



Certificate of Compliance

Certificate: 70198728

Master Contract: 175074

Project: 70198728

Date Issued: 2018-12-07

Issued to: Meggitt SA
Rte de Moncor 4
Villars-sur-Glane, Fribourg 1752
SWITZERLAND
Attention: Carlo Pellegrinelli

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: Hossein Saleh
Hossein Saleh

PRODUCTS

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

CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups A, B, C, and D T6...T4

Ex ia IIC T6...T4 Ga

Class I, Zone 0, AEx ia IIC T6...T4 Ga

IPC 707 Signal Conditioner is an analog electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analog voltage or current signal (signal side). The electronic circuitry of the IPC 707 signal conditioner is fully potted and incorporated into an aluminum enclosure.

IPC 707 signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail mounting. Signal side output configurations could be one of the following:

- Voltage output: 3-wires transmission mode,
- Current output: 2-wires transmission mode.



Certificate: 70198728

Master Contract: 175074

Project: 70198728

Date Issued: 2018-12-07

Entity Parameter Values:

Terminal	Intrinsic Safety Electrical Parameters	
J0 (SUP, COM)	U _i /V _{max} : 28 V, I _i /I _{max} : 100 mA, P _i /P _{max} : 700 mW	C _i : 2.2 nF, L _i : 1 uH
J0 (OUT, COM)		C _i : 9.6 nF, L _i : 565 uH
J1 (IN+, COM) (IN-, COM)	U _o /V _{os} : 6.6 V, I _o /I _{sc} : 66 mA, P _o /P _{max} : 107 mW, C _o /C _a : 5.69 uF, L _o /L _a : 3.435 mH	

Temperature Table:

Temperature Class / Code	Ambient Temperature Range
T6	-40 °C ≤ T _{AMB} ≤ +70 °C
T5	-40 °C ≤ T _{AMB} ≤ +80 °C
T4	-40 °C ≤ T _{AMB} ≤ +85 °C

Notes:

1. The above model is fixed connection, Pollution Degree 2 (Micro Environment), Overvoltage Category I.
2. Mode of operation: Continuous.
3. Environmental Conditions: Extended, Indoor use, -40°C to +85°C, altitude up to 4000m, RH% of 0-95% (non-condensing).
4. The sensor that can be attached to the IPC707 Signal Conditioner has not been assessed under this certification. The suitability of the combination as a system is to be determined.

Conditions of Acceptability:

1. The intrinsic safety terminal blocks (IS boards) must be connected only to an Intrinsically Safe certified apparatus.
2. The equipment housing contains more than 10% of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.
3. The grounding of the Intrinsically Safe circuits must be in accordance with the requirements of CEC and NEC.
4. End-use shall ensure the device is properly connected to Earth upon installation.

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations - Certified to US Standards

Class I, Division 2, Groups A, B, C, and D T6...T4

Ex ec IIC T6...T4 Gc

Class I, Zone 2, AEx ec IIC T6...T4 Gc

IPC 707 Signal Conditioner is an analog electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analog voltage or current signal (signal side). The electronic circuitry of the IPC 707 signal conditioner is fully potted and incorporated into an aluminum enclosure.

IPC 707signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail mounting. Signal side output configurations could be one of the following:



Certificate: 70198728

Master Contract: 175074

Project: 70198728

Date Issued: 2018-12-07

- Voltage output: 3-wires transmission mode,
- Current output: 2-wires transmission mode.

Electrical Rating: U_{MAX} : 30 V, I_{MAX} : 20 mA

Temperature Table:

Temperature Class / Code	T6	T5	T4
Ambient Temperature Range	$-40\text{ }^{\circ}\text{C} \leq T_{AMB} \leq +70\text{ }^{\circ}\text{C}$	$-40\text{ }^{\circ}\text{C} \leq T_{AMB} \leq +80\text{ }^{\circ}\text{C}$	$-40\text{ }^{\circ}\text{C} \leq T_{AMB} \leq +85\text{ }^{\circ}\text{C}$

Notes:

1. The above model is fixed connection, Pollution Degree 2 (Macro Environment), Installation Category I.
2. Mode of operation: Continuous.
3. Environmental Conditions: Extended, Indoor use, -40°C to $+85^{\circ}\text{C}$, altitude up to 4000m, RH% of 0-95% (non-condensing).
4. The sensor that can be attached to the IPC707 Signal Conditioner has not been assessed under this certification. The suitability of the combination as a system is to be determined.

