

Expert 3400

HYDROSTATIC LEVEL TRANSMITTER

2.77

General

MJK Expert™ 3400 Hydrostatic level transmitter has a ceramic capacitive measuring system and built-in breather tube for direct air pressure compensation. It is designed for use in waterworks, sewage treatment plants and industrial applications where accurate and long term stable level measuring is required. It is very robust and designed for applications in rough environments with aggressive chemicals and aggressive fluids.

A major design feature is the programming facility using a USB interface and a laptop, the servicing transmitter can be programmed on-the-fly to the required measuring range. The design without sharp edges prevents particles, textiles and paper from sticking to the housing or the diaphragm.

Features

- Ceramic diaphragm, PPS body,
- Surge resistance
- 2-wire 4-20 mA loop powered, 10-30VDC
- Accuracy better than $\pm 0.1\%$ and stability 0.1 % per year
- Field re-programmable for custom ranges and zero offset calibration
- Steel reinforced PUR cable with high tensile strength (2000 lb)
- Measuring ranges from 0-1 ft. to 0-1000 ft.

Applications

- Waste water
- Process water
- Chemical tanks with a range of acids, bases and ferric chloride.
- Approved for mounting in explosion hazardous areas
- **UL Class 1, Division 1, Group A-D.**



DATASHEET

US 2.77 Expert 3400™ datasheet 1811

mjk
a xylem brand

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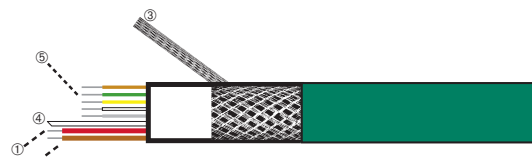
Expert™ 3400 Hydrostatic Level Transmitter

Specifications

Expert™ 3400 Level Transmitter							
Nominal Measuring Range	0-1 ft.	0-3 ft.	0-10 ft.	0-30 ft.	0-100 ft.	0-300 ft.	0-1000 ft.
Measuring principle	Ceramic capacitive, relative pressure					Sealed gate	
Min. programmable range	0-9 ft.	0-9 ft.	0-3 ft.	0-9 ft.	0-30 ft.	0-90 ft.	0-300 ft.
Max. programmable range	0-3 ft.	0-3 ft.	0-10 ft.	0-30 ft.	0-100 ft.	0-300 ft.	0-1000 ft.
Max. overpressure	75 psi	75 psi	100 psi	150 psi	275 psi	600 psi	600 psi
Temperature range	-5 °F to 105 °F						
Temp. deviation, zero point	Better than $\pm 0.01\%$ / °F						
Temperature deviation, FS	Better than $\pm 0.005\%$ / °F						
Linearity / Stability	Better than $\pm 0.5\%$ FS / $\pm 0.5\%$ FS						
Measurement accuracy	Better than $\pm 0.1\%$ FS @ 50-85 °F Better than $\pm 0.2\%$ FS @ full temperature range						
Long time stability	Better than $\pm 0.1\%$ FS per year						
Materials	Housing: PPS (Ryton), Diaphragm: 99,9 % Al ₂ O ₃ Packing: Viton®						
Supply voltage	10-30 V DC (12-30 V DC for cable lengths above 315 ft.)						
Output signal	2-wire 4-20 mA (passive transmitter)						
Cable	2 x AWG 20 (pressure) + 5 x AWG 25 (data), shielded, PUR insulation						
Cable length	39 ft.	39 ft.	39 ft.	39 ft.	115 ft.	330 ft.	1030 ft.
Enclosure	NEMA 6P, withstands a static pressure equal to max. overpressure.						
Safety Approvals	UL® Class I, II and III, Division 1 Hazardous (Classified) Locations, UL 913 ATEX: II 2G EEx ia IIC T4...T6						
Test Approvals	CE directive: 89/336/EEC, 2004/108/EC, 1999/EC EN 61326-1, 61326-2-3, EN 55011, 61000-4-2, 61000-4-3, 61000-4-4, 61000-4-5, 61000-4-6, 61000-4-8 EN 61000-6-4 2007-02-19, EN 61000-6-2 2005-09-08,						

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

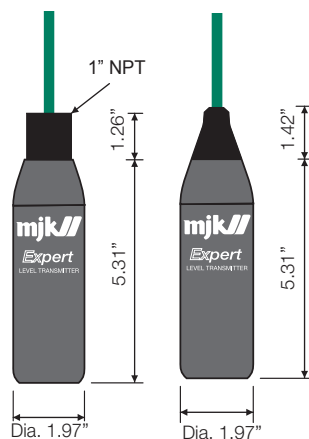
Electrical Connections



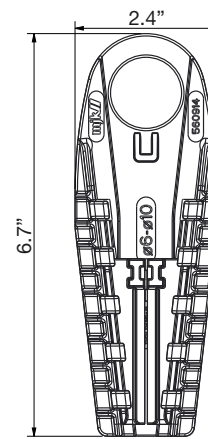
Designations		
1	Red	Positive (+) wire
2	Brown	Negative (-) wire
3	Black	Shield (NOT signal ground!)
4	Tube	Air pressure compensation tube and Moisture filter
5	Hidden	Programming wires

⑤ Programming	
Green	CS (Chip Select)
Brown	GND
Yellow	Data In
White	Clk
Grey	Data Out

