

1 **EU - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres  
Directive 2014/34/EU**

3 EU - Type Examination Certificate **Baseefa14ATEX0237X – Issue 2**  
Number:

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

4 Product: **C4000 Control Unit Mk II**

5 Manufacturer: **Compac Industries Limited**

6 Address: **52 Walls Road, Penrose, Auckland 1061 New Zealand**

7 This re-issued certificate extends EC Type Examination Certificate No. **Baseefa14ATEX0237X** to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0: 2018 EN 60079-11: 2012**

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:

**⊕ II 2 G Ex ib IIA T4 Gb (-40 °C ≤ Tamb ≤ +80 °C)**

SGS Fimko Oy Customer Reference No. **5033**

Project File No. **20/0633**

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## Schedule

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### Certificate Number Baseefa14ATEX0237X – Issue 2

#### 15 Description of Product

The C4000 Control Unit Mk II is designed to be mounted in a hazardous area within an enclosure and provides the measurement and correction functions required for a number of different fuels including Compressed Natural Gas, Liquid Petroleum Gas, Diesel, Aviation Fuel, Petrol, AdBlue and Ethanol, etc. The quantity of fuel measured is shown on a display. Various optical or magnetic encoders detect the output from a positive displacement metering unit or a KG Coriolis metering unit gives an output proportional to the mass flow of fuel. Parameters such as the temperature and pressure of the fuel are monitored and these parameters are passed to a microprocessor unit for correction before the quantity is displayed. The lower ambient limit for the C4000 Control Unit Mk II may be marked as -25°C when mounted local to other temperature limited equipment, but the C4000 Control Unit Mk II remains identical to that marked as suitable for -40°C.

This C4000 Control Unit Mk II is designed to be supplied from a C4000 Power Supply Unit Mk II printed circuit board CI138 & CI139 Certificate Number Baseefa14ATEX0074X or IECEx BAS 14.0039X which provides the essential voltage and current levels and power limitation necessary for the safe operation of the meter.

The C4000 Control Unit Mk II comprises an overall assembly of equipment housed within a number of separate inner enclosures but all mounted within the same dispenser although the complete display assembly (ASM0043) may be mounted externally. The Microprocessor Unit CI140 is central to the Control Unit, may be mounted within either an SW052-14 enclosure or AP238-06 enclosure, and various optional separate printed circuit boards in their own separate enclosures are added to the Control Unit depending upon the functions required.

The C4000 Control Unit Mk II assembly may be connected to a maximum of six encoders (containing CI180, CI163 or CI111), or two KG Meters CI176 & CI177 or CI225, CI226 and CI260 with optional CI529, or two V50 Meters CI225, CI226 & CI260 with optional CI529. It may employ a maximum of four LCD displays where each display is either CI170, CI236 & CI237, or CI251 & CI252, CI253, or CI254. These displays may connect to a maximum of four Preset displays/keypads where each of these is either CI178 & CI192 or CI249. The display assembly may include a maximum of two AP324 Card Readers and a maximum of two CI218 PIN Pads with display. The CNG Temperature and Pressure Board CI214 may connect to a maximum of four pressure sensors. With the exception of the simple apparatus, switches, RTDs and thermistors, the remaining equipment is used individually.

The equipment which may be considered within the C4000 Control Unit Mk II Certificate:-

1. Microprocessor Unit CI140
2. CNG Temperature and Pressure Board CI214
- 3.1 A KG Meter CI176 & CI177 or CI225, CI226 & CI260 with optional CI529
- 3.2 A V50 Meter, MPU CI225, DSP CI226 with either LPG CI227 or LPG CI231.
- Four encoders (3.3 to 3.6):
- 3.3 COM50 Smart+Encoder CI180,
- 3.4 COM125+Encoder CI163,
- 3.5 COM250+Encoder CI163 and
- 3.6 Optical Encoder CI111.
- 3.7 Encoder Multiplexer CI185 may be used to increase number of Encoders to six.
- 3.8 Triscan Splitter CI196 used with the Encoders and Nozzle Switch.
- 3.9 LPG Splitter CI232
4. CWIT Board CI101 Connected to the CWIT Aerial (May be referred to as CWID.)
- 5.1 Generic Display CI170 Connected to the
- 5.2 Preset Display CI178 and
- 5.3 Preset Interface Keypad CI192, or
- 5.4 Preset display/keypad CI249
- 5.5 CI236 & CI237 LCD Displays Connected to the
- 5.2 Preset Display CI178 and
- 5.3 Preset Interface Keypad CI192, or
- 5.4 Preset display/keypad CI249

- 5.6 CI251 with CI252, CI253, or CI254 LCD Displays connected to the  
5.2 Preset Display CI178 and  
5.3 Preset Interface Keypad CI192, or  
5.4 Preset display/keypad CI249
- 5.7 PIN Pad with display CI218 Connected either directly to  
Microprocessor Unit CI140 or via  
LPG Splitter CI232.
- 6. AP324 Magtek P Series Card Reader
- 7. Peripheral equipment
- 7.1 Totaliser ENM P2G729A and
- 7.2 Piezo Buzzer Hi-Q 54-35C2 54-35
- 8. Simple Apparatus  
Nozzle Switches, Hi / Lo Switch and Parameter On / Off Switch  
Air Detector / Sump Switch Herga 6863 (Common with another C4000 Control Unit within the same appliance)  
Thermistors or RTD and Pressure Sensor.

## 1 The Microprocessor Unit CI140

The Microprocessor Unit comprises a single printed circuit board which has a mixture of surface mounted and discrete components, two printed circuit board connectors for the PSU J2A and J2B and a number of other connectors are mounted on the p.c.b. for connection to other peripheral equipment. The printed circuit board is mounted on insulating pillars within a sheet metal outer enclosure mounted within either an SW052-14 or AP238-06 enclosure which provides a degree of protection of at least IP20.

The Microprocessor Unit CI140 connects to the C4000 Power Supply Unit Mk II p.c.b. CI139 Certificate Number Baseefa14ATEX0074X or IECEx BAS 14.0039X within the same Dispenser.

CI140:J2A connects to CI139:J5, CI139:J6 and CI139:J7

CI140:J2B connects to CI139:J5 and CI139:J8

CI140:J13 connects to CI139:J8 or CI101:CON1 or CI232:J1

CI140:J2A Pins 3&4  $V_P$  PERIPH - (for connection to CI139 J7 Pins 7 & 8 or Cable J2A Pins 3&4)

$U_i = 17.5V$

$I_i = 1.675A$  –Supplied from a linear output with an internal impedance of 10.45 Ohm.

