



PRESSURE

P2P Technology

PMP-S222

SPT Family: Standard Pressure Transmitters

**OEM pressure transmitter for high pressure
and aggressive media application**

DATASHEET

- **COMPACT DESIGN, HIGH INTEGRATION DENSITY**
- **HIGH MEDIA RESISTANCE, NO INTERNAL SEALS, WITHOUT WELD SEAM**
- **DIAGNOSTIC FUNCTION BASED ON THE OUTPUT SIGNAL (OPTIONAL)**
- **CAN BE APPROVED FOR HYDROGEN**
- **CUSTOMIZING POSSIBLE**
- **FOR HIGH QUANTITIES MOQ 500**

MAIN FEATURE

- **pressure ranges:** 10 to 900 bar
- **mechanical connections:** G1/4"A Form E, DIN EN ISO1179-2; 1/4"-18 NPT; 7/16-20 UNF SAE J514
- **electrical connections:** Binder M12x1 (plastic), Packard Metri-Pack, DEUTSCH DT 04-3P, DEUTSCH DT 04-4P, AMP Superseal
- **wetted parts:** stainless steel 1.4404 (316L)
- **response time:** typ. 1 ms
- **accuracy:** $\leq 0.5\%$ FS limit-point settings ($\leq 0.35\%$ FS BFS) at 25 °C
- **optionally certificate:** EX protection (ATEX, IECEx, CSA); up to 600 bar EC 79/2009 Hydrogen approval

DESCRIPTION

The piezoresistive, very compact pressure transmitters from SPT-Family (without oil reservoir) is **based on a new type of two-chip technology (P2P Technology - our patented development), which enables the highest demands on robustness and performance such as stability, vibration, and shock resistance.**

It was specially designed for OEM series use in harsh environmental conditions, such as those that prevail in the off-road sector (Vehicles and Machines in Construction, Mining, Farming, Military etc). Compared to conventional machine building, the field of mobile equipment has more demanding requirements, particularly with regard to resistance to overpressure, vibration and shock, as well as increased EMC performance. The pressure sensors PMP-S222 were specially optimized for this and are therefore a robust solution for one of the sensor types most frequently used in mobile equipment.

All manufacturing steps from packaging in modern clean rooms to final calibration take place in Prignitz Mikrosystemtechnik in Germany.

APPLICATIONS



INDUSTRIAL AUTOMATION
Test stands, CNC equipment,
Presses, HVAC



RENEWABLE ENERGY
Oil, Gas, Wind, Water, Hydrogen,
Power stations



INDUSTRIAL PROCESS CONTROL
Chemical, Pharma, Food



OFF HIGHWAY MOBILE EQUIPMENT
Vehicles and Machines in Construction,
Mining, Farming, Military



TRANSPORTATION
Trucks, Busses, rail, Road
Construction Machines



MARINE & OFFSHORE
Engines, Hydraulic, Fluidhandling



P2P
TECHNOLOGY 

TECHNICAL SPECIFICATIONS

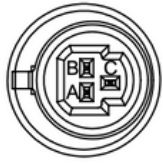
INPUT PARAMETERS												
Pressure ranges (in bar)												
Nominal pressure	10	16	25	40	60	100	160	250	400	600	900	
Over pressure	20	32	50	80	120	200	320	500	800	1200	1400	
Burst pressure	50	75	100	200	250	500	750	1000	1400	1800	2000	
Type of pressure	gauge, sealed reference (>60 bar)											
Mechanical connections	G1/4"A Form E, DIN EN ISO1179-2; 1/4"-18 NPT; 7/16-20 UNF SAE J514											
Tightening torque	typ 25 Nm; max 50 Nm											
Wetted parts	stainless steel 1.4404 (316L)											
Body material	stainless steel 1.4301/AISI 304											
OUTPUT SIZES												
Electrical connections	Binder M12x1 (plastic), Packard Metri-Pack, DT 04-3P, DT 04-4P, AMP Superseal											
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 limit point settings (≤ 0.35 % FS BFSL)											
Overall accuracy (- 5°C... 85°C)	1.50 %											
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 strength	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	~ 50 g											
Lifetime	> 10 million load cycles											

