

Expert™ 1400

HYDROSTATIC LEVEL TRANSMITTER

2.76

General

Presenting the MJK Expert™ 1400 Hydrostatic Level Transmitter with ceramic capacitive measuring system and built-in breather tube for direct air pressure compensation. It is designed for use in water applications where improved accuracy for both high and low measuring ranges are requested.

The transmitter is ATEX approved for mounting in explosion hazardous areas.

Features

- Ceramic diaphragm, AISI 316L body
- Surge resistance
- 2-wire 4 - 20 mA loop powered, 10-30VDC
- Accuracy better than $\pm 0.1\%$ and stability 0.1 % per year
- Programmable zero point and span with flexible measuring ranges
- Measuring ranges from 0 - 0,3 m to 0 - 300 m.

Applications

- Ground water bore holes
- In-fill sites
- Approved for mounting in explosion hazardous areas.



DATASHEET

EN 2.76 EXPERT 1400 DATASHEET 1907

mjk
a xylem brand

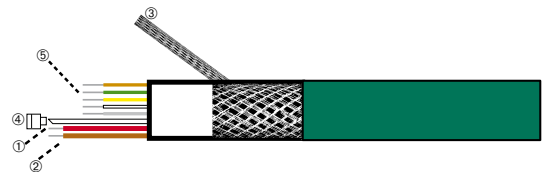
Expert™ 1400 Level Transmitter

Specifications

Expert™ 1400 Level Transmitter									
Nominal measuring range	0 - 0,3 m	0 - 1 m	0 - 3 m	0 - 5 m	0 - 10 m	0 - 30 m	0-50 m	0 - 100 m	0 - 300 m
Measuring principle	Ceramic capacitive, relative pressure							Ceramic cap., sealed gate	
Min. programmable range	0 - 0,3 m	0 - 0,3 m	0 - 1 m	0 - 3 m	0 - 3 m	0 - 10 m	0 - 30 m	0 - 30 m	0 - 90 m
Max. programmable range	0 - 1 m	0 - 1 m	0 - 3 m	0 - 10 m	0 - 10 m	0 - 30 m	0 - 50 m	0 - 100 m	0 - 300 m
Max. overpressure	4 bar	4 bar	6 bar	10 bar	10 bar	18 bar	40 bar	40 bar	40 bar
Temperature range	-10° C to 70° C								
Temp. deviation, zero point	Better than ± 0.02 % / ° C								
Temperature deviation, FS	Better than ± 0.01 % / ° C								
Linearity / Stability	Better than ± 0.2 % FS / ± 0.2 % FS								
Measurement accuracy	Better than ± 0.1 % FS @ +10 to 30° C Better than ± 0.2 % FS @ full temperature range								
Long time stability	Better than ± 0.1 % FS per year								
Materials	Housing: Stainless steel (AISI 316 L), Diaphragm: 96,6 % Al ₂ O ₃ Cell packing: Viton®								
Supply voltage	10 - 30 VDC (12 - 30 VDC for cable lengths above 100 m)								
Output signal	2-wire 4 - 20 mA (passive transmitter)								
Cable	2 × 0,5 mm ² (pressure) + 5 × 0,15 mm ² (data), shielded, PUR insulation								
Cable length①	12 m	12 m	12 m	12 m	12 m	35 m	55 m	110 m	320 m
Enclosure	IP68, withstands a static pressure equal to max. overpressure.								
Safety approvals	UL® Class I, II and II, 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,								

①Can be delivered with other cable lengths on request.
Max 60 m cable length for relative transmitters

Electrical Connections



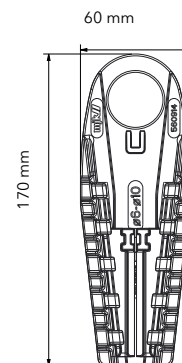
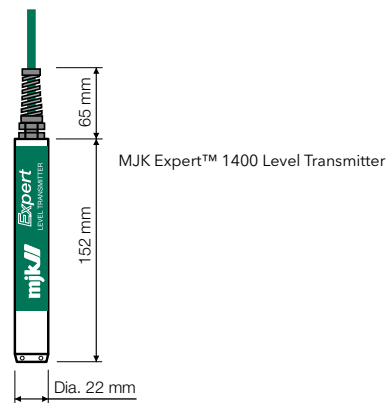
Designations

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

Programming (5)

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

Dimensions



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

Expert™ 1400 Level Transmitter

Accessories



Expert Link is free of charge.

Link to download center on www.mjk.com.



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.):

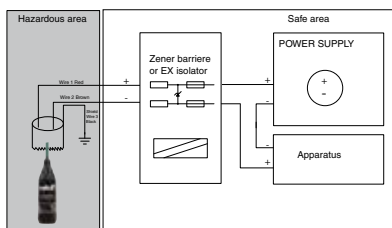
- Indication of actual pressure value and adjusting measuring ranges
- Selection of units
- Setting of a new zero and gain for the transmitter
- Reprogramming of the analog output (i.e. different unit, other pressure range)
- Setting of the instrument address (for Bus-operation and real-time value).



203990 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 IP 67 enclosure for a safe connection of 4-20 mA cables.⓪



200126 Field indicator 531, display insert, 4-20mA loop powered, IP 65 enclosure. For instant local readout.⓪

⓪ For a complete display you need both the 200126 Field indicator 531 display insert and the 202922 Transmitter connection box.

Expert™ 1400 Level Transmitter

Order Numbers

Expert™ 1400, Capacitive Ceramic, Relative Pressure , 4-20mA	
203912	Hydrostatic transmitter 1400 range 0-1m
203913	Hydrostatic transmitter 1400 range 0-3m
203914	Hydrostatic transmitter 1400 range 0-5m
203915	Hydrostatic transmitter 1400 range 0-10m
203916	Hydrostatic transmitter 1400 range 0-30m
203917-REL	Hydrostatic transmitter 1400 range 0-50m relativ
203917	Hydrostatic transmitter 1400 (SG) range 0-100m
203918	Hydrostatic transmitter 1400 (SG) range 0-300m

Order Numbers Accessories

Expert™ Hydrostatic Transmitter Accessories	
109113	MJK product test certificate. Must be requested upon order!
200126	Field indicator 531, display insert, 4-20 mA loop powered
202920⓪	Cable length, not standard
202922	Transmitter connection box
202925	Not standard measuring range
202993	Loop supplied ex-isolator for DIN rail mounting
202995	Zener barrier for hydrostatic transmitter 9002/13-280-110-00
203990	PC Interface (USB) for Expert™ Transmitter 1400/3400
560914	Plastic mounting bracket for Expert™ Transmitter, cable Ø6-10mm
691005⓪	Cable for Expert™ 1100, 1400, 7070, UL approved, PUR, per meter
840100	Expert Link

⓪MUST be ordered when ordering the Expert™ level transmitter, can only be mounted on factory.