$P_i = 7.33W$

$C_i = 1\mu F$

$L_i = 0$

CI140:J2A Pins 21&22  $V_L$  MICRO - (for connection to CI139 J7 Pins 3 & 4 or Cable J2A Pins 21&22)

$U_i = 17.5V$

$I_i = 1.25A$  Transient - Supplied from a linear output with an internal impedance of 14 Ohm.

$I_i = 0.185A$  Long Term

$P_i = 3.24W$

$C_i = 5.3\mu F$

$L_i = 0$

The combination of POK, TI0 – TI9, RXD1, TXD1, TXE1, RXD2, TXD2, TXE2 and VIS.

CI140:J2A Pins 7-17, CI140:J2B Pins 1-7, CI140:J13 Pins 5&9 and CI196:CON3 Pins 1-8.

(for connection to CI139:J5, J6, J8 and CI184:CON1) All combined as the same intrinsically safe circuit:

$U_i = 5.2V$

$I_i = 11mA$

$P_i = 4.1mW$

$C_i = 950\mu F$  This value includes the worst case capacitance of CI140 and the other circuits which may be connected.

$L_i = 0$

$U_o = 5.38V$   
 $I_o = 1.3A$  Transient -Linear output.  
 $I_o = 0.2A$  Long Term  
 $P_o = 1W$   
 $C_o = 10\mu F$   
 $L_o = 10\mu H$

The Microprocessor Unit CI140 Connects to other equipment 2 to 8 within the same Dispenser.

CI140:J3 or CI140:J4 may connect to:-

CI111, CI163:CON1, CI177:J2, CI180:J1, CI185:CON7, CI196:CON2, CI196:CON5 or CI225:J1

CI140:J5 or CI140:J6 may connect to:- CI111, CI163:CON1 or CI180:J1

CI140:J7 may connect to:- CI170:CON2, CI237:CON2, CI249:CON2, or CI251:CON2

CI140:J8 connects to CI214:CON5, CI249:CON6, or CI251:CON6

CI140:J9 may connect to:-

CI214:CON8, CI218:J1 & CI218:CON2, CI177:J1 or CI232:J4 or CI170:CON12 or CI237:CON12 or CI249:CON12 or CI251:CON12

CI140:J10 may connect to:- CI170:CON1 or CI237:CON1 or CI251:CON1

CI140:J11 may connect to:- CI170:CON12 or CI237:CON12 or CI249:CON12 or CI251:CON12

CI140:J12 may connect to:- CI170:CON1, CI237:CON1 or CI196:CON4 or CI251:CON1

CI140:J15 and CI140:J16 connects to Card Reader

CI140:J17 may connect to:- CI170:CON12, CI178:CON4, CI178:CON6 or CI237:CON12 or CI251:CON12

## **2 CNG Temperature and Pressure Board CI214 –**

CI214:CON5 to CI140:J8 and CI214 CON8 to CI140:J9

CI214:CON10 or CI214:CON11 to CI177:J1

CI214:CON1, 2, 4, 6, 7, 9 connect to Simple Apparatus.

The CNG Temperature and Pressure Board CI214 comprises external thermistors or RTDs (CI214:CON6 and CI214:CON7) and external pressure sensors with a maximum capacitance of 16 $\mu F$  (CI214:CON1, 2, 4 & 9), associated resistors, capacitors, an inductor, integrated circuits, diodes and zener diodes. Each of the thermistors, RTDs and pressure sensors takes its supply from Vcc derived from the microprocessor board and the temperature and the pressure signals are monitored and conditioned by the circuit components.

The Temperature and Pressure Board CI214 is housed within a plastic enclosure which provides a degree of protection of at least IP20, provides 500V isolation from earth. The thermistors & pressure sensors have integral leads, are provided with a degree of protection of at least IP20 and provide 500V isolation from earth.

## **3 Quantity Measurement Sensors**

3.1 Up to two KG Meter CI177 & CI176 or CI225, CI226 & CI260 with optional CI529

CI177:J1 Connected to CI140:J9 or CI214:CON10 or CI214:CON11 and

CI177:J2 Connected to CI140:J3 or CI140:J4 or CI196:CON1 or CI196:CON6

The metering of fuel by mass is achieved by either one or two Coriolis KG Meters. Each KG Meter comprises two printed circuit boards CI177 and CI176 or CI225, CI226 & CI260 with optional CI529 connected to the Micro Processor Board.

Within the KG Meter, printed circuit board CI177 or CI260 is connected to three Coriolis sensing coils. Three cores move into or out of these coils, proportional to the mass flow of fuel through two loops of process pipe work. Printed circuit board CI177 or CI260 is the Power Supply printed circuit board and is connected to Micro Processor Board and is diode blocked at the input to prevent interaction between the two units.

The printed circuit boards contain a mixture of discrete and surface mounted components and the units have an integral cable. The units are capable of meeting the 500V test to earth or frame and meet the requirements for IP20 with a metallic outer enclosure.

3.2 Up to two V50 (or KG S3) Meters, MPU CI225, DSP CI226 & either LPG CI227 or LPG CI231.  
CI225:J1 connected to CI140:J3 or CI140:J4 if one or two V50 Meters are used without PIN Pad CI218.  
CI225:J1 connected to CI232:J2 or CI232:J3 if two V50 Meters are used with PIN Pad CI218.

The metering of LPG, AdBlue, Ethanol, etc. by mass is achieved by either one or two Coriolis V50 Meters. Each V50 Meter comprises three printed circuit boards. MPU CI225 connected to the Micro Processor Board CI140 via the LPG Splitter CI232. DSP CI226 connected to MPU CI225 and a further interconnecting board either LPG CI227 or LPG CI231 which connect to the three Coriolis drive and sense coils. Three cores move into or out of these coils, proportional to the mass flow of fuel through two loops of process pipe work.

