



Certificate of Compliance

Certificate: 70013213

Master Contract: 151079

Project: 80155786

Date Issued: 2023-04-26

Issued To: Endress+Hauser SE+Co. KG
Hauptstrasse 1
Maulburg, Baden-Württemberg, 79689
Germany

Attention: Arno Götz

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: *Anil Sodhi*
Anil Sodhi

PRODUCTS

Part A:

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 U.S. STANDARDS

Ex ia IIC T4 Gb

Class I, Zone 1, AEx ia IIC T4 Gb

Class I, Division 1, Group A, B, C and D;

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

Pressure transducers models Cerabar PMC21-xxxxxxx-y, PMP21-xxxxxxx-y and PMP23-xxxxxxx-y where 'x' is detailed in the model code below and 'y' is linked to non relevant options for certification.

Intrinsically safe and Non incendive transducers when connected as per Control Drawing XA01322P. Entity parameters are defined as follows:

$$U_i (V_{max}) \leq 30 \text{ VDC} \quad I_i (I_{max}) \leq 100 \text{ mA} \quad P_i \leq 0,8 \text{ W} \quad C_i \leq 11,61 \text{ nF} \quad L_i = 0 \text{ mH}$$

Ambient temperature range: $-50^{\circ}\text{C} \leq T_a \leq 70^{\circ}\text{C}$, Temperature code T4

Transducer Model	PMC21	PMP21	PMP23
------------------	-------	-------	-------



Certificate: 70013213
Project: 80155786

Master Contract: 151079
Date Issued: 2023-04-26

Process temperature (°C)	-25°C ...+100 °C	-40°C ... +100°C	-10°C ... +100°C
--------------------------	------------------	------------------	------------------

Rated pressure ranges of the sensors (PMC-ceramic or PMP-metal) is selectable between 1.5psi and 6000psi relative or absolute pressure.

Enclosure Type 4X or 6P (depending on connection /valve / M12 or cable).

Model Code:

		mandatory codes (single selection only)	options, not mandatory (multiple selection possible)
Cerabar	PMC21-		
Approvals:			
CA	General Purpose		
CSA IS	CLI Div.1 ABCD		
CB	CSA NI CLI Div.2 ABCD		
Output:			
1	4...20mA		
Electrical connection:			
A	Cable 5m		
B	Cable 10m		
C	Cable 25m		
M	Plug M12		
U	Valve M16		
V	Valve NPT1/2		
Pressure range:	**		
Calibration units:	*		
Process connection:	***		
Seal:	*		
Calibration:			
Service:			
Test, protocol:			
Additional Approval:			
Accessory Enclosed:			
Marking:			
Cerabar	PMP21-		
Approvals:			
CA	General Purpose		
CSA IS	CLI Div.1 ABCD		
CB	CSA NI CLI Div.2 ABCD		
Output:			
1	4...20mA		
Electrical connection:			
A	Cable 5m		
B	Cable 10m		
C	Cable 25m		
M	Plug M12		
U	Valve M16		
V	Valve NPT1/2		
Pressure range:	**		
Calibration units:	*		
Process connection:	***		
Calibration:			
Service:			
Test, protocol:			
Additional Approval:			
Accessory Enclosed:			
Marking:			
Cerabar	PMP23-		
Approvals:			
CA	General Purpose		
CSA IS	CLI Div.1 ABCD		
CB	CSA NI CLI Div.2 ABCD		
Output:			
1	4...20mA		
Electrical connection:			
A	Cable 5m		
B	Cable 10m		
C	Cable 25m		
M	Plug M12		
N	Plug M12-M.		
U	Valve M16		
V	Valve NPT1/2		
Pressure range:	**		
Calibration units:	*		
Process connection:	***		
Calibration:			
Service:			
Test, protocol:			
Additional Approval:			
Accessory Enclosed:			
Marking:			



Certificate: 70013213
Project: 80155786

Master Contract: 151079
Date Issued: 2023-04-26

Part B:

CLASS 2252 06 - PROCESS CONTROL EQUIPMENT

CLASS 2252 86 - PROCESS CONTROL EQUIPMENT - Certified to US Standards

Pressure transducers models Cerabar PMC21-xxxxxxx-y, PMP21-xxxxxxx-y PMP23-xxxxxxx-y, PMC11-xxxxxxx-y and PMP11-xxxxxxx-y where ‘x’ is detailed in the model code below and ‘y’ is linked to non relevant options for certification.

