PRESSURE

TFT Technology | PMI Technology

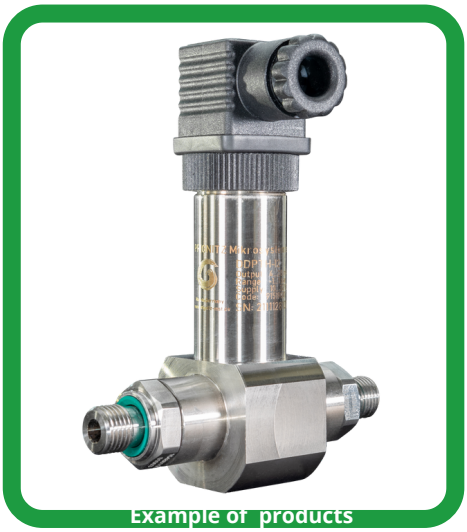
PRIGNITZ MIKROSYSTEMTECHNIK

PMP-D111, PMP-D131

DIFFERENTIAL PRESSURE TRANSMITTERS

DATASHEET

- HIGH MEDIA RESISTANCE
- MICROPROCESSOR SIGNAL CONDITIONING
- HIGH SIGNAL ACCURACY BETTER 0,5% OF FULL SCALE SIGNAL
- SIGNAL DOWNSCALING BY PC-SOFTWARE
- ZERO-SETTING BY TOOL OR PC-SOFTWARE
- SIGNAL FILTERING (CUSTOMIZING POSSIBLE)



Example of products

MAIN FEATURE

- **Line Pressure ranges*:** 70 mbar...1000 bar (1 psi...14503 psi)
- **Difference Line Pressure:** until 1:10
- **Mechanical connections*:** G1/4"A Form E; G1/2"B Mano EN 837; 1/4"-18 NPT; 9/16“ – 18UNF
- **Electrical connections*:** EN 175301-803-A;EN 175301-803-C; M12x1 (S763); Cable output
- **Wetted parts**:** stainless steel 1.4404 (316L) / 17-4 PH /Hastelloy
- **Accuracy (25°C):** typ ≤ 0.5 % FS max 1%FS

*others on request. Different special custom-made solutions

** depend of product-version

DESCRIPTION

Series of differential pressure transmitters for industrial applications with high accuracy requirements over a wide temperature range, designed to measure pressure differences in air and liquids. These pressure transmitters are used in pneumatics, hydraulics and process engineering.
The fully digital solution allows the measuring ranges to be scaled from 1:1 to 1:10 in relation to the line pressure and differential pressure.
The differential pressure transmitter allow zero point correction, range change and measurement filtering, or changing the polarity of the pressure ports with an additional service box and PC software.

APPLICATION

INDUSTRIAL AUTOMATION
Test stands, CNC equipment, Presses, HVAC

ENERGY
Oil, Gas, Wind, Water,Power stations

MARINE & OFFSHORE
Engines, Hydraulic, Fluidhandling

INDUSTRIAL PROCESS CONTROLE
Chemical, Pharma, Food

TECHNICAL SPECIFICATIONS

INPUT PARAMETERS			
Pressure type	gauge, absolute. sealed reference (>60 bar)		
Mechanical connections *	G1/4"A Form E; G1/2"B Mano EN 837; 1/4"-18 NPT; 9/16“ – 18UNF		
Tightening torque	typ 25 Nm		
Wetted parts	stainless steel 1.4404 (316L) / 17-4 PH / Hastelloy		
Body material	stainless steel		
OUTPUT SIZES			
Electrical connections *	EN 175301-803-A;EN 175301-803-C; M12x1 (S763); Cable output		
Output signal** Supply voltage Load resistance	4...20 mA 10...32 V < (Vsupply-10)V/0.02 A (Ohm)	0...5 V 10...32 V ≥ 2 kOhm	0...10 V 14...32 V ≥ 2 kOhm
PERFORMANCE CHARACTERISTICS			
Accuracy (25°C)	typ ≤ 0.5 % FS, max ≤ 1 % FS		
Overall accuracy (- 5°C...85°C)	typ ≤ 1.5 % FS, max ≤ 2 % FS		
Long-term stability	≤ 0.2 % FS per year in referential conditions		
Ambient temperature	- 40...+ 85°C		
Medium temperature	- 40...+ 125°C		
Storage temperature	- 40...+ 85°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		
CE-CONFORMITY			
EMC guidline	2014 / 30 / EU acc. to DIN EN 61326-1, DIN EN 61326-2-3		
RoHS guideline	2011/65/EU		
OTHER			
Weight***	~ 400 g		
Lifetime	> 10 million load cycles		