The two printed circuit boards MPU CI225 and DSP CI226 contain a mixture of discrete and surface mounted components and the unit has an integral cable. The units are capable of meeting the 500V test to earth or frame and meet the requirements for IP20 with either a metallic or non-metallic outer enclosure. (See Specific Conditions of Use No. 2)

Up to Four (or Six via Encoder Multiplexer CI185) encoders:-

- 3.3 COM50 Smart with Encoder CI180 –
- 3.4 COM125 with Encoder CI163 –
- 3.5 COM250 with Encoder CI163 –

Connected to CI140:J3 to CI140:J6, or CI185:CON1 - CI185:CON6 or CI196:CON1 or CI196:CON6

Each of the Encoders CI163 & CI180 comprises a mechanical assembly of differing diameters containing a magnetic pole piece on a rotor attached to a positive displacement measuring system and has an integral cable. In a separate chamber three Hall Effect sensors mounted on a printed circuit board pick up measurement data from the magnetic pole piece. This data is conditioned and is passed to the microprocessor board.

Each printed circuit board contains surface mounted capacitors, a zener diode, resistors a transistor and the three Hall Effect sensors and derives the circuit power from Vcc within the microprocessor board. Each encoder is capable of meeting the 500V test to earth or frame and meets the requirements for IP20.

- 3.6 Optical Encoder CI111 –

Connected to CI140:J3 to CI140:J6, or CI185:CON1 to CI185:CON6 or CI196:CON1 and CI196:CON6

The Optical Encoder CI111 comprises a mechanical assembly containing a segmented disc on a rotor attached to a positive displacement measuring system and has an integral cable. The vanes pass between three LED / photo transistor pickups which pass measurement data to the microprocessor board. Each printed circuit board contains discrete capacitors, three LED / photo transistor pickups and resistors and derives the circuit power from Vcc within the microprocessor board. The encoder is capable of meeting the 500V test to earth or frame and meets the requirements for IP20.

- 3.7 Encoder Multiplexer CI185

CI185:CON7 connects to CI140:J3, CI140:J4, CI140:J5 and CI140:J6  
CI185:CON1 to CI185:CON6 connects to up to six encoders CI111, CI163 or CI180

The Encoder Multiplexer CI185 comprises a printed circuit board containing capacitors and integrated circuits and derives the circuit power from Vcc within the microprocessor board. The Encoder Multiplexer is capable of meeting the 500V test to earth or frame and meets the requirements for IP20

- 3.8 Triscan Splitter CI196

CI196:CON4 connects to CI140:J12, CI196:CON2 connects to CI140:J3, CI196:CON5 connects to CI140:J4,  
CI196:CON3 connects to CI184:CON1 on Mk II Power Supply Baseefa14ATEX0074X.  
CI196:CON1 and CI196:CON6 connect to encoders CI111, CI163, CI180 or CI177:J2,  
CI196:CON7 and CI196:CON8 connects to nozzle switches.

The Triscan Splitter CI196 printed circuit board does not contain any components but provides the interconnection facility between the Microprocessor CI140 and up to four encoders CI111, CI163 or CI180 and up to two nozzle switches.

### 3.9 LPG Splitter CI232

CI232:J4 connected to CI140:J9, CI232:J1 connected to CI140:J13, CI232:J2 or CI232:J3 connected to CI225:J1, CI232:J5 or CI232:J6 connected to CI218:J1 and CI218:CON2

The LPG Splitter CI232 printed circuit board does not contain any components but provides the interconnection facility between the Microprocessor CI140 and up to two, PIN Pad Displays CI218 and up to two, V50 Meters CI225 & CI226.

## 4 Wireless Interface CWIT (or CWID) Board CI101

CI101:CON5 Connected to CI140:J13,  
CI101:CON2 / CI101:CON9 for the CWIT Aerial

The C4000 CWIT pcb CI101 is designed to be mounted in a hazardous area and its associated CWIT Aerial provides a wireless data interface for the C4000 Control Unit.

The C4000 CWIT pcb CI101 comprises a single printed circuit board which has a mixture of surface mounted and discrete components, six pcb connectors, CI101:CON5 for the Microprocessor Unit C140-J13 and CI101:CON2 / CI101:CON9 for the CWIT Aerial connection. The other connectors CI101:CON1, CI101:CON3, CI101:CON4 and CI101:CON6 are not to be used for hazardous area applications. The printed circuit board is mounted within an outer plastic enclosure which provides a degree of protection of at least IP20.

### CWIT (or CWID) Aerial

Either CI101:CON2 or CI101:CON9 may be connected to the CWIT Aerial which is a single coil antenna wound on a nylon former. It is provided with a degree of protection of at least IP20 and can withstand a 500V test to earth.

## 5 Displays

### 5.1 Retail Display CI170 –

CI170:CON1 to CI140:J10, CI140:J12.  
CI170:CON2 to CI140:J7  
CI170:CON9 to Buzzer, CI170:CON12 to CI140:J11 and CI140:J17  
CI170:CON3, 4 & 5 may be connected to Totalisers.  
CI170:CON6 may be connected to Nozzle Switches.  
A second display may be connected to:-  
CI170:CON7 to CI170:CON7 or CI178:CON1 or CI178:CON5 and  
CI170:CON10 to CI170:CON10 or CI178:CON4 or CI178:CON6

The Retail Display CI170 is designed to be mounted in a hazardous area and comprises a number of LCD displays, the LCD driver integrated circuits, capacitors, resistors, LEDs and semiconductors. The LCD displays are back lit with LEDs and fibre optic mats. The display derives the circuit power from VDSP within the microprocessor board.

### 5.2 Preset Display CI178 –

CI178:CON1 or CI178:CON5 connects to CI170:CON7 or CI237:CON7 or CI249:CON7 or CI251:CON7 and  
CI178:CON4 or CI178:CON6 connects to CI140:J17 or CI170:CON10 or CI237:CON10 or CI249-CON10 or CI251:CON10  
CI178:CON2 connected to CI192:J1  
A second display may be connected to:-  
CI178:CON1 and  
CI178:CON4

The Optional Preset Display CI178 forms part of the display circuit and is supplied from the CI140 Microprocessor printed circuit board via the Generic Display. The circuit comprises surface mount capacitors and resistors, integrated circuits and semiconductor components mounted on a printed circuit board. The Preset Display CI178 may be mounted within the same enclosure as the Generic Display which will provide a degree of protection of IP20.

### 5.3 Preset Interface Keypad CI192

CI192:J1 connects to CI178:CON2  
CI192:J3, CI192:J3A and CI192:J4 connect to a membrane keypad which only contains simple switches.