Conditions of Acceptability:

1. To be supplied by a Class 2 or limited-energy source on the signal side according to CSA 61010-1-12/UL 61010-1 3rd Edition.
2. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
3. The equipment shall be used in an area of not more than pollution degree 2 as defined in IEC 60664-1.
4. For Zone 2 application, this device shall be installed within a fixed end-use enclosure that provides a degree of protection not less than IP54 according to CSA/UL 60079-0 and CSA/UL 60079-7. The suitability of the enclosure is subject to acceptance by the local authorities having jurisdiction at the time of installation.
5. For Division 2 application, this device shall be installed within a fixed end-use enclosure that provides a degree of protection Type 4. The suitability of the enclosure is subject to acceptance by the local authorities having jurisdiction at the time of installation.
6. The final enclosure must bear the following warning marking both in French and English: "Do not connect or disconnect when an explosive atmosphere is present".
7. The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Division 2 and Zone 2 and is subject to acceptance of local authority having jurisdiction.
8. End-use shall ensure the device is properly connected to Earth upon installation.



Certificate: 70198728

Master Contract: 175074

Project: 70198728

Date Issued: 2018-12-07

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
CSA Std. C22.2 No. 213-17	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 60079-0:15	Explosive Atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-7:16	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
CAN/CSA-C22.2 No. 60079-11:14	Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety "i"
ANSI/UL 61010-1 3 rd Edition	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
ANSI/UL 121201 Edition 9	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
ANSI/UL 60079-0:13	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-7:17	Explosive Atmospheres - Part 7: Equipment Protection by Increased Safety "e"
ANSI/UL 60079-11:13	Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"