Dimensions



MJK Expert™ 3400 level transmitter



Mounting bracket for MJK Expert™ 3400 level transmitter

Expert™ 3400 Hydrostatic Level Transmitter

Accessories



Expert Link Software

840100 Expert Link for Windows for support of the Expert series. Use with 203990 PC (USB) Interface. Information (pressure- and temperature range, version of software etc.):

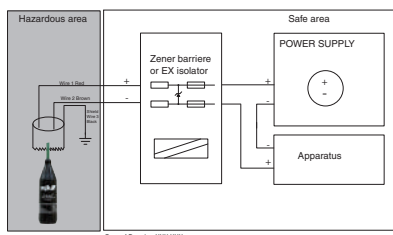
- Indication of actual pressure value and adjusting measuring ranges
- Selection of units
- Setting of a new zero and gain for the transmitter
- Reprogramming of the analog output (i.e. different unit, other pressure range)
- Setting of the instrument address (for Bus-operation and real-time value).



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



202993 Isolator, an integrated unit including active components with low power consumption. A power supply provides power to the pressure transmitter through a galvanic separator so that neither current nor voltage exceeds the specified values. A ground connection is not required.



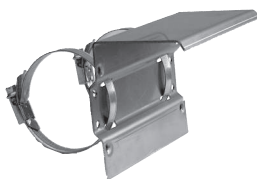
202995 Zener barrier, a passive unit requiring a safe grounding connection based on ATEX regulations. The Zener barrier contains a number of Zener diodes for voltage protection. A safety fuse will blow if the current exceeds the limits. A Zener barrier requires a safe ground connection.



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



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



200117 Rainroof/Sun Shield for 531, weather protection for display and connection box.

Ⓢ For a complete display you need both the 20016 531 display insert and the

Expert™ 3400 Hydrostatic Level Transmitter

Order Numbers

Expert™ 3400, Hydrostatic Level Transmitter			
		With 1" NPT Thread	
MJK209921	Pressure Transmitter 3400, range 0-1 ft., 39 ft. cable	MJK209991	Pressure Transmitter 3400, range 0-1 ft., 39 ft. cable, NPT thread
MJK209922	Pressure Transmitter 3400, range 0-3 ft., 39 ft. cable	MJK209992	Pressure Transmitter 3400, range 0-3 ft., 39 ft. cable, NPT thread
MJK209923	Pressure Transmitter 3400, range 0-10 ft., 39 ft. cable	MJK209993	Pressure Transmitter 3400, range 0-10 ft., 39 ft. cable, NPT thread
MJK209923-50	Pressure Transmitter 3400, range 0-10 ft., 50 ft. cable	MJK209993-75	Pressure Transmitter 3400, range 0-10 ft., 75 ft. cable, NPT thread
MJK209923-100	Pressure Transmitter 3400, range 0-10 ft., 100 ft. cable	MJK209993-100	Pressure Transmitter 3400, range 0-10 ft., 100 ft. cable, NPT thread
MJK209923-125	Pressure Transmitter 3400, range 0-10 ft., 125 ft. cable	MJK209993-250	Pressure Transmitter 3400, range 0-10 ft., 250 ft. cable, NPT thread
MJK209925	Pressure Transmitter 3400, range 0-30 ft., 39 ft. cable	MJK209995	Pressure Transmitter 3400, range 0-30 ft., 39 ft. cable, NPT thread
MJK209925-50	Pressure Transmitter 3400, range 0-30 ft., 50 ft. cable	MJK209995-75	Pressure Transmitter 3400, range 0-30 ft., 75 ft. cable, NPT thread
MJK209925-75	Pressure Transmitter 3400, range 0-30 ft., 75 ft. cable	MJK209995-100	Pressure Transmitter 3400, range 0-30 ft., 100 ft. cable, NPT thread
MJK209925-100	Pressure Transmitter 3400, range 0-30 ft., 100 ft. cable	MJK209996	Pressure Transmitter 3400, range 0-100 ft., 105 ft. cable, NPT thread
MJK209925-125	Pressure Transmitter 3400, range 0-30 ft., 125 ft. cable		
MJK209925-150	Pressure Transmitter 3400, range 0-30 ft., 150 ft. cable		
MJK209925-300	Pressure Transmitter 3400, range 0-30 ft., 300 ft. cable		
MJK209925-450	Pressure Transmitter 3400, range 0-30 ft., 450 ft. cable		
MJK209926	Pressure Transmitter 3400, range 0-100 ft., 115 ft. cable		
MJK209926-150	Pressure Transmitter 3400, range 0-100 ft., 150 ft. cable		
MJK209927	Pressure Transmitter 3400, range 0-300 ft., 330 ft. cable		
MJK209928	Pressure Transmitter 3400, range 0-1000 ft., 1030 ft. cable		

Order Numbers Accessories

Expert™ 3400, Hydrostatic Level Transmitter Accessories	
MJK200117	Rainroof/Sun Shield for 531, display and connection box
MJK200126	Field indicator 531, display insert, 4-20mA loop powered
MJK202922	Transmitter connection box
MJK202993	Loop supplied Ex-isolator for DIN rail mounting
MJK202995	Zener barrier for hydrostatic transmitter 9002/13-280-110-00
MJK203990	PC Interface (USB) for Expert™ Transmitter 1400/3400
MJK209821	1" NPT thread for Expert 2100, 3400
MJK560914	Plastic Mounting Bracket for Expert™ Transmitter, cable Ø6-10mm
MJK691075-FT	Communication Cable 2x2x0.5mm2 (AWG24) shielded twisted pair