The Preset Interface Keypad CI192 is designed to be mounted in a hazardous area and comprises integrated circuits, capacitors, resistors, and semiconductor components mounted on a printed circuit board. The Preset Interface Keypad derives the circuit power from Vcc within the microprocessor board and is split into two separate intrinsically safe circuits. Connectors CI192:J3, CI192:J3A and CI192:J4 may be connected to a membrane keypad which only contains simple switches.

#### 5.4 Preset Display/Keypad CI249 –

CI249:CON2 connects to CI140-J7, CI237-CON7, CI249-CON7, or CI251-CON7 and  
CI249:CON6 connects to CI140-J8, CI249-CON8, or CI251-CON8 and  
CI249:CON7 connects to CI178-CON1, -CON5, CI237-CON7, CI249-CON2 or -CON7, or CI251-CON2 or CON7  
CI249:CON8 connects to CI140-J8, CI249-CON8, or CI251-CON8 and  
CI249:CON10 connects to CI178-CON4, CI237-CON12, CI249-CON12, or CI251-CON12 and  
CI249:CON12 connects to CI140-J11 & -J17, CI237-CON10, CI249-CON10, or CI251-CON10

The Optional Preset Display/keypad CI249 forms part of the display circuit and is supplied from the CI140 Microprocessor printed circuit board or via the main display. The circuit comprises surface mount capacitors and resistors, integrated circuits and semiconductor components mounted on a printed circuit board. The Preset Display/keypad CI249 may be mounted within the same enclosure as the main display which will provide a degree of protection of IP20.

#### 5.5 CI236 & CI237 LCD Displays

CI237:CON1 to CI140:J10, CI140:J12.  
CI237:CON2 to CI140:J7, CI237:CON7, CI249:CON2, or CI251:CON2  
CI237:CON9 to Buzzer,  
CI237:CON12 to CI140:J11 and CI140:J17, CI237-CON10, CI249-CON10, or CI251-CON10  
CI237:CON5 may be connected to a Totaliser.  
A second display may be connected to:-  
CI237:CON7 to CI237:CON7 or CI178:CON1 and  
CI237:CON10 to CI237:CON10 or CI178:CON4

The LCD Display CI236 & CI237 is designed to be mounted in a hazardous area and comprises a number of LCD displays, the LCD driver integrated circuits, capacitors, resistors, LEDs and semiconductors. The LCD displays are back lit with LEDs and a plastic light board. The LCD panel interface printed circuit board CI237:J1 connects directly to CI236:J1 LCD Display printed circuit board. The display derives the circuit power from VDSP within the microprocessor board.

#### 5.6 CI251 with CI252, CI253, or CI254 LCD Displays

CI251:CON1 connects to CI140:J10 and CI140:J12.  
CI251:CON2 connects to CI140-J7, CI237-CON7, CI249-CON7, or CI251-CON7  
CI251:CON4 & CON5 may be connected to a Totaliser.  
CI251:CON6 connects to CI140-J8, CI249-CON8, or CI251-CON8  
CI251:CON7 connects to CI178-CON1, -CON5, CI237-CON7, CI249-CON2 or -CON7, or CI251-CON2 or CON7 and  
CI251:CON8 connects to CI214-CON5, CI249-CON6, or CI251-CON6  
CI251:CON9 to Buzzer, CI251:CON12 to CI140:J11 and CI140:J17 and  
CI251:CON10 connects to CI178-CON4, CI237-CON12, CI249-CON12, or CI251-CON12 and  
CI251:CON11 connects to Connector for various membrane keypads and  
CI251:CON12 connects to CI140-J11 & -J17, CI237-CON10, CI249-CON10, or CI251-CON10 and  
CI251:J1 connects to CI252-J1, CI253-J1, or CI254-J1

The LCD Display CI251 with CI252, CI253, or CI254 is mounted within a non-metallic housing designed to be placed in a hazardous area and comprises a number of LCD displays, the LCD driver integrated circuits, capacitors, resistors, LEDs and semiconductors. The LCD displays are back lit with LEDs and a plastic light board. The LCD panel interface printed circuit board CI251:J1 connects directly to CI252:J1, CI253:J1, or CI254:J1 LCD Display printed circuit board. The display derives the circuit power from VDSP within the microprocessor board.

#### 5.7 PIN Pad with Display CI218

CI218:J1 connect to CI140:J9 or CI232:J5 or CI232:J6  
CI218:CON2 connect to CI140:J9, CI232:J5 or CI232:J6.  
CI218:J2 is connected to a membrane keypad which only contains simple switches

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The PIN Pad with Display CI218 is designed to be mounted in a hazardous area and comprises two OLED displays, the driver integrated circuit, capacitors, resistors, and semiconductor components mounted on a printed circuit board. The PIN Pad with display derives the circuit power from VP and Vcc within the microprocessor board and is split into two separate intrinsically safe circuits. Connector CI218:J2 is connected to a membrane keypad which only contains simple switches.

## **6 Card Reader - Connected to CI140:J15 & CI140:J16**

Either one or two Card Readers may be connected to the Microprocessor CI140. This assembly does not meet the requirements for IP20, therefore must be mounted within a suitable external enclosure which provides this protection to the rear of the unit. The receptacle for inserting a card may be external to this enclosure. The unit must be segregated from other IS and non IS circuits and mounted such that it is capable of meeting a 500V test to earth. The Card Reader consists of one or two inductive heads, which read magnetic data from an external card and interpret this data using two integrated circuits. The electronic circuit components are mounted on a printed circuit board.

## **7 Peripheral equipment**

### **7.1 Totaliser ENM P2G729A Connected to CI140:J10 or CI170:CON3, 4 or 5**

The Totaliser is an electromechanical device comprising a solenoid coil with an armature which actuates a mechanical counter mechanism. Up to four totalisers may be connected to the Microprocessor Unit CI140 or Display CI170. Each totaliser is contained within a plastic enclosure which provides a degree of protection of at least IP20, provides 500V isolation from earth and is provided with two leads (and screen).

### **7.2 Buzzer Hi-Q 54-35C2 Connected to CI140:J11 or CI170:CON10 or CI170:CON2**

The buzzer is a piezo crystal device with a maximum capacitance of 0.1µF, and is contained within a plastic enclosure which provides a degree of protection of at least IP20, provides 500V isolation from earth and is provided with two leads which are connected to the Microprocessor Unit CI140.