Supplement to Certificate of Compliance

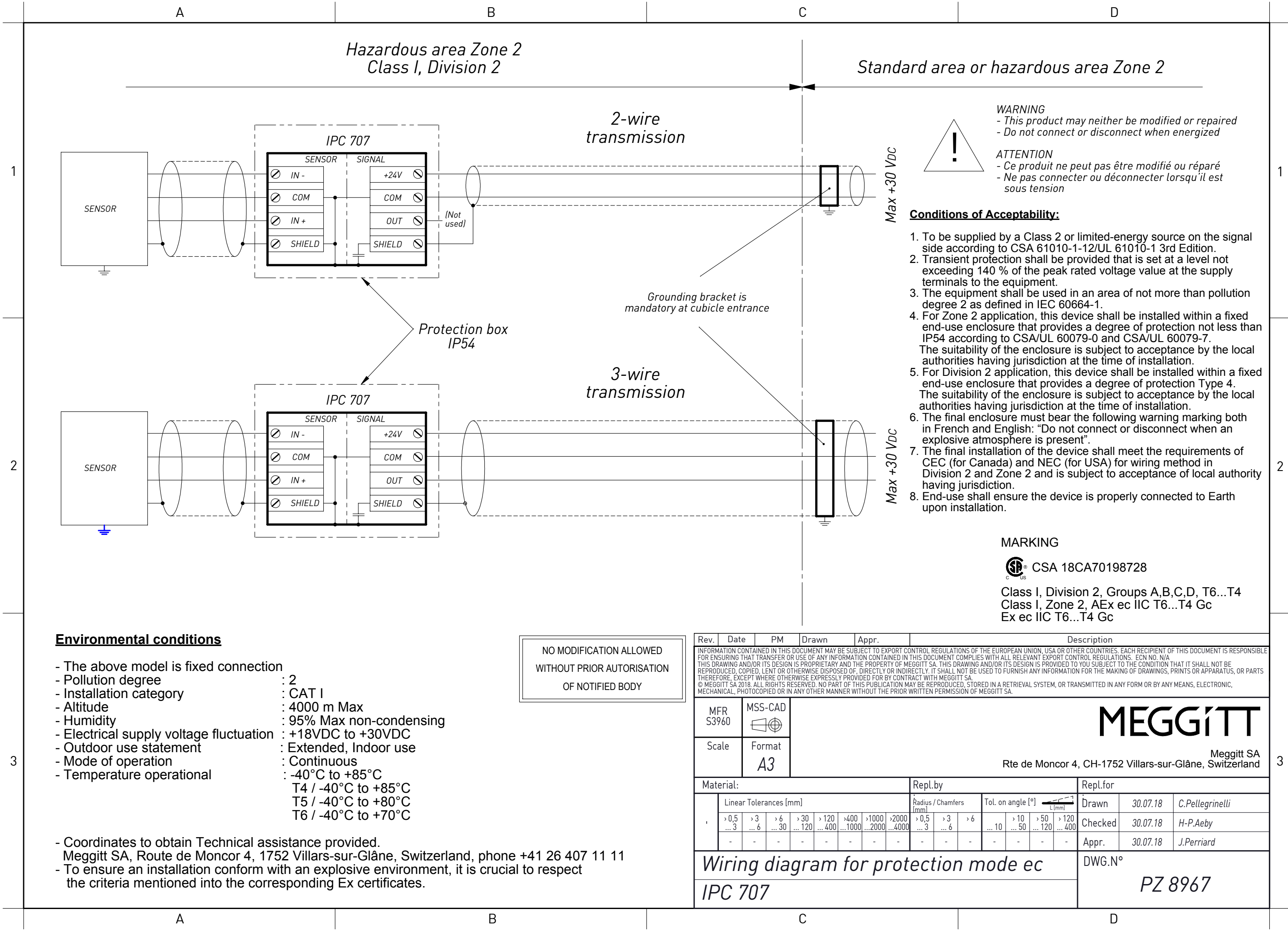
Certificate: 70198728

Master Contract: 175074

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

Product Certification History

Project	Date	Description
70198728	2018-12-07	Original North American certification of IPC707 Signal Conditioner with Model Number 244-707-000-XXX based on acceptance of existing IEC and IECEX reports for the following markings: Class I, Division 1, Groups A, B, C, D T6...T4; Ex ia IIC T6...T4 Ga; Class I, Zone 0, AEx ia IIC T6...T4 Ga; and Class I, Division 2, Groups A, B, C, and D T6...T4; Ex ec IIC T6...T4 Gc; Class I, Zone 2, AEx ec IIC T 6...T4 Gc.



Environmental conditions

- The above model is fixed connection
- Pollution degree : 2
- Installation category : CAT I
- Altitude : 4000 m Max
- Humidity : 95% Max non-condensing
- Electrical supply voltage fluctuation : +18VDC to +30VDC
- Outdoor use statement : Extended, Indoor use
- Mode of operation : Continuous
- Temperature operational : -40°C to +85°C
T4 / -40°C to +85°C
T5 / -40°C to +80°C
T6 / -40°C to +70°C

- Coordinates to obtain Technical assistance provided.
Meggit SA, Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland, phone +41 26 407 11 11
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

NO MODIFICATION ALLOWED
WITHOUT PRIOR AUTORISATION
OF NOTIFIED BODY

Rev.	Date	PM	Drawn	Appr.	Description															
INFORMATION CONTAINED IN THIS DOCUMENT MAY BE SUBJECT TO EXPORT CONTROL REGULATIONS OF THE EUROPEAN UNION, USA OR OTHER COUNTRIES. EACH RECIPIENT OF THIS DOCUMENT IS RESPONSIBLE FOR ENSURING THAT TRANSFER OR USE OF ANY INFORMATION CONTAINED IN THIS DOCUMENT COMPLIES WITH ALL RELEVANT EXPORT CONTROL REGULATIONS. ECN NO. N/A																				
THIS DRAWING AND/OR ITS DESIGN IS PROPRIETARY AND THE PROPERTY OF MEGGITT SA. THIS DRAWING AND/OR ITS DESIGN IS PROVIDED TO YOU SUBJECT TO THE CONDITION THAT IT SHALL NOT BE REPRODUCED, COPIED, LENT OR OTHERWISE DISPOSED OF, DIRECTLY OR INDIRECTLY. IT SHALL NOT BE USED TO FURNISH ANY INFORMATION FOR THE MAKING OF DRAWINGS, PRINTS OR APPARATUS, OR PARTS THEREFORE, EXCEPT WHERE OTHERWISE EXPRESSLY PROVIDED FOR BY CONTRACT WITH MEGGITT SA.																				
© MEGGITT SA 2018. ALL RIGHTS RESERVED. NO PART OF THIS PUBLICATION MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPIED OR IN ANY OTHER MANNER WITHOUT THE PRIOR WRITTEN PERMISSION OF MEGGITT SA.																				
MFR S3960	MSS-CAD																			
Scale	Format A3																			
			Meggitt SA Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland																	
Material:				Repl.by		Repl.for														
1	Linear TolerANCES [mm]							Radius / Chamfers [mm]		Tol. on angle [°]			Drawn	30.07.18	C.Pellegrinelli					
	> 0,5 ... 3	> 3 ... 6	> 6 ... 30	> 30 ... 120	> 120 ... 400	> 400 ... 1000	> 1000 ... 2000	> 2000 ... 4000	> 0,5 ... 3	> 3 ... 6	> 6		... 10	> 10 ... 50	> 50 ... 120	> 120 ... 400	Checked	30.07.18	H-P.Aeby	
	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	Appr.	30.07.18	J.Perriard
													DWG.N°							
Wiring diagram for protection mode ec												PZ 8967								
IPC 707																				