



# Certificate of Compliance

**Certificate:** 1863602

**Master Contract:** 237481

**Project:** 1897714

**Date Issued:** 2007/05/08

**Issued to:** INOR Process AB

Slipstengatan 6  
Malmö, 223 76  
Sweden  
Attention: Mr. Gert Paulsson

*The products listed below are eligible to bear the CSA Mark shown*



**Issued by:** Edward Foo, C.E.T.

**Authorized by:** Patricia Pasemko, Operations  
Manager

## **PRODUCTS**

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

Class I, Groups A, B, C & D:

- 4-20 mA Temperature Transmitter, Model IPAQ-HX, Intrinsically Safe with Entity Parameters  $V_{max} = 30$  V,  $I_{max} = 100$  mA,  $P_{max} = 900$  mW,  $C_i = 0$  uF,  $L_i = 2.5$  mH (Terminals 5 & 6) and  $V_{oc} = 30$  V,  $I_{sc} = 25$  mA,  $C_a = 0.12$  uF,  $L_a = 56.8$  mH (Terminals 1, 2, 3 & 4) per Installation Dwg. 3-7851. Temperature Code T4 at  $T_a = 80$  °C.
- Temperature Transmitter, Models APAQ-HRFX and APAQ-HCFX, Intrinsically Safe with Entity Parameters  $V_{max} = 30$  V,  $I_{max} = 100$  mA,  $P_{max} = 700$  mW,  $C_i = 0$  uF,  $L_i = 0$  mH (Terminals 4 & 5) and  $V_{oc} = 30$  V,  $I_{sc}$



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= 95.8 mA, Ca = 0.12 uF, Li = 4 mH (Terminals PL1, PL2 & PL3) per Installation Dwg. 3-7892. Temperature Code T4 at Ta = 80 °C.

Class I, Groups A, B, C & D; Class II, Groups E, F & G; Class III:

- 4-20 mA Temperature Transmitter, Model IPAQ-LX, associated apparatus with Intrinsically Safe output with Entity Parameters Vmax = 30 V, Imax = 100 mA, Pmax = 900 mW, Ci = n/a, Li = n/a (Terminals 5 & 6) and Voc = 30 V, Isc = 25 mA, Ca = 0.12 uF, Li = 56.8 mH (Terminals 1, 2, 3 & 4) per Installation Dwg. 3-7852.

Note: Transmitter is installed in safe area.

Class I, Groups A, B, C & D; Class II, Group G; Class III:

- Temperature Sensor, Model MESO-HX, Intrinsically Safe with Entity Parameters Vmax = 30 V, Imax = 100 mA, Pmax = 900 mW, Ci = 0 uF, Li = 0 mH (Terminals PL5 & PL6) and Voc = 30 V, Isc = 25 mA, Ca = 0.12 uF, Li = 56.8 mH (Terminals PL1, PL2, PL3 & PL4) per Installation Dwg. 3-7967. Temperature Code T4 at Ta = 80 °C.

#### **APPLICABLE REQUIREMENTS**

CSA Std C22.2 No. 25-1966 - Enclosures for Use in Class II, Groups E, F and G Hazardous Locations