## **8 Simple Apparatus**

Connected to Microprocessor Board CI140:J12, CI140:J11, CI196:CON7 or CON 8, CI214:CON1, 2, 4, 6, 7, 9, CI170:CON6

Various switches, temperature sensors and pressure sensors with a maximum capacitance of 16µF, are connected to the Microprocessor Unit CI140 to detect the state of external equipment. These are provided with a degree of protection of at least IP20 and provide 500V isolation from earth, therefore are considered to meet the requirements of Simple Apparatus and are not considered further. This covers the Nozzle Switches, Hi / Lo Switches, Parameter On / Off Switches, Peripheral switch, Air Detector / Sump Switches Herga 6863, temperature sensors and pressure sensors.

## **16 Report Number**

See Certificate History

## **17 Specific Conditions of Use**

1. The Micro Processor Board CI140 must be supplied from C4000 Power Supply Unit Mk II, CI138 & CI139 Certificate Number Baseefa14ATEX0074X or IECEx BAS 14.0039X Coded Ex d [ia IIA Ga] IIA T4 (-40°C ≤ Ta ≤ +55°C).
2. Any housing or part that has marked on the label “WARNING – Potential electrostatic charging hazard” must be placed within a dispenser (or similar) housing and must be protected from the possibility of rubbing.



## 18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

## 19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
<b>C4000 Cabling</b>				
AP363	1 of 18	H	16 April 2021	C4000 Cabling –Encoders and encoder multiplexer
AP363	2 of 18	H	16 April 2021	C4000 Cabling – Generic Display -Display End
AP363	3 of 18	H	16 April 2021	C4000 Cabling - Generic Display configurations
AP363	4 of 18	H	16 April 2021	C4000 Cabling – Display Cable Sgl/Dual/Dble
AP363	5 of 18	H	16 April 2021	C4000 Cabling - Generic Display Cable Multi 4/6
AP363	6 of 18	H	16 April 2021	C4000 Cabling - Generic Display Cable Quad
AP363	7 of 18	H	16 April 2021	C4000 Cabling – Misc.
AP363	8 of 18	H	16 April 2021	C4000 Cabling – CNG Dispenser – KG Meters
AP363	9 of 18	H	16 April 2021	C4000 Cabling - CNG Dispenser – Dual KG Meters
AP363	10 of 18	H	16 April 2021	C4000 Cabling - CNG Dispenser – Dual KG Meters
AP363	11 of 18	H	16 April 2021	C4000 Cabling – Preset connections
AP363	12 of 18	H	16 April 2021	C4000 Cabling - Switches I/F connections
AP363	13 of 18	H	16 April 2021	C4000 Cabling – CI214 Temperature/Pressure PCB
AP363	14 of 18	H	16 April 2021	C4000 Cabling – PIN Pad Connections
AP363	15 of 18	H	16 April 2021	C4000 Cabling – LPG Meter Connections
AP363	16 of 18	H	16 April 2021	C4000 Cabling - LPG Meter Interconnections
AP363	17 of 18	H	16 April 2021	C4000 Cabling - KG Meter Interconnections
AP363	18 of 18	H	16 April 2021	C4000 Cabling - KG Meter Interconnections
<b>Labeling</b>				
AP374	1 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – Microprocessor Unit (CI140)
AP374	2 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – Temperature/Pressure Unit
AP374	3 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – KG Meter
AP374	4 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – COM Series Meters
AP374	5 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – Optical Encoder

Number	Sheet	Issue	Date	Description
AP374	6 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – Retail and Preset Displays
AP374	7 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – Depot Register
AP374	8 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – PIN Pad
AP374	9 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – COM Series Meter with Gland
AP374	10 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – Misc
AP374	11 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – CWID and CWID Aerial
AP374	12 of 12	J	25 Oct 2023	C4000 Dispenser Control Unit Labelling – Compac V50 Meter
AP385	1 of 1	C	9 Sep 2022	C4000 Control Unit Mk II Housing
<b>Compac V50 Meter MPU (or KG S3)</b>				
CI225	1 of 9	E	30/08/2022	Coriolis Meter – MSP – MSP430F5310 (Schematic)
CI225	2 of 9	E	30/08/2022	Coriolis Meter – MSP – Data Memory (Schematic)
CI225	3 of 9	E	30/08/2022	Coriolis Meter – MSP – Power and Supervisor (Schematic)
CI225	4 of 9	E	30/08/2022	Coriolis Meter – MSP – Temperature (Schematic)
CI225	5 of 9	E	30/08/2022	Coriolis Meter – MSP – Connectors (Schematic)
CI225	6 of 9	E	28/05/2021	Coriolis Meter MSP Component Layout Top Layer
CI225	7 of 9	E	28/05/2021	Coriolis Meter MSP Track Top Layer
CI225	8 of 9	E	28/05/2021	Coriolis Meter MSP Track Bottom Layer
CI225	9 of 9	E	28/05/2021	Coriolis Meter MSP Component Layout Bot Layer
CI225P	1 of 1	E	01/09/2022	Compac V50 Meter MPU Parts List
<b>Compac V50 Meter MPU (or KG S3)</b>				
CI226	1 of 6	H	07/06/2022	Coriolis Meter – DSP TMS320C553X I/O (Schematic)
CI226	2 of 6	H	07/06/2022	Coriolis Meter – DSP TMS320C553X Power (Schematic)
CI226	3 of 6	H	07/06/2022	Coriolis Meter – DSP Program Memory (Schematic)
CI226	4 of 6	H	07/06/2022	Coriolis Meter – DSP TLV320AIC3204 CODEC (Schematic)
CI226	5 of 6	H	07/06/2022	Coriolis Meter – DSP Drive Circuit (Schematic)
CI226	6 of 6	H	07/06/2022	Coriolis Meter – DSP Connectors (Schematic)
CI226	7 of 13	H	09/06/2022	Coriolis Meter – DSP Component Layout Top Layer
CI226	8 of 13	H	08/06/2022	Coriolis Meter – DSP Track Top Layer
CI226	9 of 13	H	08/06/2022	Coriolis Meter – DSP Mid Layer 1
CI226	10 of 13	H	08/06/2022	Coriolis Meter – DSP Mid Layer 2
CI226	11 of 13	H	08/06/2022	Coriolis Meter – DSP Track Bottom Layer
CI226	12 of 13	H	08/06/2022	Coriolis Meter – DSP Component Layout Bot Layer
CI226	13 of 13	H	08/06/2022	Coriolis Meter – DSP Encapsulation Screen
CI226P	1 to 2	H	20/09/2022	Compac V50 Meter DSP Parts List
<b>LPG Meter Connector</b>				
CI231	1 of 7	C	03/09/2018	LPG Meter Connector Circuit Diagram
CI231	2 of 7	C	03/09/2018	LPG Meter Connector Component Layout Top Layer

