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 ExTC 18.0012X**

Page 1 of 5

Certificate history:
Issue 1 (2020-02-14)
Issue 0 (2018-06-13)

Status: **Current**

Issue No: 2

Date of Issue: 2023-05-02

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

Equipment: **Slave Display**

Optional accessory:

Type of Protection: **Intrinsic Safety 'i'**

Marking: Ex ib IIA T4 Gb

-40˚C ≤ Tamb ≤ +70˚C

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

Position: **Certification Authority**

Signature:
(for printed version)

Date:
(for printed version) 2023-05-02

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:

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

TESTING & CERTIFICATION

IECEx Certificate of Conformity

Certificate No.: **IECEx ExTC 18.0012X** Page 2 of 5

Date of issue: 2023-05-02 Issue No: 2

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

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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
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 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/ExTR22.0037/00

Quality Assessment Report:

AU/TSA/QAR08.0008/09

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Slave Display is designed as a secondary fuel dispenser indicator but may be used in other applications too. It consists of a CI503 Slave Display Main Board, with a large LCD board CI252, plus 1 or 2 smaller LCD boards CI253. It may also contain a totaliser, all housed in a plastic enclosure with a polycarbonate front cover that has an anti-static film applied. The back is not anti-static and hence can only be cleaned with a damp cloth. The equipment may include a CI515 Preset Board with one or two 4 x 4 membrane keypads.

A metal bracket used to mount the totaliser is accessible from outside the plastic enclosure.

See Annex for further details.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Annex for details

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
See Annex for changes

IECEx Certificate of Conformity

Additional information:
Job 21087

Annex:

IECEx ExTC 18.0012X-2 Annexe final.pdf

IECEx Certificate of Conformity

Annexe

Annexe for Certificate No.:	IECEx ExTC 18.0012X	Issue No.:	02

Description:

(continued from main body of the certificate)

The Slave Display is designed to form part of an intrinsically safe control system, and is powered via the BUS-IN connector J1. Connections are provided for 5V and 9V IS supplies, common ground and RS485 communications. The Slave Display provides BUS-OUT connectors J2 – J4 which are directly connected to BUS-IN connector J1 (though the pin numbers on J1 for the various circuits are not the same as the pin numbers on J2 – J4) for through connected 5V and 9V IS supplies, common ground and RS485 communications.

In addition to the BUS-IN and BUS OUT connectors, the Slave Display Board (CI503) provides connector J300 for a totalizer mounted internal to the enclosure

The Preset Board CI515 is separate from the Slave Display, and connection is achieved by connecting its J100 to any of the J2 – J4 of the Display Board. This connector only uses the 5V and RS485 connections of J2 – J4.

Specific Conditions of Use pertaining to Issue 0 of this Certificate:

The conditions of certification for issue 0 have been removed for clarity. Refer to latest Issue of the certificate for conditions.

Drawing list pertaining to Issue 0 of this Certificate:

The drawings have been removed and compiled together in the latest issue of this certificate for clarity.

Variations permitted by Issue 1 of this Certificate:

1. Inclusion of an optional CI515 Preset Board with one or two 4 x 4 membrane keypads.
2. Modification to the CI252 and CI253 LCD boards to include circuitry to control the dimming of the LCD backlights.

Specific Conditions of Use pertaining to Issue 1 of this Certificate:

The conditions of certification for issue 0 have been removed for clarity. Refer to latest Issue of the certificate for conditions

Drawing list pertaining to Issue 1 of this Certificate:

The drawings have been removed and compiled together in the latest issue of this certificate for clarity.

IECEx Certificate of Conformity

Annexe

Annexe for Certificate No.:	IECEx ExTC 18.0012X	Issue No.:	02

Variations permitted by Issue 2 of this Certificate:

1. Revised Instruction Manual (AP399 from Issue B to Issue C)
2. PCB for the display board CI252 revised from Rev D to Rev F.
3. Minor changes to the BOM for all the printed circuit board assemblies to include details of the PCB construction and conformal coating.
4. Compliance has been assessed to the more recent Standards IEC 60079-0:2017; IEC 60079-11:2011, Accordingly a completely revised and stand-alone report AU/EXTC/ExTR22.0037/00 has been prepared

Specific Conditions of Use pertaining to Issue 2 of this Certificate:

1. The following input and output parameters for the connectors on the Slave Display Main Board must be taken into account during interconnection:

Slave Display Main Board CI503 Connector J1 (BUS-IN) see Note 1	
5V & RS485	**Pins 1, 2 & 6 w.r.t. Pins 3, 4, 5 & 7**
Ui	6V
Ii	235mA
Pi	1.05 W
Li	1µH
Ci	13.5µF
Io	2mA see Note 2
Po	3mW see Note 2
9V	**Pin 8 w.r.t. Pins 3, 4, 5 & 7**
Ui	10V
Ii	1A
Li	0µH
Ci	0µF

Note 1: Connectors J2 – J4 (BUS-OUT) are connected in parallel to J1, and hence have the same parameters, with the pin numbers allocated as follows:

Circuit reference	J1 Pin #	J2 – J4 Pin #
9V	8	6
5V	2	9
A	6	8
B	1	4
Earth, Screen	3, 4, 5, 7	2, 7, 10

Note 2: The terminals on the 5V circuit may be considered under fault to be connected to an internal source of supply due to a supercapacitor that may charge up to the applied Ui but is limited by internal resistance to provide the Io and Po shown in this table. This needs to be accounted for when connecting in a system.

