				
CI123	Sheet 1 of	6 Digit Retail Display CI123 Issue A (<i>Schematic</i>)	A	1998/05/09
CI123P	1	Generic Display (<i>Bill of Materials</i>)	A1	2009/10/05
CI170 Generic Display				
CI170	Sheet 1 of 1	Generic Display (<i>Schematic</i>)	A	2008/10/06
CI170	Sheet 2	Generic Display Top Layer	B	2003/09/16
CI170	Sheet 3	Generic Display Bottom Layer	B	2003/09/16
CI170	Sheet 4	Generic Display Top Overlay	B	2003/09/16
CI170	Sheet 5	Generic Display Bottom Overlay	B	2003/09/16
CI170 P	2	Generic Display (<i>Bill of Materials</i>)	B	2009/04/06
CI170	Sheet 1 of 1	Generic Display (<i>Schematic</i>)	D	2009/05/11
CI170	Sheet 2	Generic Display Top Layer	D	2009/05/11
CI170	Sheet 3	Generic Display Bottom Layer	D	2009/05/11
CI170	Sheet 4	Generic Display Top Overlay	D	2009/05/11
CI170	Sheet 5	Generic Display Bottom Overlay	D	2009/05/11
CI170 P	2	Generic Display (<i>Bill of Materials</i>)	D	2009/05/04
CI172 Generic Commercial Display				
CI172	Sheet 1 of 6	Generic Commercial Display (<i>Schematic</i>)	B	2003/09/15
CI172	Sheet 2	Generic Commercial Display Top Layer	B	2003/09/15
CI172	Sheet 3	Generic Commercial Display Bottom Layer	B	2003/09/15

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Document No.	Sheets	Document Title	Issue	Date
CI172	Sheet 4	Generic Commercial Display Top Overlay	B	2003/09/15
CI172	Sheet 5	Generic Commercial Display Bottom Overlay	B	2003/09/15
CI172P	2	Generic Display (<i>Bill of Materials</i>)	B	2003/07/08
		CI178 Preset Display		
CI178	Sheet 1 of 4	Preset Display (<i>Schematic</i>)	A	2008/10/08
CI178	Sheet 2	Preset Display Top Overlay	A	2008/10/08
CI178	Sheet 3	Preset Display Top Layer	A	2008/10/08
CI178	Sheet 4	Preset Display Bottom Layer	A	2008/10/08
CI178	2	Preset Display (<i>Bill of Materials</i>)	A	2003/07/22
		CI192 Preset Interface		
CI192	Sheet 1 of	Preset Interface (<i>Schematic</i>)	C1	2009/07/07
CI192	Sheet 02	Preset I/F Top Layer	C	2008/10/24
CI192	Sheet 03	Preset I/F Top Overlay	C	2008/10/24
CI192	Sheet 04	Preset I/F Bottom Layer	C	2008/10/24
CI192	1	Interface Board for Membrane Preset (<i>Bill of Materials</i>)	C	2009/04/06
		CI075 CNG/LPG Temperature/Pressure PCB		
CI075	Sheet 1 of 1	CNG/LPG Temperature/Pressure PCB (<i>Schematic</i>)	C	2003/03/13
CI075	Sheet 2 of 4	CNG Temperature Card Top Overlay	B	2003/03/14
CI075	Sheet 3 of 4	CNG Temperature Card Top Layer	B	2003/03/14
CI075	Sheet 4 of 4	CNG Temperature Card Bottom Layer	B	2003/03/14
CI075P	1	CNG/LPG Temperature/Pressure PCB (<i>Bill of Materials</i>)	C	2003/03/19
		CP 209 CNG Temperature Board		
CP 209	1	CNG Temperature Board (<i>Schematic</i>)	B	2008/10/24
		CI101 CWIT		
CI101-1	Sheet 1 of 5	CWIT (<i>Schematic</i>)	E	2002/11/15
CI101-2	Sheet 2 of 5	CWIT (<i>Schematic</i>)	E	2002/11/15
CI101-E	Sheet 3 of 5	CWIT Top Layer	E	2002/12/11
CI101-E	Sheet 4 of 5	CWIT Bottom Layer	E	2002/12/11
CI101-E	Sheet 5 of 5	CWIT Top Overlay	E	2002/12/11
CI101P	4	CWIT (Compac Wireless ID Tag) (<i>Bill of Materials</i>)	E2	2009/11/04

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Conditions of Certification pertaining to Issue 0 of this Certificate:

The system shall be installed and connected as shown in diagram AP300 Rev P, taking in to account the input output parameters specified below.

CI140 C4000 Microprocessor System:

Header J2A pins 21 and 22 (MICRO Supply from IS Power Supply):

$U_i = 15.86 \text{ V}$
 $I_i = 1.13 \text{ A}$ (Spark)
 $I_i = 185 \text{ mA}$ (Thermal)
 $C_i = 5.28 \text{ }\mu\text{F}$
 $L_i = 150 \text{ }\mu\text{H}$

Header J2A pins 3 and 4 (PERIPH Supply from IS Power Supply):

$U_i = 15.86 \text{ V}$ (Source resistance of 9Ω)
 $I_i = 1.855 \text{ A}$
 $C_i = 0 \text{ }\mu\text{F}$
 $L_i = 80 \text{ }\mu\text{H}$

Header J2A pin 7 through 17(POK, TO0 through TO9) and Header J2B pins 1 through 8:

$U_i = 5.38 \text{ V}$
 $I_i = 0.010 \text{ A}$
 $C_i = 834.6 \text{ }\mu\text{F}$
 $L_i = 24.88 \text{ mH}$

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