



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx CSA 15.0038X Issue No: 1 Certificate history:
Status: **Current** Page 1 of 6 [Issue No. 1 \(2016-01-11\)](#)
Date of Issue: **2016-01-11** [Issue No. 0 \(2015-09-25\)](#)

Applicant: **Tecsis LP**
771-F Dearborn Park Lane
Worthington, OH 43085
United States of America

Equipment: **Pressure and load cell transmitters**
Optional accessory:

Type of Protection: **Ex ia**

Marking: Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da

Tamb:
-40 to 85°C unless limited by the following components,
-40 to 80°C when used with marine cable or Hawke, 501/453 UNIV cord grip,
-20 to 85°C when used with Hummel HSK cord grip,

*Approved for issue on behalf of the IECEx
Certification Body:*

Dorin Stochitoiu

Position:

Technical Advisor

*Signature:
(for printed version)*

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](#).

Certificate issued by:



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CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada
and
1707 - 94th Street
Edmonton, AB T6N 1E6
and
8503 East Pleasant Valley Road,
Independence, Ohio, USA
44131-5516
Canada





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Manufacturer: **Tecsis GmbH**
Carl-Legien-Straße 40
63073 Offenbach
Germany

Additional Manufacturing location(s):

Tecsis L.P.
771-F Dearborn Park Lane
Worthington, OH 43085
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[CA/CSA/ExTR15.0044/00](#) [CA/CSA/ExTR15.0044/01](#)

Quality Assessment Report:

[CA/CSA/QAR15.0007/00](#) [DE/BVS/QAR08.0003/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Model XPZ-XXXX-X-X-I low, middle and high range pressure transmitter rated 10-28 Vdc, 4-20 mA. Minimum current is 2.25 mA and maximum current is 25 mA. Pressure ranges are from 0 - 2 psi to 0 - 20,000 psi. The pressure transmitter is provided both as gauge pressure and absolute pressure and is available with a variety of pressure connections (ports) and electrical terminations. Model XPHZ-XXXX-X-I middle and high range Hammer Union pressure transmitter rated 10-28 Vdc, 4-20 mA. Ranges from 0 - 2,000 psi to 0 - 20,000 psi. The transmitter is available with a variety of electrical terminations. Model XLZ-X-XXXX-I load cell transmitters rated 10-28 Vdc, 4-20 mA. A variety of enclosures are available for measuring different ranges and different methods of locating the strain gage. The pressure transmitters and load cell transmitters are intrinsically safe when connected per drawing 98-1003-0000 with the following entity parameters: $U_o = 28$ Vdc, $I_o = 110$ mA, $P_o = 900$ mW. All units have a three board amplifier identified as "top", "middle" and "bottom" board. There is a Compensation board between the amplifier and the pressure sensor. The Hammer Union has a slightly modified three board amplifier, a Lightning/Surge board and a Compensation Board that is packaged as an annulus rather than a rectangle shape. The equipment has the following entity parameters per control drawing 98-1003-0000: $U_i = 28$ Vdc, $I_i = 110$ mA, $C_i = 33.4$ nF (see note), $L_i = 1$ μ H for models XPZ and XLZ 710 μ H for model XPHZ (see note), $P_i = 0.9$ W Note: Transducers with integral cable

For models XPZ & XLZ	For model XPHZ
Max cable length = 500 ft	Max cable length = 130 ft
C_i max = 63.4 nF	C_i max = 41.2 nF
L_i max = 501 μ H	L_i max = 840 μ H

CONDITIONS OF CERTIFICATION: YES as shown below:

The equipment shall be installed per drawing 98-1003-0000 and supplied by a shunt zener diode barrier, which requires connection to a barrier earth in accordance with IEC/EN 60079-14.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1: Addition of new manufacturing location and associated QAR number CA/CSA/QAR15.0007/00. There are no changes in the construction of the product.



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Additional information:

Please see Annex to IECEx CSA 15.0038X issue 1.

Annex:

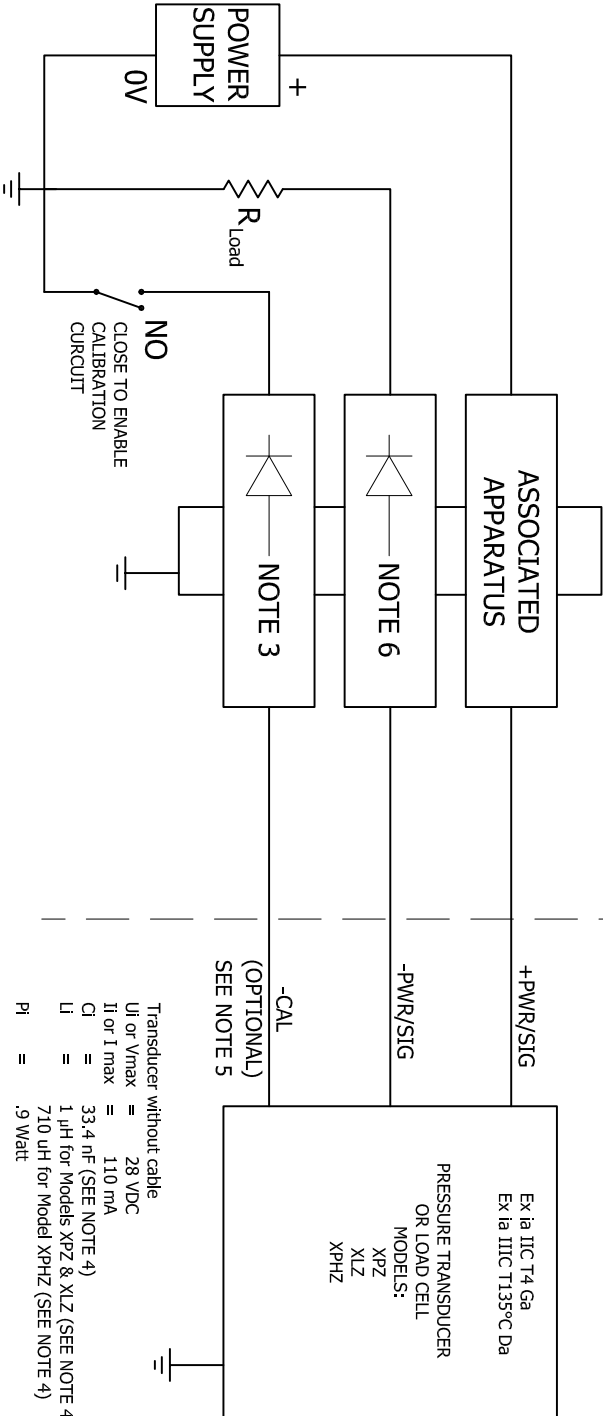
[Annex to IECEx CSA 15 0038X issue 1.pdf](#)

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CSA CONTROLLED DRAWING
NO CHANGES WITHOUT
AUTHORIZATION

NON-HAZARDOUS LOCATION
 Typical IECEx Certified Barriers. Barriers must be previously Certified. In this configuration, such that the U_i or V_{max} is greater than V_{oc} or U_o and I_{max} or I_i is greater than I_{sc} or I_o .

HAZARDOUS LOCATION
 Zone 0
 Zone 20



Transducer without cable
 U_i or V_{max} = 28 VDC
 I_i or I_{max} = 110 mA
 C_i = 33.4 nF (SEE NOTE 4)
 L_i = 1 μ H for Models XPZ & XLZ (SEE NOTE 4)
 L_i = 710 μ H for Model XPHZ (SEE NOTE 4)
 P_i = .9 Watt

NOTE 1: Two single-channel barriers may be used where both channels have been Certified for use together with combined entity parameters.
 The following must be satisfied:

V_{oc} or U_o	\leq	U_i or V_{max}
I_{sc} or I_o	\leq	I_i or I_{max}
P_o	\leq	P_i (if applicable)
C_a	$>$	C_i + Ccable
L_a	$>$	L_i + Lcable

Model XPHZ has these additional limitations
 C_i + Ccable < 41.5 nF
 L_i + Lcable < 1612 μ H

NOTE 2: Equipment connected to Barrier cannot use or generate in excess of 250 Volts

NOTE 3: Optional Certified Diode Return Barrier with I_o or I_{sc} = 0mA. Use only with shunt calibration option

NOTE 4: TRANSDUCERS with INTEGRAL CABLE
 For Models XPZ & XLZ
 MAX LENGTH = 500 FT
 C_i max = 63.4 nF
 L_i max = 501 μ H

For Model XPHZ
 MAX LENGTH = 130 FT
 C_i max = 41.2 nF
 L_i max = 840 μ H

NOTE 5: Connection to the calibration circuit in hazardous locations is not permitted on units with a "+CAL" connection. The calibration feature on units with a "+CAL" connection can only be used in Non-Hazardous locations

NOTE 6: Diode Barrier with I_{sc} or I_o = 0mA

NOTE 7: Tamb rating can be found on both the unit and the specification control drawing provided with every unit.

