



PRESSURE

PMI Technology

PAM Technology

PRIGNITZ
MIKROSYSTEMTECHNIK

SPT Family: Standard Pressure Transmitters

For low pressure application:

PMP-S131, PMP-S132, PMP-S140

Datasheet

- HIGH MEDIA RESISTANCE, NO INTERNAL SEALS, WITHOUT WELD SEAM
- SIGNAL CONDITIONING WITH ASIC
- HIGH INTEGRATION DENSITY
- VACUUM-TIGHT AND ELASTOMER-FREE
- FLEXIBLE FOR CUSTOMISED REQUIREMENT



Examples of products

MAIN FEATURE

- **Pressure ranges***: 60 mbar – 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; G1/2" Form E flush membrane
- **Electrical connections***: EN 175301-803-A; M12x1 (S763); Cable output
- **Wetted parts****:
PMP-S131, PMP-S132: stainless steel 1.4404 (316L)/17-4 PH/Hastelloy
PMP-S140: stainless steel 303 housing, Al-carrier, Si-membrane, NBR-O-ring, glue (hard)
- **Response time****: 1 ms
- **Accuracy (25°C)**: ≤ 0.5 % FS after limit-point calibration
- **Optionally with**: EX protection (ATEX, IECEx, CSA)

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

DESCRIPTION

Series of rugged pressure transmitters from SPT-Family for many applications like energy, gas, chemical technologies, HVAC, fuel cell, etc. Oil-filled or stainless steel thin film measuring cell for relative and absolute pressures.

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

APPLICATIONS



ENERGY TECHNOLOGY



AUTOMOTIVE INDUSTRY



FUEL CELLS



GAS TECHNOLOGY



CHEMICAL INDUSTRY



HVAC (Heating, Ventilation, Air conditioning)

GALAXY OF CUSTOMIZED SOLUTIONS

PRIGNITZ-MST.DE

TECHNICAL SPECIFICATIONS

INPUT PARAMETERS

Pressure ranges (bar) *											
Nominal pressure	0,1	0,16	0,25	0,4	0,6	1	1,6	2,5	4	6	10
Over pressure	1	1,5	2	2	4	5	10	5	8	12	20
Burst pressure	2	3	4	4	8	10	15	10	12	18	30
Pressure type **	gauge, sealed reference, absolute										
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; G1/2" Form E flush membrane										
Tightening torque	typ. 25 Nm; max. 50 Nm										
Wetted parts	<ul style="list-style-type: none"> PMP-S131, PMP-S132: stainless steel 1.4404 (316L)/17-4 PH/Hastelloy PMP-S140: stainless steel 303 housing, Al-carrier, Si-membrane, NBR-O-ring, glue (hard) 										
Body material	stainless steel										

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	HV 350 V DC
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

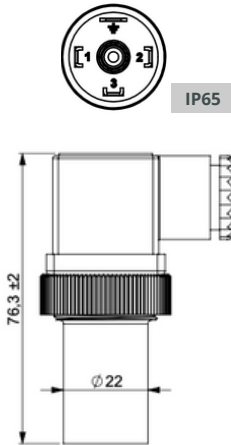
Weight***	~ 100 g
Lifetime cycles	> 100 million

*others on request.

ELECTRICAL CONNECTION

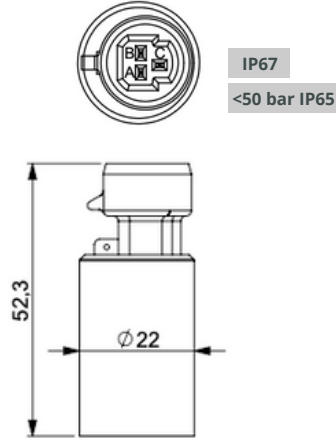


EN 175301-803-A



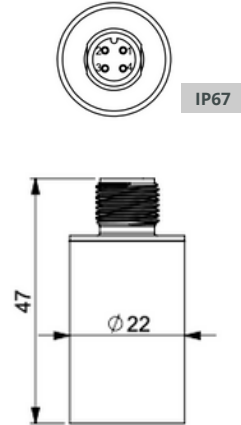
	Pin1	Pin2	Pin3	Pin4	Pin5
0.5 -4.5 V; 1-5V	+	-	V/I out	GND	Thread
4-20 mA	+	-	nc	GND	nc

Packard Metri-Pack



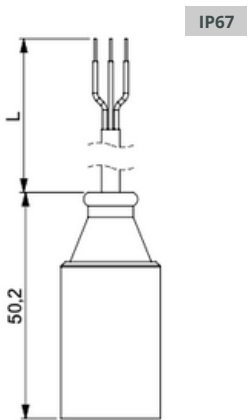
	PinA	PinB	PinC
0.5 -4.5 V; 1-5V	-	+	V/I out
4-20 mA	-	+	nc

