

# Expert™ 2100

HYDROSTATIC LEVEL TRANSMITTER

2.75

## General

The MJK Expert™ 2100 hydrostatic level transmitter is ideal for measuring levels in storage tanks, wet wells and pump stations in both water and wastewater plants.

Our latest version of the successful Expert™ 2100 level transmitter series is now improved with a higher accuracy of 0,2%.

A major new design feature is the programming facility. Using a standard USB interface and a laptop computer, the servicing transmitter can be programmed on-the-fly to the required measuring range using the RS 485 feature over Modbus protocol.

The Expert™ 2100 has a piezoresistive measuring system and built-in breather tube for direct air pressure compensation. The design is very robust and it is a useful all-round transmitter, used in waterworks, sewage treatment plants and industrial applications.

The design without sharp edges prevents particles, textiles and paper from sticking to the housing or the diaphragm.

## Features

- Stainless steel diaphragm, polypropylene body
- 2-wire 4 - 20 mA loop powered, 10-30VDC
- Very low drift (<0.2%) and high accuracy ( $\pm 0.2\%$ ) year after year
- Field re-programmable for custom ranges and zero offset calibration
- Measuring ranges from 0 - 10 ft. to 0 - 300 ft.
- Steel reinforced PUR cable with high tensile strength (2000 lb)
- Iron bar reinforced shield body with PUR potting.

## Applications

- Waste water
- Process water
- Drinking water.

## DATASHEET

US 2.75 EXPERT 2100 DATASHEET 2011



**mjk**  
a xylem brand

# Expert™ 2100 Level Transmitter

## Specifications

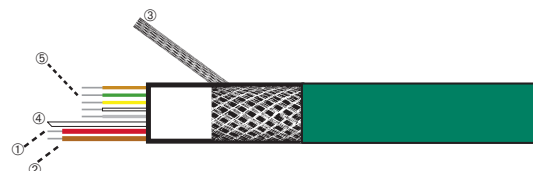
Expert 2100 Level Transmitter				
Nominal measuring range	0 - 10 ft.	0 - 15 ft.	0 - 30 ft.	0 - 100 ft.
Measuring principle	Piezo-resistive (relative pressure)			
Min. programmable range	0 - 6 ft.	0 - 6 ft.	0 - 6 ft.	0 - 30 ft.
Max. programmable range	0 - 31.5 ft.	0 - 31.5 ft.	0 - 31.5 ft.	0 - 96 ft.
Non-standard range	Min. 0 - 6 ft. / Max. 0 - 900 ft.			
Sensor FS	0..1 bar	0..1 bar	0..1 bar	1...3 bar
Max. overpressure	4 bar	4 bar	4 bar	12 bar
Temperature range	15 °F to 150° F			
Measurement accuracy	Better than ± 0.2 % FS @ +50 to 85° F Better than ± 0.5 % FS @ full temperature range			
Long time stability	Better than ± 0.5 % FS per year			
Temperature deviation	Better than ±0.015% / °F (relative to 77° F)			
Materials	Housing: PP / Diaphragm: Stainless steel (1.4404 / AISI 316 L)			
Supply voltage	10 - 30 VDC			
Output signal	2-wire 4 - 20 mA (passive transmitter) / ModBus RS485			
Cable	2 × AWG 20 (pressure) + 5 × AWG 25 (data), shielded, PUR insulation, 2000 lb. tensile strength			
Cable length <sup>①</sup>	39 ft.	39 ft.	39 ft.	114 ft.
Enclosure	IP 68, withstands a static pressure equal to max. overpressure			
Test Approvals	CE directive: 2014/30/EU EN 61326-1, 61326-2-3			

<sup>①</sup>The cable length may be extended by using the transmitter connection box (202922) and twisted shielded pair wire.

## Electrical Connections

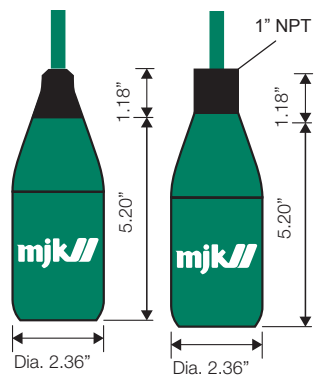


Designations		
1	Red	Positive (+) wire
2	Brown	Negative (-) wire
3	Black	Shield (NOT signal ground!)
4	Tube	Air pressure compensation tube
5	Hidden	Programming wires

