



Member of the FM Global Group

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: 781 762 4300 F: 781-762-9375 www.fmaprovals.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment

IPAQ-HX. Temperature Transmitter.

IS / I / 1 / ABCD / T4 Ta = -40°C to +80°C - 3-7851; Entity

Entity Parameters (Terminals 5 and 6):

$V_{Max} = 30\text{ V}$, $I_{Max} = 100\text{ mA}$, $P_{Max} = 900\text{ mW}$, $C_i = 0$, $L_i = 2.5\text{ mH}$.

Equipment Ratings:

Intrinsically Safe Apparatus for use in Class I, Division 1, Groups A, B, C and D, T4 Ta = -40°C to +80°C hazardous (Classified) locations in accordance with manufacturer's Control Drawing Number 3-7851.

IPAQ-LX. Temperature Transmitter.

AIS / I, II, III / 1 / ABCDEFG - 3-7852; Entity

Input Parameters (Terminals 5 and 6):

$V_{Max} = 30\text{ V}$, $I_{Max} = 100\text{ mA}$, $P_{Max} = 900\text{ mW}$.

Entity Parameters (Terminals 1, 2, 3 and 4):

$V_{oc} = 30\text{ V}$, $I_{sc} = 25\text{ mA}$, $C_a = 0.12\text{ }\mu\text{F}$, $L_a = 56.8\text{ mH}$.

Equipment Ratings:

Associated Intrinsically Safe Apparatus providing outputs for connection to Class I, II, III, Division 1, Groups A, B, C, D, E, F and G hazardous (Classified) locations in accordance with manufacturer's Control Drawing Number 3-7852.

FM Approved for:

INOR Process AB
Malmo, Sweden



This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3610	2010
Class 3810	2005

Original Project ID: 0D6A8.AX

Approval Granted: August 8, 1997

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
050929	October 19, 2005		
070814	August 31, 2007		
3042212	May 7, 2012		

FM Approvals LLC

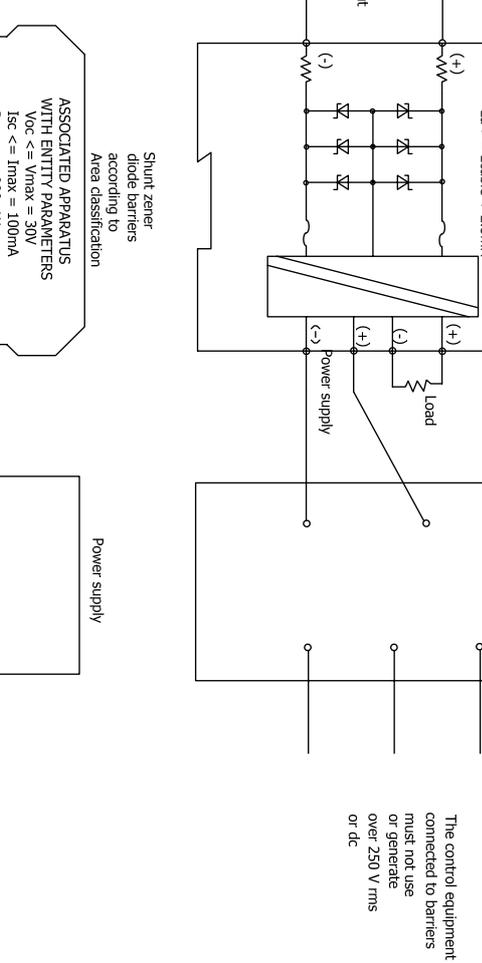
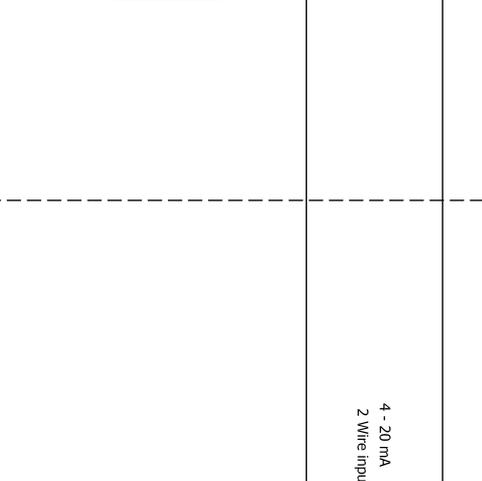
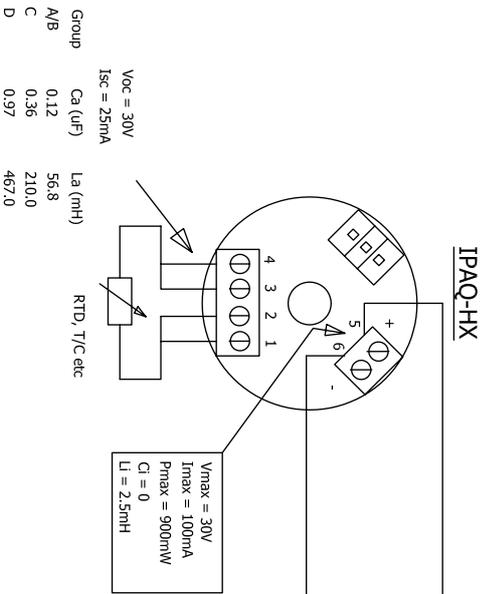
Timothy Adam
Technical Team Manager

