



PRESSURE

P2P Technology

CIT Family

Intrinsically safe pressure transducers:

PMP-C122-Exi.1H, PMP-C122-Exi.2H

APPROVED FOR HYDROGEN

Datasheet

These are stainless steel, intrinsically safe pressure sensors for the usage in hazardous areas.

In addition to its rugged construction and a good price- to- performance ratio these products will be the solution for pressure measurement for a very wide variety of applications.

This sensors has high signal accuracy better than 0,25% of the full-scale signal. Additionally the sensors from this series allows to signal downscaling, zero setting and signal filtering, with can be adjustable by special PC- software.

MAIN FEATURE

- Pressure ranges: -1....4 bar to -1....1000 bar (-14,5...58 psi to -14.5...14500 psi)
- Hi- strength stainless steel construction no silicone oil, no internal O-Rings
- Wide operating temperature range
- Low static and thermal errors
- Compatible with a wide range of liquids and gases
- High grade of EMI/RFI protection grade
- Wide variety of pressure ranges
- Several electrical connection available

SUITABLE HAZARDOUS AREAS AND CONDITIONS:

- **metallic connectors**

US: Class I, Zone 0 AEx ia IIC T4 Ga, Class I, Division 1, Groups A, B, C, D T4
CAN: Ex ia IIC T4 Ga IS Class I, Division 1, Groups A, B, C, D T4

- **for other plugs and cables:**

US: Class I, Zone 1 AEx ia IIC T4 Gb, Class I, Division 1, Groups A, B, C, D T4
CAN: Ex ia IIC T4 Gb, IS Class I, Division 1, Groups A, B, C, D T4

Rated for:

Class 2258 04 PROCESS CONTROL EQUIPMENT (for hazardous Canadian locations)
Class 2258 84 PROCESS CONTROL EQUIPMENT (for hazardous locations- certified to US standards)



Examples of products



- With flange plug: II 1G Ex ia IIC T4 Ga
- Other plugs: II 1G Ex ia IIB T4 Ga or II 2G Ex ia IIC T4 Gb



APPLICATION



MONITORING OF TANKS LEVEL



REMOTE PROCESS CONTROL



OIL & GAS EQUIPMENT



DRILLING & MINING



MARINE & OFFSHORE



CHEMICAL INDUSTRY

TECHNICAL SPECIFICATIONS

PERFORMANCE CHARACTERISTICS													
Pressure ranges (in bar) *													
Nominal pressure	4	6	10	16	25	40	60	100	160	260	400	600	1000
Over pressure	8	12	20	32	50	80	120	200	320	500	800	1200	1400
Burst pressure	12	18	30	48	75	120	180	500	750	1000	1400	1800	2000
Pressure ranges (in psi) *													
Nominal pressure	58	87	145	232	362.5	580	870	1450	2320	3770	5800	8700	14500
Over pressure	116	174	290	464	725	1160	1740	2900	4640	7250	11600	17400	20300
Burst pressure	174	261	435	696	1087.5	1740	2610	7250	10875	14500	20300	26100	29000
Accuracy (25°C)	≤ 0,25 % FS												
Overall accuracy (- 5°C... 85°C)	≤ 1,5 % FS												
Overall accuracy (< - 5°C)	max ≤ 2 % FS												
Long-term stability	± 0,1 % FS per year in referential conditions												
Pressure cycles	> 10 million												
ENVIRONMENTAL DATA													
Ambient temperatur range	- 40 °C ... 85 °C (-40 °F ... 185 °F)												
Storage temperature range	- 40 °C ... 85 °C (- 40 °F ... 185 °F)												
Medium temperature range	- 40 °C ... 85 °C (- 40 °F ... 185 °F)												
Shock resistance	tested according to EN/IEC 60068-2-31												
Vibration resistance	20 g / 3 axes to EN/IEC 60068-2-6												
EMC /RFI emission	EN 61326-1:2013- section 7												
	EN 61326-2-3:2013												
EMC /RFI susceptibility	EN 61326-1:2013 - section 6												
	EN 61326-2-3:2013												
Protection class	≥ IP65 / DIN 40 050												
Wetted parts	stainless steel 1.4404 (316L)												
ELECTRICAL DATA													
Available in certification:	CSA/ATEX			CSA				CSA					
Output signal	4 ... 20 mA			0/1 ... 5 V DC; 0/1 ... 6 V DC; 0/1 ... 10 V DC				0,5 ... 4,5 V DC ratiometric					
Supply voltage (DC)	CSA : 12 ... 27 V ATEX : 20 ... 27 V			10 ... 27 V (Vout x ... 5 V) 10 ... 27 V (Vout x ... 6 V) 15 ... 27 V (Vout x ... 10 V)				5 V DC +/- 5 %					
Load resistance	< (Vcc-10 V)/20 mA			> 5 kOhm				> 2,5 kOhm					
Current consumption	3,6 ... 21,4 mA			7 mA typ.				7 mA typ.					
Response time	≤ 4 ms			≤ 4 ms				≤ 4 ms					
Dielectric strngth	710 V DC/500 V AC												
Reverse polarity	yes												

CONNECTION VERSIONS	
Electrical connection	EN 175 301-803-A /-C; M12 x 1 (Binder S763); TURCK MiniFast 4 pins; cable outlet; others upon request
Process connections (standard)	G 1/4" DIN 1179-2; G 1/2" DIN 1179-2; G 1/4" EN 837; G 1/2" EN 837; 1/2" NPT male; 1/4" NPT male; 1/8" NPT male; 1/4" NPT female; 1/4" BSPP male; 9/16-18 UNF male; others upon request
OUTLINE DIMENSIONS	
Hex wrench size	22 mm (0.87 ") (depending of thread)
Casing diameter	22 mm (0.87 ")
Over all case length	connector versions: typ. 90 mm (3.5") conduit versions: typ. 100 mm (4")

* Depends on pressure range



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non compliance can result in serious injury and/or damage to the equipment.