* Output is calibrated at zero and full scale

ELECTRICAL CONNECTION

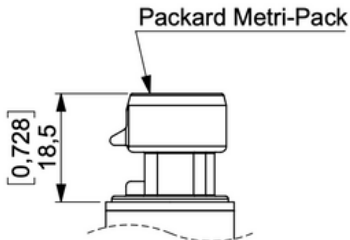
Other pinouts on request

Packard Metri-Pack



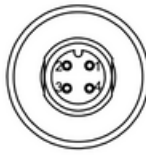
IP 67

< 50 bar IP 65



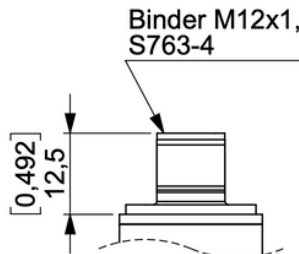
	PinA	PinB	PinC
0.5 -4.5 V; 1-5V	-	+	V/I out
4-20 mA	-	+	nc

Binder M12x1 (S763-4)



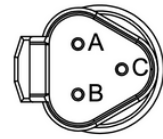
IP 67

< 50 bar IP 65

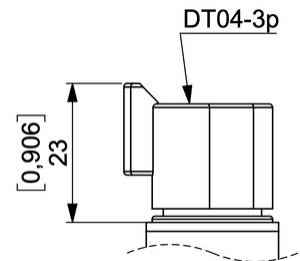


	Pin1	Pin2	Pin3	Pin4
0.5 -4.5 V; 1-5V	+	V/I out	-	nc
4-20 mA	+	nc	-	nc

DT04-3P



IP 67

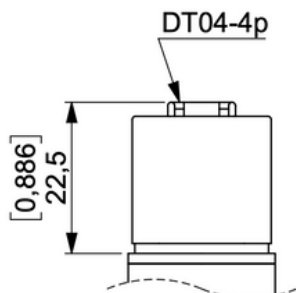


	PinA	PinB	PinC
0.5 -4.5 V; 1-5V	+	-	V/I out
4-20 mA	+	-	nc

DT04-4P

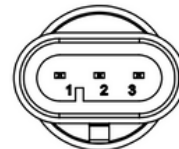


IP 67



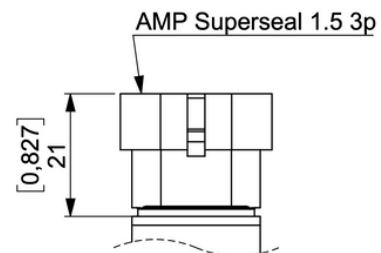
	Pin1	Pin2	Pin3	Pin4
0.5 -4.5 V; 1-5V	-	+	nc	V/I out
4-20 mA	-	+	nc	nc

