



# Certificate of Compliance

**Certificate:** 70213342

**Master Contract:** 169790

**Project:** 70213342

**Date Issued:** October 31, 2019

**Issued To:** Pepperl+Fuchs AG  
Lilienthalstrasse 200  
Mannheim, 68307  
Germany

**Attention:** Michael Breitenbach

*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:** *Bill Bizuk, P.Eng.*  
Bill Bizuk, P.Eng.

## **PRODUCTS**

CLASS - C2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non Incendive Systems - For Hazardous Locations

CLASS - C2258 83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems- For Hazardous Locations - Certified to U.S. Standards



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For Canada:

- **Class I, Div 1, Groups A, B, C and D T4 Ex ib**
- **Class I, Div 2, Groups A, B, C and D T4 Ex ic**
- **Class II, Div 1, Groups E, F, G T120°C**
- **Class II, Div 2, Groups E, F, G T120°C**
- **Class III**
- **Ex ib op is IIC T4 Gb**
- **Ex ic IIC T4 Gc**
- **Ex ib op is IIIC T120°C Db**
- **Ex ic IIIC T120°C Dc**

For U.S. :

- **Class I, Div 1, Groups A, B, C and D T4 Ex ib**
- **Class I, Div 2, Groups A, B, C and D T4 Ex ic**
- **Class II, Div 1, Groups E, F, G T120°C**
- **Class II, Div 2, Groups E, F, G T120°C**
- **Class III**
- **Class I, Zone 1, AEx ib op is IIC T4 Gb**
- **Class I, Zone 2, AEx ic IIC Gc**
- **Class II, Zone 21, AEx ib op is IIIC T120°C Db**
- **Class II, Zone 22, AEx ic IIIC T120°C Dc**

Intrinsically safe Mobile Phone, battery operated including power and energy limitation;  
2 Li-Ion cells (parallel),  $U_o = 3.7 \text{ V}$ ,  $U_{max} = 4.2 \text{ V}$ ;  $I_{UBAT\_max} = 2.6 \text{ A}$ ;  $P_{max} = 10 \text{ W}$

Supply: Two Rechargeable built-in Li-Ion Cells in Parallel

- 1) Battery Pack Ex-BP H10 Nominal data: 3.7V, 4400mAh, 16.28 Wh
- 2) Battery Pack EX-BP H10C Nominal data: 3.7V, 3920mAh, 15.4 Wh

Enclosure: IP64, Type 3

Operating temperature range:  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$



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Model Code	Marking
Ex-Handy H10 *** DZ1 (Zone 1)	<ul style="list-style-type: none"> <li>• <b>Class I, Div 1, Groups A, B, C and D T4 Ex ib</b></li> <li>• <b>Class II, Div 1, Groups E, F, G T120°C</b></li> <li>• <b>Class III</b></li> <li>• <b>Ex/AEx ib op is IIC T4 Gb</b></li> <li>• <b>Ex/AEx ib IIIC T120°C Db</b></li> </ul>
Ex-Handy H10 *** DZ2 (Zone 2)	<ul style="list-style-type: none"> <li>• <b>Class I, Div 2, Groups A, B, C and D T4 Ex ib</b></li> <li>• <b>Class II, Div 2, Groups E, F, G T120°C</b></li> <li>• <b>Class III</b></li> <li>• <b>Ex/AEx ic op is IIC T4 Gc</b></li> <li>• <b>Ex/AEx ic IIIC T120°C Dc</b></li> </ul>

\*\*\* Stars indicated above do not effect safety.