CSA Std. C22.2 No. 142-M1987 - Process Control Equipment

CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment

for Use in Hazardous Locations



## *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.*

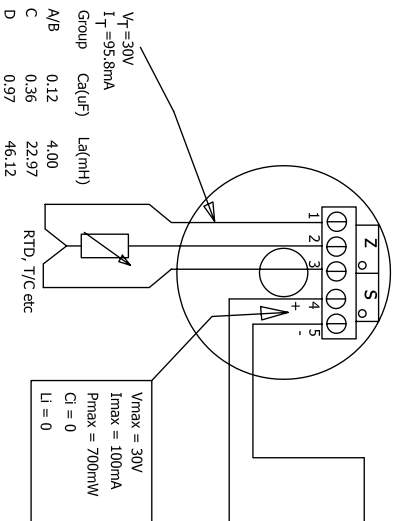
### **Product Certification History**

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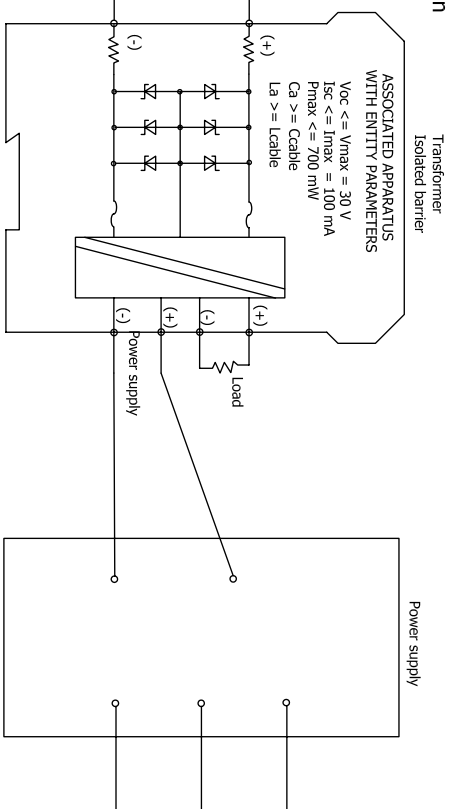
<b>Project</b>	<b>Date</b>	<b>Description</b>
1897714	2007/05/08	Update to Cover Minor Report Corrections.
1863602	2007/03/12	Transfer of Report 1822199 from MC 162767 KHRONE to INOR Process AB (IFE Required)

Hazardous (Classified) Location  
Class 1, Division 1  
Group A, B, C, and D

**APAQ-HX**

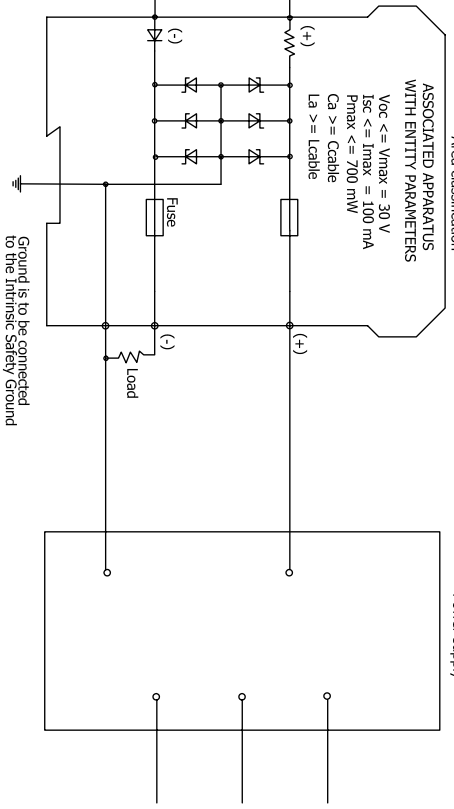
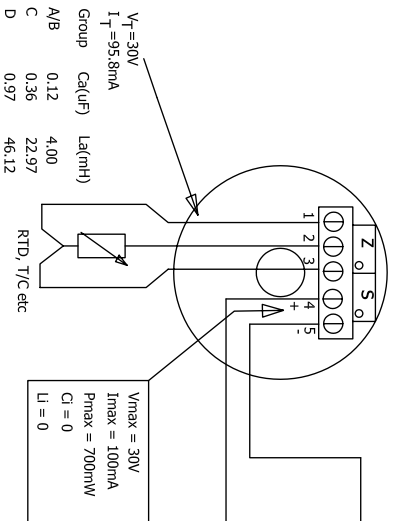


Nonhazardous Location



The control equipment connected to barriers must not use or generate over 250V rms or dc

**APAQ-HX**



The control equipment connected to barriers must not use or generate over 250V rms or dc

1. The configuration of the associated apparatus or intrinsically safe equipment shall be FM/ CSA approved. Simple apparatus connected to the equipment must follow the requirements of appropriate standards e.g. EN 50020:2002, FM 3610-1999 or IEC 60079-11:1999.
2. Safety barriers must be installed in accordance with the manufacturers instructions.
3. Installation must be in accordance with the National Electrical Code (NFPA 70, Article 504), Canadian Electrical Code (CEC) Section 18 and ANSI/ISA-IP12.6.
4. If the cable parameters are unknown, the following values shall be used:  
Capacitance = 60 pF/feet (200 pF/m)  
Inductance = 0.20 µH/feet (0.66 µH/m)
5. If the safety barrier requires an earth connection then the resistance between the terminal on the safety barrier and the earth ground shall be less than 1 ohm.

No revisions to drawing without prior FM/ CSA approval.

Rev E	060825	CSA added.	GP
Rev D	050928	Standards in note 1 added.Changed font	GP
Rev C	990503	Text is edited.	GP
Rev B	970623	Text is removed.	GP
Rev A	970602	Revision of the text etc.	GP
Revision	Date	Comment	Approved by:

Detail.	Quantity	Description	Material	Drawing no.	Article no.
		Intrinsic Safety Control Drawing APAQ-HX TEMPERATURE TRANSMITTER			General reference: SS-ISO-2/68-1 m General surface roughness: ka Ra 3.2 Projection:
File	mek7892e	Date: 970516 Designed by: LB	Scale: GP	No. of sheets: 1 Sheet: 1	Rev: E
			Drawing number: 3-7892		