Number	Sheet	Issue	Date	Description
CI231	3 of 7	C	03/09/2018	LPG Meter Connector Track Top Layer
CI231	4 of 7	C	03/09/2018	LPG Meter Connector Track Top Layer
CI231	5 of 7	C	03/09/2018	LPG Meter Connector Track Bottom Layer
CI231	6 of 7	C	03/09/2018	LPG Meter Connector Track Bottom Layer
CI231	7 of 7	C	03/09/2018	LPG Meter Connector Component Layout Bottom Layer
CI231P	1 of 1	C	03/09/2018	LPG Meter Connector Parts List
<b>Enclosures</b>				
MAD0028	1 of 4	DWG / Part Rev. D / E	05/09/2022	C4000 KG Meter General Assembly – 350 BAR KG Meter Materials
MAD0028	2 of 4	DWG / Part Rev. D / E	05/09/2022	C4000 KG Meter General Assembly– 350 BAR KG Overall Dimensions
MAD0028	3 of 4	DWG / Part Rev. D / E	05/09/2022	C4000 KG Meter General Assembly– 350 BAR KG Overall Dimensions – Internal
MAD0028	4 of 4	DWG / Part Rev. D / E	05/09/2022	C4000 KG Meter General Assembly– 350 BAR KG CI529 Display Add-on
<b>LCD PANEL LAYOUT 1</b>				
CI252	1 to 2	F	21/10/2022	LCD Panel Layout 1 Circuit Diagram
CI252	3 of 6	F	21/10/2022	LCD Panel Layout 1 Top Overlay
CI252	4 of 6	F	21/10/2022	LCD Panel Layout 1 Track Top Layer
CI252	5 of 6	F	21/10/2022	LCD Panel Layout 1 Track Bottom Layer
CI252	6 of 6	F	21/10/2022	LCD Panel Layout 1 Bottom Overlay
CI252P	1 of 1	F	02/11/2022	LCD Panel Layout 1 Parts List
<b>PIN Pad Box</b>				
ASM0043	1 to 2	DWG / Part Rev. E / D	15/01/2018	7 Digit Display Panel Housing Assembly
<b>KG100 Adaptor (C4K)</b>				
CI260	1 of 2	D	29/07/2021	KG100 Adaptor (C4K) – I/O (Schematic)
CI260	2 of 2	D	30/07/2021	KG100 Adaptor (C4K) – PWR & C4000 I/O(Schematic)
CI260	3 of 6	D	31/07/2023	KG100 Adaptor (C4K) – Top Overlay
CI260	4 of 6	D	31/07/2023	KG100 Adaptor (C4K) – Top Layer
CI260	5 of 6	D	31/07/2023	KG100 Adaptor (C4K) – Bottom Layer
CI260	6 of 6	D	31/07/2023	KG100 Adaptor (C4K) – Bottom Overlay
CI260P	1 of 1	D	03/08/2021	KG100 Adaptor (C4K) – BOM
<b>Rigid Flexi Connector</b>				
CI263	3 of 7	B	30/08/2018	Rigid Flexi Connector – Top Layer
CI263	4 of 7	B	30/08/2018	Rigid Flexi Connector – Flex Top Layer
CI263	5 of 7	B	30/08/2018	Rigid Flexi Connector – Flex Bottom Layer
CI263	6 of 7	B	30/08/2018	Rigid Flexi Connector – Bottom Layer
CI263P	1 of 1	B	31/08/2018	Rigid Flexi Connector – BOM
<b>KG100 Display</b>				
CI529	1 of 4	C	30/06/2021	Display for Coriolis Meter – Micro (Schematic)
CI529	2 of 4	C	30/06/2021	KG100 Display – Top Overlay
CI529	3 of 4	C	30/06/2021	KG100 Display – Top Layer

Number	Sheet	Issue	Date	Description
CI529	4 of 4	C	30/06/2021	KG100 Display – Bottom Layer
CI529P	1 of 1	C	01/07/2021	KG100 Display – BOM

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
AP324	1 of 1	B	28 Nov 2013	Magtek P Series Card Reader Circuit Diagram
AP325	1 of 4	C	11/10/2012	Magtek P Series Card Reader pcb
AP238	6	K	8 October 2015	Depot Register Box
<b>C4000 Cabling</b>				
AP363P	1 of 1	B	29 May 2014	C4000 Cabling – BOM for cables and wiring
AP362	2 of 6	C	8 October 2015	C4000 Cabling -Std Power Supply to Microprocessor
AP362	3 of 6	C	8 October 2015	C4000 Cabling - Power Supply with extra RS485
AP362	5 of 6	C	8 October 2015	C4000 Cabling - Power Supply with switches I/F
<b>Block Diagram</b>				
AP372	1 to 3	F	8 October 2015	C4000 Block Diagram
<b>Labeling</b>				
AP381	1 of 1	A	4 Mar 2014	Wiring Loom Labelling Format
AP384	1 to 3	B	14 October 2015	C4000 Control Unit Mk II pcb Interconnections
<b>CWIT (or CWID)</b>				
CI101-1	1 of 5	E	15/11/2002	CWIT Circuit Diagram
CI101-2	2 of 5	E	15/11/2002	CWIT Circuit Diagram
CI101E	3 of 5	E	11/12/2002	CWIT Track Top Layer
CI101E	4 of 5	E	11/12/2002	CWIT Track Bottom Layer
CI101E	5 of 5	E	11/12/2002	CWIT Component Layout
CI101P	1 to 4	E4	1 August 2014	CWIT Parts List
<b>Optical Encoder CI111</b>				
CI111	1 of 4	B	08/05/2003	3-Channel Encoder Circuit Diagram
CI111	2 of 4	B	08/05/2003	3-Channel Encoder Component Layout
CI111	3 of 4	B	08/05/2003	3-Channel Encoder Track Top Layer
CI111	4 of 4	B	08/05/2003	3-Channel Encoder Track Bottom Layer
CI111P	1 of 1	B1	17 Dec 2009	3-Channel Encoder Parts List
<b>Microprocessor CI140</b>				
CI140	2 of 8	G	18 Jan 2013	Circuit Diagram
CI140	3 of 8	G	18 Jan 2013	Component Layout
CI140	4 of 8	G	18 Jan 2013	Track Top Layer
CI140	5 of 8	G	18 Jan 2013	Track Mid Layer