Electrical Ratings: 4 to 20mA, maximum 35 VDC. Electrical Ratings: 0 to 10V, maximum 30 VDC. Enclosure Type 4X or 6P (depending on connection /valve / M12 or cable).

For PMP23-xxxxxxx-y, PMC21-xxxxxxx-y and PMP21-xxxxxxx-y models, IO-Link option is also available.

Rated pressure ranges of the sensors (PMC-ceramic or PMP-metal) is selectable between 1.5psi and 6000psi relative or absolute pressure.

Ambient temperature range: $-40^{\circ}\text{C} \leq T_a \leq 70^{\circ}\text{C}$.

Model Code is as follows:

		mandatory codes (single selection only)						options, not mandatory (multiple selection possible)				
Cerabar	PMC21-							+				
	Approvals:											
	CA	General Purpose										
	Output:											
	A	IO-Link(SSP Ed.2 V1.1), 4-20mA										
	1	4..20mA										
	Electrical connection:											
	A	Cable 5m										
	B	Cable 10m										
	C	Cable 25m										
	M	Plug M12										
	U	Valve M16										
	V	Valve NPT1/2										
	Pressure range:											
	**											
	Calibration units:											
	*											
	Process connection:											

	Seal:											
	*											
	Calibration:											
	Service:											
	Test, protocol:											
	Additional Approval:											
	Accessory Enclosed:											
	Marking:											



Certificate: 70013213
Project: 80155786

Master Contract: 151079
Date Issued: 2023-04-26

		mandatory codes (single selection only)					options, not mandatory (multiple selection possible)			
Cerabar	PMP21-					+				
	Approvals:									
	CA	General Purpose								
	Output:									
	A	IO-Link(SSP Ed.2 V1.1), 4-20mA								
	1	4..20mA								
	Electrical connection:									
	A	Cable 5m								
	B	Cable 10m								
	C	Cable 25m								
	M	Plug M12								
	U	Valve M16								
	V	Valve NPT1/2								
	Pressure range:									
	**									
	Calibration units:									
	*									
	Process connection:									

	Calibration:									
	Service:									
	Test, protocol:									
	Additional Approval:									
	Accessory Enclosed:									
	Marking:									

		mandatory codes (single selection only)					options, not mandatory (multiple selection possible)			
Cerabar	PMP23-					+				
	Approvals:									
	CA	General Purpose								
	Output:									
	A	IO-Link(SSP Ed.2 V1.1), 4-20mA								
	1	4..20mA								
	7	IO-Link								
	Electrical connection:									
	A	Cable 5m								
	B	Cable 10m								
	C	Cable 25m								
	M	Plug M12								
	N	Plug M12-M.								
	U	Valve M16								
	V	Valve NPT1/2								
	Pressure range:									
	**									
	Calibration units:									
	*									
	Process connection:									

	Calibration:									
	Service:									
	Test, protocol:									
	Additional Approval:									
	Accessory Enclosed:									
	Marking:									



Certificate: 70013213
 Project: 80155786

Master Contract: 151079
 Date Issued: 2023-04-26

		mandatory codes (single selection only)						options, not mandatory (multiple selection possible)	
Cerabar	PMC11-							+	
	Approvals:								
	CA General Purpose								
	Output:								
	1 4..20mA								
	2 0..10V								
	Electrical connection:								
	L Plug M12								
	U Valve M16								
	V Valve NPT1/2								
	Pressure range:								
	**								
	Calibration units:								
	*								
	Process connection:								

