



LEVEL



TEMPERATURE

PMI Technology

# PML-DWLR

Digital Water Level Recorder with Temperatur Sensor

Datasheet

- **AUTOMATIC DETECTION OF WATER LEVEL AND TEMPERATURE**
- **LONG BATTERY LIFE**
- **COMPACT UNIT**
- **FLEXIBLE FOR CUSTOMISED REQUIREMENT**
- **CONNECTABLE TO PC WITH ANALYSES SOFTWARE**

## MAIN FEATURE

- **Pressure ranges\***: from 0 ...1 m H2O to 0...30 m H2O
- **Mechanical connections\***: plastic protector cap
- **Electrical connections\***: S709-4 connector
- **Wetted parts**: stainless steel 1.4404 (316L)
- **Accuracy** :  $\leq 0.2$  % FS after limit-point calibration
- **Output** : digital output via RS485

\* others on request. Different special custom-made solutions



Example of product

## DESCRIPTION

Digital water level recorder for high and very high accuracy environmental measuring solutions. It has pressure sensor, temperature sensor, memory and datalogger.

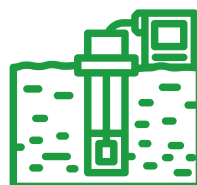
This DWLR can be connected to a PC or tablet to read the stored values and make analysis.

The DWLR compact impresses with its precise sensor technology, a powerful integrated data logger and low power consumption combined with long battery life.

## APPLICATIONS



Environment solutions



Groundwater level measurements

# TECHNICAL SPECIFICATIONS

## INPUT PARAMETERS

Level ranges (in m H2O) *							
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
Pressure type	gauge, absolute						
Mechanical connections	plastic protector cap POM ;plastic sinker ;steel sinker						
Wetted parts	stainless steel 316L						
Body material	stainless steel						

## OUTPUT SIZES

Electrical connections *	S709-4 connector
Supply voltage	5 ... 12 VDC
Supply Current	< 10 mA
Output	RS485
Output Span	10000 Digits Integer
Output by offset	0 Digit Integer
Output by nominal Pressure	10000 Digits Integer
Baud rate	19200
Temperatur Measuring in °C	Yes
Level Measuring in m H2O	Yes
Connection Cable	RS485 to USB Adpater cable
Analysis Software	Will be delivered upon request

## PERFORMANCE CHARACTERISTICS

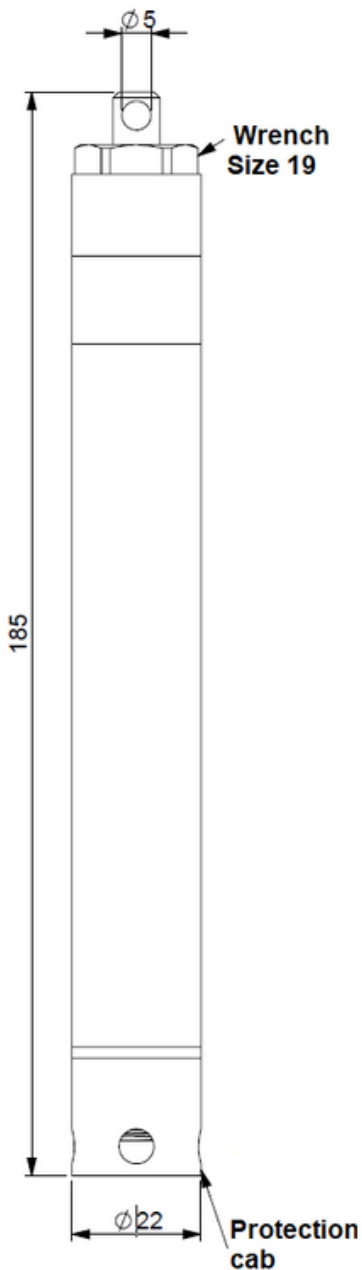
<b>Pressure Sensor</b>	
Accuracy	≤ ±0.2 % FS after limit-point calibration
Offset	OFFSET adjustment possible via operating software
Overall Accuracy (0°C... 40°C)	≤ ±0.1 % FS / 10 K after limit-point calibration
Long-term stability	≤ 0.1 % FS per year in referential conditions
<b>Temperatur Sensor</b>	
Accuracy Temperatur Sensor	+/- 0,5 °C
Resolution Temperatur Sensor	0,1°C
Offset Temperatur Sensor	OFFSET adjustment possible via operating software
<b>Datalogger</b>	
Memory	4 MB + 4 MB for redundant data storage
Storable data records:	50,000 plus redundant storage (backup) of the data
Scanning times	Adjustable from 30 seconds - 24 hours
Power supply	one piece of lithium battery. With one measurement per hour > 5 years battery life
Interface:	RS 485

\*others on request

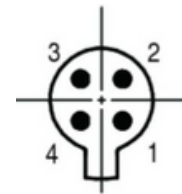
Ambient temperature	0...+ 40°C
Medium temperature	0...+ 40°C
Storage temperature	-20...+ 60°C
Protection class	IP68 with S709-4 connector
<b>ELECTRICAL PROTECTION</b>	
Reverse polarity	YES
<b>CE-CONFORMITY</b>	
EMV guideline	2014 / 30 / EU acc. to DIN EN 61326-1, DIN EN 61326-2-3
RoHS guideline	2011/65/EU
<b>OTHER</b>	
Weight	depending on electrical connection
Lifetime cycles	> 100 million

## PRODUCT CONSTRUCTION

## ELECTRICAL CONNECTION



S709-4



Pin1	Pin2	Pin3	Pin4
+	B- (RS485 B)	-	A+ (RS485 A)

## 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: -20.. +60 °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-DWLR/ /Rev.2/June.2024/ENG](#)

# HOW TO ORDER \*

## PML-DWLR-RS-(XX..XX)-XX-X-X-XX

### FAMILIES

**DWLR** : Digital Water Level Recorder with Temperatur Sensor

### ELECTRICAL OUTPUT

**RS** = digital output vis RS485 Bus

### LEVEL RANGES

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

### UNIT

**12** = mH2O @ 4 °C  
**04** = ftH2O @ 4 °C

### ELECTRICAL CONNECTION

**00** = Customised  
**19** = S709-4

### PROCESS CONNECTIONS

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

### TYPE OF PRESSURE

**g** = gauge  
**a**=absolute

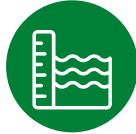
\* customisation available on request

# PRIGNITZ

## MIKROSYSTEMTECHNIK



PRESSURE



LEVEL



TEMPERATURE



CALIBRATION &  
SERVICE

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### 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](mailto:info@prignitz-mst.de)**