

Factory Mutual Research Corporation  
1151 Boston-Providence Turnpike  
P.O. Box 9102  
Norwood, Massachusetts 02062

## CERTIFICATE OF COMPLIANCE

### HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

**4-20 mA TEMPERATURE TRANSMITTER** consisting of the following apparatus, installed in accordance with entity requirements and Certification Drawings 3-7852, 3-7851 and 3-7892. The transmitters were evaluated having the following equipment ratings:

Associated electrical apparatus having intrinsically safe connections for Class I, II and III, Division 1, Group A,B,C,D,E, F and G hazardous (classified) locations.

<u>Apparatus</u>	<u>Model</u>
Temperature Transmitter	Model IPAQ-LX

Electrical apparatus having intrinsically safe connections for Class I, Division 1, Group A, B, C and D hazardous (classified) locations.

<u>Apparatus</u>	<u>Type</u>
Temperature Transmitter	Model IPAQ-HX
Temperature Transmitter	Model APAQ-HX

Manufactured by: INOR PROCESS AB  
P.O. BOX 9125  
S-200 39 MALMO, SWEDEN

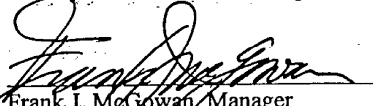
This certifies that the equipment described has been found to comply with the following Factory Mutual Research Corporation Approval Standards:

Approval Standard Class 3600 - 1989  
Approval Standard Class 3610 - 1988  
Approval Standard Class 3810 - 1989

Approval Job Identification: 0D6A8.AX

Approval Report Dated August 8, 1997

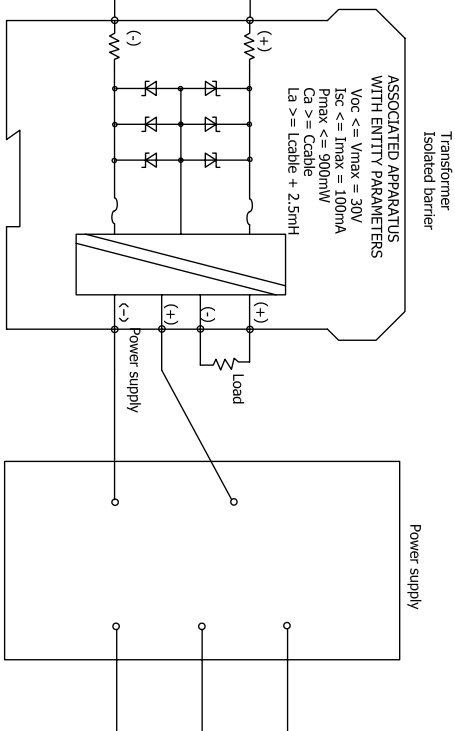
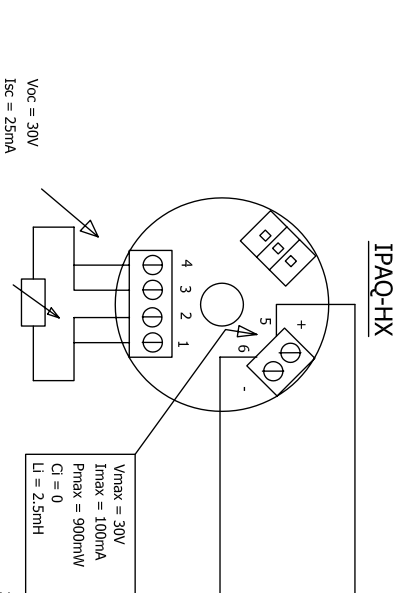
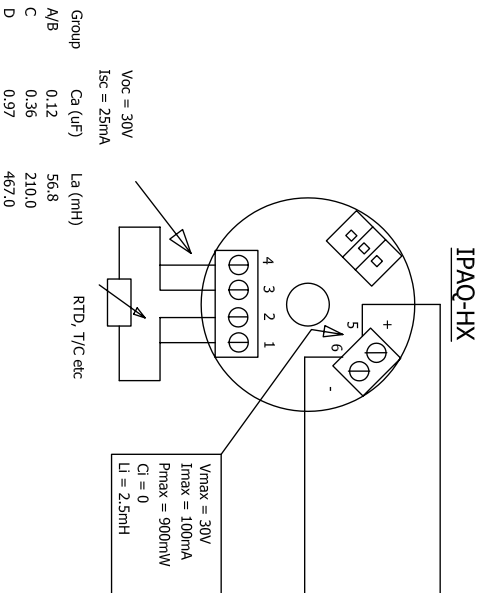
Factory Mutual Research Corporation

  
Frank J. McGowan, Manager  
Instrumentation Section  
Approvals Division

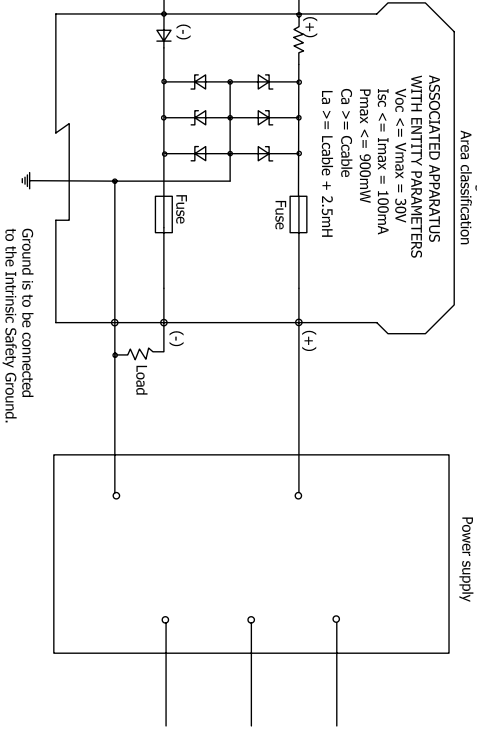
Date: 9/19/97

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

**Nonhazardous Location**



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



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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 5610:1999 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-RP12.6.
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.
6. Do not connect any communication equipment unless area is known to be non-hazardous.

No revisions to drawing without prior FM/CSA approval.

Revision	Date	Comment	Approved by
Rev A	970516	Revision of the text etc.	GP
Rev B	970602	Revision of the text etc.	GP
Rev C	970617	IPO-X added.	GP
Rev D	970619	Text note 7 added.	GP
Rev E	970623	IPO-X is removed.	GP
Rev F	970805	Text note 6 is added.	GP
Rev G	050928	Standards in note 1 added, changed font	GP
Rev H	060825	CSA added.	GP

Group	Ca (µF)	La (mH)
A/B	0.12	56.8
C	0.36	210.0
D	0.97	467.0

Description		Material	
Quantity	Description	Material	Drawing no.
File	mek7851h	Article no.	3-7851
Date:	970212	General reference:	SS-ISO-2768-1 m
Designed by:	LB	General surface roughness for projection:	Ra 3.2
Scale:	GP	No. of sheets:	1
Approved by:	GP	Sheet:	1
Title: INTRINSIC SAFETY CONTROL DRAWING IPAQ-HX TEMPERATURE TRANSMITTER		Drawing number: 3-7851	
Title: INTRINSIC SAFETY CONTROL DRAWING IPAQ-HX TEMPERATURE TRANSMITTER		Revision: H	