



TFT Technology

PMI Technology

Datasheet

# CLP-Family (Computeized Level Probe) Intrinsically safe level probes PML-C111-Exi,PML-C131-Exi

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.

This level probe has high signal accuracy better than 0.25% of the full-scale signal @RT.

## MAIN FEATURE

- Wide variety of level ranges 1-30 m H2O (3 ft ... 100 ft)
- 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
- Setting of offset, gain and scale are possible



II 1G Ex ia IIB T4 Ga or II 2G Ex ia IIC T4 Gb



## 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

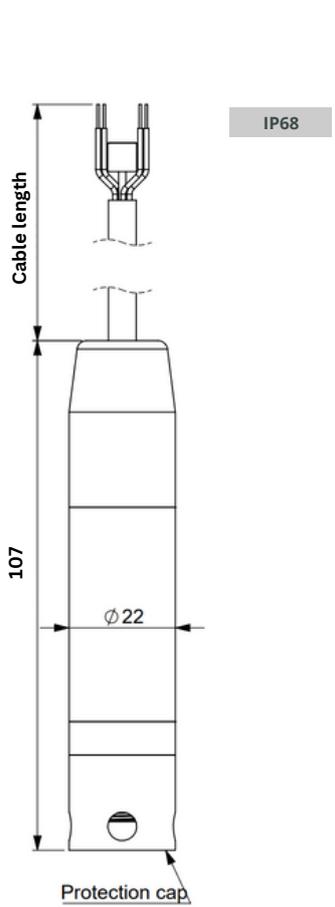
## TECHNICAL SPECIFICATIONS

INPUT PARAMETERS							
Level ranges (in m H <sub>2</sub> O) *							
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 <sub>2</sub> O) *							
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
Mechanical connections	plastic protector cap; plastic/steel sinker						
Wetted parts	stainless steel 316 L /17-4 PH						
Body material	stainless steel						
OUTPUT SIZES							
Available in certification:	CSA/ATEX		CSA		CSA		
Output signal	4 ... 20 mA 2 wires		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)	CSA : 12 ... 27 V ATEX : 20 ... 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	≤ 4 ms		≤ 4 ms		≤ 4 ms		
Electrical connection	PUR Cable						
PERFORMANCE CHARACTERISTICS							
Accuracy (25°C)	≤ 0.25 % FS limit point settings						
Overall accuracy (- 5°C... 85°C)	1.50 % FS limit point settings						
Long-term stability	≤ 0.2 % FS per year in referential conditions						
Ambient temperature	- 40 °C ... 85 °C (-40 °F ... 185 °F)						
Medium temperature	- 40 °C ... 85 °C (-40 °F ... 185 °F)						
Storage temperature	- 40 °C ... 85 °C (-40 °F ... 185 °F)						
Shock resistance	EN/IEC 60068-2-32 (1 m free fall)						
Vibration resistance	20 g / 3 axes to EN/IEC 60068-2-6						
Protection class	IP68						
EMI/RFI emission	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						

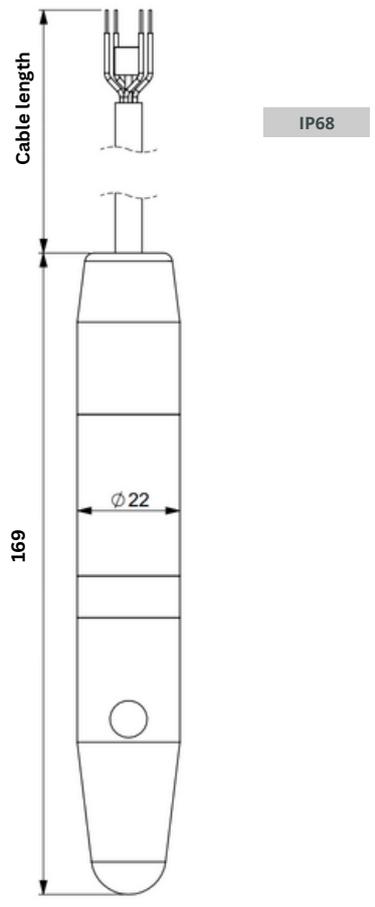
\* Other upon request

ELECTRICAL DATA	
Reverse polarity	YES
Dielectric strength	710 V DC/500 V AC
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

## PRODUCT CONSTRUCTION



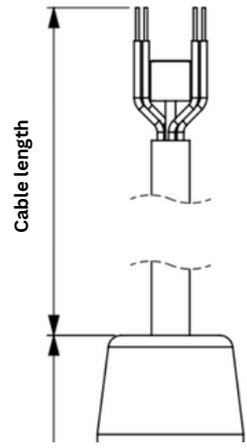
Level probe with plastic protector cap



Level probe with plastic/steel sinker

## ELECTRICAL CONNECTION

output	white	brown	yellow	green
0.5-4.5 V; 1-5V	+	-	Vout	case
4-20 mA 2L	+	-	case	case



## 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.



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.



## 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 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.

Edition version: D/PML-C111-Exi/PML-C131-Exi/Rev.1/June.2024/ENG

# HOW TO ORDER

## PML-C1XX-Exi.XX-XX-(XX..XX)-XX-X-X-XX-XXX

### FAMILIES

**C** = CLP Family

### TECHNOLOGY & MATERIAL

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

### TYPE

**Exi** = Intrinsically safe level probe

### CERTIFICATION

**10** = CSA  
**20** = ATEX

### ELECTRICAL OUTPUT

**I2** = 4 ... 20 mA 2L  
**UR** = ratiometric  
**OU5** = 0 ... 5 V  
**1U5** = 1 ... 5 V  
**U10** = 0 ... 10 V

### LEVEL RANGES

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

### UNIT

**12** = mH<sub>2</sub>O @ 4 °C  
**04** = ftH<sub>2</sub>O @ 4 °C

### TYPE OF PRESSURE

**g** = gauge

### CABLE LENGTH

**in meter:**  
min. 1 m  
max. 30 m  
**in inch:**  
min. 50 inch  
max. 1000 inch  
**in feet:**  
min. 3 ft  
max. 100 ft  
**other on request**

### ELECTRICAL CONNECTION

**C3** = PUR cable ventilated  
**C0** = cable customised

### PROCESS CONNECTIONS

**41** = plastic protector cap  
**42** = plastic sinker  
**43** = steel sinker

# PRIGNITZ

## MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &  
SERVICE

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