AMP Superseal



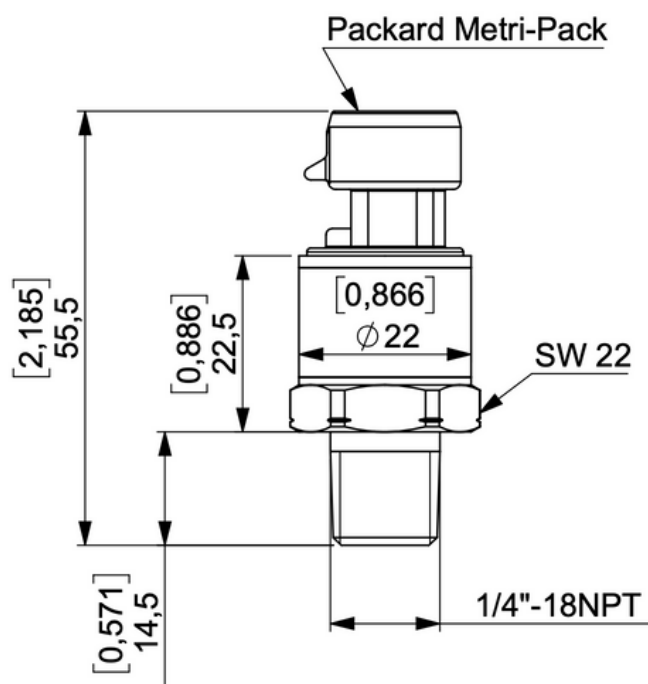
IP 67

< 50 bar IP 65



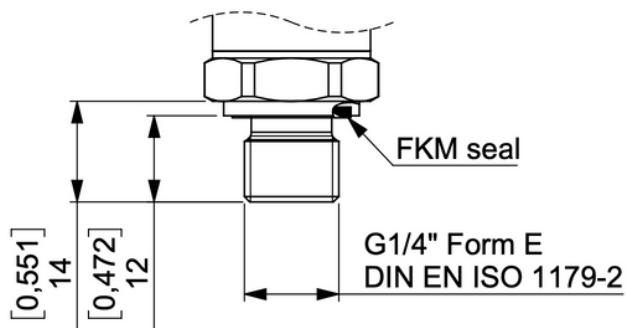
	PinA	PinB	PinC
0.5 -4.5 V; 1-5V	V/I out	-	+
4-20 mA	nc	-	+

PRODUCT CONSTRUCTION

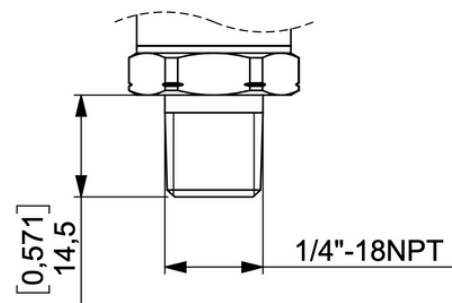


PROCESS CONNECTIONS (EXAMPLES)

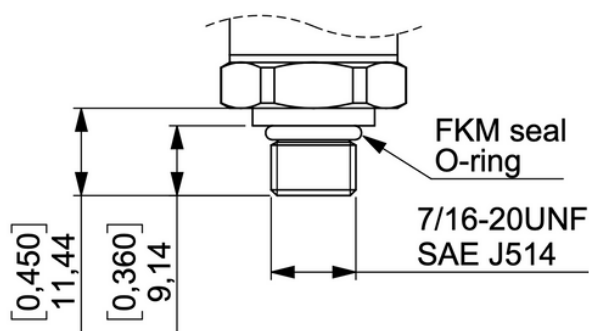
Contact us for other connections. We can realise different special customized solutions



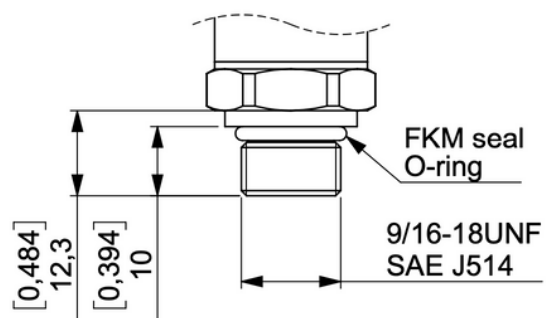
G1/4"A Form E



1/4"-18 NPT



7/16-20 UNF



9/16-18 UNF



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 tests, 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.



