



PRESSURE

PAM Technology

PRIGNITZ 
MIKROSYSTEMTECHNIK

SPT Family: Standard Pressure Transmitters

For low pressure non aggressive applications

PMP-S142

Datasheet

- **FOR AIR AND NON-AGGRESSIVE MEDIA APPLICATIONS**
- **DRY SENSORS WITHOUT OIL FILLING**
- **SIGNAL CONDITIONING WITH ASSP**
- **HIGH INTEGRATION DENSITY**
- **FLEXIBLE FOR CUSTOMISED REQUIREMENT**

MAIN FEATURE

- **Pressure ranges***: from 0...60 mbar to 0.. 10 bar
- **Mechanical connections***: 1/2"-14 NPT; 1/4"-18 NPT; G1/4"B Mano EN 837; G1/2"B Mano EN 837; G1/4"A Form E; 7/16 - 20UNF
- **Electrical connections***: EN 175301-803-A; M12x1 (S763); Cable output
- **Wetted parts**: stainless steel 303 housing, Al-carrier, Si-membrane, NBR-O-ring, glue (hard)
- **Response time****: 1 ms
- **Accuracy (25°C)**: $\leq 0.5\%$ FS after limit-point calibration



Examples of products

*others on request. Different special custom-made solutions
** depend of SPT product-version

DESCRIPTION

Series of pressure transmitters from SPT-Family for non aggressive Media applications .
Si-membrane for relative pressure measurements.

The pressure cells from 60 mbar to 10 bar are available for different fields of use. Signal processing of the measurement bridge is affected by ASSP (Application-specific standard parts).

APPLICATIONS



BUILDING AUTOMATION SYSTEMS



HVAC



Air Pressure Measurement

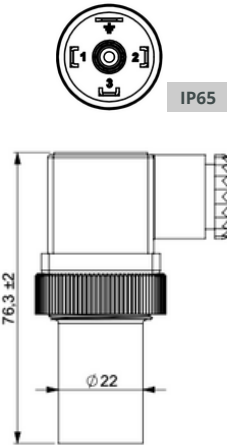
TECHNICAL SPECIFICATIONS

INPUT PARAMETERS				
Pressure type	gauge			
Mechanical connections *	9/16-18UNF 6M; 1/2"-14 NPT; 1/4"-18 NPT; G1/4"B Mano EN 837; G1/2"B Mano EN 837; G1/4"A Form E; 7/16 - 20UNF;			
Tightening torque	typ. 25 Nm; max. 50 Nm			
Wetted parts	stainless steel 303 housing, Al-carrier, Si-membrane, NBR-O-ring, glue (hard)			
Body material	stainless steel 1.4301			
OUTPUT SIZES				
Electrical connections *	M12x1 (S763); EN 175301-803-A; Cable output; Packard Metri-Pack; EN 175301-803-C			
Output signal **	4..20 mA	1...5 V	ratiometric 0.5...4.5 V	
Supply voltage	10...32 V	7...32 V	ratiometric 5 V DC±10 %	
Load resistance	< (Vsupply - 10)V/0.02 A	≥ 2 kOhm	≥ 2 kOhm	
Response time	typ. 1 ms	max. 2 ms		
PERFORMANCE CHARACTERISTICS				
Accuracy (25°C)***	≤ ±0.5 % FS after limit-point calibration			
Overall accuracy (- 5°C... 85°C)	≤ ±0.1 % FS / 10 K after limit-point calibration			
Long-term stability	≤ 0.1 % FS per year in referential conditions			
Ambient temperature	- 40...+ 105°C			
Medium temperature	- 40...+ 125°C			
Storage temperature	- 40...+ 125°C			
Shock resistance	1000 g to IEC 60068-2-32			
Vibration resistance	20 g to IEC 60068-2-6			
Protection class	depending on electrical connection, see drawing of electrical connectors			
ELECTRICAL PROTECTION				
Reverse polarity	YES			
Dielectric strength	50 VDC			
Short-circuit protection	KS Out+ / UB- (for 1s)			
CE-CONFORMITY				
EMV guideline	2014 / 30 / EU acc. to DIN EN 61326-1, DIN EN 61326-2-3			
RoHS guideline	2011/65/EU			
OTHER				
Weight***	~ 100 g			
Lifetime cycles	> 100 million			

*others on request.

