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 SIM 21.0006X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2022-05-06)
Date of Issue:	2024-09-26		
Applicant:	**Sundott Pty Ltd t/a CADEANCO** Unit 3, 4 Royan Place Royan Business Park BAYSWATER VIC 3153 **Australia**		
Equipment:	**Strain Bridge Monitor SBM3000**		
Optional accessory:			
Type of Protection:	**Intrinsic Safety "i"**		
Marking:	Ex ia I/IIB T3 Ma Ga IP64		

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

Position: **Principal Engineer - Certification**

Signature: (for printed version)

Date: (for printed version) 26 September 2024

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:

Safety in Mines Testing and Research Station (Simtars)
2 Robert Smith Street, REDBANK QLD 4301
Australia

IECEx Certificate of Conformity

Manufacturer: **Sundott Pty Ltd t/a CADEANCO**
Unit 3, 4 Royan Place
Royan Business Park
BAYSWATER VIC 3153
Australia

Manufacturing locations: **Sundott Pty Ltd t/a CADEANCO**
Unit 3, 4 Royan Place
Royan Business Park
BAYSWATER VIC 3153
Australia

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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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/SIM/ExTR21.0005/01

Quality Assessment Report:

AU/SIM/QAR22.0001/01

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

The SBM3000 Strain Bridge Monitor is a portable device for the measurement of pre-installed strain gauges.

The instrument housed in a polypropylene case for the measurement and logging of readings taken by strain gauges installed in the field. The front panel installed in the base of the case contains a six-key membrane keypad, liquid crystal display and charging terminal/data connector. The instrument can be manufactured in two options to suit different external connectors for a range of configurations and strain gauge types. The circuit is powered from a non-removable internal battery pack consisting of six series-connected size AA NiMH cells. Current-limiting resistors and blocking diodes on the battery circuit board limit power to various circuits on the Main Control Board to intrinsically safe values. Connection for data transfer and charging from separate equipment in the safe area is via a front-panel-mount stepped connector.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer Annex

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

ISSUE 1:

- Replace transistor type IRFR9024NPBF with type FDD4243 (Q1 and Q6).

Annex:

IECEx SIM 21.0006X-1 SBM3000 Annex.pdf

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Certificate No.: **IECEx SIM 21.0006X** Issue No.: 1

Annex

Manufacturer's documents associated with this issue:

Drawing No	Sheets	Subject	Rev.	Date
SBM3000-BD-4	1	SBM3000 Block Diagram	004	03/05/18
1151-932B-CLR	1	1150 BASE	A	11/14/15
1150	1	1150 CASE LINER, BOTTOM INTERNAL GEOMETRY	PR	-
1151-932T-CLR	1	1150 TOP	A	11/14/15
1150	1	1150 CUBE CASE, TOP INTERNAL GEOMETRY	PR	-
Connect-1a	1	SBM3000 Connection 1 Option	-	07/11/2021
SBM3000_1_CA	1	SBMN3000_Ver1_Cut Away	1	07/09/18
SBM3000_1_OT	1	SBM3000_Ver1_Orthogonal	1	07/09/18
Connect-2a	1	SBM3000 Connection 2 Option	-	07/11/2021
SBM3000_2_CA	1	SBM3000_Ver2_Cut Away	1	07/09/18
SBM3000_2_OT	1	SBM3000_Ver2_Orthogonal	1	07/09/18
Section-1	1	SBM3000 Case Section	-	07/02/2018
PVIEW-1	1	SBM3000 Case Plan – Baseplate Level View	-	07/02/2018
BPlate-1	1	SBM3000 Baseplate	-	23/05/2017
PVIEW-2b	1	SBM3000 Case Plan – Battery Board Level View	-	30/08/2019
PVIEW-3b	1	SBM3000 Case Plan – Battery Shield Level View	-	30/08/2019
BShield-2	1	SBM3000 Battery Shield	-	02/10/2017
PVIEW-4d	1	SBM3000 Case Plan – Control Board Level View	-	30/08/2019
PVIEW-5f	1	SBM3000 Case Plan – Panel Support Frame Level	-	26/07/2020
PVIEW-7	1	SBM3000 Case Plan – Front Panel View	-	07/11/2021
SBM-FP-4	1	SBM3000 FRONT PANEL	-	24/08/20