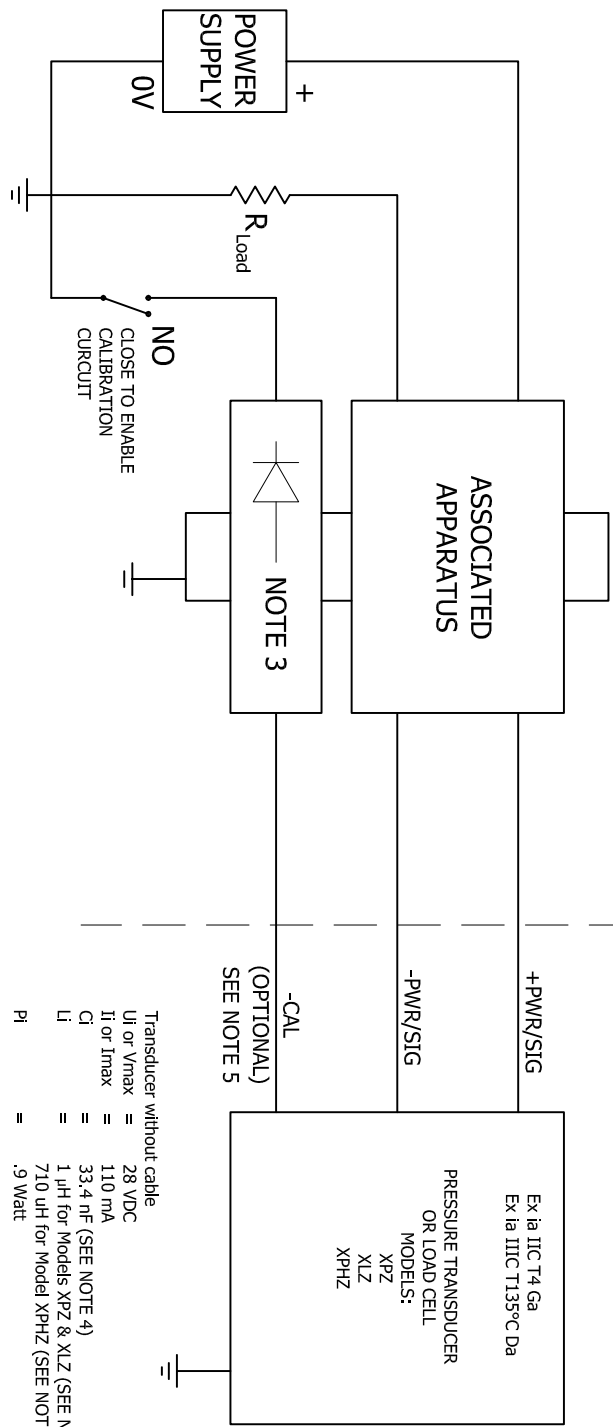
Title		WIRING, 2-WIRE AMPLIFIER		Drawn No.		98-1003-0000	
Patent	Scale	drawn	DE	7/10/15	Reference	Ferris/TR 1	Sheet 1 of 2
Bank	Norm. Size	checked	GH	7/10/15	Cage Code	5FC19	
	Check dimension				Unit		
					Inches		
				tecsis LP 7774 Oberlin Park Ln Worthington, OH 43085 Phone: (614) 430-6883			

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CSA CONTROLLED DRAWING
NO CHANGES WITHOUT
AUTHORIZATION

NON-HAZARDOUS LOCATION
 Typical IECEx Certified Barriers. Barriers must be previously Certified in this configuration, such that the U_i or V_{max} is greater than V_{oc} or U_o and I_{max} or I_i is greater than I_{sc} or I_o .

HAZARDOUS LOCATION
 Zone 0
 Zone 20



NOTE 1: One dual-channel barrier may be used. The following must be satisfied:

V_{oc} or U_o	\leq	U_i or V_{max}
I_{sc} or I_o	\leq	I_i or I_{max}
P_o	\leq	P_i (if applicable)
C_a	$>$	$C_i + C_{cable}$
L_a	$>$	$L_i + L_{cable}$

Model XPHZ has these additional limitations
 $C_i + C_{cable} < 41.5 \text{ nF}$
 $L_i + L_{cable} < 1612 \text{ } \mu\text{H}$

NOTE 2: Equipment connected to Barrier cannot use or generate in excess of 250 Volts

NOTE 3: Optional Certified Diode Return Barrier with I_o or $I_{sc} = 0 \text{ mA}$. Use only with shunt calibration option

NOTE 4: TRANSDUCERS with INTEGRAL CABLE
 For Models XPZ & XLZ

MAX LENGTH	=	500 FT
C_i max	=	63.4 nF
L_i max	=	501 μH
For Model XPHZ		
MAX LENGTH	=	130 FT
C_i max	=	41.2 nF
L_i max	=	840 μH

NOTE 5: Connection to the calibration circuit in hazardous locations is not permitted on units with a "+CAL" connection. The calibration feature on units with a "+CAL" connection can only be used in Non-Hazardous locations

NOTE 6: Tamb rating can be found on both the unit and the specification control drawing provided with every unit.

Transducer without cable
 U_i or $V_{max} = 28 \text{ VDC}$
 I_i or $I_{max} = 110 \text{ mA}$
 $C_i = 33.4 \text{ nF}$ (SEE NOTE 4)
 $L_i = 1 \text{ } \mu\text{H}$ for Models XPZ & XLZ (SEE NOTE 4)
 $P_i = 710 \text{ } \mu\text{H}$ for Model XPHZ (SEE NOTE 4)
 $P_i = .9 \text{ Watt}$

Title		WIRING, 2-WIRE AMPLIFIER		Drawn No.		98-1003-0000	
Material	Scale	drawn	DE	7/10/15	Reference	Ferris/TR 1	Sheet
Bank	Norm. Size	checked	GH	7/10/15	Form/Code	5FC19	2 of 2
	Check dimension				Unit		
					Inches		
		tecstis LP		777-A, 8000000000		Phone: (614) 430-0883	