	Seal:								
	*								
	Calibration:								
	Service:								
	Test, protocol:								
	Additional Approval:								
	Accessory Enclosed:								
	Marking:								

		mandatory codes (single selection only)						options, not mandatory (multiple selection possible)	
Cerabar	PMP11-							+	
	Approvals:								
	CA General Purpose								
	Output:								
	1 4..20mA								
	2 0..10V								
	Electrical connection:								
	L Plug M12								
	U Valve M16								
	V Valve NPT1/2								
	Pressure range:								
	**								
	Calibration units:								
	*								
	Process connection:								

	Calibration:								
	Service:								
	Test, protocol:								
	Additional Approval:								
	Accessory Enclosed:								
	Marking:								

Conditions of Acceptability:

The Cerabar PMx2x shall be powered by certified Class 2 Power Supply as defined in the Canadian Electrical Code or National Electrical Code or by a CSA C22.2 No. 60950 -1/ UL 60950-1 or CSA/UL 62368-1 certified limited power source (LPS).



Certificate: 70013213
Project: 80155786

Master Contract: 151079
Date Issued: 2023-04-26

APPLICABLE REQUIREMENTS

- | | | |
|---|---|--|
| CAN/CSA C22.2 No 94.1-07 | - | Enclosures for Electrical Equipment, Non-Environmental Considerations |
| CAN/CSA C22.2 No 94.2-07 | | Enclosures for Electrical Equipment, Environmental Considerations |
| CAN/CSA C22.2 No 213-16 | | Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations |
| CAN/CSA C22.2 No. 61010-1-12 + UPD1:2015, UPD2:2016, AMD 1-18 | - | Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements |
| CAN/CSA C22.2 No 60079-0:15 | - | Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements |
| CAN/CSA C22.2 No 60079-11:14 | - | Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i" |
| UL50E: 2007 | - | Enclosures for Electrical Equipment, Environmental Considerations |
| ANSI/UL 61010-1: 2019 Third Edition | - | Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements |
| FM3600: 2011 | - | Electrical Equipment for Use in Hazardous (Classified) Locations – General Requirements. |
| FM3610: 2010 | - | Intrinsically safe Apparatus and Associated Apparatus for Use in Class I, II, III, Division 1 and Class I, Zone 0, 1 Hazardous (Classified) Locations. |
| ANSI/ISA 60079-0: 2013 | - | Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements |
| ANSI/ISA 60079-11: 2013 | - | Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i" |
| ANSI/ISA 12.12.01: 2015 | | Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations |



Certificate: 70013213
Project: 80155786

Master Contract: 151079
Date Issued: 2023-04-26

Notes:

Products certified under Class C225206, C225286, C225804, C225884 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC).
www.scc.ca





Supplement to Certificate of Compliance

Certificate: 70013213

Master Contract: 151079

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
80155786	2023-04-26	Evaluation to update cCSAus report # 70013213 (last project 70152483) for Pressure transducer model Cerabar PMx2x series type PMC21, PMP21 and PMP23 for the addition of new software featured IO-link electronics (4-wire), and update to ord loc. standards.
70152483	2017-11-28	Update of report 70013213 (Edition 3) for Cerabar transmitter Scope: new electronic IO-Link has to be added in the CoC and also in the Descriptive Test report Class No: unchanged Applicable requirements: unchanged Ex markings: unchanged Notes: 1- All components shall be NRTL certified for the application 2- IECEx Test Reports and evaluations shall cover the National Deviations for the US and Canada
70116495	2017-03-03	Update of report 70013213 (Edition 2) for Cerabar transmitter Applicable requirements: unchanged Ex markings: unchanged Scope: Due to EMC reasons addition of five additional chip beads (Z107-Z111). additionally the chip beads Z100-Z106 reduced in dimension from 0603 to 0402. These changes result in a new pcb design. The other circuit diagram are not affected.
70013213	2015-04-01	cCSAus model certification of Cerabar transducers model PMC21 and PMP2x. Ex classification: Class I, Division 1, Groups A, B, C & D, Ex ia IIC, Class I, Zone 1, Aex ia IIC.