

# Hydrostatic Level measurement Waterpilot FMX21

Reliable and robust level probe with ceramic measuring cell and HART



## Benefits:

- Robust overload-resistant high purity ceramic sensor (99.9% Al<sub>2</sub>O<sub>3</sub>)
- Flexible scaling of 4 to 20mA with superimposed HART 6.0 output
- Highest level accuracy using temperature compensated density correction
- Simultaneous measurement of level and temperature with optionally integrated Pt100 temperature sensor
- Extensive range of accessories provides complete measuring point solutions
- Climate proofed sensor thanks to completely potted electronics and 2-filter pressure compensation system
- Small outer diameter of 22mm (0.87") version suitable for drinking water applications and for use in bore holes and wells with small diameters

More information and current pricing:

[www.ca.endress.com/FMX21](http://www.ca.endress.com/FMX21)

## Specs at a glance

- **Accuracy** 0.2% 0.1% (optional)
- **Process temperature** -10°C...70°C (14°F...158°F) Diameter 29 mm (1.14"): 0°C...50°C (32°F...122°F)
- **Pressure measuring range** 100 mbar...20 bar (1.5 psi...300 psi)
- **Main wetted parts** Diameter 22 mm and 42 mm: Seal, 316L, Ceramic Diameter 29 mm: Seal, PPS, Polyolefin, Ceramic  
Extension cable: PE, PUR, FEP
- **Max. measurement distance** 200 m H<sub>2</sub>O (656 ft H<sub>2</sub>O)

**Field of application:** The Waterpilot FMX21 transmitter with capacitive, oil-free ceramic measuring cell is typically used in the process and environmental applications for hydrostatic level measurement. With

HART output, the measuring ranges can be freely adjusted and a density-compensated level measurement can be activated. It is certified for drinking water and offers integrated temperature measurement. Versions for applications in wastewaters and sludges or usage in salt water are also available.

## Features and specifications

### Pressure

#### Measuring principle

Hydrostatic pressure

#### Characteristic

Compact probe with ceramic cell for hydrostatic level measurement,

Diameter = 22 mm: General applications, fresh water

Diameter = 42 mm: Waste water applications

Diameter = 29 mm: Salt water applications

#### Supply voltage

10.5 ...35V DC

#### Reference Accuracy

0.2%

0.1% (optional)

#### Long term stability

0.1% of URL/year

#### Process temperature

-10°C...70°C

(14°F...158°F)

Diameter 29 mm (1.14"): 0°C...50°C

(32°F...122°F)

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**Pressure****Ambient temperature**

-10°C...70°C  
(14°F...158°F)  
Diameter 29 mm (1.14"):  
0°C...50°C  
(32°F...122°F)

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**Measuring cell**

100mbar...20bar  
(1.5psi...300psi)

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**Process connection**

Suspension clamp  
Cable mounting screws

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**Communication**

4...20 mA  
4...20 mA HART

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**Certificates / Approvals**

ATEX, FM, CSA, CSA C/US, IEC Ex, INMETRO, NEPSI, UK Ex

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**Marine approvals**

GL/ ABS/ BV/ DNV/ LR

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**Drinking water approvals**

NSF/ KTW/ ACS

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**Continuous / Liquids****Measuring principle**

Hydrostatic

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**Characteristic / Application**

Compact probe with ceramic cell for hydrostatic level measurement,  
Diameter = 22 mm: General applications, Fresh water  
Diameter = 42 mm: Waste water applications  
Diameter = 29 mm: Salt water applications

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## Continuous / Liquids

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### Specialities

Automatic density compensation  
Version w/o metal parts in contact to process

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### Supply / Communication

10.5 ...35 VDC

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### Accuracy

0.2%  
0.1% (optional)

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### Long term stability

0.1% of URL/year

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### Ambient temperature

-10°C...70°C  
(14°F...158°F)  
Diameter 29 mm (1.14"):  
0°C...50°C  
(32°F...122°F)

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### Process temperature

-10°C...70°C  
(14°F...158°F)  
Diameter 29 mm (1.14"): 0°C...50°C  
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### Pressure measuring range

100 mbar...20 bar  
(1.5 psi...300 psi)

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### Main wetted parts

Diameter 22 mm and 42 mm: Seal, 316L, Ceramic  
Diameter 29 mm: Seal, PPS, Polyolefin, Ceramic  
Extension cable: PE, PUR, FEP

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## Continuous / Liquids

### Process connection

Suspension clamp  
Cable mounting screws

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### Max. measurement distance

200 m H<sub>2</sub>O  
(656 ft H<sub>2</sub>O)

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### Communication

4...20 mA  
4...20 mA HART

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### Certificates / Approvals

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### Marine approval

GL/ ABS/ BV/ DNV/ LR

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### Drinking water approvals

KTW/ NSF/ ACS

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### Options

Absolute measuring cell  
Integrated temperature sensor Pt100, 4-wire  
customer specific adjustment  
customer specific cable marking

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### Application limits

Measuring cell: ceramics

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More information [www.ca.endress.com/FMX21](http://www.ca.endress.com/FMX21)