The CI515 Preset Board is connected to BUS-OUT on the Slave Display Main Board and hence its input parameters are already included in the Slave Display Main Board parameters given above.

For the sake of completeness, the Preset Board parameters have been listed below:

Preset Board (CI515) Connector J100 (BUS-IN)	
5V & RS485	**Pins 1, 2 & 6 w.r.t. Pins 3, 4, 5 & 7**
Ui	6V
Ii	235 mA
Pi	1.05 W
Li	1µH
Ci	8µF
9V	**Pin 8 w.r.t. Pins 3, 4, 5 & 7**
Ui	10V
Ii	1A
Pi	10W
Li	0 µH
Ci	0 µF

Preset Board (CI515) Connectors J200, J201 Membrane Keypad	
Uo	6V
Io	5.6mA
Po	8.4mW
Lo	10µH
Co	0.1µF

Drawing list pertaining to Issue 2 of this Certificate:

Manufacturer's Documents

Title:	Drawing No.:	Pages	Rev. Level:	Date:
C5000 Displays 7 Digit Display Panel Housing Assembly	ASM0143	2	D	2019-03-15

IECEx Certificate of Conformity

Annexe

Annexe for Certificate No.:	IECEx ExTC 18.0012X	Issue No.:	02

Title:	Drawing No.:	Pages	Rev. Level:	Date:
C5000 Control Unit Labels Slave Displays	AP392	Sheet 5	C	2020-02-07
Installation & Safety Data for Slave Display	AP399	4	C	2021-06-04
BUS Cable for Pre-set (CI515-J100)	AP411	1	A	2019-03-21
CI503				
CI503 C5K Slave Display (Schematics)	CI503	Sheets 1 to 3 of 6	B	2018-04-26
C5000 Slave Display Board (Top Overlay)	CI503	Sheet 4 of 6	B	2018-04-26
C5000 Slave Display Board (Top Layer)	CI503	Sheet 5 of 6	B	2018-04-26
C5000 Slave Display Board (Bottom Layer)	CI503	Sheet 6 of 6	B	2018-04-26
CP-C5K-SDISP (BOM)	CI503P	1	B1	2023-04-24
CI252				
LCD PANEL LAYOUT1 (Schematic)	CI252	1 and 2 of 6	F	2021-03-04
LCD PANEL LAYOUT1 (Top Overlay)	CI252	3 of 6	F	2021-03-04
LCD PANEL LAYOUT1 (Top Layer)	CI252	4 of 6	F	2021-03-04
LCD PANEL LAYOUT1 (Bottom Layer)	CI252	5 of 6	F	2021-03-04
LCD PANEL LAYOUT1 (Bottom Overlay)	CI252	6 of 6	F	2021-03-04
CP-C5K-DSPLY7D1 (BOM)	CI252P	1 of 1	F	2023-04-24

IECEx Certificate of Conformity

Annexe

Annexe for Certificate No.:	IECEx ExTC 18.0012X	Issue No.:	02

Title:	Drawing No.:	Pages	Rev. Level:	Date:
CI253				
LCD PANEL LAYOUT2 (Schematic)	CI253	1 and 2 of 6	C	2019-08-15
LCD PANEL LAYOUT2 (Top Overlay)	CI253	3 of 6	C	2019-08-15
LCD PANEL LAYOUT2 (Top Layer)	CI253	4 of 6	C	2019-08-15
LCD PANEL LAYOUT2 (Bottom Layer)	CI253	5 of 6	C	2019-08-15
LCD PANEL LAYOUT2 (Bottom Overlay)	CI253	6 of 6	C	2019-08-15
CP-C5K-DSPLY7D2 (BOM)	CI253P	1	C1	2023-04-24
CI515				
C5000 Preset Board (Schematic)	CI515	1 and 2 of 5	A	2018-04-06
C5000 Preset Board (Top Overlay)	CI515	3 of 5	A	2018-04-06
C5000 Preset Board (Top Layer)	CI515	4 of 5	A	2018-04-06
C5000 Preset Board (Bottom Layer)	CI515	5 of 5	A	2018-04-06
CP-C5K-PSET (BOM)	CI515P	1	A1	2023-04-24