Number	Sheet	Issue	Date	Description
CI140	6 of 8	G	18 Jan 2013	Track Mid 1 Internal 1 Layer
CI140	7 of 8	G	18 Jan 2013	Track Mid 2 Internal 2 Layer
CI140	8 of 8	G	18 Jan 2013	Track Mid 2 Layer
<b>Encoder CI163</b>				
CI163	1 of 4	C	20/01/2003	Encoder COM125/250 Circuit Diagram
CI163	2 of 4	C	20/01/2003	Encoder COM125/250 Component Layout
CI163	3 of 4	C	20/01/2003	Encoder COM125/250 Track Top Layer
CI163	4 of 4	C	20/01/2003	Encoder COM125/250 Track Bottom Layer
CI163P	1 of 1	C2	26 Jan 2010	Encoder COM125/250 Parts List
<b>Generic Retail Display CI170</b>				
CI170	1 of 5	F	11 July 2013	Retail Display Circuit Diagram
CI170	2 of 5	F	11 July 2013	Retail Display Component Layout Top
CI170	3 of 5	F	11 July 2013	Retail Display Track Top Layer
CI170	4 of 5	F	11 July 2013	Retail Display Track Bottom Layer
CI170	5 of 5	F	11 July 2013	Retail Display Component Layout Bottom
CI170P	1 of 1	F1	31 Jan 2014	Retail Display Parts List
<b>KG Meter CI176</b>				
CI176	1 of 7	D	23/01/2014	KG Meter DSP Circuit Diagram
CI176	2 of 7	D	23/01/2014	KG Meter DSP Flash Circuit Diagram
CI176	3 of 7	D	23/01/2014	KG Meter CODEC Circuit Diagram
CI176P	1 of 1	D4	29 Jan 2014	KG Meter DSP Parts List
<b>KG Meter CI177</b>				
CI177	1 of 4	H	16 Oct 2013	KG Meter Power Circuit Diagram
CI177	2 of 4	H	08 July 2013	KG Meter Power Component Layout
CI177	3 of 4	H	08 July 2013	KG Meter Power Track Top Layer
CI177	4 of 4	H	08 July 2013	KG Meter Power Track Bottom Layer
CI177P	1 to 3	H2	09/05/2014	KG Meter Power Parts List
<b>Preset Display</b>				
CI178	1 of 4	B	16 Nov 2012	Preset Display Circuit Diagram
CI178	2 of 5	B	16 Nov 2012	Preset Display Component Layout Top Layer
CI178	3 of 5	B	16 Nov 2012	Preset Display Track Top Layer
CI178	4 of 5	B	16 Nov 2012	Preset Display Track Bottom Layer
CI178	5 of 5	B	16 Nov 2012	Preset Display Component Layout Bottom Layer
CI178P	1 of 1	B1	29 Jan 2014	Preset Display Parts List
<b>COM50 Smart Encoder</b>				
CI180	1 of 4	D	6/28/2010	COM50 Smart Encoder Circuit Diagram

Number	Sheet	Issue	Date	Description
CI180	2 of 4	D	6/28/2010	COM50 Smart Encoder Component Layout Top Layer
CI180	3 of 4	D	6/28/2010	COM50 Smart Encoder Track Top Layer
CI180	4 of 4	D	6/28/2010	COM50 Smart Encoder Track Bottom Layer
CI180P	1 of 1	D	28 Jun 2010	COM50 Smart Encoder Parts List

#### Encoder Multiplex

CI185	1 of 1	B	9 Oct 2008	Encoder Multiplex Circuit Diagram
CI185P	1 of 1	B1	2 Feb 2010	Encoder Multiplex Parts List

#### Preset Interface

CI192	1 of 4	D	2 Oct 2011	Preset Interface Circuit Diagram
CI192	2 of 4	D	20 Dec 2012	Preset Interface Component Layout Top Layer
CI192	3 of 4	D	20 Dec 2012	Preset Interface Track Top Layer
CI192	4 of 4	D	20 Dec 2012	Preset Interface Track Bottom Layer
CI192P	1 of 1	D1	29/01/14	Preset Interface Parts List

#### Triscan Splitter

CI196	1 of 4	A	28 Jan 2014	Triscan Splitter Circuit Diagram
CI196	2 of 4	A	28 Jan 2014	Triscan Splitter Component Layout Top Layer
CI196	3 of 4	A	28 Jan 2014	Triscan Splitter Track Top Layer
CI196	4 of 4	A	28 Jan 2014	Triscan Splitter Track Bottom Layer
CI196P	1 of 1	A	29/01/14	Triscan Splitter Parts List

#### CNG TP Board

CI214	1 of 6	D2	22 May 2014	CNG TP Board Circuit Diagram 1
CI214	2 of 6	D1	08/05/2014	CNG TP Board Circuit Diagram 2
CI214	3 of 6	D	17 Jan 2013	CNG TP Board Component Layout Top Layer
CI214	4 of 6	D	17 Jan 2013	CNG TP Board Track Top Layer
CI214	5 of 6	D	17 Jan 2013	CNG TP Board Track Bottom Layer
CI214	6 of 6	D	17 Jan 2013	CNG TP Board Component Layout Bottom Layer
CI214P	1 of 1	D4	25 September 2014	CNG TP Board Parts List

#### C4000 PIN Pad

CI218	1 of 5	D	6 Jun 2014	C4000 PIN Pad Circuit Diagram 1
CI218	2 of 5	D	6 Jun 2014	C4000 PIN Pad Circuit Diagram 2
CI218	3 of 5	D	6 Jun 2014	C4000 PIN Pad Component Layout Top Layer
CI218	4 of 5	D	6 Jun 2014	C4000 PIN Pad Track Top Layer
CI218	5 of 5	D	6 Jun 2014	C4000 PIN Pad Track Bottom Layer
CI218P	1 to 2	D	1/08/2014	C4000 PIN Pad Parts List