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Annex

Drawing No	Sheets	Subject	Rev.	Date
FPDet-3	1	SBM3000 Front Panel Detail	-	03/10/2021
SBM3000-CF-4	1	SBM3000 Case Panel Frame V4	A	05/10/21
SBM3000-FS-1	1	SBM3000 Case Frame Seal	A	19/10/21
CASELB-2	1	SBM3000 CASE LABEL 2	-	13/05/2019
SBM3000-CLP-1	1	SBM3000 Case Case label	A	04/11/21
CASEISLB-2	1	SBM3000 CASE IS LABEL	-	12/11/2021
SBM3000-ISP-1	1	SBM3000 Case IS Case Label Location	A	12/11/21
SBM3000-FP-2	1	BOM.xlsx	-	23/03/22
SBM3000-O2-2	1	BOM.xlsx	-	23/03/22
SBM3000-CableA-2	1	SBM3000 Internal Cable A	002	23/03/22
SBM3000-CableB-3	1	SBM3000 Internal Cable B	003	24/03/22
SBM3000-CableC-5	1	SBM3000 Internal Cable C	005	23/03/22
SBM3000-CableD-2	1	SBM3000 Internal Cable D	002	26/09/18
SBM3000-CableEFG-3	1	SBM3000 Internal Cables E, F &G	003	24/03/22
SBM3000-CableH-3	1	SBM3000 Internal Cable H	003	24/03/22
84094	1	SBM3000 MEMBRANE SWITCH MEMBRANE LAYER -	A	04/09/17
SBM3000_CS_2	1	LEMO ERA2S304CLL	-	14/12/19
WSLCD_2004L	1	SBM3000 LCD Module Circuit Schematic	D	05/03/2019
SBM3000-LCD-2	1	BOM.xlsx	-	23/03/22
SBM3000-BP-4	1	SBM3000 Battery Pack	004	30/08/19
PCB No: SBM3000-BP-3	1	Composite	001	29/08/2019
PCB No: SBM3000-BP-3	1	Component Layer	001	29/08/2019

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Certificate No.: **IECEx SIM 21.0006X** Issue No.: 1

Annex

Drawing No	Sheets	Subject	Rev.	Date
PCB No: SBM3000-BP-3	1	Top Layer	001	29/08/2019
PCB No: SBM3000-BP-3	1	Bottom Layer	001	29/08/2019
PCB No: SBM3000-BP-3	1	PCB Specification SBM3000-BP-3	001	29/08/2019
SBM3000-BP-4	1	BOM.xlsx	-	23/03/22
SBM3000-CON-8a	1	* SBM3000 Control Schematic	008a	11/09/24
SBM3000-MPX-5	1	SBM3000 Multiplexer Schematic	005	09/05/18
SBM3000-CHG-3	1	SBM3000 Charger Schematic	003	07/09/19
PCB No: SBM3000-CON-6	1	Composite	001	14/12/2019
PCB No: SBM3000-CON-6	1	Component Layer	001	14/12/2019
PCB No: SBM3000-CON-6	1	Top Layer	001	14/12/2019
PCB No: SBM3000-CON-6	1	Bottom Layer	001	14/12/2019
PCB No: SBM3000-CON-6	1	PCB Specification SBM3000-CON-6	001	30/08/2019
SBM3000-CON-6c	8	* BOM.xlsx	-	11/09/24
SBM3000-IO1-1	1	SBM3000 I/O Board v1	001	2/06/17
PCB No: SBM3000-IO-1	1	Composite	001	04/06/2017
PCB No: SBM3000-IO-1	1	Component Layer	001	04/06/2017
PCB No: SBM3000-IO-1	1	Top Layer	001	05/06/2017
PCB No: SBM3000-IO-1	1	Bottom Layer	001	05/06/2017
PCB No: SBM3000-IO-1	1	PCB Specification SBM3000-IO-1	001	04/06/2017
SBM3000-IO-2c	1	BOM.xlsx	-	23/03/22
SBM3000-IO2-2	1	SBM3000 I/O Board v2	002	06/02/18
PCB No: SBM3000-IO-2a	1	Composite	001	13/10/2017

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Drawing No	Sheets	Subject	Rev.	Date
PCB No: SBM3000-IO-2a	1	Component Layer	001	13/10/2017
PCB No: SBM3000-IO-2a	1	Top Layer	001	13/10/2017
PCB No: SBM3000-IO-2a	1	Bottom Layer	001	13/10/2017
PCB No: SBM3000-IO-2a	1	PCB Specification SBM3000-IO-2a	001	13/10/2017
SBM3000-IO-2c	1	BOM.xlsx	-	23/03/22
SBM3000-ISA	3	SBM Readout IS Addendum	1	10-11-21

*Note: An * is included before the title of documents that are new or revised.*

Conditions of Use associated with this issue:

Equipment entity parameters:

SBM3000 (Output 1, 2, 3 and 4)	Uo (V)	Io (A)	Po (W)	Co (µF)	Lo (mH)	Lo/Ro (µH/Ω)
Group I	5.9	0.52	0.644	999	2.2	375
Group IIA	5.9	0.52	0.644	999	0.8	228
Group IIB	5.9	0.52	0.644	999	0.525	114

Charging and data transfer in a non-hazardous area only.

Data Transfer Um: 5 V

Charging Um: 15 V

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