WARNING: Prignitz Mikrosystemtechnik reserve the right to modify their products without notice to customers. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate testes, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

APPROVALS CERTIFICATE

CE Compliance: EMC directive 2014 / 30 / EU according in EN 61326-2-3

RoHS guideline: 2011/65/EU

Approved according to the European Directive EC79/2009

PRIGNITZ Mikrosystemtechnik GmbH is certified acc. to ISO 9001. We offer a multitude of products compliant with ATEX, IECEx, CSA, and other worldwide relevant qualifications.

CSA master contract:MC 267726

CSA certificate #:70159209



DISMOUNTING, RETURN AND DISPOSAL

Dismounting

Physical injuries and damage to property and the environment caused by hazardous media Upon contact with hazardous media (e.g. oxygen, acetylene, flammable or toxic substances), harmful media (e.g. corrosive, toxic, carcinogenic, radioactive), and also with refrigeration plants and compressors, there is a danger of physical injuries and damage to property and the environment.

- Should a failure occur, aggressive media with extremely high temperature and under high pressure or vacuum may be present at the instrument.
- Wear the requisite protective equipment.

Dismounting the instrument

- Depressurise and de-energise the pressure transmitter.
- Disconnect the electrical connection.
- Unscrew the pressure transmitter with a spanner using the spanner flats.

Return

Strictly observe the following when shipping the instrument:

All instruments delivered to Prignitz Mikrosystemtechnik must be free from any kind of hazardous substances (acids, bases, solutions, etc.) and must therefore be cleaned before being returned.

TRANSPORT, PACKAGING AND STORAGE

Transport

Check the pressure transmitter for any damage that may have been caused during transportation. Obvious damage must be reported immediately.

Packaging and storage

Do not remove packaging until just before mounting.

Keep the packaging as it will provide optimum protection during transport (e.g. change in installation site, sending for repair).

Recommended conditions at the place of storage:

- - 40 °C to 85 °C (- 40 °F ... 185°F)

CUSTOMIZED SOLUTIONS

An indisputable advantage of the products from Prignitz Mikrosystemtechnik is that in addition to the specified parameters, a variety of specific customer requests can be implemented:

- other process and electrical connections available in a wide range of options
- analog output signals can be customized upon request.

Feel free to ask us. We are ready to implement individual solutions for you.

Edition version: D/C122-Exi.1H/C122-Exi.2H/Rev.3/FEB.2024/ENG

HOW TO ORDER

PMP-C122-Exi.XX-XX-(XX..XX)-XX-X-XXX-XX-XXX

FAMILIES

C = CIT Family

TECHNOLOGY & MATERIAL

22 = P2P Technology with 316L material

TYPE

Exi = Intrinsically safe pressure transducer

CERTIFICATION

1H = CSA + EC 79/2009 (up to 600 bar Hydrogen approval)

2H = ATEX + EC 79/2009 (up to 600 bar Hydrogen approval)

ELECTRICAL OUTPUT

I2 = 4 ... 20 mA 3L

UR = ratiometric

OU5 = 0 ... 5 V

1U5 = 1 ... 5 V

U10 = 0 ... 10 V

PRESSURE RANGES

e.g.

(0...400)

(0...1500)

(-1...100)

UNIT

01 = bar

16 = psi

Customised Article number

ELECTRICAL CONNECTION

01 = Packard connector 3 pins

02 = EN 175 301-803-A

03 = EN 175 301-803-C

05 = Flange connector M12 / 4 pins (Binder S763)

08 = DEUTSCH DT04-2P (2 pins)

09 = DEUTSCH DT04-3P (3 pins)

10 = DEUTSCH DT04-4P (4 pins)

11 = AMP Super Seal

14 = TURCK MiniFast 7/8" 4 pins

C0 = Cable

SNUBBER

S = with snubber

N = no snubber

C = customized pressure channel with a diameter of 11 mm

PROCESS CONNECTIONS

00 = Customised

01 = G 1/4" Form E

02 = G 1/4" Form A

04 = G 1/2"

07 = 1/2" NPT

08 = 1/4" NPT

10 = 9/16" UNF

11 = 3/8" UNF

13 = M12 x1

17 = M18 x 1,5

18 = M20 x 1,5 manometer port

TYPE OF PRESSURE

S = Sealed reference

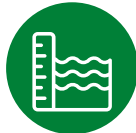
g = gauge

PRIGNITZ

MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &
SERVICE

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