M12x1 (S763)



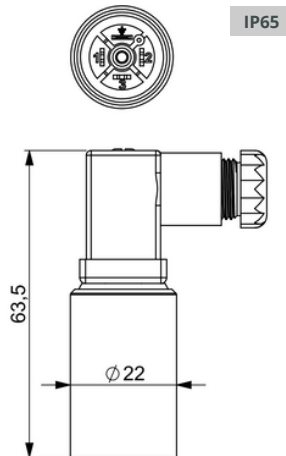
	Pin1	Pin2	Pin3	Pin4
0.5 -4.5 V; 1-5V	+	V/I out	-	nc
4-20 mA	+	nc	-	nc

Cable output



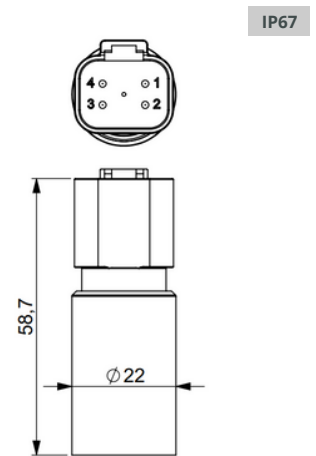
	white	brown	yellow	green
0.5 -4.5 V; 1-5V	+	-	V/I out	GND
4-20 mA	+	-	GND	GND
4-20mA digital	+	-	nc	nc

EN 175301-803-C



	Pin1	Pin2	Pin3	Pin4	Pin5
0.5 -4.5 V; 1-5V	+	-	V/I out	GND	Thread
4-20 mA	+	-	nc	GND	nc

Deutsch DT04-4P



	Pin1	Pin2	Pin3	Pin4
0.5 -4.5 V; 1-5V	+	-	nc	V/I out
4-20 mA	+	-	nc	nc



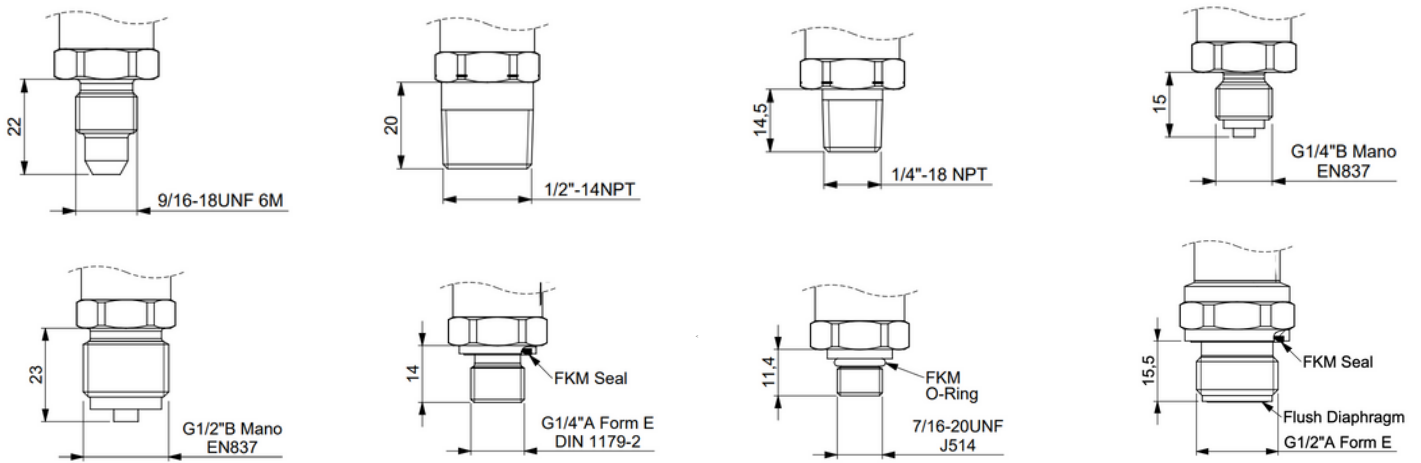
Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non compliance can result in serious injury and/or damage to the equipment.

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.

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.

HOW TO ORDER *

PMP-S1XX-XXX- (XX..XX)-XX-XX-XXX-XX-XXX

FAMILIES

S = SPT family

TECHNOLOGY & MATERIAL

- 31** = PMI Technology with steel 316 L, membrane inside
- 32** = PMI Technology with steel 316 L, flush membrane
- 40** = 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

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

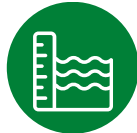
Edition version: D/S131/S132/S141/S142/S143 /Rev.2/Mar.2023/ENG

PRIGNITZ

MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &
SERVICE

© 2023 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