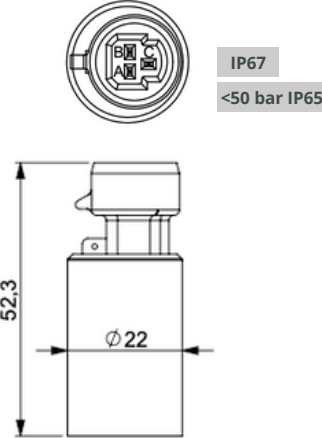
ELECTRICAL CONNECTION

EN 175301-803-A



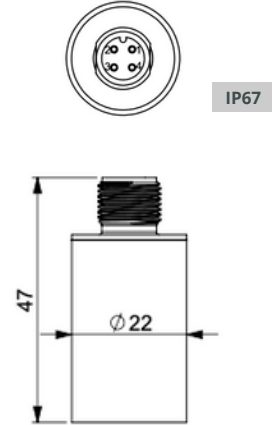
Output	Pin1	Pin2	Pin3	Pin4**
Voltage	+	-	V out	Case
4-20 mA 3 Wires	+	-	I out	Case
4-20 mA 2 Wires	+	-	nc	Case

Packard Metri-Pack



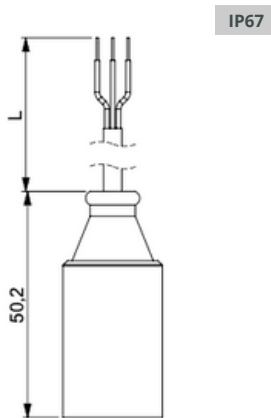
Output	PinA	PinB	PinC
Voltage	-	+	V out
4-20 mA 3 Wires	-	+	I out
4-20 mA 2 Wires	-	+	nc

M12x1 (S763)



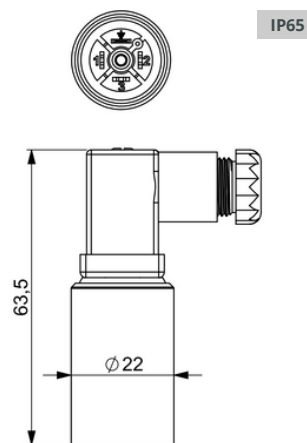
Output	Pin1	Pin2	Pin3	Pin4
Voltage	+	V out	-	nc
4-20 mA 3 Wires	+	I out	-	nc
4-20 mA 2 Wires	+	nc	-	nc

Cable output



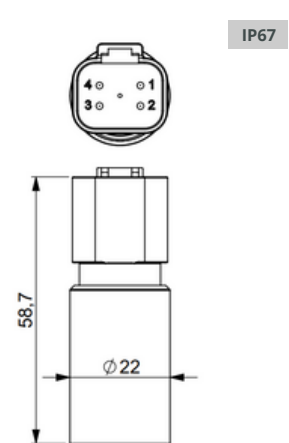
Output	white	brown	yellow
Voltage	+	-	V out
4-20 mA 3 Wires	+	-	I out
4-20 mA 2 Wires	+	-	nc

EN 175301-803-C



Output	Pin1	Pin2	Pin3	Pin4**
Voltage	+	-	V out	Case
4-20 mA 3 Wires	+	-	I out	Case
4-20 mA 2 Wires	+	-	nc	Case

Deutsch DT04-4P



Output	Pin1	Pin2	Pin3	Pin4
Voltage	+	-	nc	V out
4-20 mA 3 Wires	+	-	nc	I out
4-20 mA 2 Wires	+	-	nc	nc



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.

