



# Certificate of Compliance

**Certificate:** 2413181

**Master Contract:** 252673

**Project:** 2413181

**Date Issued:** April 7, 2011

**Issued to:** Sensear PTY Limited  
197-199 Great Eastern Highway  
Belmont, WA 6104  
AU  
Attention: David Ward

*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.*



*Andrew Redeker*

**Issued by:** Andrew Redeker

## **PRODUCTS**

**CLASS 2258 04** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

**CLASS 2258 84** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - - For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups C,D; T3C;  $-20^{\circ}\text{C} \leq \text{Ta} \leq +40^{\circ}\text{C}$

Ex ia IIB T3;  $-20^{\circ}\text{C} \leq \text{Ta} \leq +40^{\circ}\text{C}$

Class I, Zone 1, AEx ia IIB T3;  $-20^{\circ}\text{C} \leq \text{Ta} \leq +40^{\circ}\text{C}$

Type SM1xSR Electronic Ear-Muff; 4.2V battery powered; may be connected with the Type SRCK0045 SM1xSR IS Interface Cable with the following Entity Parameters as per drawing CSACUS001;

$V_{\text{max}}, U_{\text{i}} = 10\text{V}; C_{\text{i}} = 0.69\mu\text{F}; L_{\text{i}} = 0$

$V_{\text{oc}}, U_{\text{o}} = 4.1\text{V}; I_{\text{max}}, I_{\text{o}} = 26.9\text{mA}; P_{\text{max}}, P_{\text{o}} = 27.6\text{mW}; C_{\text{a}}, C_{\text{o}} = 1000\mu\text{F}; L_{\text{a}}, L_{\text{o}} = 196\text{mH}$

Notes:



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- i. The battery shall only be charged when the equipment is located in a safe area via the jack socket on the left hand, ear cup; the maximum permitted voltage at this charging input is  $U_m = 6 \text{ V}$ .
- ii. User connection to the USB connector located in the connector compartment of the right hand, ear cup is not permitted.
- iii. Connection to the 3.5 mm stereo connector in the connector compartment of the right hand, ear cup shall only be made in the safe area. The maximum permitted voltage at this connector is  $U_m = 0.6 \text{ V}$  and the maximum permitted power at this connector is  $P_m = 0.1 \text{ W}$ .
- iv. Connection to the multi-pin connector on the right hand, ear cup shall only be made via an SRCK0045 SM1xSR IS Interface Cable. No direct external connection to this connector is permitted.
- v. The SM1xSR Electronic Ear-Muff and the SRCK0045 SM1xSR IS Interface Cable enclosures both provide minimum IP 20 protection and as such this equipment shall only be used in environments appropriate to this level of protection.

#### **APPLICABLE REQUIREMENTS**

C22.2 No 0 - 10 - General Requirements - Canadian Electrical Code Part II.

C22.2 No 157 - M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations.

CAN/CSA 60079-0:07 - Electrical apparatus for explosive gas atmospheres. - PART 0: General requirements.

CAN/CSA E60079-11:02 - Electrical apparatus for explosive gas atmospheres. - PART 11: Intrinsic safety "i".

UL 913, Seventh Edition - Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, III, Division 1, Hazardous (Classified) Locations.

UL 60079-0 Fifth Edition - Electrical apparatus for explosive gas atmospheres. - PART 0: General

UL 60079-11 Fifth Edition - Electrical apparatus for explosive gas atmospheres. - PART 11: Intrinsic safety "i".