



Certificate of Compliance

Certificate: 2445306

Master Contract: 243446

Project: 70008360

Date Issued: 2014-07-09

Issued to:

Geotechnical Instruments (UK) Ltd
Sovereign House, Queensway, Leamington Spa
Warwickshire, CV31 3JR
THE UNITED KINGDOM
Attention: Mr. Steve Billingham

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by: Sripriya Kalyanasundaram

PRODUCTS

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsicly Safe and Non-Incendive Systems - For Hazardous Locations

Ex ib IIA:

Model GA 5000, GEM 5000 and BIOGAS 5000 Methane Detectors; portable, battery powered with non-field-replaceable Battery Pack P/N 20087 or P/N 2011113; intrinsically safe and providing intrinsically safe circuits (“[ib]” for Zone 1) to Model GF5.2 Temperature Probe (Connector B) and with entity output parameters as tabulated below; Temperature Code T1; $-10\text{ }^{\circ}\text{C} \leq T_{amb.} \leq +50\text{ }^{\circ}\text{C}$.

Connector	Entity Parameters						
	Uo (V)	Io (mA)	Po (mW)	Co (uF)	Lo (mH)	Ci (uF)	Li (mH)
B	5.0	6	7	100	1000	0	0
C	10.0	5	50	100	1000	0	0

Note: This device has been investigated for electrical safety features only.



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CLASS 2258 83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

AEx ib IIA:

Model GA 5000, GEM 5000 and BIOGAS 5000 Methane Detectors; portable, battery powered with non-field-replaceable Battery Pack P/N 20087 or P/N 2011113; intrinsically safe and providing intrinsically safe circuits (“[ib]” for Zone 1) to Model GF5.2 Temperature Probe (Connector B) and with entity output parameters as tabulated below; Temperature Code T1; $-10\text{ }^{\circ}\text{C} \leq T_{\text{amb.}} \leq +50\text{ }^{\circ}\text{C}$.

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APPLICABLE REQUIREMENTS

- C22.2 No. 0-10 - General Requirements – Canadian Electrical Code, Part II
- CAN/CSA-C22.2 No. 60079-0:11 - Electrical apparatus for explosive gas atmospheres - Part 0: General Requirements
- CAN/CSA-E60079-11:11 - Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic Safety "i"
- ANSI/UL 60079-0:09 - Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
- ANSI/UL 60079-11:11 - Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety “i”

MARKINGS

Product markings shall be in accordance with the related standards. In addition, it shall be the responsibility of the manufacturer to provide additional markings on the product to comply with the requirements of the local regulatory authorities. For example, in Canada, any caution and warning markings must be provided in French and English.

Model GA 5000, GEM 5000 and BIOGAS 5000 Methane Detectors

Markings appear on a CSA Accepted (LL 81288; Class 7921) adhesive nameplate/label (manufactured by Cuspal Ltd., Velvet Polycarbonate w/pressure-sensitive “467MP” adhesive), or CSA Accepted equivalent. Refer to Drawings Ex003 and Ex041. The following marking details appear:



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- CSA Monogram, with c us indicator;
- Company name (“Geotechnical Inst.”) or Master Contract Number (“M.C. # 243446”);
- Model number;
- Serial number or Date Code;
- Certificate reference (“CSA 11 2445306”);
- Hazardous Location designation (“Ex ib IIA T1”) (In addition to these required markings, the following optional markings may also appear: “Class I, Zone 1, Group IIA”);
- Hazardous Location designation (“Class I, Zone 1, AEx ib IIA T1”);
- Ambient Temperature (“Ta = -10 Deg. C to + 50 Deg. C”);
- The statement: “Do not charge, recharge or open in a potentially explosive atmosphere”;
- The statement: “In hazardous area only use Temperature Probe GF5.2 in Connector B”
- The statement: “Connector B (Uo = 5V, Io = 6 mA, Po = 7 mW, Co = 100 uF, Lo = 1000 mH, Ci = 0, Li = 0)
- The statement: “Connector C (Uo = 10V, Io = 5 mA, Po = 50 mW, Co = 100 uF, Lo = 1000 mH, Ci = 0, Li = 0)
- The statement: “Maximum Non-Hazardous Area supplies: Connector A Um = 6V Connector B Um = 10.1 V”.
- The statement: “Only as to Intrinsic Safety”

Battery Pack, P/N 20087 or P/N 2011113

Markings appear on an adhesive label, affixed to the side of the Battery Pack. Refer to Drawing EX042. The following marking details appear:

- Company Name (“Geotechnical Inst.”) or Master Contract No. (“M.C. # 243446”);
- Part Number;
- Serial Number.

Temperature Probe, P/N GF5.2

Markings appear on a CSA Accepted adhesive nameplate/label, manufactured by Zebra Technologies, Z-Ultimate 3000T White. Refer to Drawing Ex038. The following marking details appear:

- Company Name (“Geotechnical Inst.”) or Master Contract No. (“M.C. # 243446”);
- Part number;
- Serial number and/or date code;
- Certificate reference (“CSA 11 2445306”);
- The statement: “Warning – For use with GA5000, GEM5000 & BIOGAS 5000”.