#### LPG Meter Connector

CI227	1 of 5	B	17 Apr 2014	LPG Meter Connector Circuit Diagram
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Number	Sheet	Issue	Date	Description
CI227	2 of 5	B	17 Apr 2014	LPG Meter Connector Component Layout Top Layer
CI227	3 of 5	B	17 Apr 2014	LPG Meter Connector Track Top Layer
CI227	4 of 5	B	17 Apr 2014	LPG Meter Connector Track Bottom Layer
CI227	5 of 5	B	17 Apr 2014	LPG Meter Connector Component Layout Bottom Layer
CI227P	1 of 1	B	23 Apr 2014	LPG Meter Connector Parts List
CI231P	1 of 1	B	23 October 2015	LPG Meter Connector Parts List
<b>LPG Splitter</b>				
CI232	1 of 5	A	23 Apr 2014	LPG Splitter Circuit Diagram
CI232	2 of 7	A	19 Jun 2014	LPG Splitter Component Layout Top Layer
CI232	3 of 7	A	19 Jun 2014	LPG Splitter Track Top Layer
CI232	4 of 7	A	19 Jun 2014	LPG Splitter Track Bottom Layer
CI232	5 of 7	A	19 Jun 2014	LPG Splitter Component Layout Bottom Layer
CI232P	1 of 1	A	23 Apr 2014	LPG Splitter Parts List
<b>LCD Panel Connector</b>				
CI236	1 of 1	B	10 October 2014	LCD Panel Connector Circuit Diagram
CI236	2 of 5	B	10 October 2014	LCD Panel Connector Component Layout Top Layer
CI236	3 of 5	B	10 October 2014	LCD Panel Connector Track Top Layer
CI236	4 of 5	B	10 October 2014	LCD Panel Connector Track Bottom Layer
CI236	5 of 5	B	10 October 2014	LCD Panel Connector Component Layout Bottom Layer
CI236P	1 of 1	B	10 October 2014	LCD Panel Connector
<b>Enclosures</b>				
MAD0035A	1 to 4	Part Rev. A	2 May 2014	C4000 V50 Meter General Assembly Metallic
SW052	3	B	7 Sept 2009	CI101 CWIT
SW052	7	D	22 Oct 2013	CI163 / CI162 Encoders COM50 (Similar to 125 250)
SW052	14	C	18 Sept 2012	CI140 Micro Processor
SW107	8	C	10 November 2014	Rotary Encoder Assembly for CI111
MAD0048B	1 to 3	Part Rev. B	12/10/2015	C4000 V50 Meter General Assembly Non-Metallic replaces MAD0048A
<b>PRESET DISPLAY</b>				
CI249	1 of 3	A	22 September 2015	Preset Display Circuit Diagram
CI249	2 of 3	A	29 September 2015	Preset Display Circuit Diagram
CI249	3 of 3	A	22 September 2015	Preset Display Circuit Diagram
CI249	4 of 7	A	29 September 2015	Preset Display Top Overlay
CI249	5 of 7	A	29 September 2015	Preset Display Track Top Layer
CI249	6 of 7	A	29 September 2015	Preset Display Track Bottom Layer
CI249	7 of 7	A	29 September 2015	Preset Display Bottom Overlay
CI249P	1 of 1	A	12 October 2015	Preset Display Parts List

Number	Sheet	Issue	Date	Description
<b>C4K MAIN DISPLAY</b>				
CI251	1 of 6	A	5 October 2015	C4K Main Display Circuit Diagram
CI251	2 of 6	A	5 October 2015	C4K Main Display Circuit Diagram
CI251	3 of 6	A	5 October 2015	C4K Main Display Top Overlay
CI251	4 of 6	A	5 October 2015	C4K Main Display Track Top Layer
CI251	5 of 6	A	5 October 2015	C4K Main Display Trach Bottom Layer
CI251	6 of 6	A	5 October 2015	C4K Main Display Bottom Overlay
CI251P	1 to 2	A	12 February 2016	C4K Main Display Parts List
<b>LCD PANEL LAYOUT 2</b>				
CI253	1 of 5	A	6 October 2015	LCD Panel Layout 2 Circuit Diagram
CI253	2 of 5	A	7 October 2015	LCD Panel Layout 2 Top Overlay
CI253	3 of 5	A	7 October 2015	LCD Panel Layout 2 Track Top Layer
CI253	4 of 5	A	7 October 2015	LCD Panel Layout 2 Track Bottom Layer
CI253	5 of 5	A	7 October 2015	LCD Panel Layout 2 Bottom Overlay
CI253P	1 of 1	A	12 October 2015	LCD Panel Layout 2 Parts List
<b>LCD PANEL LAYOUT 3</b>				
CI254	1 of 5	A	7 October 2015	LCD Panel Layout 3 Circuit Diagram
CI254	2 of 5	A	7 October 2015	LCD Panel Layout 3 Top Overlay
CI254	3 of 5	A	7 October 2015	LCD Panel Layout 3 Track Top Layer
CI254	4 of 5	A	7 October 2015	LCD Panel Layout 3 Track Bottom Layer
CI254	5 of 5	A	7 October 2015	LCD Panel Layout 3 Bottom Overlay
CI254P	1 of 1	A	12 October 2015	LCD Panel Layout 3 Parts List
<b>PIN Pad Box</b>				
ASM0024D	1 to 2	Part Rev. C	12 October 2015	C4000 PIN Pad Box Assembly Replaces ASM0024C; Part Rev. C
<b>Microprocessor CI140</b>				
CI140	1 of 8	G2	14 October 2015	Circuit Diagram
CI140P	1 to 3	G6	14 October 2015	Parts List

These drawings are common to IECEx BAS 14.0107X. The drawings are held with IECEx BAS 14.0107X.

## 20 Certificate History

Certificate No.	Date	Comments
Baseefa14ATEX0237X	26 November 2014	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR14.0210/00.



<b>Certificate No.</b>	<b>Date</b>	<b>Comments</b>
Baseefa14ATEX0237X Issue 1	8 June 2016	To permit minor changes to a number of circuit boards and enclosures and the introduction of a new connector Board CI251 as an alternative to CI236 with three new display boards CI252, CI253, and CI254 as an alternative to CI170. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR16.0065/00.
Baseefa14ATEX0237X Issue 2	27 October 2023	This issue of the certificate confirms the current design meets the requirements of EN IEC 60079-0:2018 and EN 60079-11:2012 including the revision of the equipment marking in accordance with these standards. The issue of the certificate also documents several constructional changes, including the addition of new circuit assemblies and the correction of a typographical error on the previous certificate. The associated test and assessment is documented in Report No. GB/BAS/ExTR23.0007/00. Project 20/0633.
For drawings applicable to each issue, see original of that issue.		