



PRESSURE

P2P Technology

PRIGNITZ

MIKROSYSTEMTECHNIK

SPT Family

Non-sparking pressure transmitter:

PMP-S122-ExnA.1H

APPROVED FOR HYDROGEN

Datasheet

These are stainless steel pressure transmitters for the usage in hazardous areas.

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

MAIN FEATURE

- Pressure ranges: -1...10 bar to -1...1000 bar (-14,5...145 psi to -14.5...14500 psi)
- Hi-strength stainless steel construction
- No internal O-Rings, no silicon oil
- 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



Examples of series products

SUITABLE HAZARDOUS AREAS AND CONDITIONS:



US: Class I / Zone 2 AEx nA IIC T4 Gc;

CAN: Class I / Division 2;

Groups A, B, C, D T4 Ex nA IIC T4 Gc (Ta = -40 °C ... 80 °C)



APPLICATION



TEST STANDS



REMOTE PROCESS CONTROL



OIL & GAS EQUIPMENT



HYDROGEN INDUSTRY



GAS COMPRESSION AND STORAGE



WATER MANAGEMENT

TECHNICAL SPECIFICATIONS

PERFORMANCE CHARACTERISTICS												
Pressure ranges (in bar) *												
Nominal pressure	10	16	25	40	60	100	160	250	400	600	1000	
Over pressure	20	32	50	80	120	200	320	500	800	1200	1400	
Burst pressure	50	75	100	200	250	500	750	1000	1400	1800	2000	
Pressure ranges (in psi) *												
Nominal pressure	150	250	360	600	900	1500	2500	3625	6000	9000	14500	
Over pressure	300	500	720	1200	1800	3000	5000	7250	12000	18000	20300	
Burst pressure	750	1125	1500	3000	3750	7500	11250	14500	21000	27000	29000	
Accuracy (25°C)	≤ 0,5 % FS											
Overall accuracy (- 5°C... 80°C)	≤ 1,5 % FS											
Overall accuracy (< - 5°C)	max ≤ 2,5 % FS											
Long-term stability	±0.1 % FS per year in referential conditions											
Pressure cycles	> 10 million											
ENVIRONMENTAL DATA												
Ambient temperatur range	- 40 °C ... 80 °C (-40 °F ... 176 °F)											
Medium temperatur range	- 40 °C ... 80 °C (-40 °F ... 176 °F)											
Storage temperature range	- 40 °C ... 80 °C (-40 °F ... 176 °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											
EMI/RFI susceptibility	EN 61326-1:2013 - section 6											
	EN 61326-2-3:2013											
Protection class	≥ IP66											
Material of wetted parts	stainless steel 1.4404 (316L);											
ELECTRICAL DATA												
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)	10 ... 27 V				6... 27 V (Vout x ... 5 V) 8 ... 27 V (Vout x ... 6 V) 12 ... 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	≤ 5 ms				≤ 2 ms				≤ 2 ms			

ELECTRICAL PROTECTION	
Reverse polarity	yes
Dielectric strength	710 V DC/500 V AC
CONNECTION VERSIONS	
Electrical connection*	TURCK MiniFast 4 pins; Conduit fitting ½ MNPT with cable
Process connections (standard)	1/2" NPT male 1/4" NPT male 1/8" NPT male 1/4" BSPP male 1/4" NPT female 9/16-18 UNF male F250-c Autoclave
OUTLINE DIMENSIONS	
Hex wrench size	22 mm (0.87 ")
Casing diameter	22 mm (0.87 ")
Over all case length	connector versions: max. 100 mm (3.95") conduit versions: max. 110 mm (4.35")

*Other on request



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 80 °C (- 40 °F ... 176 °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.

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HOW TO ORDER

PMP-S122-ExnA.XX-XX-(XX..XX)-XX-X-XXX-XX-XXX

FAMILIES

S = SPT Family

TECHNOLOGY & MATERIAL

22 = P2P Technology with 316L material

TYPE

ExnA = Non-sparking pressure transducers

CERTIFICATION

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

ELECTRICAL OUTPUT

I2 = 4 ... 20 mA 3L
UR = ratiometric
0U5 = 0 ... 5 V
1U5 = 1 ... 5 V
U10 = 0 ... 10 V

PRESSURE RANGES

e.g.
(0...400)
(0...1500)
(-1...100)

Customised Article number

ELECTRICAL CONNECTION

14 = TURCK MiniFast 7/8" 4 pins
C0 = Cable

SNUBBER

S = with snubber
N = no snubber

PROCESS CONNECTIONS

07 = 1/2" NPT
08 = 1/4" NPT
10 = 9/16-18 UNF male
other on request

TYPE OF PRESSURE

S = Sealed reference
g = gauge

UNIT

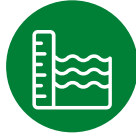
01 = bar
16 = psi

PRIGNITZ

MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &
SERVICE

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