CUSTOMIZED SOLUTIONS

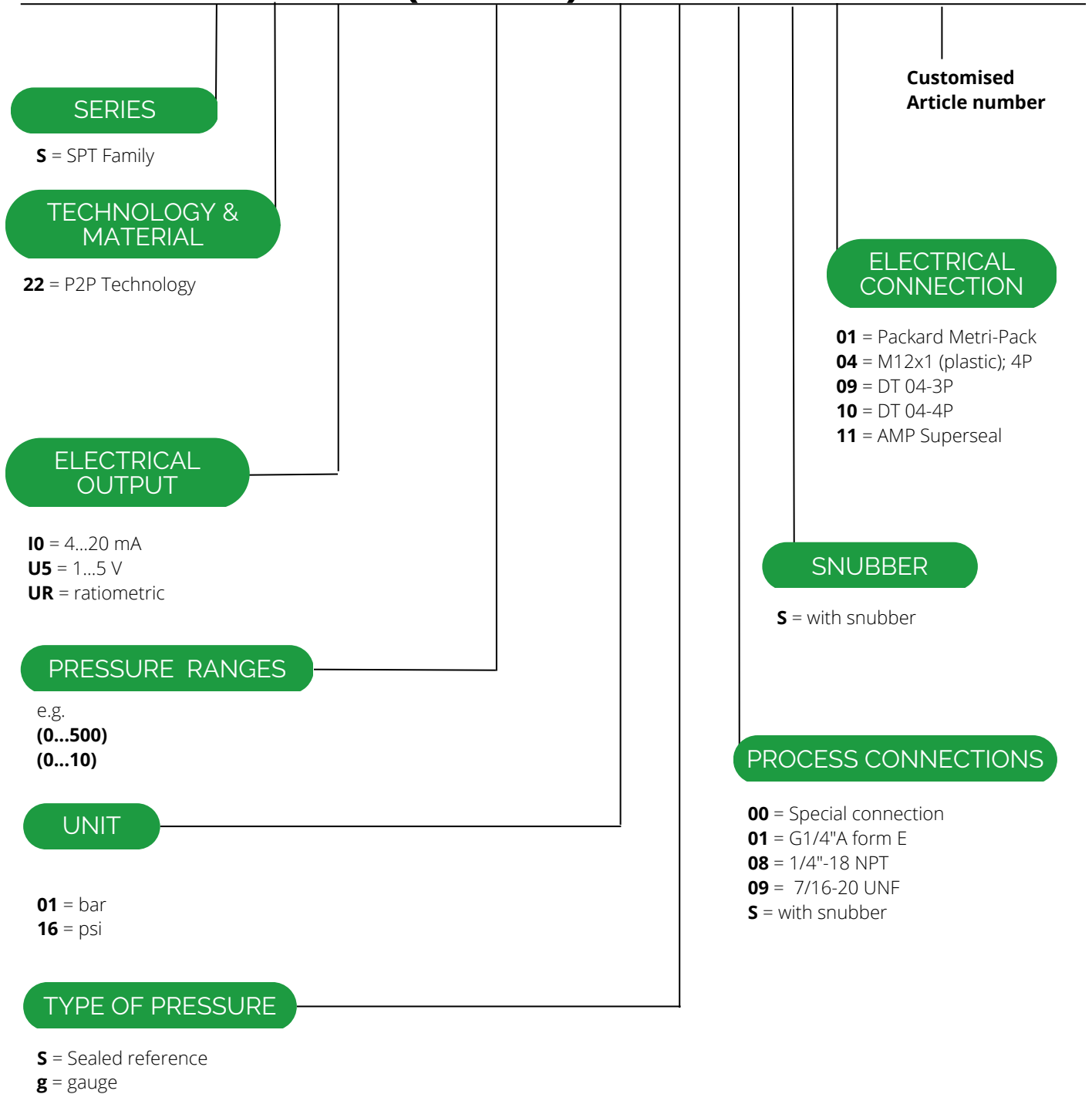
An indisputable advantage of the products from Prignitz Mikrosystemtechnik is that in addition to the specified parameters, a variety of specific customer requests can be implemented:

- 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.

HOW TO ORDER

PMP-S222-XX- (XX..XX)-XX-X-XXS-XX-XXX



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:

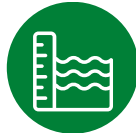
All instruments delivered to Prignitz Mikrosystemtechnik must be free from any kind of hazardous substances (acids, bases, solutions, etc.) and must therefore be cleaned before being returned.

PRIGNITZ

MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &
SERVICE

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