May 7, 2012

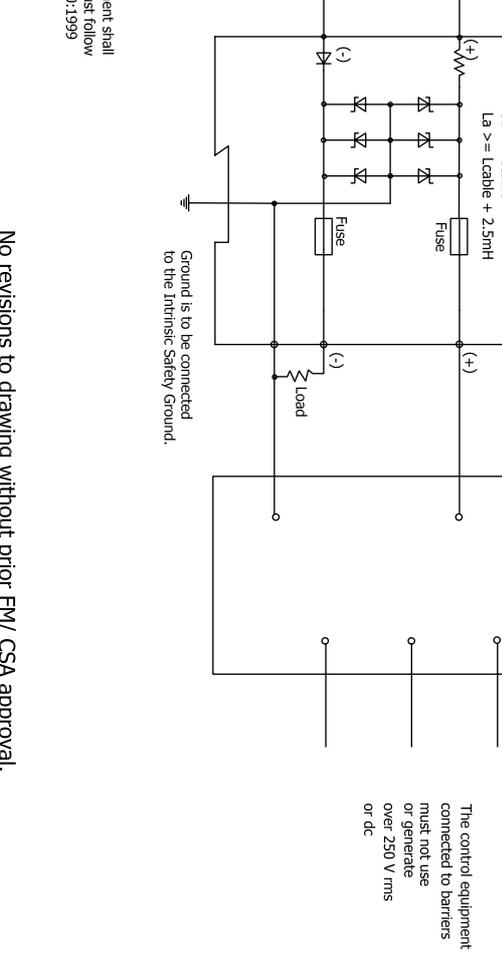
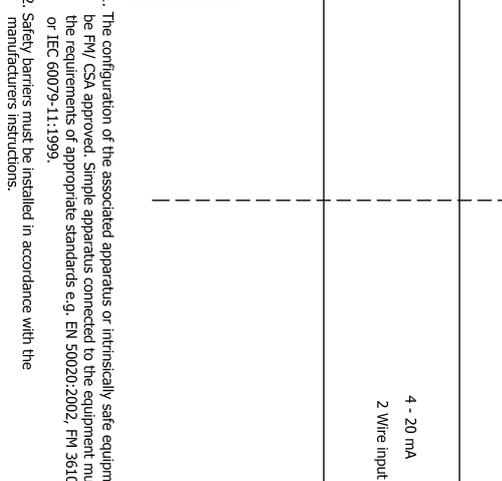
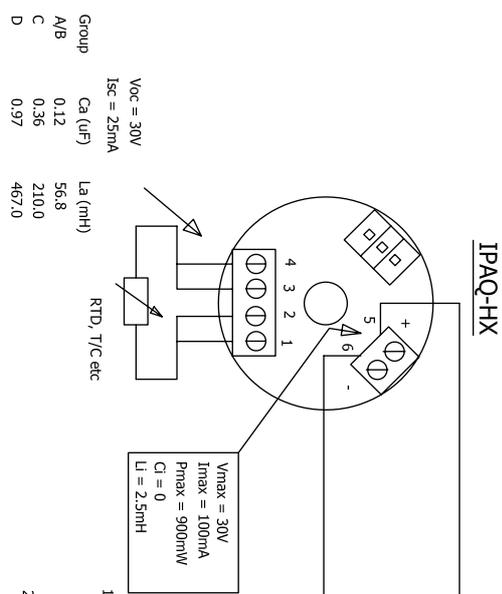
Date

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



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 (NEPA 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

		INTRINSIC SAFETY CONTROL DRAWING IPAO-HX TEMPERATURE TRANSMITTER	
File	mek7851h	Date:	970212
Quantity		Designed by:	LB
		Scale:	GP
		Approved by:	GP
		No. of sheets:	1
		Sheet:	1
		Drawing number:	3-7851
		Article no:	SS-ISO-2768-1 m
		General surface roughness Ra	Ra 3.2
		Projection:	
		Rev:	H