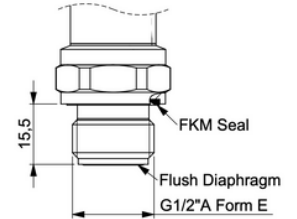
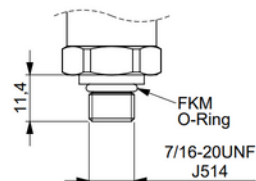
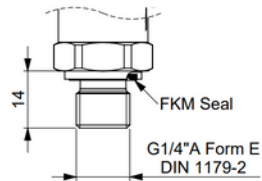
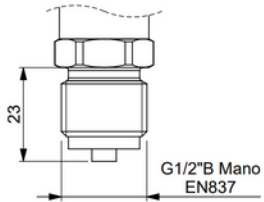
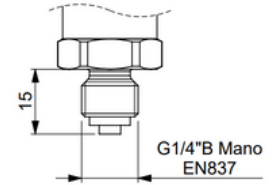
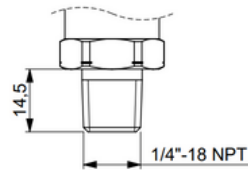
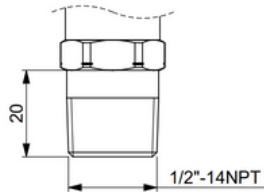
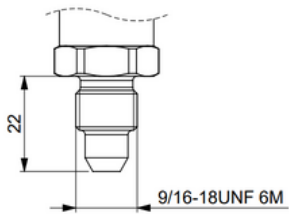
WARNING: Prignitz Mikrosystemtechnik reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate testes, 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.

*Others on request

**optional

PROCESS CONNECTIONS

*



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:

- EX versions are available for use in hazardous areas (ATEX, IECEx, CSA)
- 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.

*others on request.

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).

Permissible conditions at the place of storage:

- Storage temperature: -40 ... +125 °C

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.

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.



**depend of CIT product-version

Edition version:

D/PMP-S142/Rev.4/Nov2024/ENG

GALAXY OF CUSTOMIZED SOLUTIONS

PRIGNITZ-MST.DE

HOW TO ORDER *

PMP-S142-XXX- (XX..XX)-XX-XX-XXX-XX-XXX

FAMILIES

S = SPT family

TECHNOLOGY & MATERIAL

42 = PAM Technology with Silicon membrane for non-aggressive media

ELECTRICAL OUTPUT

I2 = 4-20mA 2L
I3 = 4-20mA 3L
I30 = 0-20mA 3L
UR = ratiometric
0U5 = 0-5V
1U5 = 1-5V
U10 = 0-10V

PRESSURE RANGES

e.g.
0...60
0...10

UNIT

e.g.
bar
psi
mbar

TYPE OF PRESSURE

g = gauge
S = sealed reference
a = absolute

**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
Cable available

SNUBBER

S = with snubber
0 = without snubber

PROCESS CONNECTIONS

00 = Customised
01 = G 1/4" Form E
02 = G 1/4" Form A
03 = G 1/2" Form E
04 = G 1/2"
05 = G1/2" B Mano
07 = 1/2" NPT
08 = 1/4" NPT
09 = 7/16-20 UNF 2A
10 = 9/16" UNF
11 = 3/8" UNF
13 = M12 x1
17 = M18 x 1,5
18 = M20 x 1,5 manometer port
19 = G1/4 manometer port

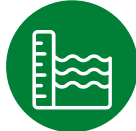
* customisation available on request

PRIGNITZ

MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &
SERVICE

© 2024 PRIGNITZ Mikrosystemtechnik GmbH
All rights reserved. / Alle Rechte vorbehalten.

CONTACTS:

Tel.: **+49 (0) 38 77 / 5 67 46-0**

Fax: **+49 (0) 38 77 / 5 67 46-18**

Margarethenstraße 61

19322 Wittenberge / Elbe

Germany

info@prignitz-mst.de