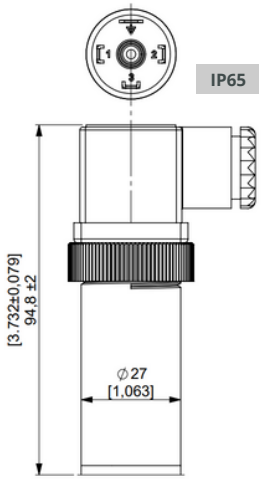
*other on request

**output is calibrated at zero and full-scaled

***depend of product version

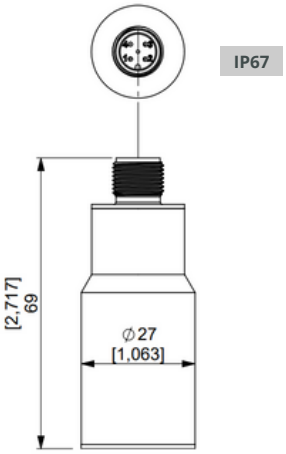
ELECTRICAL CONNECTION

EN 175301-803-A



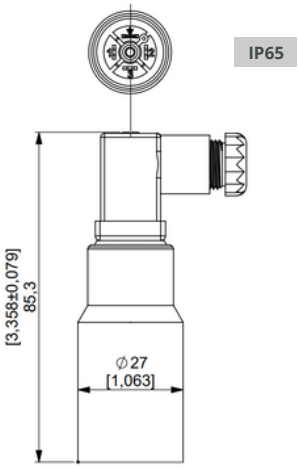
	Pin1	Pin2	Pin3	Pin4	Pin5
0.5 -4.5 V; 1-5V	+	-	V out	GND-SDA	Thread-SCL
4-20 mA	+	-	SDA	GND-SCL	nc

M12x1 S763-4



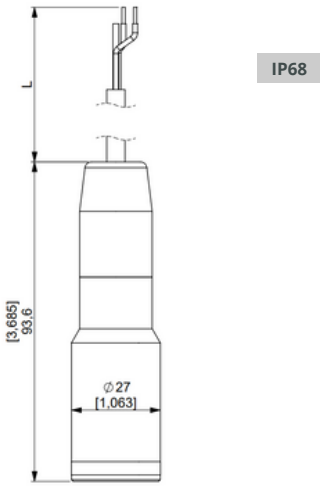
	Pin1	Pin2	Pin3	Pin4
0.5 -4.5 V; 1-5V	+	nc	-	V out
4-20 mA	+	SCL	-	SDA

EN 175301-803-C



	Pin 1	Pin 2	Pin 3	Pin 4
0.5 -4.5 V; 1-5V	+	-	V out	nc
4-20 mA	+	-	nc	nc

Cable output



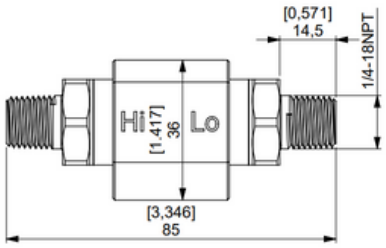
	white	brown	yellow	green
0.5 -4.5 V; 1-5V	+	-	V out	nc
4-20 mA	+	-	nc	nc

Befor 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 injure and/or damage to the equipment.

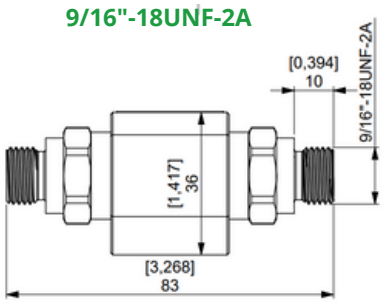
WARNING: Prignitz Mikrosystemtechnik reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate testes,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

PROCESS CONNECTIONS

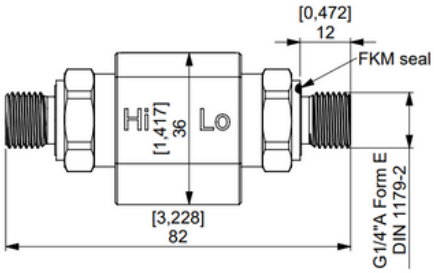
1/4"-18NPT



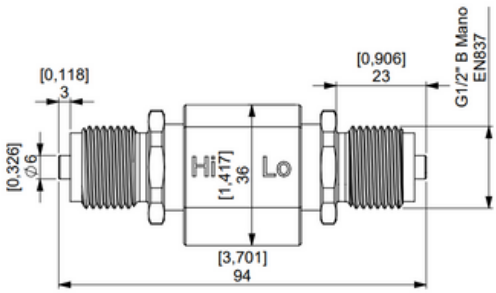
9/16"-18UNF-2A



G1/4"A Form E
DIN 1179-2



G1/2" B Mano
EN837



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.

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.

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 ... +85 °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 compres- sors, 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.

Edition version: D/PMP-D111/PMP-D132/Rev.1/Okt.2023/ENG

HOW TO ORDER

PMP-D1XX-XX- (XX..XX)X-XX-XX-XX

FAMILIES

D = Differential pressure transmitter

TECHNOLOGY& MATERIAL

11 = TFT Technology with stainless steel 17/4

31 = PMI Technology with steel 316L, membrane inside

ELECTRICAL OUTPUT

I2 = 4-20mA 2L
0U5 = 0-5V
1U5 = 1-5V
U10 = 0-10V

DIFFERENTIAL PRESSURE RANGE

e.g.
(-1...1)
(0...60)
(0...400)

MAX. LINE PRESSURE

e.g.
4
100
500

UNIT

01 = bar
16 = psi

ELECTRICAL CONNECTION

02 = EN 175301-803-A
03 = EN 175301-803-C
05 = M12x1 S763-4
C3 = Cable output
C0 = Customized Cable

PROCESS CONNECTIONS

00 = Customized
01 = G1/4"A Form E DIN 1179-2
05 = G1/2" B Mano EN837
08 = 1/4"-18NPT
10 = 9/16"-18 UNF G1/8"A, female

PRIGNITZ
MIKROSYSTEMTECHNIK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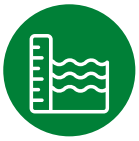
LEVEL


TEMPERATURE


CALIBRATION & SERVICE

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