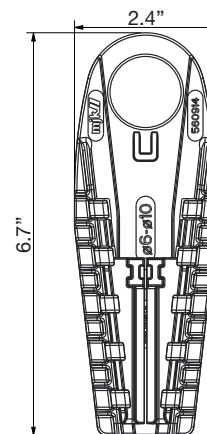


⑤ Programming	
Green	N/C
Brown	N/C
Yellow	RS485 B
White	N/C
Grey	RS485 A

## Dimensions



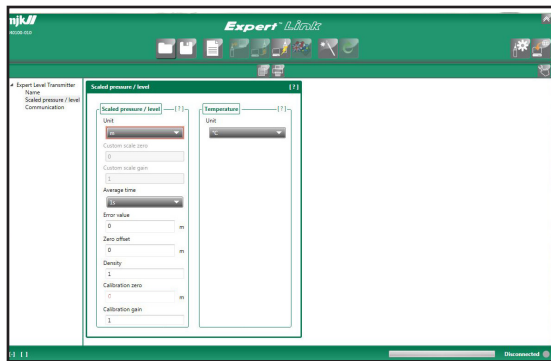
MJK Expert™ 2100 Level transmitter



560914 Plastic mounting bracket for MJK Expert™ 2100 Level transmitter (1 pcs. is delivered with each transmitter)

# Expert™ 2100 Level Transmitter

## Accessories



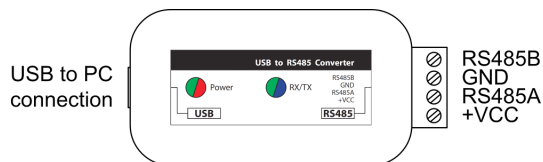
Expert Link Software

800110 ExpertLink for Windows for support of the Expert™ series. Use with 203992 PC (USB) Interface.

Information (pressure- and temperature range, version of software etc.):

- Indication of actual pressure value and adjusting measuring ranges
- Selection of units
- Setting of a new zero and gain for the transmitter
- Reprogramming of the analog output (i.e. different unit, other measuring range)
- Setting of the instrument address (for Bus-operation and real-time value).

Expert Link is free of charge. Link to download center on [www.mjk.com](http://www.mjk.com).



203992 PC Interface used for connecting Expert™ Hydrostatic Level Transmitters to a PC using Expert Link.



202922 Transmitter connection box NEMA 6 enclosure and ventilation for a safe connection of 4-20 mA cables.Ⓞ



200126 Field indicator 531, display insert, 4-20 mA loop powered, NEMA 6 enclosure. For instant local readout.Ⓞ

Ⓞ For a complete display you need both the 200126 Field indicator 531 display insert and the 202922 Transmitter connection box.

# Expert™ 2100 Level Transmitter

## Order Numbers

Expert™ 2100, Piezoresistive, Relative Pressure, 4-20mA/Supply 10 - 30VDC	
209980	Pressure Transmitter 2100, Range 0-10 ft, 39 ft Cable
209980-75	Pressure Transmitter 2100, Range 0-10 ft, 75 ft Cable
209982	Pressure Transmitter 2100, Range 0-15 ft, 39 ft Cable
209985	Pressure Transmitter 2100, Range 0-30 ft, 39 ft Cable
209985-75	Pressure Transmitter 2100, Range 0-30 ft, 75 ft Cable
209985-100	Pressure Transmitter 2100, Range 0-30 ft, 100 ft Cable
209985-150	Pressure Transmitter 2100, Range 0-30 ft, 150 ft Cable
209990	Pressure Transmitter 2100, Range 0-100 ft, 114 ft Cable

## Order Numbers Accessories

Expert™ Hydrostatic Transmitter Accessories	
109113	MJK product test certifikat. Must be requested upon order!
200126	Field indicator 531, display insert, 4-20mA loop powered
202918	Sacrificial Copper Ring for Expert™ 2100, 7050, 7060
202922	Transmitter connection box
203992	PC Interface (USB/RS485) for Expert™ Transmitter 2100/3400D/7060/7070
209821 <sup>⓪</sup>	1" NPT thread for Expert 2100
560914	Plastic Mounting Bracket for Expert™ Transmitter, Cable Ø6-10mm
MJK691075-FT	Communication Cable 2x2x0.5mm <sup>2</sup> (AWG24) shielded twistet pair
800110	Expert Link

<sup>⓪</sup> MUST be ordered when ordering the transmitter, the thread top can only be mounted at factory.

For support in North Americas, please contact:

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