LEVEL

TFT Technology | PMI Technology

PRIGNITZ MIKROSYSTEMTECHNIK

SLP-Family (Standard Level Probe)
Intrinsically safe level probes
PML-S111-Exi,PML-S131-Exi

Datasheet

There are stainless steel, intrinsically, submersible, safe level probe for the usage in hazardous areas.
In addition to its rugged construction and a good price- to- performance ratio this series will be the solution for level measurement for a very wide variety of applications.


Example of series product

MAIN FEATURE

- **Wide variety of level ranges (3 ft ... 100 ft)/ 1-30 m H2O**
- **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**

SUITABLE HAZARDOUS AREAS AND CONDITIONS:

US:
Class I, Division 1, Groups A, B,C,D T4
Class I, Zone 1 AEx ia IIC T4 Gb
Class I, Division 1, Groups C and D T4
Class I, Zone 0 AEx ia IIB T4 Ga

CAN:
Class I, Division 1, Groups A,B,C,D T4
Ex iA IIC T4 Gb
Class I, Division 1, Groups C and D T4
Ex iA IICB T4 Ga

Rated for:
Class 2258 04
PROCESS CONTROL EQUIPMENT
for hazardous Canadian locations

Class 2258 84
PROCESS CONTROL EQUIPMENT
for hazardous locations - certified to US standards

APPLICATION

MONITORING OF TANKS LEVEL

REMOTE PROCESS CONTROL

OIL & GAS EQUIPMENT

DRILLING & MINING

MARINE & OFFSHORE

CHEMICAL INDUSTRY

TECHNICAL SPECIFICATIONS

PERFORMANCE CHARACTERISTICS							
Level ranges (in m H_2O) *							
Standard level ranges	1	2	3	5	10	20	30
Safety level ranges	10	20	24	25	60	80	100
Damage level ranges	20	40	48	50	120	160	200
Level ranges (in ft H_2O) *							
Standard level ranges	3	7	10	16	33	66	98
Safety level ranges	33	66	79	82	197	262	328
Damage level ranges	66	131	157	164	394	525	656

Accuracy (25°C)	+/- 0,5 % FS		
Overall accuracy (- 5°C... 85°C)	+/-1,5 % FS		
Overall accuracy (< - 5°C and > 85°C)	+/- 3 %		
Stability (1 year)	+/- 0,25 % full scale (typical)		
ENVIRONMENTAL DATA			
Ambient temperatur range	- 40 °C ... 85 °C (-40 °F ... 185 °F)		
Storage temperature range	- 40 °C ... 85 °C (- 40 °F ... 185 °F)		
Shock protection	EN/IEC 60068-2-32 (1 m free fall)		
Vibration	20 g / 3 axes to EN/IEC 60068-2-6		
EMI/RFI emmission	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 grade	IP68 / DIN 40 050		
Material of wetted parts	1.4404 (316L); 1.4301 (304);		
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	10 ... 27 V (Vout x ... 5 V) 10 ... 27 V (Vout x ... 6 V) 15 ... 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	< 2 ms	< 2 ms	< 2 ms
Zero offset	< 1 % of FS	< 1 % of FS	< 1 % of FS
Span tolerance	< 2 % of FS	< 1,5 % of FS	< 1,5 % of FS
Reverse and overvoltage protection	yes		

* Other upon request

CONNECTION VERSIONS	
Electrical connection	cable gland with vented cable option: 1/2 MNPT thread (conduit)
Process connections (standard)	plastic protector steel protector\sinker other upon request
OUTLINE DIMENSIONS	
Casing diameter	22 mm (0.87 ")
Over all case lenght	conduit versions: typ. 135 mm (5.3")

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 injure 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 #:7008 0999

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

- De-energise the pressure transmitter.
- Disconnect the electrical connection.

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.

HOW TO ORDER

PML-S1XX-Exi-XX-(XX..XX)-XX- X- X -XX- XXXXX

FAMILIES

S = SLP Family

TECHNOLOGY& MATERIAL

11 = TFT Technology with 17-4PH material
31 = PMI Technology with Membrane inside

TYPE

Exi = Intrinsically safe level probe with CSA certification

ELECTRICAL OUTPUT

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

LEVEL RANGES

e.g.
(0 ... 1)
(0 ... 3)
(0 ... 30)

UNIT

12 = mH2O @ 4 °C
04 = ftH2O @ 4 °C

TYPE OF PRESSURE

g = gauge

PROCESS CONNECTIONS

P = plastic protector
S = steel protector and sinker

ELECTRICAL CONNECTION

C = Cable gland with vented cable
M = conduit 1/2" MNPT

CABLE LENGTH

xxxxx M = for cable length in meter
xxxxx ft = for cable length in ft

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 85 °C (- 40 °F ... 185 °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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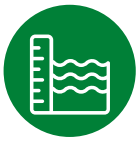
PRIGNITZ

MIKROSYSTEMTECHNIK


PRESSURE


LEVEL


TEMPERATURE


CALIBRATION & SERVICE

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