**Input Entity Parameters for 3.5mm Audio Plug:**

Parameters	Ex-Handy H10 *** DZ1/ Ex-Handy H10 *** DZ2	
	Gas Application(DZ1)	Gas Application(DZ2)
Terminals		
Voltage Voc/U <sub>o</sub>	DC 4.2 V	DC 4.2 V
Isc/I <sub>o</sub>	0.35A	0.35A
Power P <sub>o</sub>	500mW	500mW
Effective capacitance C <sub>o</sub>	3.0uF	5.6uF
Effective inductance L <sub>o</sub>	440uH	680uH

**Conditions of Acceptability**

1. Ambient Temperature range:  $-20^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$
2. Battery pack is only allowed to be charged outside of the classified hazardous location.
3. The device has to be protected from impacts.
4. The SIM-Card-Cover for card access must be screwed tight before entering the hazardous location.
5. The device shall not be repaired or dismantled(Except the SIM-Card-Cover in ordinary locations).
6. It is allowed to use the 3.5mm Audio Plug in the hazardous locations connections to certified accessory meeting the following entity parameters:  
 (DZ1)U<sub>o</sub> = 4.2 V, I<sub>o</sub> =350mA, P<sub>o</sub>=500mW, C<sub>o</sub> = 3.0uF, L<sub>o</sub> = 440uH  
 (DZ2)U<sub>o</sub> = 4.2 V, I<sub>o</sub> =350mA, P<sub>o</sub>=500mW, C<sub>o</sub> = 5.6uF, L<sub>o</sub> = 680uH



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**APPLICABLE REQUIREMENTS**

CAN_CSA-C22.2 No. 62368-1-14	-	Audio/video, information and communication technology equipment – Part 1: Safety requirements
CAN/CSA/C22.2 No. 213-17	-	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 60079-0:19 (IEC 60079-0 7 <sup>th</sup> Edition)	-	Explosive atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-11:14(R2018) (IEC 60079-11 6 <sup>th</sup> Edition)	-	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i”
CAN/CSA-C22.2 No. 60079-28:16 (IEC 60079-28 2 <sup>nd</sup> Edition)	-	Explosive atmospheres — Part 28: Protection of equipment and transmission systems using optical radiation
CAN/CSA-C22.2 No. 60529:16	-	Degrees of protection provided by enclosures (IP Code)
CAN/CSA-C22.2 No. 94.2-15	-	Special Purpose Enclosures
UL 62368-1 2nd Ed	-	Audio/video, information and communication technology equipment – Part 1: Safety requirements
UL Std. No 913, 8 <sup>th</sup> Edition	-	Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, III, Division 1, Hazardous (Classified) Locations.
UL 12.12.01, 9 <sup>th</sup> Edition	-	Non-Incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
UL Std. No. 60079-0, 7 <sup>th</sup> Edition (IEC 60079-0 7 <sup>th</sup> Edition)	-	Explosive atmospheres – Part 0: Equipment - General requirements
UL Std. No. 60079-11, 6 <sup>th</sup> Edition (IEC 60079-11 6 <sup>th</sup> Edition)	-	Explosive atmospheres – Part 11: Equipment Protection by Intrinsic safety “i”
UL 60079-28, 2 <sup>ND</sup> Edition (IEC 60079-28 2 <sup>nd</sup> Edition)	-	Explosive atmospheres — Part 28: Protection of equipment and transmission systems using optical radiation
ANSI/IEC 60529:2004	-	Degrees of protection provided by enclosures (IP Code)
UL 50E, 2st Edition	-	Enclosures for Electrical Equipment



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## MARKINGS




The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

The following marking details appear:

- The CSA Monogram with adjacent qualifiers:  , or  , or  . The products listed 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.
- Submitter's name, trademark, or the CSA file number (adjacent the CSA Mark).
- Catalog or Model designation or equivalent, traceable to the month and year (at least) of manufacture
- Complete electrical rating (amps, hertz, and volts)
- Temperature code or equivalent, Ambient temperature range
- Hazardous Location designations
- serial number, date code or equivalent
- For intrinsically safe equipment, the words "INTRINSICALLY SAFE" or "IS" or "I.S." or the symbol "Ex ia".
- Temperature Code
- Maximum ambient -20°C to +60°C.
- CSA Enclosure TYPE 3/IP64

The following Caution markings or equivalents are required in English and French.

- NO WARNINGS REQUIRED



## *Supplement to Certificate of Compliance*

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*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### **Product Certification History**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
70213342	Oct. 31 2019	CSA Certification for Canada and USA on mobile phone/smart-phone of type Ex-Handy 10, based on IECEX Certificate: IECEX EPS 19.0008X and ExTR DE/EPS/ExTR19.0007/01.